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Common Pool Barrier Questions

Code:2018 North Carolina Residential Code **Date:** November 4, 2026

Section: AV 105.2
Revised: Nov 4, 2026
See question #9.

The following list of frequently asked questions (FAQ's) was compiled and summarized in this web interpretation. These responses have been communicated over several code cycles from this office (OSFM) on an individual basis for some of the listed items, and other items are individually already posted on their own. This web interpretation is intended to provide a more visible, more uniform resource for people interested in this topic. Please refer to the actual question for the detailed answer, the question titles are only key words, or the topic being discussed in each respective question.

FAQ's addressed in this web interpretation:

Question 1: Automated Pool Covers - general
Question 2: Automated Pool Covers - in Lieu of Door Alarms
Question 3: Barriers Composed of Weighted Bases (No Drill)
Question 4: Permanent construction requirement
Question 5: Strength, or loading requirements of barrier
Question 6: Adjacent structure used as ladder
Question 7: Use of neighbor's fence
Question 8: Nylon or other non-metallic mesh infill
Question 9: Barrier location

Question 1: Automated Pool Covers - general

Can an automated pool safety cover be substituted for the pool barrier in North Carolina?

Answer: No.
Although the International Swimming Pool and Spa Code has for several iterations allowed powered safety covers that comply with ASTM F1346 to be used in lieu of a barrier[i], the North Carolina Building Code Council has consciously chosen to not adopt this standard in its entirety or the pool cover allowance in particular, therefore it is not a code-recognized method or alternate method.

It is understood that manufacturers market nationally and internationally and claim code

compliance respectively. It is also understood that their marketing literature contains overly broad statements as different states and countries have different minimum requirements. An individual can install a safety cover, in addition to the minimum barrier requirements, but it does not eliminate the barrier requirement as set forth in NCRC, section AV105.2.

Question 2: Automated Pool Covers - in Lieu of Door Alarms
Isn't AV105.2, item 9, allowing for an automated pool cover as a substitute for a barrier?

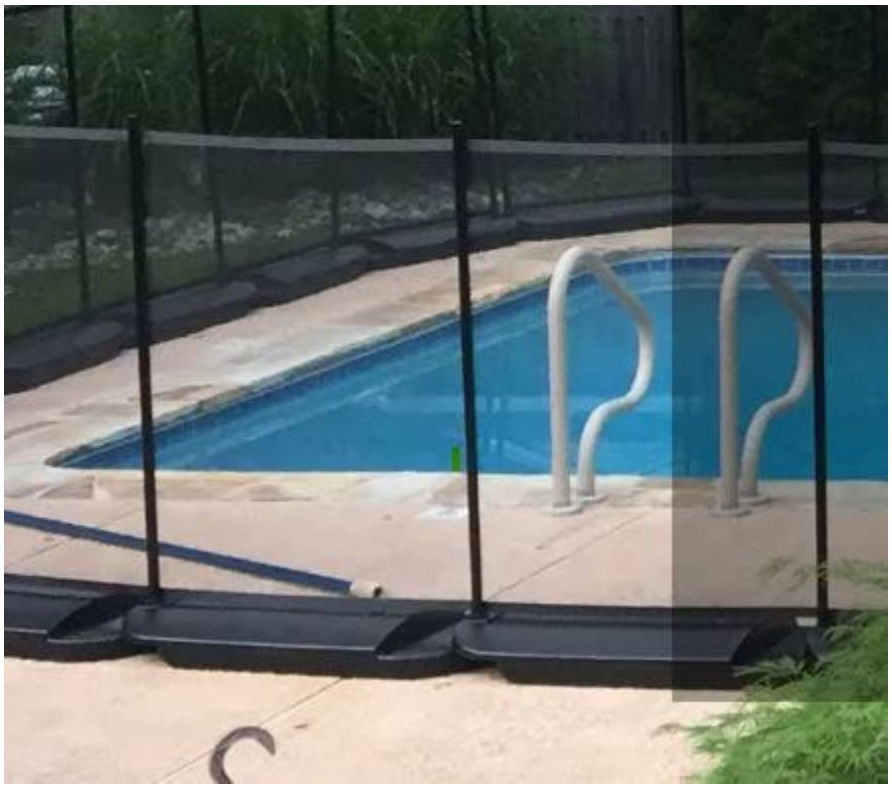
Answer:
No. Here is the language:

> **AV105.2 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:
>
> (Items 1-8, and 10 are not shown for brevity)
>
> 9. Where a wall of a *dwelling* serves as 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 that 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 (1372 mm) 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 Item 9.1 or 9.2 described above.

In this case, the powered safety cover is **only** to be used in lieu of door alarms that may be a part of the wall that forms the barrier. The remainder of the pool perimeter that is not protected by a building wall is still subject to the barrier requirements.

Question 3: Barriers Composed of Weighted Bases (No Drill)
Can the pool barrier be composed of removable weighted barriers, or other portable methods commonly marketed?

Figure 1: Pool barrier composed of water-filled bases[ii]



Answer.
No, the barrier must be permanent. This interpretation is consistent with the NCRC in general, as temporary fencing or barriers are not something that a code official can inspect or anticipate to be part of the pool area for any appreciable time. These barriers could be used in addition to permanent barriers where the building owner wants another level of security, and are used in states or jurisdictions without codes adopted for pool barriers.

Question 4: Permanent construction requirement
What is the interpretation of "permanent"?

Answer:
The term "permanent" shall mean not being able to be removed, lifted, or relocated without the use of a tool. There are pool barrier systems that use poles pushed into a receiving socket embedded or drilled into a pool deck, and if this connection locks in place, and requires a tool to remove, then that pole would be considered permanent. The fencing material and strength of the pole and fence still need to be addressed separately.

Question 5: Strength, or loading requirements of barrier
What are the strength, or loading requirements, of the pool barrier?

Answer:
The pool and its barrier are subject to the NCRC, see R101.2.2[ii]. As such, refer to **Table R301.5 Minimum Uniformly Distributed Live Loads,** Guards and handrails category. Any barrier, including barriers with some degree of flexibility, would be required to maintain the minimum height requirements under the load imposed.

Figure 2: Table from Chapter 3 of NCRC - Building Planning

TABLE R301.5
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS
(in pounds per square foot)

USE	LIVE LOAD
Uninhabitable attics without storage[b]	10
Uninhabitable attics with limited storage[b, g]	20
Habitable attics and attics served with fixed stairs	30
Balconies (exterior) and decks[e]	40
Fire escapes	40
Guards and handrails[d]	200[h]
Guard in-fill components[f]	50[h]
Passenger vehicle garages[a]	50[a]
Rooms other than sleeping rooms	40
Sleeping rooms	30
Stairs	40[c]

For SI: 1 pound per square foot = 0.0479 kPa, 1 square inch = 645 mm^2, 1 pound = 4.45 N.

Question 6: Adjacent structure used as ladder
How far from an adjacent structure (like a fence) must the barrier be to prevent the adjacent structure from being used as a means of climbing over the barrier?

Answer:
In order to provide consistent enforcement in meeting **AV105.4 Prohibited locations***, this office holds the position that if the adjacent structure has features that would allow its use to climb over the required pool barrier, said structure must be 3-feet away from the pool barrier. The 3-foot rule is based on recommendations from the International Pool and Spa Code and is the basis for this interpretation.

Question 7: Use of neighbor's fence
Can a neighbor's fence be used in lieu of the required barrier of AV 105.2?

Answer:
No. See Web interpretation AV 105.2 – Pool Barrier on adjacent property on the www.ncosfm.gov website for more details.

Question 8: Nylon or other non-metallic mesh infill
Can permanent barriers that utilize a non-metallic mesh, such as nylon or plastic be used?

Answer:
No. The Building Code Council considered these systems and deleted them from the list of approvable barriers in the 2024 NCRC and this deletion is being used as a guide in this web interpretation.

Question 9: Barrier location
Is there a specified numerical limit for the distance from the pool's edge to the pool barrier?

Answer:
No, there is no specified numerical distance mandated by code.

Conclusion:
The "pool area" is determined by the owner, and it should be shown on the site plan at the time of permit submittal. The owner takes responsibility for the safety of the pool area.

Keywords: ASTM F2286

***AV105.4 Prohibited locations.** Barriers shall be located to prohibit permanent structures, equipment or similar objects from being used to climb them.

[i] Reference: 2015 International Swimming Pool and Spa Code Section 305.1 Exception 2. Newer versions of this standard also allow this exception.

ii **R101.2.2 Accessory structures. The following accessory structures shall meet the provisions of this code.**
1. Decks, see Appendix M,
2. Gazebos,
3. Retaining walls, see Section R404.4,
4. Detached masonry chimneys located less than 10 feet (3048 mm) from other buildings or lot lines,
5. Swimming pools and spas, see Appendix V,
6. Detached carports,
7. Docks, piers, bulkheads, and waterway structures, see Section R327.

Exception: Portable, lightweight carports not exceed-ing 400 square feet (37 m2) or 12 feet (3658 mm) mean roof height.

iii Refer to 2024 NC Residential Code, Appendix NCA-Swimming Pools, Spas, and Hot Tubs, Section NCA 105.2.4 Reprint: NCA105.2.4 Mesh Fence as a barrier. Deleted.