



655 Village Hall Drive  
Cary, IL 60013  
847.639.1100  
Fax: 847.639.2761  
[WWW.CARYILLINOIS.COM](http://WWW.CARYILLINOIS.COM)

## COMMUNITY DEVELOPMENT DEPARTMENT

# SWIMMING POOL

### Permit Information:

- Submit application with estimated cost of construction and all contractors with contact information.
- Submit one copy of your plat of survey with the swimming pool dimensions and location, pool equipment location, electric and gas line locations/materials, and fence/safety barrier location shown
- Submit one copy of manufacturer specifications for the pool and pool equipment.
- Submit lot coverage area calculation including the area of all existing improvements and the pool.
- Submit contractor's proposal for the project.
- Once received, the documents are reviewed for compliance with the Zoning and Building codes.
- Village staff will contact you with any questions, or when the permit is ready for pickup.
- The Village only accepts cash or check for payment.

### Location Requirements:

- Pool shall be setback at least 8'-0" from the side and rear property lines.
- Pool shall not be in any easements (i.e. drainage, utility, etc.).
- Pool shall be 5'-0" from underground electric lines. See Village staff regarding overhead lines.

### Barrier/Fence Requirements:

- A minimum 5'-0" high barrier is required around the pool. There are restrictions on openings in the barrier to make it difficult to climb. There are requirements for entry points through the barrier to maintain the continuity. The following can be part of the barrier as long as the requirements are met: fence, pool wall, guardrail on top of a pool wall, guardrail on a deck, or wall of the house.
- Safety Barrier: A minimum 5'-0" high barrier. Bottom of barrier shall be maximum of 2" above grade. Vertical members shall have a maximum spacing of 4". If horizontal members are less than 45" apart, the spacing of the vertical members shall be reduced to a maximum of 1 3/4". Pool wall can be used as long as it complies with these requirements. Any barrier added to the top of a pool wall must extend tight to the ladder.
- Entry Point (gate): Any gate must be minimum 5'-0" high and swing away from the pool, be self-closing, and self-latching. The latch release mechanism must be mounted at least 54" above grade. The latch release mechanism can be mounted lower if it is located on the pool side of the gate at least 3" below the top of the gate, and the gate/barrier has no openings greater than 1/2" within an 18" radius of the release mechanism.
- Entry Point (ladder): If an above ground pool will use a ladder as means of entry, it must be a removable or lockable ladder. The ladder may be fixed in place as long as it is enclosed, and the enclosed area is lockable and the enclosure and gate meet the safety barrier requirements.
- Entry Point (door from house): An alarm is required that produces an audible warning when the door is opened. Alarm must sound within 7 seconds of the door opening and sound continuously for a minimum of 30 seconds. Alarm must be loud (85 dB at 10'-0") and be a distinctly different sound from any doorbell, smoke alarm, or telephone in the home. Alarm must have a manual switch or touchpad to temporarily deactivate the alarm for no more than 15 seconds that is located at least 54" above the floor. Alarm must have an automatic reset feature.

### Electrical Requirements:

- Edge of pool must be minimum 5'-0" from any underground electric lines. Contact Village staff for required distances to overhead electric lines.
- No receptacles within 5'-0" of pool wall.
- One GFCI twist-lock receptacle to be used for the pump and filter is allowed between 5'-0" to 10'-0" of the pool wall. No other receptacles allowed within 10'-0" of pool wall.
- One GFCI general purpose receptacle required between 10'-0" to 20'-0" of the pool wall.
- All outdoor receptacles shall have a weather tight in-use "bubble" cover.
- Pool equipment flexible cords shall not be longer than 3'-0".
- Extension cords cannot be used to operate the pool equipment.
- All metal parts of the pool, equipment, or any other structure within 5'-0" of the pool shall be connected with a bonding wire.
- Electrical conduit shall be buried at a minimum depth of 6" below grade for rigid or intermediate metallic conduit and 18" for rigid non-metallic conduit.
- Electric and gas lines shall not be located in the same trench. Minimum 12" separation between lines.

### Gas Requirements:

- Gas piping for the heater shall be buried at a minimum depth of 12" below grade (18" if flexible metal or non-metallic piping is used).
- If non-metallic piping is used, a yellow insulated tracer wire (min. 18 gauge) must be installed adjacent to the piping and terminated above ground at each end.
- Non-metallic piping shall not be used aboveground.
- Metal piping aboveground must be painted with an approved paint for rust protection.
- The gas shut-off for the heater must be installed within 6'-0" of the unit.
- Pool heater shall be equipped with a readily accessible shut-off. Heater shall not have a standing pilot.
- Electric and gas lines shall not be located in the same trench. Minimum 12" separation between lines.

### Inspections:

- 2 day notice required to schedule inspections.
- Stake out: Pool location must be identified with paint/flags, JULIE markings must be visible, and property corner stakes must be identified and visible.
- Underground - gas / electric
- Bonding grid / backfill (in-ground pools)
- Base - pool deck (patio around pool) (in-ground pools)
- Post holes - Fence (if applicable)
- Final: Includes check of the safety barrier, electrical, and grading. Owner or contractor must be on site for the final inspection.

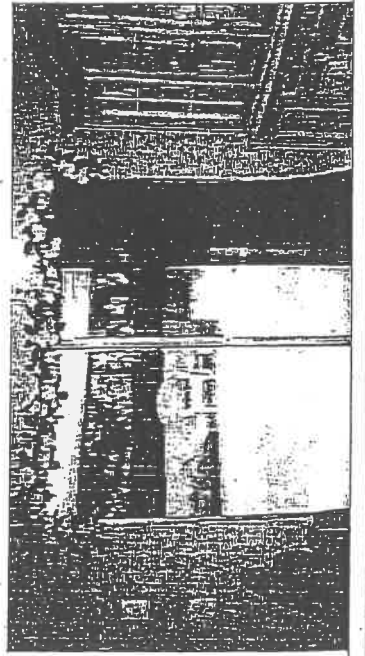
### Reminder:

- State Law requires the actual person doing the digging to contact J.U.L.I.E. at 811 for utility location marking 48 hours before starting to dig.

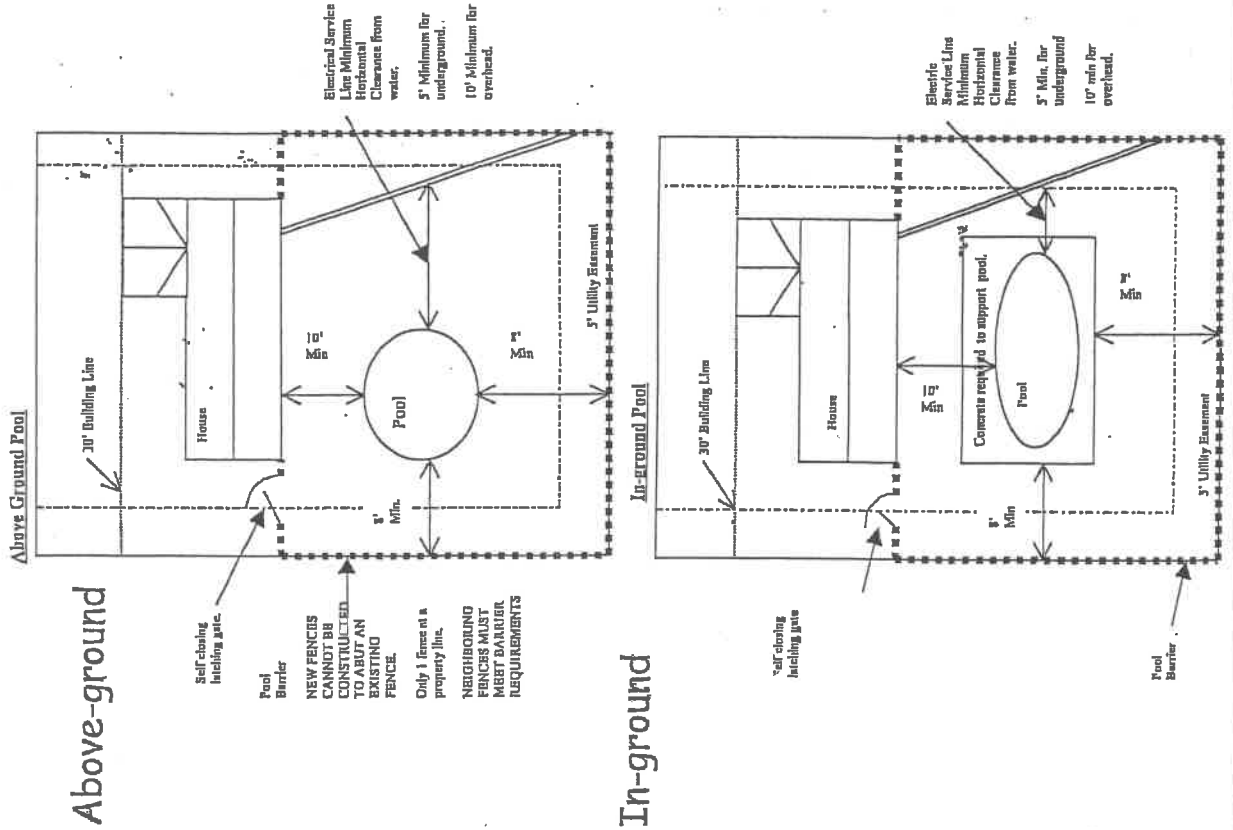
If you have questions on your project, please contact  
the Community Development Department at 847-639-1100.

# HOUSE WALL AS PART OF SAFETY BARRIER

1. A side of the house used for the safety barrier with a door with direct access to the pool shall have an audible alarm on the door or a power safety cover.
  - Alarm - shall commence within 7 seconds of opening door, sound for 30 seconds or more. The alarm should be loud - 85 dB at 10', distinctive in sound from doorbell, smoke-alarm or telephone. Shall have an automatic reset feature. Deactivation switch/touch pad shall be mounted 54 inches above the floor and can temporarily deactivate the alarm for no more than 15 seconds.
2. Doors opening onto the pool area shall be self-closing, self-latching with release 54 inches above the floor, and swing away from the pool area.
3. A deck that opens on to the pool will require a 5 foot safety barrier from the deck, or the deck access shall comply with the safety barrier requirements, including a 5 foot high gate, and guardrails with a max. 1  $\frac{3}{4}$ " opening.
4. A deck that is attached to the house and opens on to the pool and provides direct access from the door to the pool shall have alarms on the doors or a power safety cover.

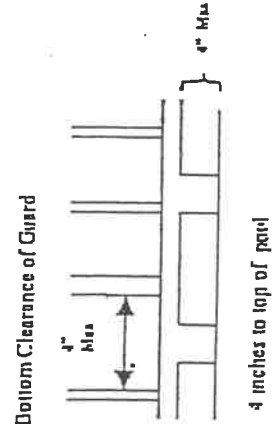
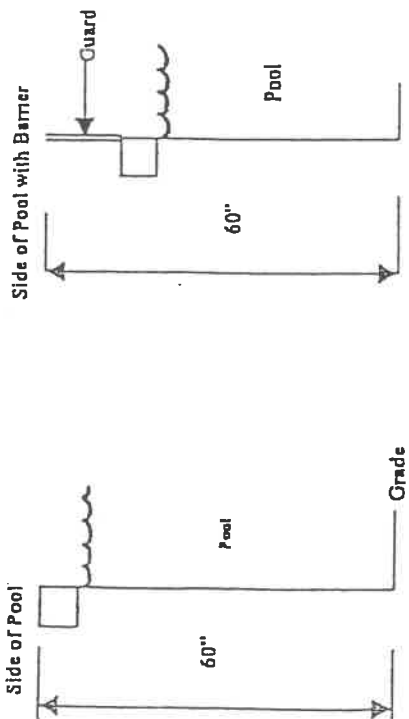


# SAMPLE PLATS OF SURVEY

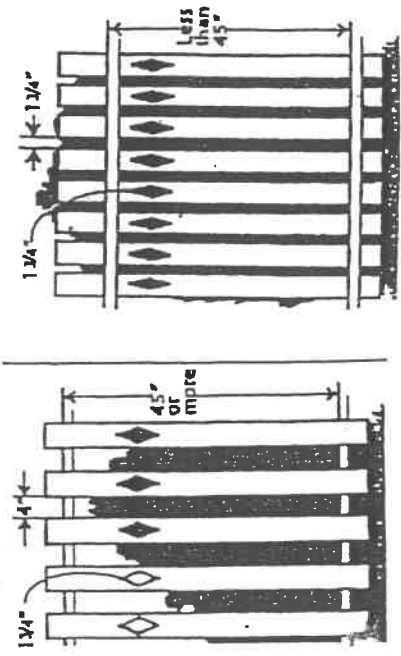


# APPROVED SAFETY BARRIERS ...

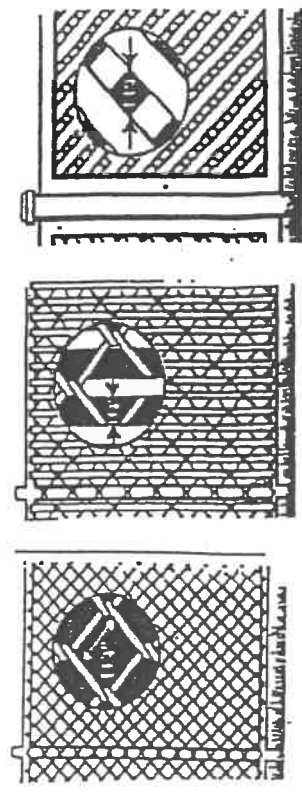
Side of pool can be used as the safety barrier or other approved methods.



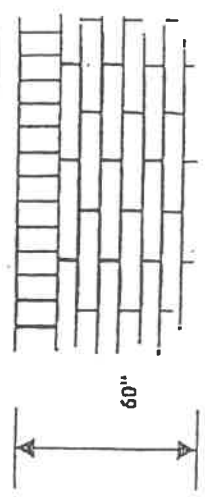
## Wood Fences as Barriers



## Chain Link



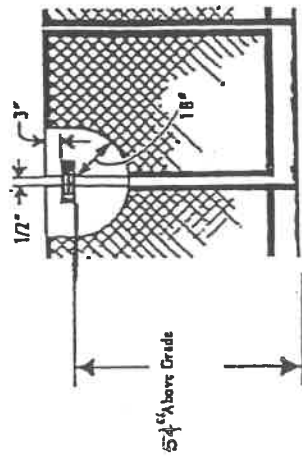
## Brick - No indentations or Projections



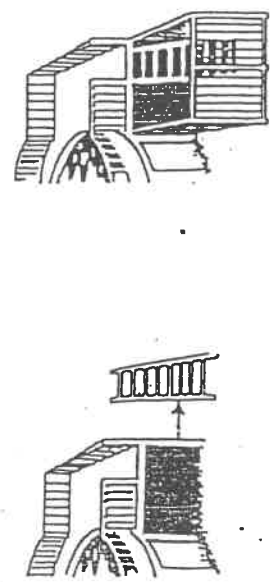
## Pedestrian Gates

Must swing away from pool, self closing, self locking, same construction requirements as the safety barriers and equipped to accommodate a locking device.

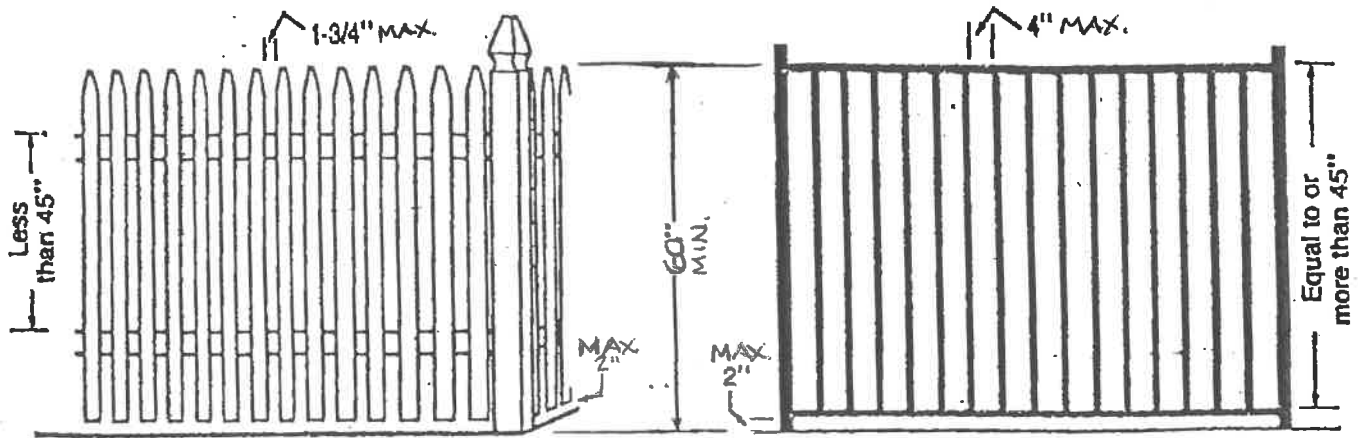
Self-latching device shall be at least 54 inches above grade. The latch is to be located on the poolside of the gate.



## Above Ground Pools - Removable or lockable ladder, or enclose ladder are only approved barriers



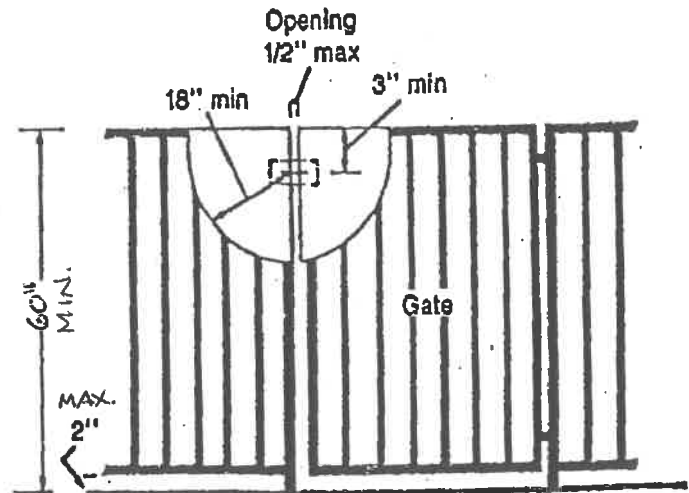
All gates must be equipped with self-latching devices. The self-latching devices should be installed as described for pedestrian gates.



IF HORIZONTAL MEMBERS ARE LESS THAN 45" APART, VERTICAL SPACING SHALL NOT EXCEED 1-3/4".

IF HORIZONTAL MEMBERS ARE EQUAL TO OR MORE THAN 45" APART, VERTICAL SPACING SHALL NOT EXCEED 4".

SAFETY BARRIER



IF RELEASE MECHANISM LOCATED LESS THAN 54" FROM THE BOTTOM OF THE GATE, THEN NO OPENINGS IN BARRIER GREATER THAN 1/2" FOR 18" RADIUS.

LATCH RELEASE MECHANISM

# Electrical Pool information to the 2002 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)

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

Note #1

Disconnecting means must be a minimum of 5' from pool. 680.12, 430.102 (There may be a switch on the pump motor. Check your unit.)

Single, twist-lock grounding type receptacle GFCI protected 680.22(A)(1)  
And with in-use cover 408.(B)(1)  
See note 2 about GFCI protected

6" minimum heavy wall conduit and IMC 1.8" minimum non-metal conduit (PVC) 300.5

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

**Grounding.** The following Equipment shall be grounded: (1) wet-niche and non-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 should be a continuous green ground wire.

5' Minimum 680.22(A)(1)

If the pool has plastic standards an upper bond wire will be needed if upper ring is metal.

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

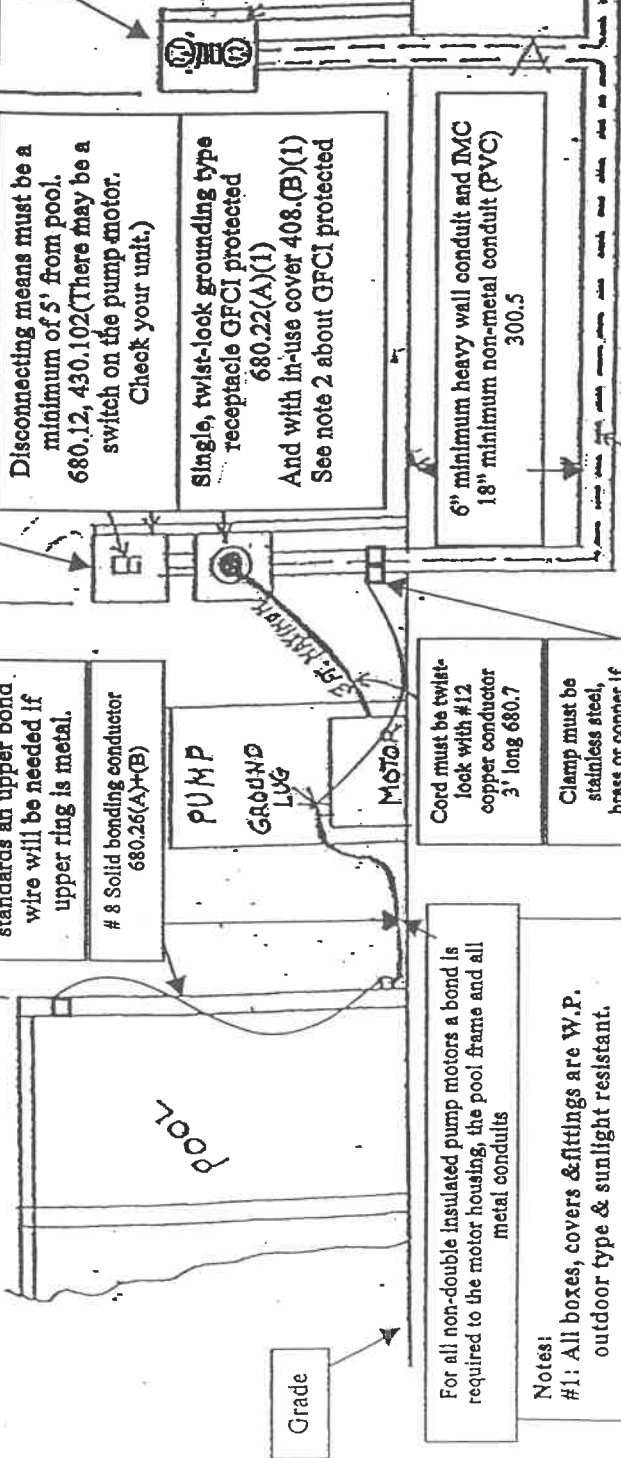
PUMP  
GROUND LUG

Cord must be twist-lock with #12 copper conductor 3' long 680.7  
Clamp must be stainless steel, brass or copper if heavy wall or I.M.C is used 680.26(C)

For all non-double insulated pump motors a bond is required to 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 (like face-less GFI outlets) or other approved type 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

Note #1  
Convenience receptacle GFCI Protected.  
(There may be a receptacle on the house close enough) 680.22(A)(3)



**PERMANENTLY INSTALLED SWIMMING POOL  
CHECK LIST TO THE 2002 NEC**

1. Is there underground conductor within 5' horizontally from the inside wall at the pool. 680.10
2. Is there overhead electrical conductors in the area extending 10 ft. horizontally from the inside wall of the pool and 22.5' up from the water level? 680.8
3. Is the pump motor third party listed to U. S. standards with a label for 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 5' 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 ½ h.p. motors).
7. Is the cover for the receptacle an in-use cover? 406.8 (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 5' from the inside wall of the pool? 680.12
10. Is the raceway of the type of rigid heavy wall metal conduit, intermediate metal conduit or rigid nonmetallic conduit (PVC) and listed for electrical use? 680.21 (A)(1) 110.3 (b)
11. Is the raceway buried to the correct depth? RMC, IMC=6 inches and PVC 18 inches 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 sub panels and that supply any electric equipment associates with the pool? 680.25 The wire shall be sized in accordance with table 250.122 and shall also be insulated.
15. The bonding conductor must be a solid #8 copper wire. (Bare conductor is OK). This wire must pick up pool frame (upper and lower ring if metal) and pump motor, pool heater (if one) and RMC or IMC piping, and any metallic part within 5' of the pool. 680.26 (B) (1,2,3,4 and 5).
16. Is the bonding conductor connection done with a clamp of the type of stainless steel, brass or copper? (No zinc parts) 680.26 (C)
17. Double insulated pump motors do not have to be bonded with the solid #8 but must have a #12 green wire to them.
18. If RNC (PVC) is used with RNC PVC boxes, these items must be listed for electrical and sunlight resistant. Support and expansion fitting may be needed. Article 352 (No plumbing type pipes).

CSA Mark	Type of Mark/Label	Mark/Label Definition	Country
	Certification mark	Indicates that the product was tested and has met the certification requirements for electrical, plumbing and/or mechanical products.	Canada U.S.
	Certification mark	Indicates that the product was tested and has met the certification requirements for electrical, plumbing and/or mechanical products.	U.S.
	Certification mark	Indicates that the product was tested and has met the certification requirements for gas-fired products.	U.S.
	Certification mark	<b>NOT ACCEPTABLE</b> Indicates that the product was tested and has met the certification requirements for electrical, plumbing and/or mechanical products.	Canada