Village of Menands
Swimming Pool: General Technical Guidance

Overview

This document is intended to provide thorough, though non-comprehensive, technical guidance detailing relevant and applicable code requirements for the construction of residential swimming pools, hot tubs and spas. Though not all NYS and Village regulatory requirements for swimming pools are included, those that are included within this package are necessary to be met for the lawful construction of a pool, hot tub or spa. Compliance with the codes included within this technical guidance document does not ensure complete compliance with all current codes. Individuals or entities planning on building a swimming pool should still review the NYS Uniform Building Code.

While not all inclusive, the comments within the technical guidance should be used as a general guide to code compliance. Complete and accurate information will expedite the plan review process. After reviewing the technical guidance, please review the application information sheet, which details the necessary paperwork to be submitted prior to permit acquisition.

Definitions

Permanent Barrier:

A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

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.

Swimming Pool:

Any structure, basin, chamber or tank which is intended for swimming, diving, recreational bathing or wading and which contains, is designed to contain, or is capable of containing water more than 24 inches (610 mm) deep at any point. This includes in-ground, above-ground and on-ground pools; indoor pools; hot tubs; spas; and, fixed-in-place wading pools.

Temporary Barrier:

An approved temporary fence, permanent fence, the wall of a permanent structure, any other structure, or any combination thereof that prevents access to the swimming pool by any person not engaged in the installation or construction of the swimming pool during its installation or construction.

Regulations

Temporary Barriers*:*

An outdoor swimming pool, including an in-ground, aboveground or on-ground pool, hot tub or spa shall be surrounded by a temporary barrier during installation or construction and the temporary barrier shall remain in place until a permanent barrier is provided. A temporary barrier measuring at least 48 inches in height above grade (as measured on the side of the barrier which faces away from the swimming pool) must be installed in every scenario except:

1) The swimming pool is an above-ground construction in excess of 48 inches in height AND with stairs which can be locked and/or made inaccessible; or

2) The structure is a hot tub that has a cover in compliance with ASTM F 1346. Manufacturer specifications shall be checked to ensure cover compliance.

A temporary barrier shall be replaced by a complying permanent barrier (see below) within either of the following periods:

1) 90 days of the date of issuance of the building permit for the installation or construction of the swimming pool; or
2) 90 days of the date of commencement of the installation or construction of the swimming pool.

Permanent Barriers:

An outdoor swimming pool, including an in-ground, aboveground 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 above grade as 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 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.
2) Openings in the barrier shall not allow passage of a 4-inch diameter sphere.
3) Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions, which could be used to climb the barrier, except for normal construction tolerances and tooled masonry joints.
4) Where the barrier is composed of crossing horizontal, vertical or diagonal members, design drawings submitted with the Swimming Pool Supplemental Application shall include a detail of the barrier including:
    a. Area of openings between members.
    b. Side of the barrier on which crossing members are installed.
5) Maximum mesh size for chain link fences shall be 2.25-square inches unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1.75-square inches.
6) The barrier shall be situated so as to prevent the use of nearby structures/features as tools to climb the barrier.

Permanent Barrier Gates:

Gates installed in permanent barriers shall comply with the following:

1) All gates shall be self-closing. If the gate is a pedestrian access gate, the gate shall open outward, away from the pool.
2) All gates shall be self-latching, with the latch handle located within the enclosure (i.e., on the pool side of the enclosure) and at least 40-inches above grade. In addition, if the latch handle is located less than 54-inches from the bottom of the gate, the latch handle shall be located at least 3-inches below the top of the gate, and neither the gate nor the barrier shall have any opening greater than 0.5-inch within 18-inches of the latch handle.

3) All gates shall be securely locked with a key, combination or other child proof lock sufficient to prevent access to the swimming pool through such gate when the swimming pool is not in use or supervised.
4) Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:
    a. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or
    b. 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 in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54-inches above the threshold of the door; or
    c. Other means of protection, such as self-closing doors with self-latching devices, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by 4a or 4b as described above.
5) 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:
    a. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
    b. The ladder or steps shall be surrounded by a barrier which meets the requirements specified for permanent barriers. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch diameter sphere.

<u>Entrapment Protection for Suction Outlets</u>

Pools must be equipped with water circulation systems. These systems are required to provide entrapment protection at suction outlets to mitigate the potential for individuals to become trapped. The major code requirements that apply to water circulation systems include:

1) All pool and spa suction outlets must be equipped with a cover that conforms with ANSI/ASME A112.19.8M, or a drain grate that is at least 18-inches by 23-inches, or an approved channel drain system; and
2) Separate suction outlets must be at least three feet apart; and
3) Circulation systems must be equipped with an atmospheric vacuum relief system, which automatically terminates suction when a suction outlet becomes clogged. The vacuum relief system shall include at least one of the following:
    a. Safety vacuum release system conforming to ASME A112.19.17; or
    b. An approved gravity drainage system.

<u>Swimming Pool & Spa Alarms</u>

All swimming pools or spas installed, constructed, or substantially modified after December 14, 2006 must be equipped with a pool alarm except:

1) A swimming pool (other than a hot tub or spa) equipped with an automatic power safety cover which complies with ASTM F1346; or
2) A hot tub or spa which is equipped with a safety cover which complies with ASTM F1346.

Pool alarms must comply with ASTM F2208. Pool alarms must be capable of detecting entry into the water at any point on the surface of the swimming pool and shall activate upon detection of such entry so that the alarm can be heard both in the swimming pool and inside the dwelling.

Additional Requirements

Additional pool requirements on factors such as safety glazing, backflow prevention, and pool heaters can be found in the Uniform Fire Prevention and Building Code and the Energy Conservation Construction Code of New York State or by contacting the Department of State Codes Division at (518) 474-4073. Additional pool requirements can also be found at the NYS Department of Health Website at http://www.health.state.ny.us/nysdoh/phforum/nycrr10.htm.