



TOWN OF CARY

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## PERMITTING and INSPECTIONS GUIDE

FOR  
RESIDENTIAL SWIMMING POOLS,  
SPAS and HOT TUBS

This guide is designed to assist customers who wish to install swimming pools, spas, and hot tubs on residential sites.

### FREQUENTLY ASKED QUESTIONS

#### **Why are permits required for pools, spas, and hot tubs?**

It is required by State law (G.S. 160A-417). Obtaining the proper permits and inspections helps ensure that the equipment is properly installed and has the appropriate safeguards in place that will help prevent injuries and deaths due to drowning, near-drowning, and electrocution. It helps the Town and the Department in our mission to provide for the health, safety, and welfare of Cary's citizens.

#### **Who makes the rules for pools, spas, and hot tubs?**

The State's design requirements are set forth in Appendix G of the North Carolina Residential Code. Town of Cary ordinances list additional requirements in LDO 5.3.4(l).

### HOW TO APPLY FOR A PERMIT

To apply for a permit, you will need *all* of the following documents:

- Completed Application** (including Plan Information and Accessory Structure supplements)
- Pool Plan**
  - Pool layout
  - Fence location with construction details (proposed or existing)
  - Location and layout of pool equipment (i.e., pumps, heaters, etc.)
- Plot Plan** (see sample plot plan on our Web site at [www.townofcary.org](http://www.townofcary.org))
  - Show all setbacks and easements
  - Show all structures on lot, including location of existing or proposed fence
  - Prepared by a licensed surveyor

### PROCESSING TIME

Approximately five (5) business days from the submittal date of a complete and accurate application

### FEES

The minimum permit fee (\$60) is applied per trade.

The example below shows the permit fees for a *typical* residential in-ground pool:

**Building Permit (\$60) + Electrical Permit (\$60) = \$120 Total Permit Fees**

Actual fees may vary, depending upon the specific installation. For a complete listing of current fees and rates as per the Town of Cary's approved budget, please visit the Inspections & Permits Web page at [www.townofcary.org](http://www.townofcary.org).

## INSPECTIONS and DESIGN REQUIREMENTS

### GENERAL INFORMATION

Generally, inspections for pools, spas, and hot tubs will cover three areas:

- (1) Electrical work
- (2) Proper barrier protection
- (3) Entrapment protection

Required inspections may vary depending upon the specific equipment and installation, such as mechanical work for heated pools. It is the responsibility of both the owner and contractor to ensure that the installation is done in compliance with all applicable laws and regulations.

### IMPORTANT!

- Suction outlets and dual drain systems must be inspected and approved by the Town prior to pouring concrete
- Water must not be added to pool until the barrier has been inspected and approved by the Town for compliance with Appendix G of the North Carolina Residential Code

### ELECTRICAL INSPECTIONS for POOLS

Electrical work must comply with Article 680 of the National Electrical Code. Typical inspections are listed below. Other inspections may be required depending upon the specific equipment and installation.

**Electrical Groundwork Inspection (E100)** includes, but is not limited to:

- Bare copper ties to wall rebar
- Potting compound at underwater lights
- Bare copper ties to metal light fixture shells, cups for ladders, handrails...
- Other bonding & grounding depending on type of pool
- Junction boxes
- Underground conduits
- Underground copper ties from house/electrical panel to pool equipment...
- Equipotential bonding of perimeter surfaces

**Electrical Final Inspection (E300)** includes, but is not limited to:

- Pool equipment grounding
- Junction boxes
- Completion of electrical work
- Ground fault protection
- Required distances, receptacles

Note: An Electrical Rough-In Inspection (E200) is required if the items above are not accessible at the time of a final inspection.

### ELECTRICAL INSPECTIONS for SPAS and HOT TUBS

Electrical work must comply with Part IV of Article 680 of the National Electrical Code, which includes all pertinent sections of Parts I and II.

REQUIRED:

- **Electrical Rough-In Inspection (E200)**
- **Electrical Final Inspection (E300)**

Note: Typical installations do not require an Electrical Groundwork Inspection (E100), but exceptions may apply. If you have any questions about what inspections your particular installation may require, please call Inspections & Permits at (919) 469-4043.

## **BUILDING INSPECTIONS for POOLS, SPAS, and HOT TUBS**

Building inspections for residential pools, spas, and hot tubs are performed to verify compliance with the barrier and entrapment protection requirements set forth in Appendix G of the North Carolina Residential Code (NCRC).

Some of the requirements are listed below. Always consult the Town's ordinances and NCRC Appendix G for specific details and alternate methods.

**Building Final Inspection (B300)** includes, but is not limited to:

### **BARRIERS**

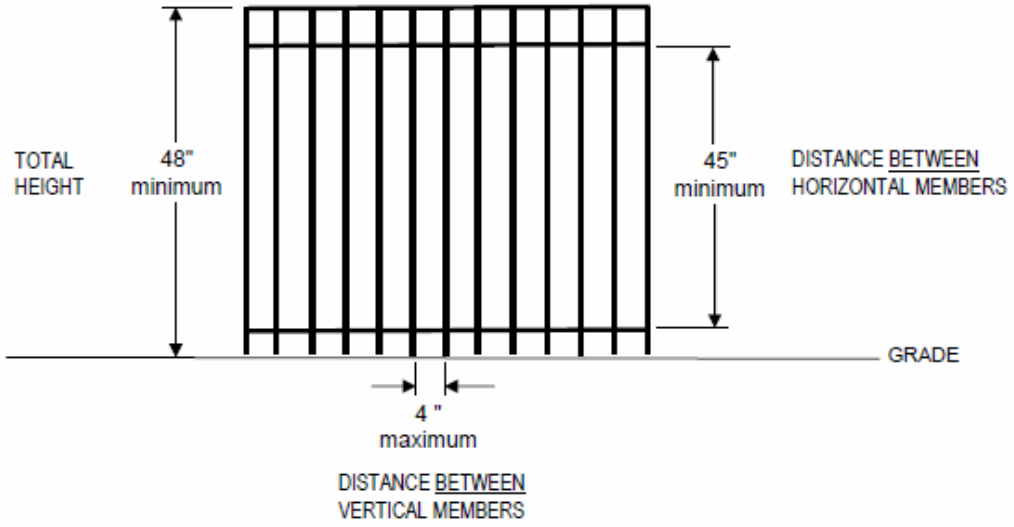
- Top of fences or solid barriers shall be 48 inches
- Maximum clearance under the barrier is 2 inches
- Openings must not allow passage of a 4-inch diameter sphere
- Horizontal members of fences must be at least 45 inches apart with 4-inch space between vertical members
- Horizontal members of fences less than 45 inches apart require 1¾ inches or less between vertical members
- Decorative cutouts in barrier must not exceed 1¾ inches
- Solid barriers shall not have protrusions or indentations that can be used for climbing
- Gates shall be self-closing, self-latching device, and open away from pool
- Release mechanism height is required to be at least 54 inches
- Release mechanism heights less than 54 inches require gate and barrier to have openings no greater than 0.5 inches for 18 inches on each side of the mechanism and 3 inches below the top of gate on the pool side
- Doors with pool access require an alarm that activates within 7 seconds, is audible for 30 seconds, and can be heard throughout house
- The alarm shall be listed in accordance with UL 2017
- A deactivation switch is allowed that at 54 inches above the door threshold and lasts for not more than 15 seconds
- Self-closing, self-latching doors may be used instead of an alarm if the opening mechanism is at least 54 inches above the door threshold
- Ladders or steps to an above-ground pool must be capable of being secured, locked, or removed, or have a barrier surrounding the pool access point
- Barriers must be kept away from permanent structures to prevent climbing
- Spas or hot tubs may have a safety cover complying with ASTM F 1346

### **ENTRAPMENT PROTECTION**

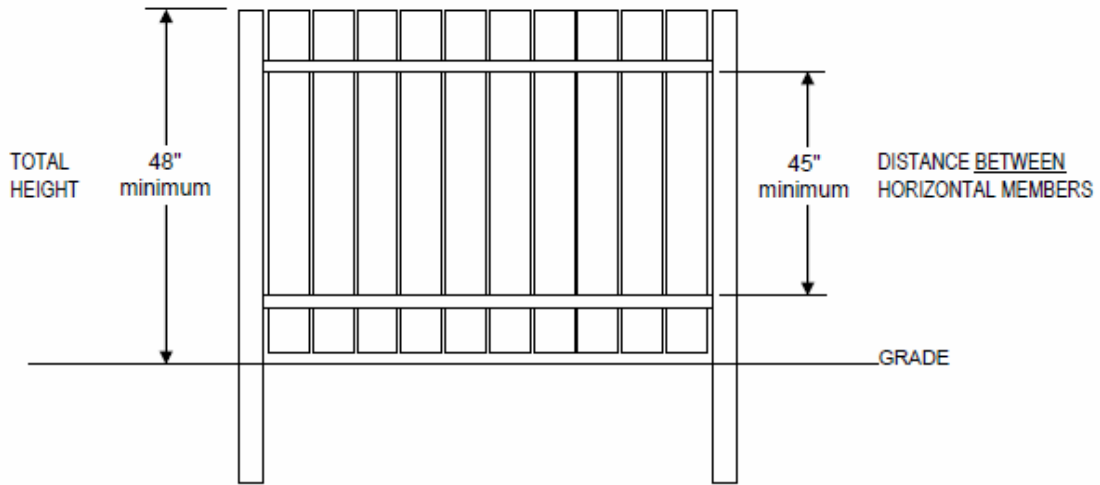
- Suction fittings must comply with ANSI /ASME A112.19.8M or must have covers at least 18 inches x 23 inches
- Safety vacuum release systems must conform to ASME A112.19.17
- Two required suction outlets shall be at least 36 inches apart
- Suction outlets shall be piped so that water is drawn through them simultaneously through a vacuum-relief-protected line to the pump or pumps
- Pool cleaner fittings shall be in an accessible location between 6 inches and 12 inches below the minimum operable water level

# SAMPLE FENCE SKETCH

(see NC State Residential Code Appendix G for a complete list of requirements)



**METAL FENCE**  
(aluminum or wrought iron)



**WOOD FENCE**