



Residential Swimming Pools, Hot Tubs and Spas

Community Development Department, Building Division, City of Grain Valley 816-847-6220

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.

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

Inspections – call 816-847-6220

All work shall be inspected prior to back-fill, coverage or concealment. Inspections will be scheduled for the next workday unless a later date is requested. Call if you have questions regarding inspections. Depending on the type of pool or spa, all of the inspections listed below may not be applicable. **All installations require a final inspection.**

- A bonding inspection is required prior to placing concrete to verify that all metallic parts of the pool 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 all require bonding as well.
- 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 luminary inspection shall be performed prior to filling the pool with water.
- A final inspection must be performed after all work is complete.

Note: Certificate of Compliance will be sent to the permit applicant to certify completion of the project and compliance with city code requirements when all work is inspected and approved.

Plans

A complete set of plans must be submitted to the Community Development Dept. of City Hall located at 711 Main Street, to obtain a building permit. Provide a plot plan showing the following:

Site Plan

- Site plan shall show the entire property including lot lines, dimensions and easements.

- Proposed pool/spa location, size and depth.
- House and all adjacent structures.
- Septic system tanks and lateral lines for lots without public sewers.
- Location of overhead and underground electric lines including cable TV, phone and data.
- Fence or other pool enclosure.
- Electrical outlets within 20' of proposed pool/spa
- Location of any proposed wood decks or other patio that will service the pool/spa.
- Provide a deck-framing plan where decks constructed of wood are used for walkways or supporting spas and hot tubs (see *Residential Deck Hand out* for requirements).

Note: For one- & two- family dwellings, the city will provide a copy of the plot plan if available – call 816-847-6220 for plot plan assistance.

Pumps and Filter

- All swimming pools that require a permit shall be of the recirculation type.
- Pool pump shall be sized to provide a turnover of the water 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.

Setbacks - location on the property

All swimming pools and associated appurtenances (decks, equipment, etc.) shall be located...

- Behind the front building line.
- Not less than 10 feet from any rear or side property line.
- Corner lots: not less than 25 feet from the front or street-side property line. Not less than 20 feet from the principal building on the adjoining lot (neighbor’s house).
- Not less than 10 feet from all overhead power lines including cable, phone and data.
- Not less than 5 feet from all underground electrical including cable, phone and data.

Barriers

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

Fence or perimeter barrier

- Barrier shall be a minimum of 4 feet above grade on the pool side.
- Vertical clearance between bottom of the barrier and grade shall not exceed 4 inches for solid grade surfaces (concrete) and shall not exceed 2 inches for non-solid grade (grass).
- Openings in barriers shall not allow the passage of a 4 inch diameter sphere.
- Barrier shall not include indentations or protrusions that could act as foot and hand holds.
- There shall be a clear zone of not less than 36 inches around the exterior of the barrier and permanent structures or equipment (i.e. pumps, filters, heaters etc) that could be used to climb the barrier.
- The pool side of the barrier shall be not less than 20 inches from the water’s edge.

- Other materials: Mesh (other than chain link), chain link, horizontal member, and diagonal member barriers have specific requirements. Indicate on the plans what type of material is to be used for the proposed barrier.

Gates and latches

- Access gates shall meet all of the requirements for barriers.
- Access gates shall be self-closing and self-latching.
- The latch release mechanism for access gates shall be 54 inches above grade – OR – be located on the pool side be a minimum 3 inches below the top of the gate and the gate and the barrier shall not have any openings greater than ½ inch within 18 inches of the release mechanism.
- Double gates shall have at least one leaf secured.
- Service gates or gates not intended for pool access shall be locked when not in use.

Dwelling structure wall as part of a barrier

Doors and operable windows with a sill height of 48 inches or less with direct access to the pool shall be equipped with an alarm which produces an audible warning when the door or window (or its screen) is opened.

- The alarm shall be listed and labeled as a “water hazard entrance alarm” in accordance with UL 2017.
- The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door is opened and be capable of being heard throughout the house during normal household activities.
- The alarm shall not automatically reset under all conditions.
- Other means of equivalent protection, such as self-closing doors with self-latching devices, which are approved by the City of Grain Valley Building Division.

On-Ground pool structure as a barrier

Where an on-ground residential pool structure is used as a barrier or where the barrier is mounted on top of the pool structure the following shall apply:

- The wall of the on-ground pool and/or a top mounted barrier is a minimum of 48 inches above grade for the entire perimeter of the pool and complies with the requirements for a barrier (above).
- Where the means of access is a ladder or steps, the ladder or steps shall be capable of being secured, locked or removed to prevent access or the ladder or steps shall be surrounded by a barrier that meets the requirements as listed above for barrier.
- When the ladder or steps are secured, locked or removed, any opening still remaining shall meet the requirements for a barrier (above). For example if the walls of the pool are less than 48 inches above grade and a barrier is mounted on top of the pool wall there will still be an access opening where the ladder would be during use.
- Top of wall mounted barrier shall be installed per the manufacturer’s installation instructions.

Exceptions to barrier requirements

Spas and hot tubs with a lockable safety cover that complies with ASTM F 1346

Pools with an automatic power-operated safety cover that complies with ASTM F 1346

Receptacles

- 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 6 feet and 10 feet from the inside walls of pools, outdoor spas and hot tubs. Receptacles located within the 5-10 feet zone shall be of the grounding type, be GFCI-protected, employ a locking configuration and consist of a single receptacle.
- At least one 125-volt, 15- or 20-amp receptacle supplied by a general-purpose branch circuit shall be located a minimum of 6 feet, but not more than 20 feet, from the inside wall of a pool, outdoor spa or hot tub. This receptacle shall be located not more than 6 feet, 6 inches above the floor, platform or grade serving the pool, spa or hot tub.
- All 125-volt receptacles located within 20 feet of the inside walls of pools and outdoor spas and hot tubs shall be GFCI-protected.

Accessory Structures

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

Decks including wood, concrete and other materials

All decks shall be designed and installed in accordance with the International Residential Code and the International Swimming Pool and Spa Code. See “Residential Decks Permit and Construction Guidelines” handout.

Building codes

All swimming pools, spas, and hot tubs, shall be constructed in accordance with one or more of the following Codes...

- The City of Grain Valley Ordinances
- 2012 International Swimming Pool & Spa Code
- 2012 International Residential Code
- 2011 National Electrical Code, Article 680

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-RITE (1-800-344-7483).