

CHAPTER 9 RESIDENTIAL CODE

4-9-1. ADOPTION.

- (A) Pursuant to the authority granted by 65 ILCS 5/1-2-4, and pursuant to its home rule powers, the City of Evanston hereby adopts by reference the 2021 International Residential Code with the additions, deletions, exceptions, and other amendments set forth in this Chapter. Said Code shall govern the design, construction, prefabrication, alteration, repair, use occupancy, and maintenance of all detached one- and two-family dwellings and townhouses not more than three (3) stories above grade plane in height, with separate means of egress and their accessory structures. All advisory or text notes, other than the rules and regulations contained in the 2021 International Residential Code adopted hereby, are expressly excluded from this Chapter.
- (B) Any reference in the 2021 International Residential Code to "Administrative Authority," "Building Official" or "Code Official" shall refer to the City's Manager of Building and Inspection Services. Any reference to "municipality" shall mean the City of Evanston.
- (C) In the event that any provision of the 2021 International Residential Code adopted hereby is in conflict with any provision(s) of the City Code, the more/most stringent shall control.
- (D) There shall be a copy of the 2021 International Residential Code kept on file for public inspection in the City Clerk's office.

4-9-2. AMENDMENTS.

The following sections of the International Residential Code are hereby amended to read as follows:

R101.1 Title.

Insert "the City of Evanston, Cook County, Illinois" for "[name of jurisdiction]"

R101.2 Scope. Delete Exceptions 1, 2, and combine Exceptions 3, 4, and 5 to read as follows:

3. Residential Care Homes and Transitional Treatment Facilities of up to 8 occupants, as regulated in 6-4-4 of the City Zoning Code, within a dwelling unit.

R102.4.3 State Plumbing Code. Add a new subsection to read as follows:

R102.4.3 Illinois Plumbing Code. Whenever a reference is made to the International Plumbing Code or Chapters 25 through 33 of this Code, such reference shall be deemed to refer to the applicable section of the Illinois State Plumbing Code, as adopted by the City of Evanston.

R102.4.4 Electrical Code. Add a new subsection to read as follows:

R102.4.4 Electrical Code. Whenever a reference is made to Chapters 34 through 43 of this Code, such reference shall be deemed to refer to the applicable section of the National Electrical Code, as adopted by the City of Evanston.

R102.5 Appendices. Provisions in the appendices shall not apply unless specifically referenced in the adopting ordinance. The following appendices are hereby adopted:

Appendix AA. Sizing and Capacities of Gas Piping

Appendix AB. Sizing of Venting Systems Serving Appliances Equipped with Draft Hood, Category I Appliances and Appliances Listed for Use with Type B Vents

Appendix AC. Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems

Appendix AF. Radon Control Methods

Commentary: 420 ILCS 52 "The Illinois Radon Resistant Construction Act", requires that all new residential construction in the State of Illinois shall include passive radon resistant construction.

Appendix G. (2012 International Residential Code) Swimming Pools, Spas and Hot Tubs

Commentary: Appendix G was not included in the 2021 IRC as it is now a separate, stand-alone code. The provisions of the 2012 IRC Appendix G will be retained.

Appendix AH. Patio Covers

Appendix AJ. Existing Buildings and Structures as amended.

Appendix AK. Sound Transmission as amended.

Appendix AO. Automatic Vehicular Gates

Appendix AT. [RE] Solar Ready Provisions-Detached One- and Two-Family Dwellings and Townhouses

R102.7.1 Additions, alterations or repairs. This section shall be revised to read as follows:

Additions, alterations or repairs to any structure shall conform to the requirements for a new structure without requiring the existing structure to comply with the requirements of this code unless otherwise stated. Additions, alterations, repairs and relocations shall not cause an existing structure to become less compliant with the provisions of this code than the existing building or structure was prior to the addition, alteration or repair. Where an Accessory Dwelling Unit is created within a legally existing two-family dwelling, bringing the total dwelling unit count to three, the provisions of this code and Appendix AJ Existing Buildings and Structures shall apply.

R102.7.2 Additions, alteration or repairs following demolition. Additions, alterations or repairs to any structure that follows the removal or deconstruction of a structure or building in whole or in part to the extent of 50% or more of such structure or building as it existed prior to the commencement of such act or process (demolition) shall comply with the requirements of this code for new construction.

Exception: Removal or deconstruction of interior building elements without removal or deconstruction of foundation, exterior walls and/or roofs.

R103.1: Creation of an enforcement agency. This section shall be revised to read as follows:

The Division of Building and Inspection Services is hereby made responsible for the enforcement of this Code.

R103.2: Appointment. This section shall be revised to read as follows:

Any reference in the 2021 International Residential Code to "Building Official" shall refer to the Manager of Building and Inspection Services. Any reference to "municipality" shall mean the City of Evanston.

R103.3: Deputies. This section shall be revised to read as follows:

The Building Official shall have the authority to appoint such technical officers, inspectors, plan examiners, and other employees as he or she deems necessary to effectuate the purposes of this code.

R105.2: Work exempt from permit. This section is deleted in its entirety. Contact the City's Building and Inspection Services Division for information regarding work exempt from permits.

R105.3.1.2: Issuance of a building permit. The Building Official may refuse to issue a building permit if there is an outstanding sum of money due the City from the property owner or if work done a separately issued building permit has not been satisfactorily completed per the requirements of these provisions.

R105.5: Expiration. This section shall be revised to read as follows:

1) *Expiration:*

- a) A building permit shall, without further action by the City, automatically expire and be rendered null, void, and of no further force or effect, if the permit holder does not begin the work authorized by the permit within one hundred eighty (180) calendar days of the date of permit issuance.
- b) A building permit shall, without further action by the City, automatically expire and be rendered null, void, and of no further force or effect, if, at any time after the work is begun, the permit holder suspends and/or abandons the work authorized by the building permit for a continuous period of one hundred eighty (180) calendar days.
- c) A building permit shall, without further action by the City, automatically expire and be rendered null, void, and of no further force or effect, two (2) years after the date of permit issuance, unless an extension is granted in accordance with Subsection 2) below.
- d) If the building or work authorized by a building permit does not receive final inspection approval by the permit expiration date, all work shall stop until the Building Official issues a new permit or grants an extension of time in accordance with Subsection 2) below. All electrical, plumbing,

and/or mechanical permits associated with a building permit shall expire concurrently with the building permit.

2) *Extension:*

- a) Except for relocation of structures, a permit holder may submit, before the expiration date of the building permit, an application to the Building Official for an extension of time. The application shall be filed in advance of the expiration date. The Building Official may extend the building permit once, for a period not exceeding one hundred eighty (180) calendar days, if he/she determines that circumstances beyond the permit holder's control prevented completion of the work. All permits associated with a building permit shall be extended to expire concurrently with the building permit.
- b) If a permit holder files application for an extension of time before expiration and in accordance with this Subsection, the existing building permit shall automatically be extended until the Building Official makes a decision on the application for an extension.
- c) If the building permit expires before an application is submitted for an extension of time, no extension shall be granted. If the previous permit holder or any other applicant wants to proceed with the same development, a new application is required and the application is treated in all respects as a new application.
- d) If the Building Official previously approved an extension of time in accordance with Subsection a), the Building Official may extend the expiration of the building permit one (1) additional time if he/she finds the following:
 - i) There are no significant change(s) in the regulations applicable to the site since the date the permit was issued;
 - ii) The additional extension is in the public interest; and
 - iii) Circumstances beyond the control of the applicant prevented the authorized work from proceeding.

R105.7: Placement of permit. This section shall be revised to read as follows:

The building permit or a legible copy of the building permit shall be kept on the site of operations, open to public inspection during the entire time of prosecution of the work and until the completion of the same. Said permit must be posted within forty-eight (48) hours of permit issuance and must be visible from the public way. Failure to post the permit as required by this section may result in revocation of the building permit and forfeiture of all permit fees.

R105.10: Hours of work permitted for the construction, repair, and demolition of buildings. The creation (including excavation), demolition, alteration or repair of any building within the City, other than between the hours of seven o'clock (7:00) A.M. and seven o'clock (7:00) P.M. on weekdays, and eight o'clock (8:00) A.M. and five o'clock (5:00) P.M. on Saturdays, except in case of urgent necessity in the interest of public

health and safety, and then only with permission from the City Manager or his or her designee, which permission may be granted while the emergency continues.

R106.1: Submittal documents. This section shall be revised to read as follows:

Submittal documents consisting of construction documents, and other data shall be submitted in two or more sets, or in a digital format where allowed by the building official, with each application for a permit. Construction documents for all new one- and two-family dwellings, additions and alterations involving structural work or where the construction cost exceeds \$25,000 shall be prepared by a design professional licensed with the State of Illinois. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The Building Official is authorized to waive the submission of construction documents and other data not required to be prepared by a design professional licensed with the State of Illinois if it is found that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this Code. Projects not requiring preparation by a registered design professional include single-level decks, single-level exterior stairs, single-story, detached garages and accessory buildings and unheated porches. Contact the City's Building and Inspection Services Division for information regarding waiver of preparation by a design professional licensed with the State of Illinois requirement.

R106.2.1 Compliance with site plan. It shall be the responsibility of the builder/developer to submit to the Building & Inspection Services Division, a spot survey prepared by a Registered Land Surveyor within five (5) days of the foundation installation. No construction will be allowed to proceed until the spot survey is approved by the City's Zoning Division. This section applies to new one- and two-family dwellings, townhouses, additions, detached accessory dwelling units and detached garages.

Exception: The Building Official or Zoning Administrator is authorized to waive the spot survey requirement if it is found that the nature of the work is such that review of a spot survey is not necessary to obtain compliance with this code.

R112: BOARD OF APPEALS. Delete this section in its entirety.

R113.4 Violation Penalties. This section shall be revised to read as follows:

Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed under Section 4-9-3 Penalties of the City of Evanston Municipal Code.

R202: Definitions.

DEMOLITION. The removal or destruction of a structure or building in whole or in part to the extent of fifty percent (50%) or more of such structure or building as it existed prior to the commencement of such act or process.

Table R301.2 CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA. Insert the following values into the table:

Climatic and Geographic Design Criteria	
Ground Snow Load	30 psf
Wind Speed (mph)	117 mph
Topographic Effects	No
Special Wind Region	Not Applicable
Windborne Debris Zone	Not Applicable
Seismic Design Category	A
Subject to Damage from Weathering	Severe
Subject to Damage From Frost Line Depth	42 inches
Subject to Damage From Termite	Slight to Moderate
Ice Barrier Underlayment Required	Yes
Flood Hazards	2008
Air Freezing Index	2000
Mean Annual Temperature	47.6F
Manual J Design Criteria	
Elevation	653
Latitude	42 degrees North
Winter Heating	4 degrees
Summer Cooling	89 degrees
Altitude Correction Factor	None
Indoor Design Temperature	70 degrees
Design Temperature Cooling	75 degrees
Heating Temperature Difference	66 degrees
Cooling Temperature Difference	14 degrees
Wind Velocity Heating	None
Wind Velocity Cooling	None
Coincident Wet Bulb	73 degrees
Daily Range	Medium
Winter Humidity	30%
Summer Humidity	50%

Table R301.5 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS (in pounds per square foot)
Revise the table to read as follows:

Use	Uniform Load (psf)	Concentrated Load (lbs.)
Balconies (exterior) and decks*	60	—

e. See Section R507.1 for decks attached to exterior walls.

R309.1.1 Spill containment. The sills of all door openings between the garage and residence must be raised at least four inches (4") above the garage floor slab.

Section R309 – Garages and Carports

R309.5 Fire sprinklers. Delete this section in its entirety.

R310.1 Emergency escape and rescue opening required. Delete exception No. 2 in its entirety.

R313.1.1 Design and Installation. This section shall be revised to read as follows:

Automatic residential sprinkler systems for townhouses shall be designed and installed in accordance with NFPA 13D.

R313.2 One- and two-family dwellings automatic sprinkler systems. An automatic sprinkler system shall be installed in one- and two-family dwellings.

Exception: This exception has been revised to read as follows:

An automatic system shall not be required for additions, alterations or when adding a detached accessory dwelling unit to existing buildings that are not already provided with a sprinkler system. The following conditions shall exist for the accessory dwelling unit exception:

- 1) The unit meets the definition and conditions of an Accessory Dwelling Unit per 6-4-6-10 Special Regulations Applicable to Accessory Dwelling Units (ADUs) of the City Zoning Code.
- 2) The existing primary residence is not required to have an automatic residential sprinkler system
- 3) The accessory detached dwelling unit does not exceed 1,000 square feet in size.
- 4) The unit is on the same lot as the primary residence.

R313.2.1: Design and installation. This section has been revised to read as follows:

Automatic residential sprinkler systems shall be designed and installed in accordance with NFPA 13D.

R327 Swimming Pools, Spas and Hot Tubs. Delete this section in its entirety.

R331 Wrecking, Demolition, or Razing of Structures.

- 1) Prior to the issuance of any permit for the wrecking, demolishing, or razing of any building or other structure, the owner of said structure shall deposit, in escrow, funds in an amount deemed sufficient by the Director of Community Development to secure the owner's obligations to grade, place topsoil, seed, sod, and/or fence any unimproved surface. Should the owner and/or owner's successor(s) in interest fail to perform said duties, the City may draw on said funds to complete them.
- 2) Prior to the start of demolition work, the owner and/or owner's successor(s) shall deliver all water meters on the property to the Utilities Department.

- 3) Demolition work shall not begin until site has been inspected by the City for placement of temporary fencing and temporary tree protection, and any related measures implemented.
- 4) Demolition work shall not begin until the owner and/or owner's successor(s) has established, either by way of a hose connected to the public water hydrant or by the use of a water truck on site, a source for wetting down the structure and resulting debris during the demolition process to minimize the creation of air-borne dust and debris.
- 5) Written notice stating the date on which work is to begin shall be given to the Director of Community Development and to owners/occupants of adjoining property at least forty-eight (48) hours before beginning the wrecking, demolishing, or razing of any building or other structure.
- 6) During demolition, any temporary structure erected adjacent to or on any public way, used as temporary storage for debris and wreckage, shall be outfitted with reflective orange material outlining every top and bottom corner of said temporary structure, which reflective material will be visible when struck by headlight beams three hundred feet (300') away at night. Said markings shall be approved by the City Engineer.
- 7) All foundations and footings associated with the demolished structure shall be removed in the course of demolition. The property owner and/or owner's successor(s) in interest shall schedule and permit an inspection by the Building Official or his/her designee to determine removal of all foundations and footings prior to the backfill of any excavated area.
- 8) Debris caused from the demolition of a building or structure in excess of that required to fill openings shall be removed from the site as wrecking progresses. Salvaged material, if left on the premises, shall be stored neatly. Debris shall be kept from adjacent properties and public ways at all times.
- 9) On completion of demolition, all debris, equipment and temporary protections shall be removed from the site. In no case shall demolition debris be allowed to remain on the site longer than seven (7) days after the structure has been demolished.
- 10) On completion of demolition, owner and/or owner's successor(s) shall immediately restore the public right-of-way to its original condition upon completion of the work, including restoration of openings, broom sweeping walks and streets and raking of grassy areas.
- 11) On completion of demolition, the property owner and/or owner's successor(s) in interest shall fill with clean inorganic material with the upper eight inches (8") filled in friable topsoil and graded to the level of sidewalks, alleys, or adjoining property with allowance for settlement.
- 12) On completion of demolition, the property owner and/or owner's successor(s) in interest shall schedule and permit an inspection by the Building Official or his/her designee to determine compliance with the City Code.

- 13) Unless construction of a new structure on the site commences within sixty (60) days of completion of demolition, the property owner and/or owner's successor(s) shall seed the property with grass or place sod thereon no later than fifteen (15) days after completion of demolition. The temporary construction fence shall be removed no later than fifteen (15) days after such seeding or sodding.

R403.1.1.1: Trench foundations. Trench foundations incorporating a monolithically-poured footing and foundation wall shall be permitted for one story wood frame and wood frame with masonry veneer room additions provided the following are met:

- 1) Trench foundations are to be designed in accordance with accepted engineering practice based on a minimum allowable soil pressure of 3000 psf and a minimum concrete compressive strength of 3000 psf at twenty-eight (28) days.
- 2) The foundation wall shall be a minimum of eight inches (8") wide and be belled at the bottom to a minimum width of twice the wall width for a depth of at least one foot (1').
- 3) Trench foundations shall be permitted only in those soils which exhibit cohesive characteristics so as to prevent collapse of the adjacent soil mass before, during and after placement of the concrete.
- 4) Trench foundations shall extend a minimum of forty-two inches (42") below adjacent grade.
- 5) Trench foundations shall comply with all applicable sections of the 2021 International Residential Code, adopted by the City, except as previously mentioned.

R502.1. 2: Prefabricated wood I-joists. This section is revised to read as follows:

Structural capacities and design provisions for prefabricated wood I-joists shall be established and monitored in accordance with ASTM D 5055. Where prefabricated wood I-joists are used for floor and ceiling joist framing members in finished or unfinished spaces in one or two-family dwellings, the prefabricated wood I-joists shall be separated from adjacent spaces by a minimum five-eighths inch (5/8") thick, type "X" gypsum wall board, taped. Such separation shall not be required for structures fully equipped with an automatic sprinkler system designed and installed in accordance with N.F.P.A. 13R.

R506.2.3 Vapor retarder. Exception No. 1 is revised to read as follows.

Detached garages, utility buildings and other unheated accessory structures.

R602.3: Design and construction. This section is revised to read as follows:

Exterior walls of wood frame construction shall be designed and constructed in accordance with the provisions of this chapter and figures R602.3(1) and R602.3(2) or in accordance with AWC NDS. Components of exterior walls shall be fastened in accordance with table R602.3(1) through R602.3(4). Wall sheathing shall be fastened directly to framing members and, where placed on the exterior side of an exterior wall,

shall be capable of resisting wind pressures listed in Table R301.2.1(1) adjusted for height and exposure using Table R301.2.1(2) and shall conform to the requirements of Table R602.3(3). Wall sheathing used only for exterior wall covering purposes shall comply with Section R703. Exterior walls covered with foam plastic sheathing shall be braced in accordance with section R602.10. Structural sheathing shall be fastened directly to structural framing members. Any wall which contains any plumbing or mechanical piping, and/or ductwork must have a minimum depth of the structural members of five and one-half inches (5½"). Studs shall be continuous from support at the sole plate to a support at the top plat to resist loads perpendicular to the wall. The support shall be a foundation or floor, ceiling or roof diaphragm or shall be designed in accordance with accepted engineering practice.

Chapter 11 – Energy Efficiency. This Chapter is retained for references purposes only. For purposes of compliance, the design and construction of building is regulated by Title 71, Part 600 of the Illinois Administrative Code – Illinois Energy Conservation Code.

N1101.6 Defined Terms.

ELECTRIC VEHICLE. An automotive-type vehicle for on-road use primarily powered by an electric motor that draws current from an onboard battery charged through a building electrical service, electric vehicle supply equipment (EVSE), or another source of electric current.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The apparatus installed specifically for the purpose of transferring energy between the premises wiring and the Electric Vehicle.

EV-CAPABLE SPACE. A dedicated parking space with electrical panel capacity and space for a branch circuit dedicated to the EV parking space that is not less than 40-ampere and 208/240-volt and equipped with raceways, both underground and surface mounted, to enable the future installation of electric vehicle supply equipment. For two adjacent EV-Capable spaces, a single branch circuit is permitted.

EV-READY SPACE. A designated parking space which is provided with a dedicated branch circuit that is not less than 40-ampere and 208/240-volt assigned for electric vehicle supply equipment terminating in a receptacle or junction box located in close proximity to the proposed location of the EV parking space. For two adjacent EV-Ready spaces, a single branch circuit is permitted.

Section N1101.15 ELECTRIC VEHICLE CHARGING. Where parking is provided, new construction shall provide electric vehicle spaces in compliance with Sections N1101.15.1 through N1101.15.4. Where more than one parking facility is provided on a site, electric vehicle parking spaces shall be calculated separately for each parking facility.

Exception: This section does not apply to parking spaces used exclusively for trucks or delivery vehicles.

N1101.15.1 Electric vehicle ready circuit. The service panel shall provide sufficient capacity and space to accommodate the circuit and over-current protective device for each EV-Ready Space.

N1101.15.2 New detached one- and two-family dwelling units and townhouses. New detached one- and two-family dwelling units and townhouses shall provide not less than one EV-Ready Space per dwelling unit.

N1101.15.3 New multifamily dwellings. EVSE-Installed, EV-Ready and EV-Capable Spaces for Group R-2, R-3 and R-4 buildings three stories or less in height above grade shall be provided in accordance with Table N1101.15.3. Where the calculation of percent served results in a fractional parking space, it shall round up to the next whole number.

Table N1101.15.3: EVSE Installed, EV-Ready and EV-Capable Space Requirements

One- and Two-Family Dwelling Units and Townhouses	Multifamily
One (1) EV-Ready Space per Dwelling Unit	10% EV-Installed, 20% EV-Ready, 70% EV-Capable EV-installed and EV-Ready to increase 10% every 3 years with remainder of spaces being EV-Capable

a. Where EVSE-Installed Spaces installed exceed the required values in Table 1101.15.3, the additional spaces shall be deducted from the EV-Ready Spaces requirement.

b. Where EV-Ready Spaces installed exceed the required values in Table 1101.15.3, the additional spaces shall be deducted from the EV-Capable Spaces requirement.

N1101.15.4 Identification. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EVSE. Construction documents shall also provide information on amperage of future EVSE, raceway methods, wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformers, meet the requirements of this code. Parking spaces equipped with EVSE shall be identified by signage. A permanent and visible “EV-Capable” or “EV-Ready” label shall be posted in a conspicuous place at the service panel to identify each panel space reserved to support EV-Capable or EV-Ready Spaces, respectively and at the termination point of the raceway or circuit termination point.

**Section M1309
Noise Limitations**

M1309.1 Noise limitations. Noise levels for equipment and appliances shall not exceed 55 dBA SPL (Decibels, A-weighted, Sound Pressure Level) as averaged over any 15 minute period, and as measured at the property line between the said adjacent structures if a property line separates the parcels.

Exception: Emergency Back-Up Generators.

Chapters 25 through 32. Delete these Chapters in their entirety. Whenever a reference is made to the International Plumbing Code or Chapters 25 through 33 of this Code, such references shall be deemed to refer to the applicable section of the Illinois Plumbing Code, as adopted by the City of Evanston.

P2904 Dwelling unit fire sprinkler systems. Whenever a reference is made to Section P2904 of this Code, such reference shall be deemed to refer the NFPA 13D Standard for the Installation of Sprinkler Systems in One- and Two-Family Homes and Manufactured Homes.

Chapters 34 through 42. Delete these Chapters in their entirety. Whenever a reference is made to Chapters 34 through 43 of this Code, such reference shall be deemed to refer to the applicable section of the National Electrical Code, as adopted by the City of Evanston.

Appendix AJ – Existing Buildings and Structures. Appendix adopted with the following revisions:

1. Delete Subsection AJ107.1.2 Plumbing materials and supplies.
2. Delete Subsection AJ107.2 Water closets
3. Delete Subsection AJ107.3 Electrical
4. Delete Subsection AJ109.5 Electrical equipment and wiring

Appendix AK - Sound Transmission. Appendix adopted with the following revisions:

AK102.1: General. This section has been revised to read as follows:

Airborne sound insulation for wall and floor-ceiling assemblies shall meet a sound transmission class (STC) rating of fifty (50) when tested in accordance with ASTM E 90.

AK103.1: General. This section has been revised to read as follows:

Floor/ceiling assemblies between dwelling units or between a dwelling unit and a public or service area within a structure shall have an impact insulation class (IIC) rating of not less than fifty (50) when tested in accordance with ASTM E 492.

4-9-3. PENALTIES.

Any person who violates any provision of the 2021 International Residential Code as adopted by the City, who fails to comply with any of the requirements thereof, or who erects, installs, alters, or repairs work in violation of any approved plan or direction of the Building Official or of any permit or certificate issued by the Building Official or his/her designee, shall be guilty of an offense and fined as follows:

- (A) 1. The fine for a first violation is one hundred fifty dollars (\$150.00).
2. The fine for a second violation is four hundred dollars (\$400.00).
3. The fine for a third or subsequent violation is seven hundred fifty dollars (\$750.00).
- (B) Each day a provision of this Chapter is found to have been violated constitutes a separate violation subject to the fine schedule set forth in Subsection (A) of this Section.
- (C) The fines provided for herein shall not be construed as limiting the power of a court of competent jurisdiction or an administrative hearing officer to impose other penalties and remedies as provided for by applicable legislation.

4-9-4. SEVERABILITY.

It is the intention of the City Council that the provisions of this Chapter and the Code adopted hereby are severable and the invalidity of any Section or any portion of any such Section of either of them shall not affect any other Section.

4-9-5. – IDENTIFICATION OF ORDINANCE WITH THE ILLINOIS CAPITAL BOARD.

The adoption of this Ordinance and code, by title and edition, shall be reported to the Illinois Capital Development Board Illinois or any successor agency of the State of Illinois pursuant to Section 1-2-3.1 of the Illinois Municipal Code, 65ILCS 5/1-2-3.1.

4-9-6. – EFFECTIVE DATE.

This Ordinance shall be in full force and effect thirty (30) days after its approval and passage.

Appendix G: Swimming Pools, Spas and Hot Tubs

(The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.)

General Comments

Drowning is the second leading cause of accidental death in the home for children under five years of age. It has been the number one cause of accidental deaths in the home for that age group in a number of states, including Arizona, California, Florida and Texas. The use of effective residential swimming pool barriers is the best way to reduce these tragic losses.

This appendix chapter sets forth the regulations for swimming pools, hot tubs and spas. The primary focus of the provisions is the need for an effective barrier surrounding the water area to reduce the potential for young children to gain uncontrolled access.

Section AG101 establishes the scope of the chapter. Section AG102 defines those terms specific to this appendix chapter. Section AG103 identifies specification standards for the design and construction of swimming pools. Section AG104 identifies specification standards for the design and construction of spas and hot tubs. Section AG105 discusses barrier requirements for swimming pools, hot tubs and spas. Section AG106 contains provisions for entrapment protection for suction outlets. Section AG107 indicates the abbreviations for standards-writing organizations, and Section AG108 specifies the various standards used in this appendix chapter.

Purpose

According to the Consumer Product Safety Commission (CPSC), approximately 350 children under 5 years of age drown each year in residential swimming pools, spas and hot tubs. A CPSC study, *Child Drowning Study: A Report on the Epidemiology of Drownings in Residential Pools of Children Under Age Five*, found that the majority of the victims lived in or were visiting the residence where the accident happened. Less than 2 percent of the drowning incidents occurred when a child trespassed on the property. For these reasons, this appendix chapter states that all swimming pools, spas and hot tubs must be enclosed to prevent young children from gaining unsupervised access to pool areas. This chapter provides 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 old and younger, to enter such areas unsupervised.

SECTION AG101 GENERAL

AG101.1 General. The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the *lot* of a one- or two-family dwelling.

❖ This section provides the scope of the appendix chapter on swimming pools, spas and hot tubs. It regulates the design and construction of such facilities where they are located inside a dwelling unit or on the lot of a one- or two-family dwelling.

AG101.2 Pools in flood hazard areas. Pools that are located in flood hazard areas established by Table R301.2(1), including above-ground pools, on-ground pools and in-ground

pools that involve placement of fill, shall comply with Section AG101.2.1 or AG101.2.2.

Exception: Pools located in riverine flood hazard areas which are outside of designated floodways.

❖ Pools, especially above-ground pools and pools that involve fill, can block floodwater and cause waters to rise higher if they are placed in areas with effective flow (effective flow areas are areas that pass the greatest volumes of water, typically with higher velocities). The requirement to consider the impacts of development on flood heights where floodways have not been designated is consistent with the National Flood Insurance Program, *International Residential Code*® (IRC®) Section R324.1.3.2, and the *International Building Code*® (IBC®).

AG101.2.1 Pools located in designated floodways. Where pools are located in designated floodways, documentation shall be submitted to the *building official* which demonstrates that the construction of the pool will not increase the design flood elevation at any point within the *jurisdiction*.

- ❖ As with any other construction, the pool could be located in a designated floodway. In this case, an analysis is required to simply show that the design flood elevation in the community is not impacted by the addition of the pool.

AG101.2.2 Pools located where floodways have not been designated. Where pools are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the *jurisdiction*.

- ❖ Similar to the requirements of AG101.2.1, the concern is that the pool not cause an increase of 1 foot (305 mm) to the design flood elevation in the community. In this case, a floodway analysis is required, given that there are no designated floodways. Although FEMA has provided floodways along many rivers and streams shown on a community's Flood Insurance Rate Map (FIRM), many other riverine flood hazard areas have Base Flood Elevations (BFEs) but not designated floodways. In these areas, the potential effects that floodplain construction may have on flood elevations may not have been properly evaluated. In this case, the permit applicant must prepare a hydraulic analysis.

SECTION AG102 DEFINITIONS

AG102.1 General. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

- ❖ This section clarifies the terminology used in this appendix chapter. The terms take on specific meanings, often different from the way they are typically used.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

- ❖ These two terms have essentially the same meaning. If a side of a swimming pool projects above the adjacent ground level, the pool is referred to as an above-ground pool. If the bottom of the pool rests on the ground with no portion recessed except for leveling purposes, it is referred to as an on-ground pool. The important factor in both situations is that access to the pool surface is elevated and requires a vertical ascent (from at least one side) to gain access to the water.

A swimming pool situated on the ground or located above the ground is in the same category as other similar facilities such as spas, hot tubs and in-ground

pools. All such facilities are simply regulated as swimming pools.

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

- ❖ Any system of components that encloses a swimming pool to the degree that access is obstructed is a barrier. Enclosure components include the exterior wall of the dwelling unit, a fence and any doors or gates included as a portion of the enclosure. Any construction or natural element that does not surround the pool will allow access at some point. The vast majority of provisions in this appendix chapter relate to the installation of a complying barrier to restrict access to swimming pools, spas and hot tubs. Left unprotected, these facilities present the potential for drownings and near-drownings.

HOT TUB. See "Swimming pool."

- ❖ Typically regarded as a small soaking tub, a hot tub is defined as a swimming pool and is regulated in the same manner as spas and the various types of swimming pools. Hot tubs often are equipped to introduce bubbles or jets of water into the tub.

IN-GROUND POOL. See "Swimming pool."

- ❖ An in-ground pool is a swimming pool in which the top of the pool structure is roughly at the same elevation as the adjoining surface surrounding the pool. Unlike an above-ground or on-ground pool, the pool construction itself does not limit access to the pool.

A swimming pool constructed in the ground is in the same category as similar facilities such as spas, hot tubs, above-ground pools and on-ground pools. All such facilities are simply regulated as swimming pools.

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.

- ❖ Where a pool is located on the property of a single-family dwelling, two-family dwelling, or one-family townhouse, it is "residential." The scope of the provisions in this appendix chapter coincides with this definition.

SPA, NONPORTABLE. See "Swimming pool."

- ❖ Typically regarded as a whirlpool tub, a spa is defined as a swimming pool and is regulated in the same manner as hot tubs and the various types of swimming pools.

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.

- ❖ A nonpermanent structure, a portable spa is self-contained, with all of the controls and equipment integrated.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water more than 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.

❖ To be considered a swimming pool for the provisions of this appendix chapter, the structure used for swimming or recreational bathing must be more than 24 inches (610 mm) deep. Hot tubs, spas, in-ground pools, on-ground pools and above-ground pools are included in this definition if they are the minimum depth prescribed.

SWIMMING POOL, INDOOR. A swimming pool which is totally contained within a structure and surrounded on all four sides by the walls of the enclosing structure.

❖ Where a swimming pool is located in a enclosed structure, fully surrounded by walls, it is an indoor pool. Of critical concern is the easy access afforded to children by an indoor pool.

SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

❖ Where a swimming pool is not fully enclosed, as is required in the definition of an indoor pool, it is an outdoor swimming pool. A pool that may be partially inside and partially outside is defined as an outdoor pool because it is not completely surrounded by a structure.

SECTION AG103 SWIMMING POOLS

AG103.1 In-ground pools. In-ground pools shall be designed and constructed in compliance with ANSI/NSPI-5.

❖ The requirements of ANSI/NSPI-5 regulating residential in-ground swimming pools are applicable to all in-ground pools regulated by this appendix chapter.

AG103.2 Above-ground and on-ground pools. Above-ground and on-ground pools shall be designed and constructed in compliance with ANSI/NSPI-4.

❖ The requirements of ANSI/NSPI-4 regulating residential above-ground and on-ground swimming pools are applicable to all such pools regulated by this appendix chapter.

AG103.3 Pools in flood hazard areas. In flood hazard areas established by Table R301.2(1), pools in coastal high-hazard areas shall be designed and constructed in compliance with ASCE 24.

❖ The purpose of this section is to address installation of swimming pools in or on the lot of a one- or two-family dwelling if the location of the proposed swimming pool is in a coastal high-hazard area (V Zone). Coastal high-hazard areas are areas where wave heights are predicted to exceed 3 feet (914.4 mm) during the base flood. Breaking waves impart dynamic loads on structures, including above-ground pools and inground pools in soils that are subject to scour and erosion. ASCE 24 specifies that pools are

to be designed to withstand flood-related loads and load combinations. If pools are structurally connected to buildings, the pools are to be designed to function as a continuation of the building (see Section R324.3.3). The regulations of the National Flood Insurance Program require that all development be designed and adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

SECTION AG104 SPAS AND HOT TUBS

AG104.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-3.

❖ The requirements of ANSI/NSPI-3 regulating permanently installed residential spas are applicable to all nonportable spas and hot tubs.

AG104.2 Portable spas and hot tubs. Portable spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-6.

❖ The requirements of ANSI/NSPI-6 regulating residential portable spas are applicable to all such spas.

SECTION AG105 BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this appendix 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.

❖ This section describes the provisions for barriers around residential swimming pools, hot tubs and spas. A swimming pool or similar facility creates an attractive temptation to children, including very young children and infants who do not know how to swim. The installation of an effective barrier can help reduce the number of children who die or are injured as the result of open access to a swimming pool, spa or hot tub.

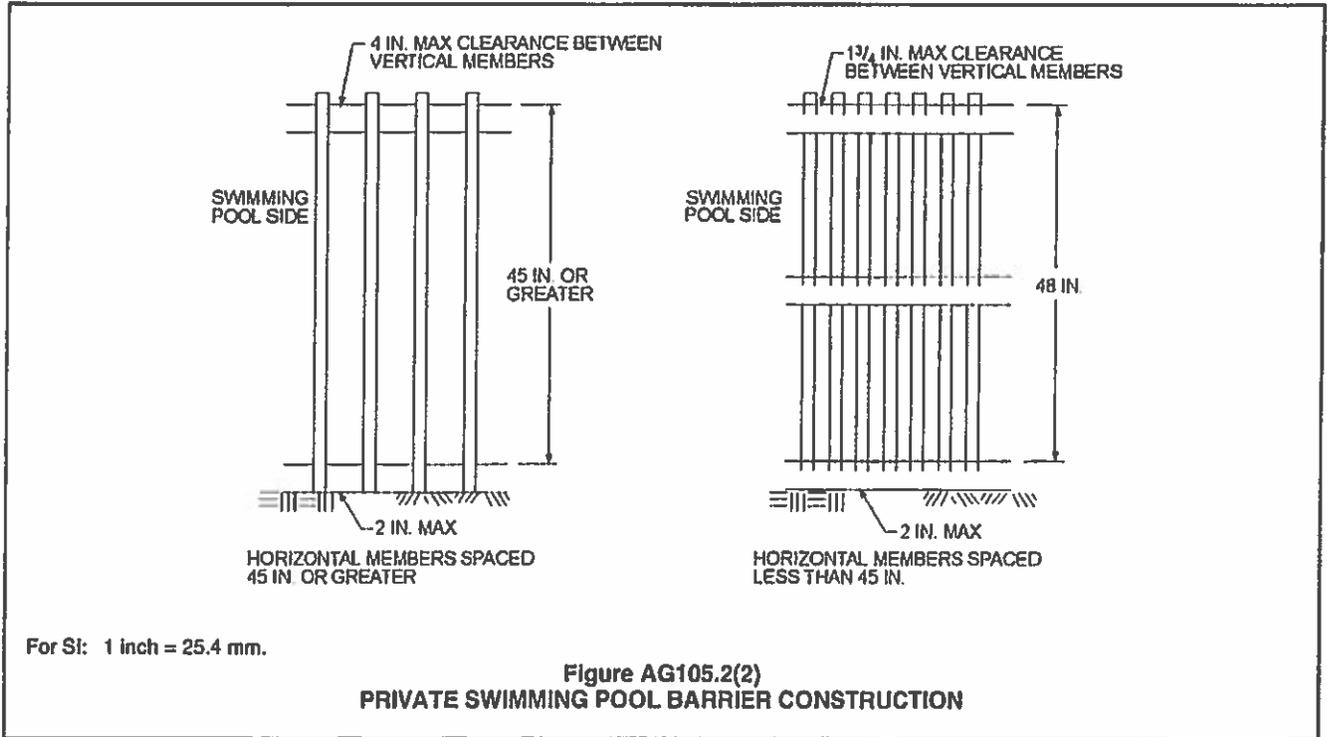
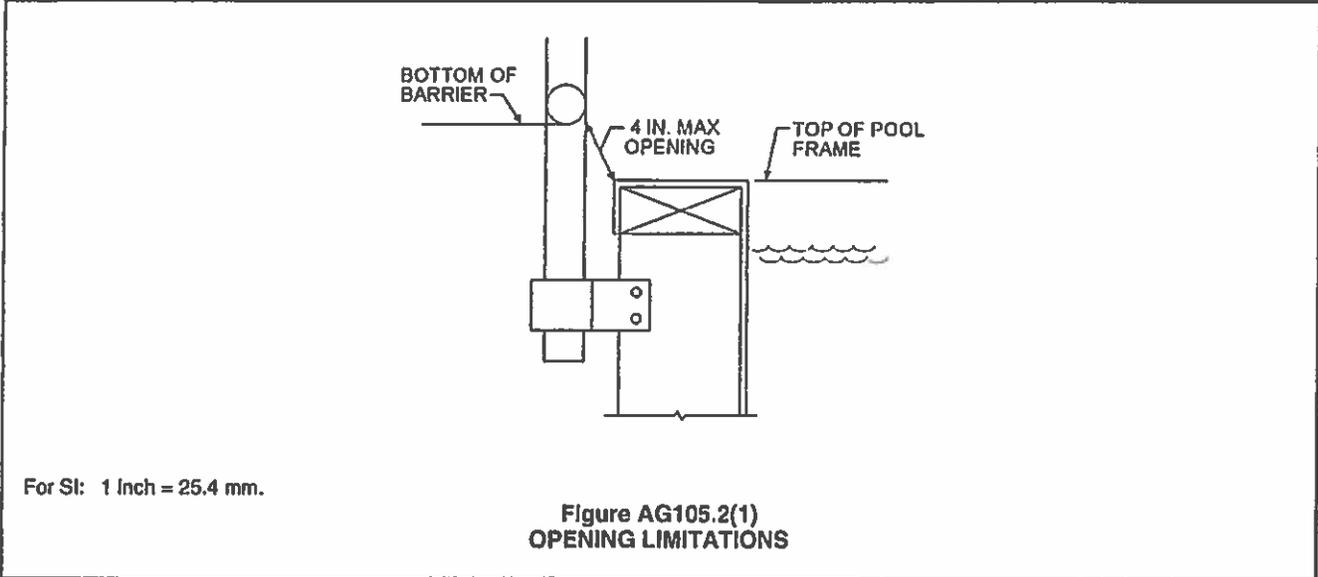
AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa, shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above *grade* 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 (51 mm) 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,

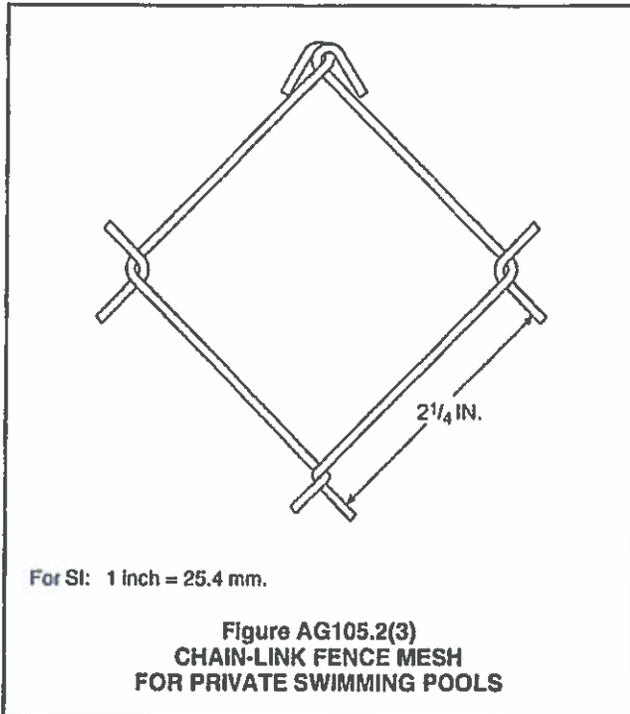
- or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow the passage of a 4-inch-diameter (102 mm) sphere.
 3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions, except for normal construction tolerances and tooled masonry joints.
 4. 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 swimming pool side of the fence. Spacing between vertical members shall not exceed $1\frac{3}{4}$ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1\frac{3}{4}$ inches (44 mm) in width.
 5. 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, spacing within the cutouts shall not exceed $1\frac{3}{4}$ inches (44 mm) in width.
 6. Maximum mesh size for chain link fences shall be a $2\frac{1}{4}$ -inch (57 mm) square, unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than $1\frac{3}{4}$ inches (44 mm).
 7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than $1\frac{3}{4}$ inches (44 mm).
 8. Access gates shall comply with the requirements of Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool, and shall be self-closing and have a self-latching device. Gates, other than pedestrian access gates, shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:
 - 8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and
 - 8.2. The gate and barrier shall have no opening larger than $\frac{1}{2}$ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.
 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 F 1346;
 - 9.2. 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 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 herein.
 10. 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:
 - 10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
 - 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.
- ❖ This section provides prescriptive requirements for the construction of the swimming pool barrier.
1. The barrier height requirement of 48 inches (1219 mm) above the ground is based on reports that document the ability of children under the age of 5 to climb over barriers that are less than 48 inches (1219 mm) in height. The basis for the 4-inch (102 mm) criterion for an opening between the barrier and the top of the pool frame is the same as for guard construction as addressed in Section R312. Refer to Commentary Figure AG105.2(1).
 2. The general provision is applicable only when one of the conditions addressed in Items 4, 5, 6 and 7 is not present. For example, a chain-link fence would be regulated by the requirements of Item 6, which reduces the general opening criterion of 4 inches (102 mm) to $2\frac{1}{4}$ inches (57 mm). The basis for the 4-inch (102 mm) criterion is the same as for guard construction per Section R312. It is based on studies of the body measurements of children 13 to 18 months old.
 3. This provision reduces the potential for gaining a foothold and climbing the barrier.
 4. The more stringent 1.75-inch (44 mm) provision for spacing between vertical members applies when the spacing between horizontal members is less than 45 inches

(1143 mm). It acknowledges the potential for a child to gain both a handhold and a foothold on closely spaced horizontal members and reduces the potential for a child to gain a foothold by limiting the space between the vertical members on the same barrier. If the horizontal members are spaced less than 45 inches (1143 mm) apart, they must also be located on the swimming pool side of the fence as shown in Commentary Figure AG105.2(2) so that they are not available to be used to climb the barriers.

5. This requirement is the counterpart to Item 4 in that it permits the opening in the barrier to be 4 inches (102 mm) if the vertical spacing of the horizontal members equals or exceeds 45 inches (1143 mm) as illustrated in Commentary Figure AG105.2(2). It is consistent with Item 2, which limits openings in the barrier to a 4-inch (102 mm) diameter. The spacing of horizontal members 45 inches (1143 mm) apart precludes them from being used by small children to climb the barrier.



6. The $2\frac{1}{4}$ -inch (57 mm) dimension is intended to reduce the potential for a child to gain a foothold [see Commentary Figure AG105.2(3)]. The mesh size is permitted to be larger than $2\frac{1}{4}$ -inches (57 mm) square if slats are used to reduce the mesh opening to $1\frac{3}{4}$ inches (44 mm) in order to decrease the potential for a child to obtain a foothold or handhold.



7. A slightly larger opening is permitted for barriers composed of diagonal members other than chain link fences, on the basis that such barriers would be more difficult to gain a foothold and handhold on than a chain link fence. The $1\frac{3}{4}$ -inch (44 mm) dimension is consistent with Items 4, 5 and 6.
8. A gate represents the same potential hazard relative to climbing as do the other portions of the barrier; therefore, it must be constructed in accordance with applicable Items 1 through 7. Additionally, because the gate also represents a potential breach of the barrier because the gate can be opened, the code provides prescriptive details for the construction and operation of the gate. A self-closing pedestrian gate must open away from the pool because if the latch fails to operate, a child pushing on the gate will not gain immediate access to the pool. Pushing on the gate may also engage the latch. Large, nonpedestrian gates are not required to be self-closing because of prohibitive cost and maintenance

concerns coupled with the fact that these gates are typically operated by persons other than small children. The 54-inch (1372 mm) latch height requirement limits the potential for small children to reach and activate the latch. If the latch is located lower than 54 inches (1372 mm), the code's prescriptive location requirements preclude the latch from being activated by small children who are not on the pool side of the gate.

9. Many residential settings with backyard pools use the dwelling as a portion of the barrier required around the pool, such as where the fence bounding the property terminates at the dwelling. This limits access to the pool by unsupervised children around the perimeter of the fence, but there is still a potential for children to access the pool from within the dwelling. Indeed, almost half the children involved in drowning or near-drowning accidents gained access to the pool from the dwelling.

The provisions of this section restrict such access by small children and are applicable to all doors in walls that form a portion of the barrier required around swimming pools.

Protection of such door openings to pool areas can be achieved in any one of the methods described in Items 9.1 through 9.3. The first alternative does not require protection of the exterior door itself but limits access to the pool by means of a power safety cover. The performance criteria specified when this option is selected assures that the power safety cover is an adequate and reliable barrier to the pool. In Item 9.2, the alarm is configured to allow adults who are accessing the house to open the door, enter the house and deactivate the system to prevent a false alarm. The touchpad used to deactivate the system must be mounted 54 inches (1372 mm) above the floor, which is presumed to be beyond the reach of small children.

Item 9.3 permits doors to pool areas to be protected by devices that render the door self-closing and self-latching. Any other requirements would be performance based because the code requires equivalency only with Item 9.1 or 9.2. One possible criterion could require the release mechanism for the latching device to be located a minimum of 54 inches (1372 mm) above the floor, which is presumed to be beyond the reach of small children. In addition, doors protected by the method specified in Item 9.3 should probably open away from the pool area. This is so that if the door failed to latch, a child outside the pool area pushing against the door would

cause it to close and not swing to an open position.

10. The code permits the wall of the pool itself to serve as the barrier to the pool, if the wall extends at least 48 inches (1219 mm) above the finished ground level around the perimeter of the pool. Unless it can be secured, locked or removed, the ladder must be surrounded by a complying barrier to limit access to the ladder.

AG105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Item 9 of Section AG105.2.

❖ Indoor pools represent the same hazards as outdoor pools. For this reason, the walls and doors surrounding an indoor swimming pool are regulated in the same manner as an exterior wall of a dwelling where the wall is used as a barrier for an outdoor pool. The provisions of Section AG105.2, Item 9 apply in their entirety.

AG105.4 Prohibited locations. Barriers shall be located to prohibit permanent structures, *equipment* or similar objects from being used to climb them.

❖ The purpose of a swimming pool barrier would be defeated if children could climb on benches, planters, pumps and similar permanent features adjacent to the barrier and gain access to the pool area. Therefore, the area adjacent to the barrier must be carefully designed and constructed to avoid such a condition. This provision is performance in character and must be reviewed on a case-by-case basis.

AG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which comply with ASTM F 1346 shall be exempt from the provisions of this appendix.

❖ The provisions of this appendix chapter are not applicable to spas and hot tubs where an approved safety cover serves as the protective barrier. The requirements of ASTM F 1346 contain a number of criteria so that the safety cover can provide a level of protection that is equivalent to that provided by a swimming pool enclosure barrier. The following requirements are representative of several of the specifications found in the standard:

1. There should be a means of fastening the safety cover to the hot tub or spa, such as key locks, combination locks, special tools or similar devices that will prohibit children from removing or operating the cover. The fastening mechanism, design and location are vital components that help prevent a child's entry to the water.
2. The safety cover should have a label that provides a warning and message regarding the risk of drowning. The label is also very important for the transfer of information to second owners and temporary users.

3. The cover should have been tested to demonstrate that it is capable of supporting the weight of one child [50 pounds (23 kg)] and one adult [225 pounds (102 kg)] so an adult and a child can be supported during a rescue operation.

4. There should be no openings in the cover itself or at any point where the cover joins the surface of the hot tub or spa that would allow a child's head to pass through. The 4-inch (102 mm) spacing for guards in Section R312 and openings in pool enclosures of Section AG105.2 is also applicable.

5. Safety covers are to be installed in accordance with the manufacturer's instructions.

SECTION AG106 ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA SUCTION OUTLETS

AG106.1 General. Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

❖ Vacuum devices for suction inlet systems in pool water circulation are a safety hazard. Body entrapment or hair entrapment can cause drowning and evisceration. Therefore it is important that protection be provided against possible entrapment at the pool entrances to suction inlets and that vacuum relief be provided for the vacuum system. The referenced standard, ANSI/APSP-7 provides requirements intended to prevent entrapment.

SECTION AG107 ABBREVIATIONS

AG107.1 General.

ANSI—American National Standards Institute
11 West 42nd Street
New York, NY 10036

APSP—Association of Pool and Spa Professionals
NSPI—National Spa and Pool Institute
2111 Eisenhower Avenue
Alexandria, VA 22314

ASCE—American Society of Civil Engineers
1801 Alexander Bell Drive
Reston, VA 98411-0700

ASTM—ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428

UL—Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062-2096

❖ This section sets forth the full names and addresses of organizations that develop standards referenced in this appendix chapter. The abbreviations for the names of the organizations are used throughout the code text.

**SECTION AG108
REFERENCED STANDARDS**

AG108.1 General.

ANSI/NSP

ANSI/NSPI-3—99 Standard for Permanently Installed Residential Spas AG104.1

ANSI/NSPI-4—99 Standard for Above-ground/ On-ground Residential Swimming Pools AG103.2

ANSI/NSPI-5—03 Standard for Residential In-ground Swimming Pools. . AG103.1

ANSI/NSPI-6—99 Standard for Residential Portable Spas AG104.2

ANSI/APSP

ANSI/APSP-7—06 Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins AG106.1

ASCE

ASCE/SEI-24—05 Flood-resistant Design and Construction AG103.3

ASTM

ASTM F 1346—91 Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools Spas and Hot Tubs AG105.2, AG105.5

UL

UL 2017—2000 Standard for General-purpose Signaling Devices and Systems—with revisions through June 2004 AG105.2

❖ The seven referenced standards found in this appendix chapter are listed in this section.