
Residential Swimming Pool / Spas

General Information

A permit is required for the installation of a Swimming Pool, which must comply with the requirements of the International Plumbing Code and International Residential Code.

State law allows a homeowner to perform this work on his/her homestead. However, any other person performing this work must be a licensed plumber registered as a contractor with the City of Lewisville.

Swimming Pool / Spa ordinance

- [International Residential Code Appendix Q](#)

Inspections

- Belly Steel and Pool Placement
- Deck Steel, Electrical Bond, Electrical Underground and Plumbing
- P-Trap and Gas Line
- Pool Final

Fees

A permit fee is required.

Online Contractor Registration, Application and Inspections

Effective October 1, 2019, the City of Lewisville's NEW online permitting & inspections system can be found at www.mygovernmentonline.org.

You must create an account in order to register as a contractor, apply for permits or request inspections.

To create an account...

Click CREATE ACCOUNT in the upper right corner of the home page, fill out all required fields, then click CREATE ACCOUNT.

To register as a contractor...

Hover your cursor over PERMITS & LICENSING in the upper left corner of the home page, then click APPLY ONLINE. While filling out the application, select PERMIT when asked which “Project Type” you’re applying for. Select CONTRACTOR REGISTRATION when asked which “Application Type” you’re applying for. Fill out all required fields and submit your completed application for review.

To apply for a permit...

Hover your cursor over PERMITS & LICENSING in the upper left corner of the home page, then click APPLY ONLINE. While filling out the application, select PERMIT when asked which “Project Type” you’re applying for. Select POOL - RESIDENTIAL when asked which “Application Type” you’re applying for. Fill out all required fields and submit your completed application for review.

To request an inspection...

You must first search for and locate the permit for which you would like to request an inspection. Hover your cursor over PERMITS & LICENSING in the upper left corner of the home page, then click SEARCH PERMITS. Once you locate your permit, click the REQUEST INSPECTION button on the right side of the permit listing. Fill out all required fields, then click ADD.

Contact our Customer Support Line at 866-957-3764, extension #1, for assistance with online accounts, applications and inspections.

RESIDENTIAL SWIMMING POOL & SPA GUIDELINES

Code Compliance

Construction projects must adhere to the following codes:

- 2015 International Energy Conservation Code
- 2017 National Electrical Code
- 2015 International Residential Code
- 2015 International Mechanical Code
- 2015 International Plumbing Code
- 2015 International Building Code
- 2015 International Fuel Gas Code
- 2015 International Property Maintenance Code
- 2015 International Fire Code
- Residential Swimming Pool & Spa Regulations

All adopted City of Lewisville Zoning, Subdivision, and Building Ordinances

The focus of plan review and building inspections is to ensure quality construction. You, as a pool contractor, must require your administrative staff, designers, engineers, subcontractors, and material suppliers to draw, specify, and build pools that reflect the code requirements and other regulations listed below. Your best effort, along with ours, will achieve the goals of life safety and quality construction.

Permit Application Submittal Requirements:

Before a pool and/or spa may be constructed and/or installed in the City, a pool permit must be obtained from the City. Incomplete permit applications will not be accepted and/or processed. Each permit application must contain the following information:

1. Construction plans, drawn to scale, and stamped by the electrical service provider (TXU Electric, CoServ, etc.). The plans shall include equipment specifications indicating equipment size and type and pool/spa volume (square foot size and gallon capacity). The plans shall indicate the location of the pool and/or spa in relation to property lines and the distance to the pool and/or spa will be from any structures. All deck and area drains, gutter downspouts or other means of capturing water shall be shown. Existing drainage on the lot shall not be modified where it will create a nuisance to an adjacent property or right-of-way. Depth dimensions shall be marked on the water envelope and a sectional drawing showing pool depths.
2. All drawings must be prepared, signed and sealed by an engineer if piers and/or retaining walls are over forty eight inches (48") in depth or height.

EXCEPTION: Above ground pools and spas are not required to provide plans stamped by the electrical service provider.

3. Site plan indicating the location of the pool and/or spa in relation to property lines and the distance to the pool and/or spa will be from any structures. Only the most current survey will be accepted as a site plan. Builder plot plans or other conceptual drawings provided by the property owner will not be accepted.

If a septic property, site plans indicating the location of the pool and/or spa in relation to the septic tanks and spray heads. All pool construction plans on septic properties require approval from AHJ for septic systems prior to submittal with the City.

Measurements will be made to the pool and/or spa structure (back of beam) itself, not the water's edge. Location and setback requirements include:

Rear Yard - The pool and/or spa must be located at least five feet (5') from the rear property line.

Side Yard - The pool and/or spa must be located at least five feet (5') from the side property line.

Easements – Pools and/or spas, pool and/or spa decks and pool and/or spa equipment cannot be located within any easement.

Buildings - Pools and spas must be located no less than three feet (3') from buildings with foundations and at least one foot (1') away from the foundation for every one foot (1') of depth - measured to any point of excavation. For example purposes only, if a portion of a pool is five feet (5') deep that portion of the pool must be located at least five feet (5') from a building that utilizes a foundation.

NOTE: The measurement will be from the point at which the natural grade touches the foundation and any area excavated for the pool and/or spa construction. If the setback from the building foundation is less than the 1:1 ratio, an original prepared, signed and sealed engineer design must accompany the construction plans.

EXCEPTION: Above ground pools and spas do not have a minimum required setback from foundations, but are required to comply with property line setback, easement requirements and any other applicable building codes associated with life or safety items.

Manufacturers' brochure or details of pool required for above ground pools.

Pool Equipment - Pool and/or spa equipment cannot be located within the front yard of a lot or within an easement. Pool and/or spa equipment cannot be attached to a common fence separating an adjoining property. Pool and/or spa equipment cannot be installed in drainage swales and/or designated drainage flows or easement of any type or designation.

Diving Pools – require compliance with ANSI/NSPI-5 2015.

Pool Permit Requirements - Pool permit applications are for pools only!! No other structures shall be approved on the plans that would require a separate permit.

Permit Expiration: All pool and/or spa permits expire ninety (90) days from the date the permit is issued by the City. In every case where a permit is expired, a new permit shall be obtained before any work is resumed.

Permit and Inspection Fees: The permit and inspection fees provided in this ordinance shall be paid to the City before the issuance of a permit and before any work is started. No pool construction or excavation shall commence prior to permit issuance. Fees shall not be collected prior to permit approval.

General Information

All general information per the Residential Contractor Guidelines shall be followed. Below are relevant portions of that guideline that pertain specifically to pool contractors and their subcontractors.

1. **Working Hours** – Standard working hours are as follows (The erection, excavation, demolition, alteration, or repair work on any building):

From June 1 to September 30:

- Mon-Fri: 6:00 AM to 8:30 PM
- Saturday: 8:00 AM to 8:30 PM
- Sunday: 10:00 AM to 8:30 PM

From October 1 to May 31:

- Mon-Fri: 7:00 AM to 8:30 PM
- Saturday: 8:00 AM to 8:30 PM
- Sunday: 10:00 AM to 8:30 PM

Work during other hours shall not be done provided, however, that the city building official may issue special permits for such work at other hours in case of urgent necessity and in the interest of public safety and convenience.

2. Instruct subcontractors and their employees to park in such a way that emergency vehicular traffic will not be obstructed, i.e. police cars, fire trucks and ambulances.
3. **Inspection Requests** – request inspections through our [online inspection request](#) portal.

Inspection Cancellations – All cancellations must be made prior to 8:30 AM on the day of inspection. Contractors should make every effort to speak directly with an inspector to confirm a cancellation. Do not tell the front counter staff. Inspections will not be cancelled if the inspector has already been to the jobsite.

4. **Location of permit packets and inspection tickets** – In order to allow for uniformity and the most efficient use of time, City approved permits and all associated approved construction documents shall be displayed outside on the construction site at the window or door facing the pool at all times during construction. Inspection tags will be placed in the permit packet by the inspector once the inspection is completed. The City approved building plans and all previous inspection tags must be available on the job site when an inspection is called for.
5. **Inspector Office Hours** – Every effort will be made to have an inspector available from 8:00 AM – 8:30 AM and 3:30 PM – 5:00 PM each day. Technical questions regarding an inspection item should be directed to the inspector who made the call. Other technical questions should be directed to a building inspector. Do not call the front counter and request technical information or ask if an inspection has been made or if an inspection has passed. Check your jobsite. If you are unable to resolve an issue with your inspector, please contact the Senior Building Inspector.

For general questions only and permit submittal information, you may call the front counter.

6. **Reinspection Fees** – A reinspection fee may be assessed, at the discretion of the inspector, and no inspection performed, when any of the following conditions apply:
 - a. Inspection called for is not ready. (This could include a first time inspection where history has developed for deficient items on a continual or repeated basis)
 - b. City approved plans are not on the jobsite and located as specified in #5 above.
 - c. Backyard is locked or work to be inspected is not accessible. Work being performed.
 - d. An inspection is failed twice for the same item.
 - e. A temporary or permanent barrier is not in place at all times during construction.
 - f. Previous inspection tags have been removed or are missing from the permit packet.
 - g. Any deviation from the original approved plans that require a re-stamp, permit or has had no prior approval.
 - h. Missing required paperwork at the respective inspection.
7. **Engineering letters and other required documents** – Whenever an engineering letter or other document is required, it shall be placed inside of the permit packet on the jobsite. This will allow the inspector to refer to the letter or document in order to verify compliance with the document requirements. As soon as practical the **original** document should be submitted to the Building Inspections office, directly to the inspector who did the inspection, to be included with the permit files.
8. **Expiration** – All pool and/or spa permits expire ninety (180) days from the date the permit is issued by the City. In every case where a permit is expired, a new permit shall be obtained before any work is resumed. In addition, any approved permit applications that have not been picked up and paid for within 180 days of approval shall become invalid and disposed of.

Inclement Weather

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No concrete inspections or underground inspections will be made if it has been determined that it is too wet by the Building Official or their designee.

No concrete inspections will be made unless the temperature is at least 38 degrees and rising by 8:30 AM the morning of the inspection.

During inclement weather it is the responsibility of the contractor to reschedule all cancelled inspections, after checking their jobsites.

Construction and Inspection Requirements:

ITEMS COMMON TO EVERY INSPECTION:

- Permit packet & approved plans not posted where required.
- Outstanding re-inspection fees due-no receipt in permit packet.
- Not ready for inspection called in.
- Temporary or permanent barrier not in place during construction.

Belly Steel and Pool Placement Inspection:

Before any concrete or gunite can be placed; the belly steel and placement of the pool and/or spa shall be inspected and approved by the City.

1. Rebar shall be a minimum size of three-eighths inch (3/8") and located no more than twelve inches (12") on center each way with a minimum twelve inch (12") overlap.
2. All breaks in the swimming pool floor (depth change) shall have the rebar doubled up and located no more than twelve inches (12") on center each way with a minimum twelve inch (12") overlap.
3. All metal parts of the pool or spa, including metal of the pool or spa shell, metal fittings within or attached to the pool or spa structure, metal conduit and electrical equipment and motors associated with the pool or spa water circulating system must be connected to a common bonding grid with a solid bond conductor not smaller than #8 AWG.
4. A minimum of four (4) approved ground clamps that are evenly spaced around the pool shall be required to electrically bond the pool and/or spa from stray ground current. One (1) additional approved ground clamp shall be required on the spa.

Deck Steel, Electrical Bond, Electrical Underground and Plumbing:

Before any concrete is placed for the pool and/or spa deck, the placement of steel and the electrical bond shall be inspected and approved by the City.

NOTE: Electrical underground inspections shall be passed before a deck steel inspection will be performed, Local policy.

1. The concrete deck shall be a minimum thickness of four inches (4") with a maximum of two inches of cushion sand under the deck.
2. Rebar shall be a minimum size of three-eighths inch (3/8") and located no more than eighteen inches (18") on center each way.
3. All metal parts of the pool or spa, including metal of the pool or spa shell, metal fittings within or attached to the pool or spa structure, metal conduit and electrical equipment and motors associated with the pool or spa water circulating system must be connected to a common bonding grid with a solid bond conductor not smaller than #8 AWG. The solid bond conductor shall be run back to the equipment location.
4. A minimum of four (4) ground clamps that are evenly spaced around the pool and/or spa shall be required to electrically bond the pool and/or spa from stray ground current.
5. All electrical conductors buried in the ground shall be inspected and approved by the City prior to covering. The following depth requirements shall apply per NEC Table 300.5:
 - a. Rigid metal conduit. Six inches (6")
 - b. Rigid metal conduit, IMC or PVC, installed under a residential driveway. Eighteen inches (18")
 - c. PVC conduit (GFCI protected conductors with maximum overcurrent protection of 20 amperes. Twelve inches (12")
 - d. PVC conduit. Eighteen inches (18")
 - e. PVC conduit (low voltage). Six inches (6")
6. Diving boards and all metal within five feet (5') of waters edge shall be grounded.
7. Approved isolation joints shall be required at all areas where the deck will abut the building foundation, patio slabs or any other existing concrete.

P-Trap and Gas Line:

Before the backwash line, p-trap and gas line are covered in any way, those items shall be inspected and approved by the City.

1. All gas lines shall be installed a minimum of twelve inches (12") deep with a minimum Yellow #18 AWG tracing wire. Low pressure gas lines (black pipe & poly) must be air pressure tested with 15 psi on a 30 lb test gauge.
2. All pools and spas shall have a p-trap and backwash line connected to the sanitary sewer. Backwash lines shall be installed at time of inspection.
3. Air gaps must be a minimum two (2) times the diameter of the backwash line that is installed. The air gap must be installed at time of inspection.

EXCEPTIONS: 1) Above ground pools and spas that have a capacity of seven-hundred fifty (750) gallons or less are not required to install a P-trap or backwash line. 2) Lots that do not have access to City sewer and where sanitary drainage is provided through a septic system, no p-trap or backwash line is required; however, adequate drainage, as solely determined by the City, must be provided to allow for drainage of the pool and/or spa.

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Pool Final:

Before the pool and/or spa is/are used, all pool and/or spa components shall be inspected and approved by the City. **The pool and/or spa final inspection shall be approved within ninety (90) days from the date the permit is issued.**

1. The pool barrier shall meet all requirements of the City adopted 2015 International Residential Code, Appendix G, as amended by the City.
2. All non-pedestrian access gates shall have keyed locksets, combination or keyed padlocks locked at all times when not in use.
3. All doors and windows within sixty inches (60") of waters edge must be tempered safety glass in conformance with the City adopted 2015 International Residential Code (IRC), as amended.
4. All pool and/or spa equipment shall be grounded by an approved method and operating properly.
5. No pool and/or spa equipment shall be attached to a common fence located on a property line.
6. All equipment shall be securely fastened on the equipment pad.
7. All GFCI receptacles shall be installed and operating properly in accordance with the City adopted 2015 International Residential Code (IRC), as amended.
8. Final grade, positive drainage, swale location, and sod must be in place. (positive drainage away from foundation) (Exception: Sod and landscaping do not have to be installed if the City is under a water restriction prohibiting installation)

Pool Barrier Requirements:

Design and erection of the pool enclosure shall be in strict accordance with Appendix Q of the 2015 International Residential Code as provided below:

AQ105.1 Application.

The provisions of this appendix shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

AQ105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1,219mm) above grade measured on the side of the barrier, which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51mm) measured on the side of the barrier, which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102mm).

2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1,143mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75 inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44mm) in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1,143mm) or more, spacing between vertical members shall not exceed 4 inches (102mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44mm) in width.
6. Maximum mesh size for chain link fences shall be a 2.25-inch (57mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1.75 inches (44mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1.75 inches (44mm).
8. Access gates shall comply with the requirements of Section AQ105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1,372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:
 - 8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76mm) below the top of the gate, and
 - 8.2. The gate and barrier shall have not opening greater than 0.5 inch (13mm) within 18 inches (457mm) of the release mechanism.
9. Where a wall of a dwelling serves a part of the barrier one of the following conditions shall be met:
 - 9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F1346; or
 - 9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch(es) shall be located at least 54 inches (1,372mm) above the threshold of the door; or
 - 9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Items 9.1 or 9.2 described above.
10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then:

- 10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access, or
- 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AQ105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch diameter (102mm) sphere.

AQ105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AQ105.2, Item 9.

AQ105.4 Prohibited locations. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb them.

AQ105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AQ107, shall be exempt from the provisions of this appendix.

SUMMARY

This guideline has been prepared to assist the pool contractor, their subcontractors and their field supervisors. Pool contractors are encouraged to share the content of this guideline with their administrative staff, designers, engineers, subcontractors, and material suppliers.

Periodically, the City of Lewisville intends to update this guideline to reflect building code changes, newly adopted ordinances, and any other information pertinent to residential construction. All contractors currently building pools and/or spas within the City of Lewisville will be responsible for obtaining the most current publication available. Please stop by the Building Inspections Department for the most current addition.

This guideline is not a full disclosure of all codes and ordinances. It is only a supplement to help our pool contractors, their subcontractors and our residents.