



MIKE CAUSEY, INSURANCE COMMISSIONER & STATE FIRE MARSHAL
BRIAN TAYLOR, CHIEF STATE FIRE MARSHAL

July 6, 2022

Mr. Michael Rettie
Chief Building Official
Orange County Planning & Inspections Department
131 W. Margaret Lane, Suite 101
PO BOX 8181
Hillsborough, NC 27278

**RE: 2018 NC Residential Code
2018 NCRC Section AV105 Barrier Requirements**

Mr. Rettie:

This letter is in response to your request for formal interpretation dated May 13, 2022, that was received in NCDOI by email on May 13, 2022. Your request for formal interpretation states:

“Mr. Rittlinger,
Please find attached a formal interpretation request, with supporting information to address Residential Code requirements for swimming pool barriers per Appendix V section AV105. Thank you for your attention to this request. I remain available if additional information or clarification of this request is needed.

Request: NC DOI determination of the maximum location distance permitted for barrier from a residential swimming pool.”

Remarks:

Code sections noted in this letter are referring to the 2018 edition of the NC Residential Code unless otherwise noted.

Attachment A is comprised of the request for formal interpretation as well as all supporting information submitted with the request.

Code Analysis:

2018 NCRC Section AV102 Definitions states in part:

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

2018 NCRC Section AV105.1 Application states in part:

AV105.1 Application. The provisions of this chapter 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.

Comments: The installation of barriers around swimming pools, spas and hot tubs is intended to restrict access and provide protection against potential drownings and near drownings.

2018 NCRC Section AV105.2 Outdoor swimming pool states in part:

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:

Comments: The section notes that barriers are required. The ten sets of criteria listed in the section (not shown in this letter for brevity) list various dimensional heights, spacings, openings and widths for the various materials used to construct barriers. Of note, code specifics for any fixed maximum distances for the location of barriers from the pool edge are not included in the section.

Conclusions:

Specific maximum distances for the location of barriers from the pool edge are not included in the code because fixed dimensions would be too restrictive for the infinite number of pool designs and pool area options that are available. The minimum intent of the code for the protection afforded by the barrier is to restrict access and provide protection against potential drownings and near drownings in the area dedicated to the use of the pool. The edge of the pool deck or patio and other limited areas near the pool intended primarily for use by associated swimmers can be used as guidance in determining compliance with the intent of the code.

Please call or email if you have comments or questions.

Sincerely,



David B. Rittlinger, PE, LEED AP
Chief Code Consultant
NCDOI-OSFM Engineering & Codes Division

cc: File
Bridget Herring, Chair – BCC
Danny Priest, Vice-Chair – BCC
David Smith, Chair BCC Residential Standing Committee

ATTACHMENT A



**APPENDIX E
APPEALS
NORTH CAROLINA
BUILDING CODE COUNCIL**
325 North Salisbury Street, Room 5_44
Raleigh, North Carolina 27603
(919) 647-0095

APPEAL TO NCDOI/NCBCC Hearing Date ____ / ____ / ____
GS 153A-374, GS 160A-434
Formal Interpretation by NCDOI _____ GS 143-140, GS 143-141
Appeal of Local Decision to NCDOI _____ Appeal of Local Decision to NCBCC _____
Appeal of NCDOI Decision to NCBCC _____

APPELLANT Michael Rettie **PHONE** (919) 245 - 2604 x _____
REPRESENTING Orange County
ADDRESS 131 West Margaret lane
CITY Hillsborough **STATE** NC **ZIP** 27278
E-MAIL mrettie@orangecountync.gov **FAX** (919) 644 - 3347

North Carolina State Building Code, Volume Residential - Section Appendix V, AV105

REQUEST ONE: Formal Interpretation by NCDOI Appeal of Local Decision to NCBCC
 Appeal of Local Decision to NCDOI Appeal of NCDOI Decision to NCBCC

Request NCDOI determination of the maximum location distance permitted for barrier from a residential swimming pool
Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.

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

AV105.I Application. The provisions of this chapter 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

REASON:
Based upon the attached informal correspondence regarding this question, the Code requirements for locating a barrier's proximity to a swimming pool needs further clarification and determination. Use of the term "fairly close proximity" does not provide the necessary defining specification to adequately apply this Code provision/intention. Nebulous and imprecise specifications pose continuing conflicts and delays in processing required building permits when the preferences of the property owners exceed the opinion of the plans reviewer. Without a definitive specification or Code language to be

Signature Michael Rettie DATE: 5-13-22 **APPEAL TO NCDOI/NCBCC** FORM 3/14/17

202.9 Appeals

202.9.1 Engineering Division. A written technical interpretation shall be provided as specified in Section 203.2.1.2. Any person may appeal in writing an order, decision, or determination pertaining to the code or any state building law by filing written notice with the Commissioner of Insurance or his designee within ten (10) days after the order, decision, or determination. A copy of the appeal shall be furnished to each party.

(General Statutes 143-140, 153A-374 and 160A-434)

203.2.1 Interpretations

203.2.1.1 Informal Interpretations. The Engineering Division shall provide informal interpretations on code related matters either by e-mail, letter or telephone. These informal interpretations may be accepted by the local code enforcement official or party requesting the interpretation. Either party may request a formal interpretation of the code.

203.2.1.2 Formal Interpretations. Any person may request in writing a formal interpretation of the code. The request shall be addressed to the Chief Code Consultant for the Department of Insurance. The request shall be specific and shall reference the code sections in question. All formal interpretations shall be in writing. A formal interpretation shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. Formal interpretations determined to be of a general nature may be posted on the Department website. (General Statute 143-140)

203.2.2 Appeals. Any person may appeal in writing an order, decision, or determination of a code enforcement official pertaining to the code or any state building law. The appeal shall be addressed to the Chief Engineer for the Department of Insurance by filing written notice within ten (10) days after the order, decision, or determination. The appeal shall contain the type and size of the building in question, the location of the building, and shall reference the code sections in question. The decision shall be in writing and shall set forth the facts found. The decision rendered shall be based on the technical provisions of the code, public health and safety and shall be construed liberally to those ends. A decision shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. A copy of the appeal and written decision shall be furnished to each party. (General Statutes 153A-374 and 160A-434)

202.9.2 Building Code Council. The Building Code Council shall hear appeals from the decisions of State enforcement agencies relating to any matter related to the code. Any person wishing to appeal a decision of a State enforcement agency to the Building Code Council shall give written notice of appeal as follows:

202.9.2.1 Twenty one (21) copies including an original of the Notice of Appeal shall be filed with the Building Code Council c/o NC Department of Insurance, Engineering Division, 325 North Salisbury Street, Room 5_44, Raleigh, NC 27603 and one (1) copy shall be filed with the State enforcement agency from which the appeal is taken.

202.9.2.2 The Notice of Appeal shall be received no later than thirty (30) days from the date of the decision of the State enforcement agency.

202.9.2.3 The Notice of Appeal shall be legibly printed, typewritten or copied and shall contain the following:

- (1) Name, address of the party or parties requesting the appeal.
- (2) The name of the State enforcement agency, the date of the decision from which the appeal is taken, and a copy of the written decision received from the enforcement agency.
- (3) The decision from which the appeal is taken shall be set forth in full in the Notice of Appeal or a copy of the decision shall be attached to all copies of the Notice of Appeal.
- (4) The contentions and allegations of fact must be set forth in full in a clear and concise manner with reference to the sections of the code in controversy.
- (5) The original Notice of Appeal shall be signed by the party or parties filing appeal.
- (6) The Notice of Appeal shall be received by the first day of the month prior to the Building Code Council's quarterly scheduled meeting in order to be placed on the agenda for that meeting. The Chairman may schedule a special meeting to hear an appeal.

202.9.2.4 Upon the proper filing of the Notice of Appeal, the Building Code Council Secretary shall forward one (1) copy of the Notice of Appeal to each member of the Building Code Council. The Chairman may appoint a Hearing Committee to hear appeals. The Secretary shall send notice in writing to the party or parties requesting an appeal and to the Building Code Council Hearing Committee members at least fifteen (15) days prior to the Hearing Committee meeting. A written decision of the Hearing Committee meeting shall be provided to all Building Code Council Members. The actions of the Hearing Committee shall be final, unless appealed to the full Building Code Council in writing within 30 days of the Hearing Committee's action. If a Hearing Committee consists of at least seven Council members, it will constitute a quorum of the full Council. Further appeals shall be as specified in Section 202.9.3.

202.9.2.5 The Building Code Council shall, upon a motion of the State enforcement agency or on its own motion, dismiss appeals for the following reasons:

- (1) Not pursued by the appellant or withdrawn;
- (2) Appeal not filed in accordance with these rules; or
- (3) Lack of jurisdiction.

202.9.2.6 When the Building Code Council finds that a State enforcement agency was in error in its interpretation of the code, the Building Code Council shall remand the case to the agency with instructions to take such actions as the Building Code Council directs. When the Building Code Council finds on appeal that materials or methods of construction proposed are equivalent to those required by the code, the Building Code Council shall remand the case to the State enforcement agency with instructions to permit the use of such materials or methods of construction. The Building Code Council shall immediately initiate procedures for amending the code to permit the use of such materials or methods of construction.

202.9.2.7 The Building Code Council shall provide a written decision setting forth the findings of fact and the Building Code Council's conclusions to each party or parties filing the appeal and to the State enforcement agency from which the appeal was taken.

202.9.3 Superior Court. Whenever any person desires to appeal a decision of the Building Code Council or a decision of a State or local enforcement agency, he may appeal either to the Wake County Superior Court or the Superior Court of the county in which the proposed building is to be situated in accordance with the provisions of Chapter 150B of the General Statutes.
(General Statute 143-141(d))

PLANNING & INSPECTIONS DEPARTMENT
Michael D. Rettie, Chief Building Official

Building Inspections
(919) 245-2600
(919) 644-3347 (FAX)
www.orangecountync.gov



131 W. Margaret Lane
Suite 101
P. O. Box 8181
Hillsborough, NC 27278



Formal Interpretation additional supporting information being submitted with official forms:

Request: **NC DOI determination of the maximum location distance permitted for barrier from a residential swimming pool.**

Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.

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

AVI05.1 Application. The provisions of this chapter 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.

REASON:

Based upon the attached informal correspondence regarding this question, the Code requirements for locating a barrier's proximity to a residential swimming pool needs further clarification and determination.

Use of the term "in fairly close proximity" does not provide the necessary defining specification to adequately apply this Code provision / intention. Adding the additional [undefined] term "pool use area" to this discussion further confuses the issue by opening the door to arguments that the area within the barrier IS this [use] area. Use of nebulous and imprecise specifications pose continuing conflicts and delays in processing required building permits when the preferences of the property owners exceed the opinion of the AHJ.

Without a definitive specification or Code language to be referenced, this issue presents a situation that undermines the integrity and confidence in the Code as being intended to protect the public from hazards. Property owners want to use their property how they wish and typically have valid, rationalized reasons for their proposed barrier location. ALL [property owners] believe their proposed location is safe and meets the intention of the Code (in the absence of this requested specification).

In the possible absence of a specific maximum distance being provided by this formal interpretation: Orange County requests that specific scoping and determining criteria (a list of determining factors, to be used when evaluating a proposed barrier location) be provided to which a case-by-case determination can be made by Authority Having Jurisdiction. These criteria would need to be uniform and repeatable throughout North Carolina, to the wide range of possible scenarios that are likely to be encountered.

From: Yip, Pak <pak.yip@ncdoi.gov>
Sent: Wednesday, May 11, 2022 8:20 AM
To: Rodgers, Jim <jim.rodgers@ncdoi.gov>
Subject: FW: [External] Pool barrier

Jim.

Would you mind addressing Romina's question in regards to swimming pool barrier?

Thank you.

I hope the information above is helpful to you. Please let me know if you have any questions.

Pak Keung Yip, P.E.
Chief Building Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0007

Mrs. Khandani,

We have interpreted that the pool barrier is meant to be in fairly close proximity to the pool, the pool deck, or the "pool use area" in order to fulfil it's intended purpose – protecting small children from unsupervised access to the pool.

Property fencing, such as proposed in this case, does not protect those small children that may be already on the property from the hazard.

If I can be of further assistance please contact me,

Jim Rodgers
NCDOI Building Inspector
Engineering Division

This is the historic correspondence NC DOI presents to support requirements to empower Jurisdictions to address residential swimming pool barrier proximity upon the property.

From: Conner, David
Sent: Thursday, February 18, 2010 11:32 AM
To: 'Bill Hiltbold'
Cc: Martin, Carl; Page, Mike; Gupton, Barry
Subject: RE: Swimming pool barrier

Mr. Hiltbold

Barriers for pools, spas, and hot tubs accessory to single family residences are governed by the NC Residential Code, Appendix G. While the appendix sets out the technical requirements for such barriers, it does not address specifics related to boundaries of the required enclosures. To make a determination as to the limits of enclosure size or barrier boundaries, one must look at the intent of the code relative to Appendix G.

Based on the information provided in the "Purpose" section of Appendix G, it is the intent of the code to provide protection of children from accidental drowning and most especially those living in or visiting the residence. The intent is further defined in the requirements to provide" prescriptive details for the construction of enclosures around swimming pools, spas, and hot tubs to make it more difficult for children, particularly those 5 years and younger, to enter such areas unsupervised.

Based on the code intent as outlined above, it is my opinion that the enclosure boundaries should and can be limited to that area, in the opinion of the CEO, that that will provide a safe environment for small children (living in or visiting the residence) under an unsupervised condition. This, in most cases, would not include a barrier around a large or entire lot where the children who may be within those boundaries would have free and open access to the pool, spa, or hot tub.

I hope this helps.

David W. Conner, Sr., P.E.
Building Code Consultant
Office of State Fire Marshall
NC Department of Insurance
Phone (919) 661-5880 Ext. 229
FAX (919) 662-4414
david.conner@ncdoi.gov