SWIMMING POOL PERMIT REQUIREMENTS

A. Definitions:

Above Ground/On Ground Pool: See “Swimming pool.”
Barrier: A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.
Earth Disturbance Activity: A construction or other human activity which disturbs the surface of the land, including, but not limited to, clearing and grubbing, grading, excavations, embankments, road maintenance, building construction and the moving, depositing, stockpiling, or storing of soil, rock or earth materials.
Hot Tub: See “Swimming pool.”
Impervious Surface: A surface that prevents the infiltration of water into the ground. Impervious surfaces include, but are not limited to, decks, swimming pools, streets, sidewalks, pavement, roofs, or driveway areas. Any surface areas designed to be gravel or crushed stone shall be regarded as impervious surfaces.
In-Ground Pool: See “Swimming pool.”
Non-Regulated Grading: The addition of less than 1,000 sq. ft of new impervious or 5000 sq. ft of earth disturbance.
Residential: That which is situated on the premises of a detached one or two-family dwelling or a one-family townhouse not more than three stories in height.
Regulated Grading: The addition of 1,000 sq. ft of new impervious surface or 5,000 sq. ft of earth disturbance.
Spa, Non-portable: See “Swimming pool.”
Spa, Portable: A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.
Swimming Pool: Any structure intended for swimming or recreation bathing capable of containing water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.
Swimming Pool, Indoor: A swimming pool which is totally contained within a structure and surrounded on all sides by the walls of the enclosing structure.
Swimming Pool, Outdoor: Any swimming pool which is not an indoor pool.

B. Permit Requirements:

1. Earth Disturbance Activity:
Prior to the submittal of an application to construct or place a swimming pool in the Township of Lower Moreland a Grading permit shall be obtained. In the event construction exceeds 1,000 sq. ft of new impervious surface or 5,000 sq. ft of earth disturbance or alters the natural hydraulic regime, a Regulated Grading permit shall be obtained from the Township Engineer meeting the requirements of the Pennsylvania Stormwater Management Act 167. Construction not exceeding 1,000 sq. ft of new impervious surface or 5,000 sq. ft of earth disturbance or does not alter the natural hydraulic regime, a Non-Regulated Grading permit shall be obtained.
2. Construction:
   a. No in-ground outdoor swimming pool shall be constructed or placed within the Township of Lower Moreland between December 15 and March 15 of any calendar year.
   b. Any person or persons desiring to construct or place a swimming pool shall first make application and submit a fee, as provided for in Chapter A214 “Fees”, and having first received a Grading permit as herein required by PA Act 167.
   c. The following documents shall accompany an application for construction and placement of swimming pools:
      [1] Copy of an approved Grading permit as herein required by PA Act 167.
      [2] A site plan, three (3) sets, prepared by a Land Surveyor or Engineer licensed by the Commonwealth of Pennsylvania at a scale of one inch equals 30 feet, containing:
         i. The proximity of the Swimming Pool to lot lines and existing or proposed buildings and structures.
         ii. Location of all existing and proposed buildings and structures, sidewalks, decks, patios and like improvements.
         iii. Location of private water supply and sanitary sewage systems.
         iv. Easements, right-of-way or other deed or recorded covenants.
         v. Zoning requirements including applicable district, maximum permitted and proposed building and impervious coverage ratios, lot size and yard requirements.
         vi. Type and location of barriers.
      [3] Copy of contract for any required barrier including, but not limited to, fencing and walls.

C. Setback and yard regulations.
   1. No swimming pool shall be constructed within a front yard.
   2. No part of a swimming pool shall be constructed, erected or placed within any side or rear yard when nearer than ten (10) feet from rear or side property lines and that an open grassed or landscaped area of at least ten (10) feet shall be provided between ground coverings, patios, pads, walkways, pool mechanicals, sliding boards and like improvements.
SWIMMING POOL GUIDELINES

Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401

The discharge of any sewage or industrial waste, including swimming pool water to a water of the Commonwealth without a permit is a violation of the Clean Streams Law, the Act of June 22, 1937 P.L. 1987, as amended.

It has been the Department’s policy not to require permits for discharges from single residence pools provided the guidelines outlined below are followed. Local municipalities should be contacted concerning local ordinances.

These guidelines shall not be construed so as to waive or impair any rights of the Department of Environmental Protection to prosecute the property (pool) owner and/or pool company for any stream damage that occurs as a result of the discharge. Penalties would be assessed under the provisions of the Clean Streams Law.

Pool Guidelines:

A. Disposal of Water to Sanitary Sewer

1. If the municipal authority grants permission, discharging of pool backwash water, neutralized pool cleaning wastewater and standing water to the sanitary sewer system is the best environmental alternative. Care should be taken in making sure the discharge is to a sanitary sewer and not a storm sewer which would be hauled off-site for disposal at an approved treatment facility.

B. Discharge of Water

1. The following guidelines must be followed if water is not pumped or hauled to a sanitary sewer. Water should be pumped over a grassy area to allow absorption, filtration and aeration of water. The discharge should be at a rate which prevents erosion and optimizes infiltration. In no event shall pool waters be directly discharged to waters of the Commonwealth.

   a. Standing water or accumulated rain and/or pool water from the previous season should be pumped from the top so as not to disturb settled solids. Solids on the pool bottom should not be discharged. Following pump down of water, solids should be cleaned out manually. The discharge should not raise instream temperatures by more than 2 degrees F in a one hour period or a total of 5 degrees F, pH should be between 6 and 9 standard units and total chlorine residual should be 0.0 mg/l.

   b. Cleaning wastewaters containing muriatic acid of chlorine that is used in cleaning pool surfaces needs to be treated prior to discharge. Muriatic acid wastewater should be neutralized to a pH between 6 and 9 standard units. Chlorine rinses should stand for a period of days to allow chlorine degradation prior to discharge. Total chlorine residual of the wastewater discharge should be less than 0.5 mg/l. Temperature should be monitored as above (standing water), Chlorine rinse water pH should be between 6 and 9 standard units.

   c. Filter backwash water during normal pool operation must be at a sufficiently low volume that all water infiltrates to the ground. Backwash water discharged to a stream or storm sewer is not permitted.

Questions concerning pool guidelines should be directed to Pennsylvania Department of Environmental Protection, Southeast Regional Office, Bureau of Water Management, Telephone: 484-250-5970.
(c) Only within a side or rear yard of a property and shall not be visible from a public street.

(9) See Article 5 of this Chapter relating to Permitted Accessory Use or Structure Setback and Yard Exemptions/Modifications in Lot and Structure Regulations and Exemptions/Modifications (§ 208-507.B.(5)) for specific setback and yard modifications.

F. Fences.

(1) See Table 5-2.4 in this subsection below for the maximum permitted height of fences from the existing grade:

**TABLE 5-2.4**
**MAXIMUM PERMITTED FENCE HEIGHT**

<table>
<thead>
<tr>
<th>YARD OR SETBACK</th>
<th>RESIDENTIAL ZONING DISTRICTS</th>
<th>MIXED USE ZONING DISTRICTS</th>
<th>BUSINESS ZONING DISTRICTS</th>
<th>SPECIAL PURPOSE ZONING DISTRICTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Yard or Minimum Required Front Setback, whichever is greater</td>
<td>4 ft (^2), MU-RO or MU-REV: 4 ft.; MU-VC: 3 ft.</td>
<td>B-OL: 4 ft.; B-IND: 12 ft.</td>
<td>8 ft.</td>
<td></td>
</tr>
<tr>
<td>Side Yard or Minimum Required Side Setback, whichever is greater</td>
<td>6 ft.</td>
<td></td>
<td>12 ft.; or 6 ft. if adjoining a Residential Zoning District (^1)</td>
<td></td>
</tr>
<tr>
<td>Rear Yard or Minimum Required Rear Setback, whichever is greater</td>
<td>6 ft.</td>
<td></td>
<td>12 ft.; or 6 ft. if adjoining a Residential Zoning District (^1)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
1. Properties separated from a Residential Zoning District or residential use by a railroad or street right-of-way are not considered to be adjoining a Residential Zoning District or residential use.
2. Except in the case of a fence to be located in the front yard of a reverse frontage lot that adjoins the street conveying the greater amount of existing or proposed daily traffic, or the street with the higher street classification, in which case the fence may be six (6) feet high.

(2) Any fence exceeding six (6) feet in height shall contain a minimum of fifty (50) percent open area to fifty (50) percent structural area, for that portion of the fence exceeding six (6) feet.

(3) See Article 5 of this Chapter relating to Permitted Accessory Use or Structure Setback and Yard Exemptions/Modifications in Lot and Structure Regulations and Exemptions/Modifications (§ 208-507.B.(5)) for specific setback and yard modifications.

(4) No fence shall block motorist views from vehicles entering or exiting the lot.
(5) Unless required for security purposes for non-residential uses, no fence shall be constructed of barbed wire, razor, or other sharp components capable of causing injury, and only then if the portion of the fence containing the barbed wire, razor, or other sharp components capable of causing injury are located higher than six (6) feet from the surrounding grade.

(6) No fence shall be constructed out of fabric, junk, inoperable vehicles, appliances, tanks or barrels.

(7) In the Residential Zoning Districts or Mixed Use Zoning Districts, fences located in the front yard shall:

(a) Be an open-type of fence (e.g., picket, metal post, wrought iron or split rail) with a minimum of fifty (50) percent open area to fifty (50) percent structural area, except in the case of a fence to be located in the front yard of a reverse frontage lot that adjoins the street conveying the greater amount of existing or proposed daily traffic, or the street with the higher street classification, in which case the fence may be one hundred (100) percent solid.

(b) Not be constructed of “chain-link” material or pattern. Fences shall not be constructed of corrugated metal, corrugated fiberglass, or sheet metal.

(c) Not be constructed or comprised of guide rails, regardless of the materials used to construct that guide rail.

(d) Be permitted to include structural posts and supports of a fence that are designed and integrated as decorative or architectural features with a maximum height of six (6) feet.

(e) Be permitted to include a maximum of one (1) arbor, canopy, trellis or similar decorative garden structure with a maximum height of ten (10) feet and maximum width of four (4) feet.

G. Outside Refuse Collection Containers/Stations.

(1) All items and materials stored shall be kept in an orderly fashion to permit access and circulation for emergency response.

(2) In those instances where outside refuse collection containers/stations are required in accordance with this subsection and elsewhere in this Chapter or the applicable design and construction standards and requirements of Chapter 180 of the LMT Codified Ordinances relating to Subdivision of Land (as applicable), outside refuse collection containers/stations shall comply with the following requirements:

(a) Outside refuse collection containers/stations shall comply with the applicable design and construction standards and requirements of Chapter 180. Deviations from the standards and requirements listed in Chapter 180 that are proposed during the:
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.

Sections 305.2 through 305.7 cover the requirements for barriers.

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

2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) 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 (102 mm) 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 (102 mm).

The barrier height of 48 inches (1219 mm) ensures that smaller children cannot simply “hop the fence” to gain access to the pool or spa. Those persons who are capable of climbing over a 48-inch-high (1219 mm) barrier are probably of sufficient maturity to avoid the pool if they cannot swim or are uncomfortable with the idea of entering the water of a spa. The height is measured on the outside of the barrier from the highest elevation of grade or concrete slab for a distance of 3 feet (914 mm) away from the outside of the barrier [see Commentary Figure 305.2.1(1)]. This requirement coordinates with Section 305.2.9 that requires a clear zone of 36 inches (914 mm) around the outside of the barrier.

Barriers that are not close to the surface of the ground could be bypassed by a child maneuvering under the barrier. Where over grass or gravel, the bottom of the barrier must be within 2 inches (51 mm) of the ground surface from which the grass grows from or onto which the gravel is placed. It is unlikely that a child would be able to dig out more than 2 inches (51 mm) of settled, naturally compacted earth in order to make an opening large enough to gain access to the pool or spa. If the bottom of the barrier is over concrete, the bottom must be within 4 inches (102 mm) of the concrete surface to prevent a child from maneuvering through the opening to gain access to the pool or spa [see Commentary Figures 305.2.1(2) and (3)].

The top of a pool or spa could be above grade. The barrier for this arrangement could be installed at grade or the barrier could be installed on top of the pool or spa [see Commentary Figure 305.2.1(4)]. Where mounted on top of the pool or spa, the vertical clearance from the top of the pool or spa to the underside of the barrier cannot exceed 4 inches (102 mm) [see Commentary Figure 305.2.1(5)] to prevent a child from maneuvering through the opening to gain access to the pool or spa.

305.2.2 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

The 4-inch (102 mm) opening is narrow enough to prevent passage of a small child through the barrier (see Commentary Figure 305.2.2).
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.

- An important characteristic of a barrier is that the exterior vertical face not offer any protrusions or indentations such that a toehold or handhold could assist in the climbing of the barrier.

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:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) 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 (102 mm) from grade or decking.

3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface
For 1 inch = 25.4 mm.

**FIGURE 305.2.1(3)**
MAXIMUM CLEARANCE FROM BOTTOM OF BARRIER TO SOLID SURFACE

For 1 inch = 25.4 mm, 1 foot = 304.8 mm.

**FIGURE 305.2.1(4)**
HEIGHT OF BARRIER WHERE MOUNTED ON TOP OF THE POOL OR SPA
4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) 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.

Mesh fences provide a temporary, removable barrier for a pool or spa. For example, consider a pool with a permanent barrier on three sides and the fourth side is bounded by a building. During times when the pool is not in use, a mesh barrier could be erected between the pool and the building so that the space between the building and the mesh fence could be used without concern that the pool could be easily accessed by children. The bottom of the mesh barrier (fence) must not be able to be lifted more than 4 inches (102 mm) above the pool deck so that a child cannot crawl under the barrier. The attachment devices between mesh barrier sections and the posts must be not less than 45 inches (1142 mm) above the deck so that they are out of reach of small children. The attachment devices must offer the same difficulty to disengage as a spring-loaded hook and eye latch. Gates with mesh fences must comply with gate requirements in Section 305.3.

Mesh fences must not be used on top of onground residential pools because mesh fencing cannot resist the forces of an adult falling against it. An adult could
topple off the deck of an above-ground pool and onto the ground below (see Commentary Figure 305.2.4).

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 (1143 mm), the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed 1 3/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches (44 mm) in width.

- Conventional fencing that is not chain link fence is typically constructed with horizontal rails attached to vertical posts. Vertical pickets are fastened to the horizontal rails to complete the barrier. If the distance between the top surface of the horizontal rails is less than 45 inches (1143 mm), such spacing could allow a child to climb up and over the barrier. Therefore, these closely spaced rails must be located on the pool or spa side of the barrier so that a child on the outside of the barrier cannot climb over it. Where closely spaced rails exist and are exposed between vertical members on the exterior of the fence, the gap between vertical pickets must not be more than 1 3/4 inches (44 mm) wide so that a child cannot wedge his or her foot in the gap and gain a handhold on the top closely spaced horizontal member in order to scale the fence (see Commentary Figure 305.2.5(1)). Any decorative cutouts in the pickets must not have an opening greater than 1 3/4 inches (44 mm) for the same reason (see Commentary Figure 305.2.5(2)).

There are welded metal wire mesh products and flexible "on a roll" plastic fence products that "technically comply" with the dimensional requirements of this section. However, this section was written with the typical wood or rigid vinyl fence construction in mind. Consider a wood fence with 4-inch by 4-inch vertical posts with two 2-inch by 4-inch horizontal rails (one near the top, one near the bottom of the fence)
with 3/4-inch-thick vertical pickets (4 to 6 inches wide) horizontally spaced apart not more than about the thickness of 2-inch (nominal) material. Such construction has “thickness of its vertical members,” making it difficult to climb. For example, reaching between the pickets to grab onto a 2-inch by 4-inch horizontal rail will be difficult. Similarly, wedging the toe of a shoe between the (thick) pickets to get a toehold onto the horizontal rail will be difficult. And generally, such a fence would not be constructed with many closely spaced horizontal rails as it would be too costly and structurally unnecessary.

Do these metal or plastic mesh products with horizontal “members” every 4 inches or closer (but with the width between vertical “members” less than 1 3/4 inches) offer an equivalent resistance to climbing by children? Does such a product offer a similar rigidity and ruggedness to a fence constructed of wood members given that the code does not specify a distance between vertical posts? There are situations where, for public safety, a code official might have to make a decision about items that are not specifically covered by the code. Section 102.8 provides support to the code official in these instances.

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 (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed 1 3/4 inches (44 mm).

Conventional fencing that is not chain link fencing is typically constructed with horizontal rails attached to vertical posts. Vertical pickets are fastened to the horizontal rails to complete the barrier. If the distance between the top surface of the horizontal rails is greater than or equal to 45 inches (1143 mm), such spacing poses a climbing difficulty for children. Therefore, these widely spaced rails could be located on either side of the fence. Because there is not a reachable horizontal top member to gain a handhold, the vertical pickets could be spaced as far as 4 inches apart [see Commentary Figure 305.2.6(1)]. However, note that Section 305.2.2 requires that openings in the barrier must not allow the passage of a 4-inch (102 mm) sphere. Any decorative cutouts in the pickets must not have an opening that is greater.

For SI: 1 inch = 25.4 mm.

**FIGURE 305.2.5(2)**
MAXIMUM OPENING WIDTH OF DECORATIVE CUTOUTS IN BARRIER MATERIALS

**FIGURE 305.2.6(1)**
MAXIMUM SPACING BETWEEN VERTICAL MEMBERS WHERE DISTANCE BETWEEN TOPS OF HORIZONTAL MEMBERS IS 45 INCHES OR GREATER
than 1 3/4 inches (44 mm) to prevent a child from gaining a foothold to scale the fence [see Commentary Figure 305.2.6(2)].

Commentary Figure 305.2.6(2) shows a barrier. The fence is known to be 4 feet (1219 mm) high. It is obvious that the distance between the horizontal rails is less than 45 inches (1143 mm) and the vertical pickets spaced wider than 1.75 inches (44 mm). Thus, this fence is a violation because the horizontal members are not at least 45 inches (1143 mm) apart.

305.2.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than 1 3/4 inches (44 mm). Where the fence is provided with slats fastened at the top and bottom which reduce the openings, such openings shall be not more than 1 3/4 inches (44 mm).

- Chain link fencing has diamond-shaped or square openings. The most common sizes of chain link openings (measured between parallel sides of the opening) are 2 inches (51 mm) and 2 1/4 inches (57 mm). This section requires that the openings be not greater than 1 3/4 inches (44 mm) so that a child cannot wedge his or her foot in the opening in order to climb the fence (see Commentary Figure 305.2.7). Two-inch (51 mm) and 2 1/4-inch (57 mm) chain link fence must have the openings reduced in size by the installation of slats (sometimes called privacy slats) vertically or diagonally. Where slats are used, they must be attached to the top and bottom of the fence so that they cannot be removed for gaining a hand- or foothold on the fence. The slats must be of a width that reduces the openings to less than 1 3/4 inches (44 mm).

Chain link fencing is also available in 1 3/4-inch (32 mm) size (mesh). The resulting diagonal opening is 1 3/4 inches (44 mm). Therefore, slats would not be required for this size of chain link fence.

305.2.8 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not more than 1 3/4 inches (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

- Some barrier designs use diagonal members (latticework) as part of the barrier. Where diagonal members are installed, the angle cannot be more than 45 degrees (0.79 rad) from vertical and the opening created by the diagonal members cannot be greater than 1 3/4 inches (44 mm) so a child cannot wedge a foot in the opening to climb the barrier (see Commentary Figure 305.2.8).
GENERAL COMPLIANCE

305.2.9 Clear zone. There shall be a clear zone of not less than 36 inches (914 mm) between the exterior of the barrier and any permanent structures or equipment such as pumps, filters and heaters that can be used to climb the barrier.

❖ A barrier of any height is not much of a deterrent to gaining access to the pool or spa if there is equipment, trees or storage boxes that are within 3 feet (914 mm) of the outside of the barrier. These items could be used to assist someone in climbing over the barrier.

305.2.10 Poolside barrier setbacks. The pool or spa side of the required barrier shall be not less than 20 inches (508 mm) from the water’s edge.

❖ Barriers must not be installed so close to the pool or spa such that if a child did manage to climb over the barrier, he or she would not immediately fall into the water.

305.3 Gates. Access gates 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 gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

❖ There can be two types of gates in a barrier: a service access gate, which is required by Section 305.3.1 to be secured by a lock, and a pedestrian gate for user access to the pool or spa. This section requires that pedestrian gates open outward, self-close and self-latch so that the barrier is continuous all around the pool or spa after a user passes through the gate. The code is not specific as to the conditions whereby the gate must be self-closing and self-latching. Wind, degree of opening and instability of the barriers and gate could affect the closing and latching of the gate. The code official will have to use his or her best judgment concerning this section. Commentary Figure 305.3 shows a pedestrian access gate that swings in the wrong direction.

Some code officials might consider an outdoor public pool and spa area a location where “means of egress,” as defined by the IBC, applies. Section 1010 of the IBC pertaining to doors and gates has requirements for self-closing and self-latching doors (of which the IBC considers gates as doors).

305.3.1 Utility or service gates. Gates not intended for pedestrian use, such as utility or service gates, shall remain locked when not in use.

❖ This section requires that service gates be locked when not in use.

305.3.2 Double or multiple gates. Double gates or multiple gates shall have at least one leaf secured in place and the adjacent leaf shall be secured with a self-latching device. The gate and barrier shall not have openings larger than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the latch-release mechanism. The self-latching device shall comply with the requirements of Section 305.3.3.

❖ In some cases, gates could be installed with several movable (swinging) sections. One swinging section must be provided with a self-latching device that is located on the pool or spa side of the gate. The other portions of the gate must be secured so that they are normally stationary. For example, the normally stationary side of the gate might be prevented from swinging by a sliding rod mounted on the gate that can penetrate into a hole in the deck or walkway. The latch on the other gate must be of the self-latching type and must be on the pool or spa side of the gate. The inside release mechanism must be protected against tampering from the outside of the gate by providing a solid panel or mesh with openings of not greater than 1/2 inch (12.7 mm). The panel or small opening mesh must extend not less than 18 inches (457 mm) in all directions (except not beyond the top of the required gate height) of the inside latch-release mechanism (refer to the commentary to Section 305.3.3).

305.3.3 Latches. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches (76 mm) below the top of the gate, and the gate and barrier shall not have openings greater than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

❖ This section requires that the gate’s latch-release mechanism on the nonpool or spa side of the gate be not less than 54 inches (1372 mm) above grade or, if less than 54 inches (1372 mm), then the release mechanism must be on the pool or spa side of the gate. Placing the release mechanism at 54 inches (1372 mm) puts the release out of reach of small children. But there may be aesthetic reasons for having the latch at less than 54 inches (1372 mm) above grade. Where located on the pool or spa side of the gate, the latch must be not less than 3 inches (76 mm) below the top of the gate. This allows for adults outside of the gate to reach the latch but preventing children outside the gate from reaching the latch.

FIGURE 305.3
VIOLATION—WRONG SWING DIRECTION ON PEDESTRIAN ACCESS GATE
release. The inside (backside of the gate) release mechanism must be protected against tampering from the outside of the gate by providing a solid panel or mesh with openings of not greater than \( \frac{1}{2} \) inch (12.7 mm). The panel or small opening mesh must extend not less than 18 inches (457 mm) in all directions of the inside latch-release mechanism [see Commentary Figure 305.3.3(1)].

This section reflects the "traditional approach" for latch-release mechanisms on pedestrian access gates to pool and spa areas. Although suitable for most residential (as defined by this code) pool and spa access gates, this approach might not coordinate with designs for accessibility and controlled access needs in a public environment. For example, a latch-release on the inside (backside) of the gate or at a 54-inch height above the walking surface on either side of a gate is out of the reach range for persons seated in a wheelchair. Key card or key entry might also be necessary to control when the pool or spa can be used and who can use the pool or spa [see Commentary Figure 305.3.3(2)]. Therefore, the designer of the barrier system and pedestrian access gate for a public environment will need to assess each gate arrangement against all code requirements and the needs of the client in order to propose an alternative method to the code official for compliance to this section (see Section 104.11).

![Diagram of barrier gate latch release](image)

**FIGURE 305.3.3(1)**
LOCATION AND PROTECTION OF BARRIER GATE LATCH RELEASE WHERE LOCATED AT LESS THAN 54 INCHES ABOVE WALKING SURFACE

**FIGURE 305.3.3(2)**
KEY CARD ENTRY ON GATE TO POOL AND SPA AREA MIGHT REQUIRE ALTERNATIVE METHOD APPROVAL

For SI: 1 inch = 25.4 mm.
305.4 Structure wall as a barrier. Where a wall of a dwelling or structure serves as part of the barrier and where doors or windows 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 (1219 mm) above the indoor finished floor and doors 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. In dwellings or structures not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located 54 inches (1372 mm) or more above the finished floor. In dwellings or structures 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 (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.

2. A safety cover that is listed and labeled in accordance with ASTM F1346 is installed for the pools and spas.

3. 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.

A building wall can serve as part of the barrier. Where that building wall has openings such as doors or operable windows, those openings can provide access to the pool or spa by a child. If the wall has only operable windows and those windowsill heights are 48 inches (1219 mm) or more above the inside floor of the structure, then the wall provides a similar level of protection that a 48-inch-high (1219 mm) barrier does. Although furniture could be placed against that wall that could aid in a child gaining access to the window, the code official can only be concerned about the height of the window above what is considered to be a permanent and "normal" walking surface. The code official doesn't have any control over the placement of furniture in a building. Walking surfaces would include, for example, permanent stairs and landings intersecting walls having operable windows. However, a kitchen counter with windows just above the countertop would not be considered a "normal" walking surface even though a child might use kitchen drawers to climb to the countertop to access the window.

If the operable windowsill heights are lower than 48 inches (1219 mm) above the floor, either screen or window alarms listed and labeled to UL 2017 must be installed; or a safety cover listed and labeled to ASTM F1346 must be provided for the pool or spa (see Commentary Figure 305.4(1)).

Where there is a door in the wall, either a door alarm listed and labeled to UL 2017 must be installed; or a safety cover listed and labeled to ASTM F1346 must be provided for the pool or spa. A third option for a door could be to provide a self-closing and self-latching door with a latch-release mechanism that is not less than 54 inches (1372 mm) above the floor, but this option requires approval by the code official.

Where a door or window alarm is installed, the deactivation switches must be not less than 54 inches (1372 mm) above the floor [see Commentary Figure 305.4(2)]. This height corresponds to the same height required for latch-release mechanisms for gates in Section 305.3.3. Where the structure is required to be an Accessible unit, a Type A accessible unit or a Type B accessible unit, the deactivation switch height can be reduced to 48 inches (1219 mm) above the floor to be within upper reach range of persons seated in a wheelchair. Accessible units, Type A accessible units and Type B accessible units are defined in the IBC.

Note that Item 2 does not specify that pools are required to have a powered safety cover in compliance with ASTM F1346. A manual safety cover is the minimum requirement. This is in contrast to Exception 2 in Section 305.1 for not requiring a barrier around the pool. If there is a barrier around the pool (perhaps a structure forms part of that barrier) or the pool has a powered safety cover, then the public at large is kept safe. The requirement for a safety cover (manual type as a minimum) for relief of the alarm requirement for doors and windows for a structure serving as part of the barrier is more for the occupants (including their children) of the structure. It is then a personal decision by the occupant as to whether they will install the safety cover to protect their children. The code intends that the means for safety be provided to the occupant—the code official cannot make the occupant use those means. Commentary Figure 305.1(4) shows a manual installed safety cover (however, it is unknown whether what is shown meets ASTM F1346). Note the barrier (fence) in the background on the left of the photo.

305.5 On-ground residential pool structure as a barrier.
An on-ground residential pool wall structure or a barrier mounted on top of an on-ground 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 (1219 mm) 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 (1219 mm) 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
FIGURE 305.4(1)
STRUCTURE OR DWELLING WALL SERVING AS A BARRIER TO A POOL OR SPA

FIGURE 305.4(2)
ALARM DEACTIVATION DEVICE LOCATION FOR OPENING IN STRUCTURE OR DWELLING WALL SERVING AS BARRIER TO A POOL OR SPA
IMPORTANT — BEFORE YOU START

1. READ INSTRUCTIONS
   Take your time and read these instructions thoroughly before you begin the pool installation. Follow all instructions. Do not take short cuts. Refer to the back page of this Owner's Manual and record the appropriate information.

2. CHECK LOCAL CODES — GET BUILDING PERMITS IF NECESSARY
   Check your local building and electrical codes concerning installation of above ground pools. You should have all required permits before you start the ground preparation.

3. GET EVERYTHING TOGETHER
   Review the tools and materials that you will need to install the pool. Purchase what you will need.

4. SETTING UP THE POOL
   Do not attempt to install your pool on a windy day. The pool wall is extremely hard to handle in the wind and could possibly collapse causing permanent damage to your wall. Install your liner on a warm sunny day (60°F) so the liner can stretch to fit the pool correctly.

DETERMINE POOL LOCATION

Look over the various pool location situations shown at right.

1. TERRAIN
   Look over your property for the most ideal pool location. A large area is best. If you have no flat area large enough for the pool then try to pick a spot where you would have the least amount of digging to do. Do not install your pool with any of the wall area underground – or located in a major water drainage depression or sewer drain field.

2. CONVENIENT ELECTRICAL OUTLETS
   Your filter and other accessories are operated by electricity. If there are no outside electrical outlets, you must have them installed by a qualified electrician in accordance with the National Electrical Code, Section 680.

3. OVERHEAD ELECTRICAL WIRES
   The pool should never be placed directly under any overhead power lines for precautionary measures. In some communities this is against the law.

4. UNDERGROUND CABLES AND UTILITIES
   Before you start digging into the ground to level the surface, it would be wise to check with your telephone, electric and gas utilities as to the location of any underground lines or pipes.

5. TREES
   Trees and their occupants are not best of friends with swimming pools. Falling leaves, branches and sap can be a constant problem in keeping the pool water clean (along with bird droppings and insects falling into the pool). These materials will necessitate cleaning your filtering unit more often. The further away from a tree, the better for your pool.

GROUND SURFACE

It is important that the ground surface be firm and solid. The area must be free of grass, stones, roots and sharp objects. Any stones or roots flush or just below the ground surface must be removed. The earth below the pool will compress under the weight of the water and will expose these items to the liner causing damage. Any grass under the pool will rot and give off an unpleasant odor.

Avoid installing your pool on ground that has been recently treated with oil base weed killers, chemicals or has been heavily fertilized. Avoid areas growing Nut Grass or Bermuda Grass (these grasses can grow up through pool liner).

DO NOT INSTALL YOUR POOL ON:
- concrete
- asphalt
- peat moss
- tar paper
- sand
- gravel
- wood
- chemically treated soil
- grass
Typical pole with Electric, Cable TV and Bell Telephone facilities. (This is a generic diagram, some poles will have more or less facilities)

**Secondary cables** 120/240 volts
(3) open wires 8" space between cables.

Most poles will have secondary cables, this diagram shows both kinds that PECO has on their system.

**High Voltage** (This measurement always applies) Some poles may have only one wire without a crossarm.

**Secondary cables** 120/240 volts
(3 cables together)
If pool is 10' horizontal from this kind of secondary cables the 25' rule does not apply.

This rule applies to most aerial services to a house.

On ground pool

This diagram does not address clearances for towers, diving platforms or decks for on ground pools.
Contact PECO Energy for additional information.
There may be charges to the customer to relocate facilities

Not drawn to scale