



Village of Tinley Park - Building Department
Inground/Onground Swimming Pool
Permit Requirements

16250 S. Oak Park Avenue
Tinley Park, Illinois 60477
(708) 444-5100
Email: Building@tinleypark.org
www.tinleypark.org

The following items are necessary to process your application. If anything is missing, your application will be considered incomplete and will not be processed.

- Date of Application
- Address of Structure
- **Information Required on Your Plat of Survey:**
 - Location of Pool and Setback from Property Lines
 - ComEd Power Line Distances from Pool (Both Above and Underground Lines)
 - Location of Any Pool Equipment and Setback Distances from Pool and Property Lines
 - Location of Equipment and Gas/Electric Lines
- Provide Copies of All Manufacturers Equipment Specifications
- Estimated Cost
- Project Description
 - ▶ Indicate the size of the pool and walkways
 - ▶ Indicate if there is an existing fence – **(Please Review Pool Barrier Requirements)**
- Owner's Name, Address and Phone Number (After project has been completed)
- General Contractor's Name, Address, Phone and License Number (Indicate "Homeowner" if a licensed contractor is not being used)
- Sign and Date Permit Application

POOL FENCE/BARRIER REQUIREMENTS

2021 International Swimming Pool and Spa Code

305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable *safety cover* complying with ASTM F1346 the areas where those spas or hot tubs are located shall not be required to comply with Sections 305.2 through 305.7.

305.1.1 Construction fencing required. The construction sites for in-ground swimming pools and spas shall be provided with construction fencing to surround the site from the time that any excavation occurs up to the time that the permanent barrier is completed. The fencing shall be not less than 4 feet in height.

305.2 Outdoor swimming pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7.

305.2.1 Barrier height and clearances.

Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches where measured on the side of the required barrier that faces away from the pool or spa.
4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and

the bottom of the barrier shall not exceed 4 inches.

305.2.2 Openings.

Openings in the barrier shall not allow passage of a 4-inch-diameter sphere.

305.2.3 Solid barrier surfaces.

Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

305.2.4 Mesh fence as a barrier.

Mesh fences, other than chain link fences in accordance with Section 305.2.7 shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

The bottom of the mesh fence shall be not more than 1 inch above the deck or installed surface or grade.

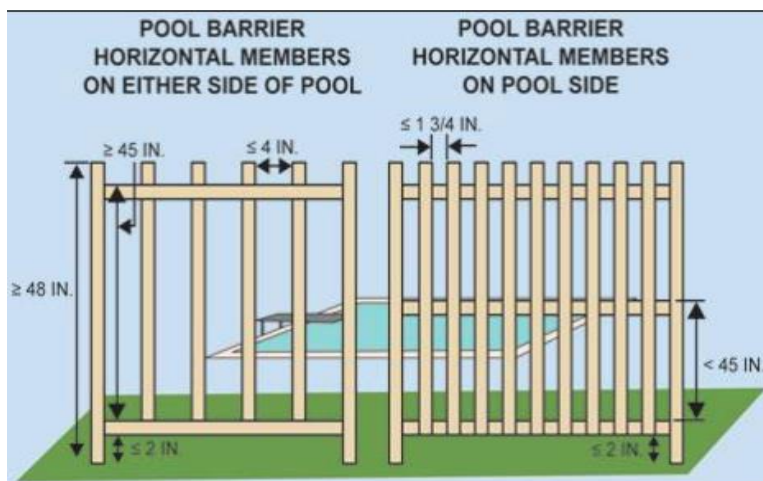
1. The bottom of the mesh fence shall be not more than 1 inch above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall be not greater than 4 inches from grade or decking.
4. An attachment device shall attach each barrier section at a height not lower than 45 inches above grade. Common attachment devices include, but are not limited to, devices that provide the security equal to or greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.
5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section 305.3
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground residential pools.

305.2.4.1 Setbacks for mesh fences.

The inside of a mesh fence shall not be closer than 20 inches to the nearest edge of the water of a pool or spa.

305.2.5 Closely spaced horizontal members.

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, the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed 1 ¾ inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches in width.



Example: Gate Locking Mechanism



305.2.6 Widely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed 1 ¾ inches.

305.2.7 Chain link dimensions.

The maximum opening formed by a **chain link fence shall be not more than 1 ¾ inches**. Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than 1 ¾ inches.

305.2.8 Diagonal members.

Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not greater than 1 ¾ inches. The angle of diagonal members shall be not greater than 45 degrees from vertical.

Clear zone Where equipment, including pool equipment such as pumps, filters and heaters, is on the same lot as a pool or spa and such equipment is located outside of the barrier protecting the pool or spa, such equipment shall be located not less than 36 inches from the outside of the barrier.

305.3 Doors and gates.

Doors and gates in barriers shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access doors and gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

305.3.1 Utility or service doors and gates.

Doors and gates not intended for pedestrian use, such as utility or service doors and gates, shall remain locked when not in use.

305.3.2 Double or multiple doors and gates.

Double doors and gates or multiple doors and gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device.

305.3.3 Latch release.

For doors and gates in barriers, the door and gate latch release mechanisms shall be in accordance with the following:

1. Where door and gate latch release mechanisms are accessed from the outside of the barrier and are not of the self-locking type, such mechanism shall be located above the finished floor or ground surface in accordance with the following:
 - 1.1. At **public pools and spas**, not less than 52 inches and not greater than 54 inches.
 - 1.2. At **residential pools and spas**, not less than 54 inches.
2. Where door and gate latch release mechanisms are of the self-locking type such as where the lock is operated by means of a key, an electronic opener or the entry of a combination into an integral combination lock, the lock operation control and the latch release mechanism shall be located above the finished floor or ground surface in accordance with the following:
 - 2.1. At public pools and spas, not less than 34 inches and not greater than 48 inches.
 - 2.2. At residential pools and spas, at not greater than 54 inches.
3. At private pools, where the only latch release mechanism of a self-latching device for a gate is located on the pool and spa side of the barrier, the release mechanism shall be located at a point that is at least 3 inches below the top of the gate.

305.3.4 Barriers adjacent to latch release mechanisms.

Where a latch release mechanism is located on the inside of a barrier, openings in the door, gate and barrier within 18 inches of the latch shall not be greater than ½ inch in any dimension.

305.4 Structure wall as a barrier.

Where a wall of a dwelling or structure serves as part of the barrier and where doors, gates or window provide direct access to the pool or spa through that wall, one of the following shall be required.

1. Operable windows having a sill height of less than 48 inches above the indoor finished floor, doors and gates shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be *listed* and labeled as a water hazard entrance alarm in accordance with UL 2017.
2. In dwellings not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located at not less than 54 inches above the finished floor.
3. In dwellings that are required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches and not less than 48 inches above the finished floor.
4. In structures other than dwellings, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches and not less than 48 inches above the finished floor
5. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F1346 is installed for the pools and spas.
6. An *approved means* of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

305.5 Onground (Above Ground) residential pool structure as a barrier.

An onground *residential* pool wall structure or a barrier mounted on top of an onground *residential* pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.
2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4- inch diameter sphere.
5. Barriers that are mounted on top of onground *residential* pool walls are installed in accordance with the pool manufacturer's instructions.

305.6 Natural barriers

In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches, a barrier is not required between the natural body of water shoreline and the pool or spa.

305.7 Natural topography.

Natural topography that prevents direct access to the pool or spa area shall include but not be limited to mountains and natural rock formations. A natural barrier *approved* by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by the requirements of Sections 305.2 through 305.5

305.8 Means of Egress.

Outdoor public pools provided with barriers shall have means of egress as required by Chapter 10 of the *International Building Code*.

POOL ELECTRICAL INFORMATION

2017 National Electric Code (NEC)

This is not an all-inclusive list of all the requirements of the 2017 National Electrical Code (**NEC Article 680**). However, the following information is a basic overview of some of the key points of Article 680. Installations shall comply with all of the requirements of the 2017 **NEC Article 680**.

1. Placement of installation of pools shall maintain clearances from overhead conductors, communication cables, and underground wiring. (**2017 NEC – 680.9, Table 680.9(A), Figure 680.9(A)**)

Table 680.9(A) Overhead Conductor Clearances

Clearance Parameters	Insulated Cables, 0-750 Volts to Ground, Supported on and Cabled Together with a Solidly Grounded Bare Messenger or Solidly Grounded Neutral Conductor		All Other Conductors Voltage to Ground			
			0 through 15 kV		Over 15 through 50 kV	
	m	ft	m	ft	m	ft
A. Clearance in any direction to the water level, edge of water surface, base of diving platform, or permanently anchored raft	6.9	22.5	7.5	25	8.0	27
B. Clearance in any direction to the observation stand, tower, or diving platform	4.4	14.5	5.2	17	5.5	18
C. Horizontal limit of clearance measured from inside wall of the pool	This limit shall extend to the outer edge of the structures listed in A and B of this table but not less than 3 m (10 ft).					

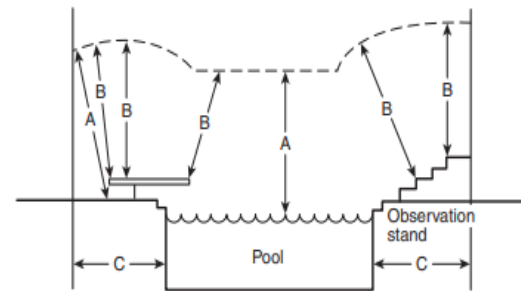


FIGURE 680.9(A) Clearances from Pool Structures.

2. **NEC 300.5** - Branch circuits for pool associated motors shall comply with this section for underground installations. Conductors Installed underground in conduit shall be listed for wet installations.
3. **NEC 680.21 (A)(1)** -The branch circuits for pool associated motors shall be Installed in rigid metal conduits, intermediate metal conduit, rigid polyvinyl chloride conduit, reinforced thermosetting resin conduit. **Any wiring method employed shall contain an insulated copper equipment grounding conductor sized in accordance with 250.122 but not smaller than 12AWG.**
4. **NEC 680.22 (A)(1)** - Where a permanently installed pool is installed at a dwelling unit(s), no fewer than one (1) 125-volt, 15 or 20 ampere receptacles on a general-purpose branch circuit shall be located not less than six (6) feet from, and not more than 20 feet from the inside wall of the pool. This receptacle shall not be located more than six (6) feet six (6) inches above the floor platform, or grade level serving the pool.
5. **NEC 680.22(A)(3)** – Other receptacles shall be not less than 1.83 m. (6 feet) from the inside wall of the pool.
6. **NEC 680.22(A)(4)** - A 15 and 20 ampere receptacles located within 20 feet of the inside wall of the pool shall be protected by ground-fault circuit interrupter. The receptacle shall be tamper resistant per section **NEC 406.12**, and shall be listed as weather-resistant type per **NEC 406.9(A)**. Weather proof cover required.

7. **NEC 680.21(C)** – Outlets supplying pool pump motors connected to single-phase, 120-volt through 240- volt branch circuits, rated 15 or 20 amperes, whether by receptacle or direct connection, shall be provided with ground-fault circuit-interrupter protection for personnel.

Equipotential Pool Bonding:

8. **Bonded Parts: NEC 680.26(B)** - The parts specified in **680.26(B)(1) through (B)(7)** shall be bonded together using solid copper conductors, insulated covered, or bare, not smaller than 8 AWG or with rigid metal conduit of brass or other identified corrosion-resistant metal. Connections to bonded parts shall be made in accordance with **250.8**. An 8 AWG or larger solid copper bonding conductor provided to reduce voltage gradients in the pool area shall not be required to be extended or attached to remote panel boards, service equipment, or electrodes.
9. **Perimeter Surfaces: NEC 680.26(B)(2)** - The perimeter surface to be bonded shall be considered to extend for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces and other types of paving. Perimeter surfaces separated from the pool by a permanent wall or building 1.5 m (5 ft) in height or more shall require equipotential bonding only on the pool side of the permanent wall or building. Bonding to perimeter surfaces shall be provided as specified in **680.26(B)(2)(a), (B)(2)(b), or (B)(2)(c)** and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four points uniformly spaced around the perimeter of the pool. For nonconductive pool shells, bonding at four points shall not be required. (a) Structural Reinforcing Steel. Structural reinforcing steel shall be bonded in accordance with **680.26(B) (1)(a) (b) Alternate Means**. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be utilized where the following requirements are met: 1) At least one minimum 8 AWG bare solid copper conductor shall be provided. 2) The conductors shall follow the contour of the perimeter surface. 3) Only listed splicing devices or exothermic welding shall be permitted. 3) The required conductor shall be 450 mm to 600 mm (18 in. to 24 in.) from the inside walls of the pool. 4) The required conductor shall be secured within or under the perimeter surface 100 mm to 150 mm (4 in. to 6 in.) below the subgrade.
10. **Bonding Pool Water NEC 680.26(C)** - Where none of the bonded parts are in direct connection with the pool water, the pool water shall be in direct contact with an approved corrosion-resistant conductive surface that exposes not less than 5800 mm² (9 in.²) of surface area to the pool water at all times. The conductive surface shall be located where it is not exposed to physical damage or dislodgement during usual pool activities, and it shall be bonded in accordance with **680.26(B)**.

POOL ENERGY REQUIREMENTS

2018 International Energy Conservation Code

1. **R403.10.1** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

2. R403.10.2 Time Switches:

- a. Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

- i. Where public health standards require 24-hour pump operation.
- ii. Pumps that operate solar- and waste-heat-recovery pool heating systems.

3. R403.10.3 Covers.

- a. Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover, or other approved vapor retardant means.

EXCEPTION: Where more than 75 percent of the energy for heating, computed over an operating season of not less than three calendar months, is from a heat pump or on-site renewable energy system, covers or other vapor-retardant means shall not be required.

GENERAL POOL INFORMATION

Location: No pool including surrounding decking or sidewalk, pumps, filters, and pool water disinfection equipment installations, shall be placed less than five (5) feet from the property lines. Nothing is allowed to be placed in any easement area.

Water Supply: No source of water other than that from the Village of Tinley Park Water Department potable water supply shall be used in village swimming pools.

Excavating: All dirt from the excavation of the pool site **must be removed** from the property. The grade of the property cannot be changed, as this effects drainage for the entire subdivision.

Inground Pool - Walk Area: Unobstructed walk areas not less than 36 inches wide shall be provided to extend entirely around the pool. The walk area shall be constructed of impervious material, and the surfaces shall be of such as to be smooth and easily cleaned and of nonslip construction. The slope of the walks shall have a pitch of at least ¼ inch to the foot, designed so as to prevent back drainage from entering the pool.

Gas Heaters: If a gas heater is being installed with an above ground pool, heater specifications are required as part of the permit submission. If the heater is installed independently of the pool permit, a separate permit is required at that time. A gas shut off valve shall be located within 6 feet of the appliance and the gas meter to the residence. The gas line installation must meet both the manufacturer and 2021 International Fuel Gas Code (IFGC) Requirements. A continuous #18 AWG yellow tracer wire shall be buried in the trench adjacent to the gas line per 404.17.3 of the 2021 (IFGC) requirements.

Suction Entrapment Avoidance: 310.1 General. Suction entrapment avoidance for pools and spas shall be provided in accordance with APSP 7. (ANSI/PHTA/ICC 7)

Exceptions:

- 1. Portable spas and portable exercise spas listed and labeled in accordance with UL 1563 or CSA C22.2 No. 218.1.
- 2. Suction entrapment avoidance for wading pools shall be provided in accordance with Section 405.

SECTION 807 POOL FLOORS:

1. **807.1 Floor slopes.** Floor slopes shall be in accordance with Sections 807.1.1 through 807.1.3.
2. **807.1.1 Shallow end.** The slope of the floor from the beginning of the shallow end to the deep area floor slope transition point, indicated in Figure 804.1 as Point E to Point D, shall not exceed 1 unit vertical in 7 units horizontal.
3. **807.1.2 Shallow to deep transition.** The shallow to deep area floor slope transition point, indicated in Figure 804.1 as Point D, shall occur at a depth not less than 33 inches (838 mm) below the *design waterline* and at a point not less than 6 feet (1829 mm) from the beginning of the shallow end, indicated in Figure 804.1 as Point E, except as specified in Section 809.7.
4. **807.1.3 Deep end.** The slope of the floor in the deep end, indicated in Figure 804.1 as Point B to Point D, shall not exceed a slope of 1 unit vertical in 3 units horizontal (33- percent slope).
5. **807.2 Shallow end water depths.** The design water depth as measured at the shallowest point in the shallow area shall be not less than 33 inches (838 mm) and not greater than 4 feet (1219 mm). Shallow areas designed in accordance with Sections 809.6, 809.7 and 809.8 shall be exempt from the minimum depth requirement.

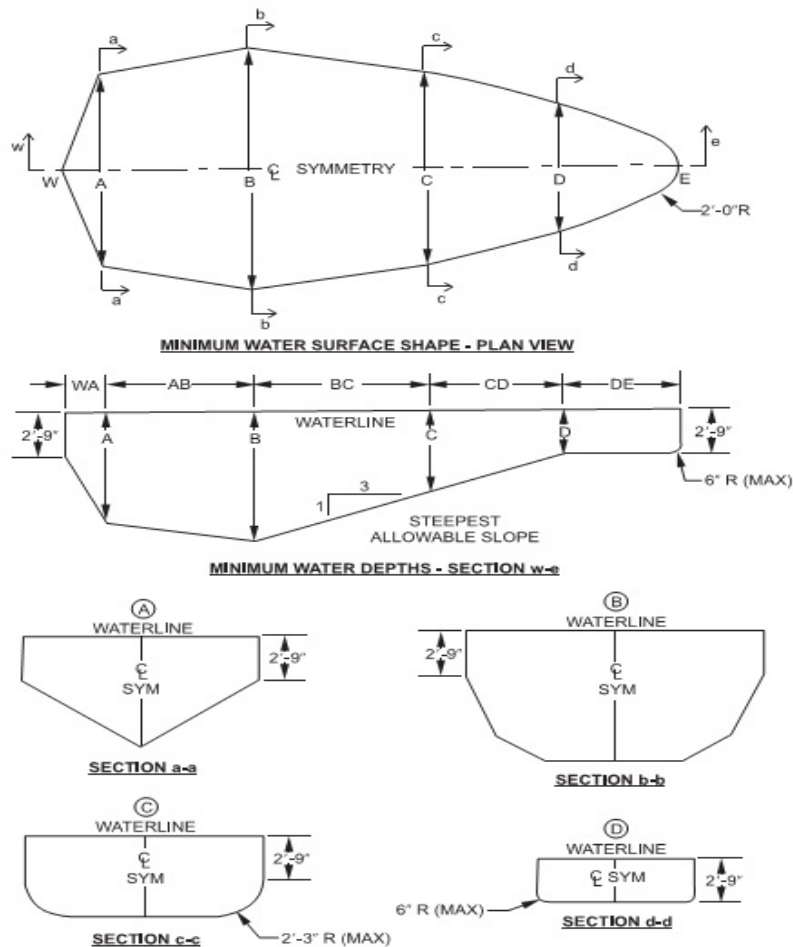


FIGURE 804.1 MINIMUM DIVING WATER ENVELOPE

Section 809 Special Features:

1. **809.1 Slides.** Slides shall be installed in accordance with the manufacturer's instructions.
2. **809.2 Entry and Exit.** Pools shall have a means of entry and exit in all shallow areas where the design water depth of the shallow area at the shallowest point exceeds 24 inches (610 mm). Entries and exits shall consist of one or a combination of the following: steps, stairs, ladders, treads, ramps, beach entries, underwater seats, benches, swimouts and other *approved* designs. The means of entry and exit shall be located on the shallow side of the first slope change.
3. **809.3 Secondary Entries and Exits.** Where water depth in the deep area of a pool exceeds 5 feet (1524 mm), a means of entry and exit as indicated in Section 809.2 shall be provided in the deep area of the pool.

- a. **Exception:** Where the required placement of a means of exit from the deep end of a pool would present a potential hazard, handholds shall be provided as an alternative for the means of exit.
4. **809.4 Over 30 Feet in Width.** Pools over 30 feet (9144 mm) in width at the deep area shall have an entry and exit on both sides of the deep area of the pool.
5. **809.5 Pool Stairs.** The design and construction of stairs into the shallow end and recessed pool stairs shall conform to Sections 809.5.1 through 809.5.3.
6. **809.5.1 Tread Dimension and Area.** Treads shall have a minimum unobstructed horizontal depth of 10 inches (254 mm) and a minimum unobstructed walking surface area of 240 square inches (0.15 m²).
7. **809.5.2 Riser Heights.** Risers, other than the top and bottom riser, shall have a uniform height of not greater than 12 inches (305 mm). The top riser height shall be any dimension not exceeding 12 inches (305 mm) for the width of the walking surface. The bottom riser height shall be any dimension not exceeding 12 inches (305 mm). The top and bottom riser heights shall not be required to be equal to each other or equal to the uniform riser height. Riser heights shall be measured at the horizontal centerline of the walking surface area.
8. **809.5.3 Additional Steps.** In design water depths exceeding 48 inches (1219 mm), additional steps shall not be required.
9. **809.6 Beach and Sloping Entries.** The slope of beach and sloping entries used as a pool entrance shall not exceed 1 unit vertical in 7 units horizontal (14-percent slope).
10. **809.7 Steps and Sloping Entries.** Where steps and benches are used in conjunction with sloping entries, the vertical riser distance shall not exceed 12 inches (305 mm). For steps used in conjunction with sloping entries, the requirements of Section 809.6 shall apply.
11. **809.8 Architectural Features.** Surfaces of architectural features shall not be required to comply with the 1 unit vertical in 7 units horizontal (14-percent slope) slope limitation.
12. **809.9 Maximum Depth.** The horizontal surface of underwater seats, benches and swimouts shall be not greater than 20 inches (508 mm) below the *design waterline*.

Section 810 Circulation Systems:

1. **810.1 Turnover Rate.** The circulation system equipment shall be sized to provide a turnover of the pool water not less than once every 12 hours. The system shall be designed to provide the required turnover rate based on the manufacturer's specified maximum flow rate of the filter, with a clean media condition of the filter.
2. **810.2 Strainer Required.** Pressure filter systems shall be provided with a strainer located between the pool and the circulation pump.

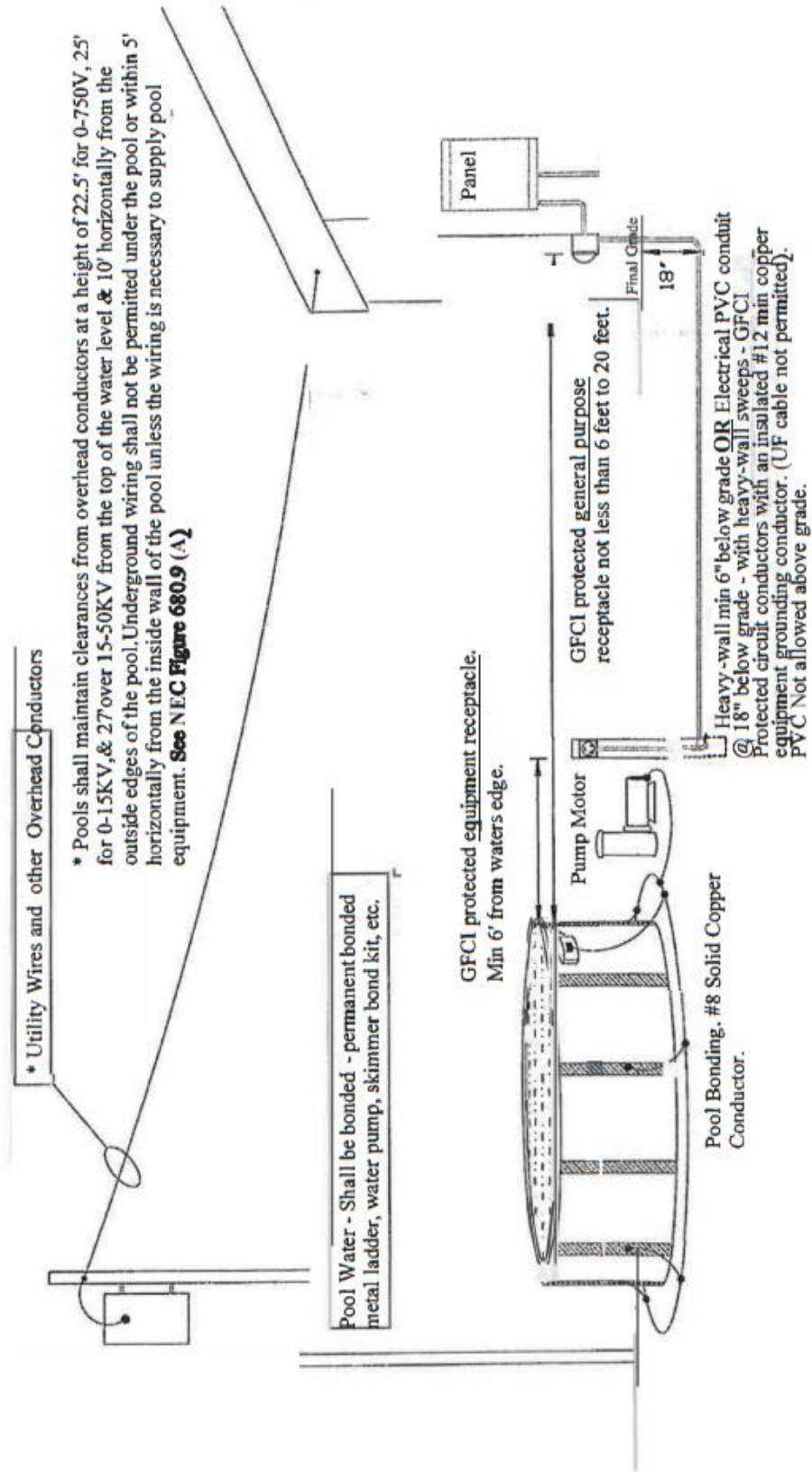
Section 811 Safety Features:

1. **810.2 Strainer Required.** In pools where the point of first slope break occurs, a rope and float assembly shall be installed across the width of the pool. The rope assembly shall be located not less than 1 foot (305 mm) and not greater than 2 feet (610 mm) towards the shallow side of the slope break. Rope anchoring devices shall be permanently attached to the pool wall, coping or deck. Rope ends shall attach to the rope anchor devices so that the rope ends can be disconnected from the rope anchor device.

**If you have any questions, please contact the
Community Development Department at (708) 444-5100.**

Village of Tinley Park

Swimming Pool (Typical Above Ground)



YOUR PLAT OF SURVEY SUBMITTAL
MUST IDENTIFY YOUR PARTICULAR INFORMATION AND EQUIPMENT LOCATIONS AS OUTLINED ABOVE