



RESIDENTIAL SWIMMING POOL REQUIREMENTS

Community Development Department – Building Services

(816) 316-4817

Residential Swimming Pools, Hot Tubs, & Spas

This packet contains general requirements and should not be considered as a complete list of all code requirements. Complete information is available in the codes and ordinances adopted by the city.

PERMITS:

A building permit is required for the construction of all swimming pools that are 24 inches or greater in depth or any swimming pool with a heater, electrical lighting, or a filter system (unless it is a cord and plug).

Note: The pool/spa permit includes the required fence enclosure as part of the pool/spa permit. Separate permits will not be issued.

PLANS:

A complete set of plans must be submitted to the Community Development Department Building Services Division to obtain a building permit. Provide a plot plan showing the following:

- Proposed pool or spa location - show distances to property lines.
- House and adjacent structures.
- Septic system tanks and lateral lines for lots without public sewers.
- Location of overhead or underground electric lines (provide dimensions from pool or spa).
- Location of mechanical filtering, heating equipment and screening method if applicable.
- Fence or other pool enclosure.
- Provide a deck-framing plan where decks constructed of wood are used for walkways or supporting spas or hot tubs (see *Residential Deck Handout* for requirements).
- Setbacks of deck or pool patio from property lines.

Note: For one- & two- family dwellings, the city may provide a copy of the plot plan if available. For more information call (816) 316-4817.

PUMPS AND FILTER:

- Pool pump shall be sized to provide a turnover of the pool water at least once every twelve hours.
- Pool and spa pumps shall be listed by a nationally approved testing laboratory. Pumps less than 5HP shall comply with ANSI/UL 1081, "*Standard for Swimming Pool Pumps, Filters and Chlorinators.*"
- Filters shall be capable of maintaining water clarity.

All work, especially if underground, needs to be inspected prior to coverage or concealment. Inspections will be scheduled for the next workday unless a later date is requested. Call (816) 316-4817, if you have questions regarding inspections. Depending on the type of pool or spa, all of the inspections listed below may not be applicable.

- A bonding inspection is required prior to pouring concrete to verify that all metallic parts of the pool and the body of water are electrically bonded (connected together) including reinforcing bars in the concrete for the pool walls, bottom and deck; diving boards, ladders, handrails, fixtures for pool lights, electrical conduits and metal fences.
- A gas line inspection is required for any relocated or added gas line. The line must be inspected and tested prior to covering.
- A wet, dry or no-niche luminaire inspection shall be performed prior to filling the pool with water.
- A final inspection must be performed after all work is complete.

Note: A final inspection report will be given to the permit applicant to certify completion of the project and compliance with city code requirements when all work is inspected and approved.

All installations require a final inspection.

SETBACKS - LOCATION ON THE PROPERTY:

The following setbacks for pools and fences apply to pools constructed in various Zoning Districts. Check with the Community Development Department at (816) 316-4817, regarding setback requirements in your zoning district.

- Pool/deck setbacks include any decking or walkway around the pool/spa.
- Front yard pools/spas are not permitted.
- Side & Rear Yard Setbacks:
 - 1) Patios, pools or similar structures shall have a minimum three foot (3') setback for side yards and rear yards.
- Easements:
 - 1) Pool/spa and decks shall not be located within any type off utility easement. If the rear yard of the property has a five foot (5') utility easement, your rear yard setback will default to five foot (5') instead of the three foot (3') regularly allowed.

ACCESSORY STRUCTURES:

Solid or membrane covers including shade structures shall meet the setback requirements for accessory structures – separate plans are required.

ENCLOSURES:

To restrict access by children to the pool, spa or hot tub, a barrier or fence must be constructed to surround the pool, spa or hot tub.

- **Fences**
 - 1) The height of the fence used for a pool barrier must be at least four feet (4') in height measured from the adjacent ground level to the top of the fence on the pool side off the fence, and can be no taller than six feet (6'). Special permission must be granted for fences exceeding six feet (6') in height.
 - 2) Ground clearance between the fence and finished ground level shall not exceed two inches (2"). Openings in the fence shall not allow passage of a four inch (4") diameter sphere.
 - 3) The horizontal fence members shall be located on the swimming pool side of the fence. Where the barrier has decorative cutouts within vertical members or diagonal members (such as lattice fence), the spacing within the cutouts shall not exceed one and three quarters inches (1-¾") in width.
 - 4) Fence enclosures shall also comply with the city requirements for fences (see "*Residential Fence Permits*").
 - 5) Some homes associations have special requirements or covenants regarding fence locations and materials. Check with your homes association prior to selecting a fence design.

- **Gates**

- 1) Gates in the enclosure must swing away from the pool area and be self-closing and self-latching.
- 2) Where the release mechanism is located less than fifty four (54") from the bottom of the gate, the release mechanism and opening shall comply with the following:
 - The release mechanism shall be located on the poolside of the gate at least three (3") below the top of the gate.
 - The gate and barrier shall have no opening greater than one half inch (1/2") within eighteen inches (18") of the release mechanism.

- **Structure Wall Barrier**

A dwelling unit wall that serves, as part of the barrier shall comply with the following:

- 1) The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346.
- 2) Doors with direct access to the pool through the dwelling unit wall shall be equipped with an alarm which produces an audible warning when the door and/or the screen is opened.
 - The alarm shall be listed in accordance with UL 2017.
 - The audible alarm shall activate within seven (7) seconds and sound continuously for a minimum of thirty (30) seconds after the door is opened and be capable of being heard throughout the house during normal household activities.
 - The alarm shall automatically reset under all conditions.
 - The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than fifteen (15) seconds. The deactivation switch(es) shall be located at least fifty four (54") above the threshold of the door; or
- 3) Other means of equivalent protection, such as self-closing doors with self-latching devices, which are approved by the Building Services Division shall be acceptable as long as the degree of protection is not less than the protection afforded by the items listed above.

- **Pool Structure as a Barrier**

Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure where the means of access is a ladder or steps the following shall apply:

- 1) The ladder or steps on aboveground pools is considered as complying with the fence requirements for restriction of access if it is lockable or removable.
- 2) The ladder or steps shall be surrounded by a barrier as described under the Fence and Gate segments above.

BUILDING CODES:

The pool/spa or hot tub must be constructed in accordance with *Chapter 42* and *Appendix G* of the 2012 *International Residential Code (IRC)*, the 2012 *International Swimming Pool & Spa Code*, and the 2011 *National Electric Code (NEC) Article 680*:

- In-ground pools shall be designed and constructed in conformance with *ANSI/NSPI-5 - 03*.
- Above-ground pools shall be designed and constructed in conformance with *ANSI/NSPI-4 - 99*.
- Permanently installed spas and hot tubs shall be designed and constructed in conformance with *ANSI/NSPI-3 - 99*.
- Portable spas and hot tubs shall be designed and constructed in conformance with *ANSI/NSPI-6 - 99*.
- Entrapment protection for swimming pool, spas and hot tubs shall be designed and installed in accordance with *ANSI/APSP-7 – 06*.
- Decks and elevated walking surfaces - decks for one- and two- family dwellings shall be designed to support a minimum forty (40) pounds per square foot live load (see *Residential Decks* for design

information). Decks supporting spas or hot tubs shall be designed to support the weight recommended by the manufacturer plus a forty (40) pound per square foot live load on adjacent deck areas. A plan of the deck is required to verify that adequate support is provided.

- **Electrical installations**

- 1) All electrical wiring for the pool must be in accordance with *Section Chapter 42 and Appendix G of the 2012 IRC and 2011 NEC Article 680*.
- 2) Clearance from services - residential pools/spas/hot tubs must be located so that there is at least a ten foot (10') horizontal clearance from the edge of the pool to any overhead power line and at least a five foot (5') horizontal clearance from the edge of the pool to any underground electrical wiring.

- **Receptacles**

- 1) Receptacles that provide power for water-pump motors or other loads directly related to the circulation and sanitation system are allowed to be located between six feet (6') and ten feet (10') from the inside walls of pools, outdoor spas and hot tubs. Receptacles located within this range shall be of the grounding type, be GFCI-protected, employ a locking configuration and consist of a single receptacle.
- 2) At least one 125-volt, 15 or 20-ampere receptacle supplied by a general-purpose branch circuit shall be located a minimum of six feet (6') from, but not more than twenty feet (20'), from the inside walls of pools, outdoor spas and hot tubs. This receptacle shall be located not more than six feet six inches (6'-6") above the floor, platform or grade level serving the pool, spa or hot tub.
- 3) All 125-volt receptacles located within twenty feet (20') of the inside walls of pools and outdoor spas and hot tubs shall be GFCI-protected.

- **Underground utility lines** - care should be taken when excavating to minimize potential problems with buried gas, water, sewer, and underground electrical lines. Applicants may obtain assistance regarding the location of underground utilities by calling 1-800-DIG-SAFE (1-800-344-7233).

