APRIL 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 City Council 7:00 PM	**2** Power Board 5:30 PM	**3**	**4** Gas Authority 7:00 AM	**5**	**6**
7	**8** Water Authority 5:00 PM Airport Authority 6:00 PM	**9** Finance & Mgt. Agenda Deadline 12:00 PM	**10**	**11**	**12**	**13**
14	**15** Finance & Mgt. 6:00 PM	**16** Bd. Of Zoning Appeals 6:00 PM Planning Commission 6:30 PM	**17**	**18** Parks & Rec. Bd. 6:00 PM Community Access 7:00 PM	**19**	**20**
21	**22**	**23**	**24**	**25**	**26**	**27**
28	**29**	**30** City Council Agenda Deadline 12:00 pm				

March 2024

S	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

May 2024

S	M	T	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Notes:

AGENDA

Dickson City Council and Beer Board
7:00 pm Monday, April 1, 2024
Council Chambers, Dickson City Hall
Mayor Don L. Weiss Jr., O.D. presiding

Call to Order Mayor Weiss

Roll Call City Recorder

Invocation Councilperson Outlaw

Pledge of Allegiance Mayor Weiss

Beer Board

1. March 18, 2024 Beer Board special session minutes

City Council

Public Hearing

1. Ordinance #1548: An Ordinance to rezone properties at 300 West College St., 302 West College St., 200 North Charlotte St., 202 North Charlotte St. and 204 North Charlotte St. from B-2 (central business district) to R-2 (medium-density residential) and to repeal any ordinance or part of ordinance that conflicts herewith *(Planning Commission recommended approval Feb. 20, 2024)*

Minutes

1. March 4, 2024, City Council regular session minutes

2. March 18, 2024, City Council special session minutes

Public Comments

1. Anyone wishing to provide comments germane to any item on this agenda shall indicate so by registering prior to the start of the meeting on the sign-up sheet provided at the entrance to the council chambers. No registrations will be allowed after the meeting has been called to order. The presiding officer shall establish an allotted time for each speaker and determine the order of speakers under the guidelines established in the City of Dickson Public Engagement Policy adopted in Resolution #2023-12

Old Business

1. Discussion and vote on Project Vulcan/Orange PILOT agreement *(withdrawn at March 18, 2024, special session)*

New Business

1. Proclamation for National Public Safety Telecommunicators Week *(April 14-20,2024)*

2. FY2022-23 Audit by Alexander Thompson Arnold CPAs *(presented at March 18, 2024, Finance and Management Committee meeting)*

3. Contract with Alexander Thompson Arnold CPAs for audit services for FY2023-24 *($45,750 plus $5,000 if single audit necessary in accordance with Uniform Guidance)*

4. Dickson Electric System annual report *(DES General Manager Darrell Gillespie)*

5. Resolution #2024-5: A Resolution to authorize and direct the Board of Public Utilities to make payments in lieu of taxes to surrounding municipalities and counties as set forth by the laws of the State of Tennessee and by contract with the Tennessee Valley Authority

6. First Reading of Ordinance #1548: An Ordinance to rezone properties at 300 West College St., 302 West College St., 200 North Charlotte St., 202 North Charlotte St. and 204 North Charlotte St. from B-2 (central business district) to R-2 (medium-density residential) and to repeal any ordinance or part of ordinance that conflicts herewith *(Planning Commission recommended approval Feb. 20, 2024)*

7. First Reading of Ordinance #1549: An Ordinance to amend the City of Dickson, Tennessee, Municipal Building Code by adopting portions of the 2018 International Swimming Pool and Spa Code and Appendix J Existing Buildings and Structures of the 2019 International Residential Code

8. Resolution #2024-6: A Resolution authorizing the Mayor of the City of Dickson, Tennessee, to make application to and enter into an agreement with the Tennessee Department of Environment and Conservation for the 2024 Local Parks and Recreation Fund grant *(Phase 2 of the J. Dan Buckner Park revitalization project)*

9. Resolution #2024-7: A Resolution authorizing the Mayor of the City of Dickson, Tennessee, to make application to and enter into an agreement with the Tennessee Department of Economic and Community Development for funding through the Historic Development Grant program *(repairs to the War Memorial Building)*

10. Individual Project Order #6 with Kimley-Horn and Associates to assist with preparation of an application for a Tennessee Department of Environment and Conservation Local Parks and Recreation Fund grant for Phase 2 of the J. Dan Buckner Park revitalization project *($15,900 fee under existing Master Agreement for Continuing Professional Services approved April 17, 2023)*

11. Individual Project Order #4.3 with Kimley-Horn and Associates for the preparation of right-of-way exhibits and legal descriptions and construction support services for the Alexander Drive/Livestock Road intersection with Highway 46 project *($16,800 fee under existing Master Agreement for Continuing Professional Services approved April 17, 2023)*

12. Amendment to the Tennessee Commission on Aging and Disability contract for $8,000 grant for Senior Activity Center *(adds provision allowing advance payment and changes executive director to Commissioner Brad Turner)*

13. Contract with TechForce Consultants for Professional IT Services *($60,000 for one year with automatic renewal option)*

14. No Trucks/"Local Deliveries Only" signs on Jackson Brothers Boulevard

15. Request for flashing warning light/signage on Blakemore Road at Codie Drive *(Councilperson Outlaw)*

16. Appointments

17. Schedule the Finance and Management Committee meeting at 6:00 pm April 15, 2024

18. Announce the next City Council meeting for 7:00 pm Monday, May 6, 2024

Other Business

Communication from the Mayor

Adjournment

An Executive Session will follow immediately.

MINUTES

Beer Board Special Session
Monday, March 18, 2024
Following the Special Session of the City Council
Council Chambers at Dickson City Hall

The Beer Board of the City of Dickson, Tennessee, met the eighteenth day of March, 2024, for a special session immediately following the special session of the City Council in the Council Chambers of Dickson City Hall, 600 East Walnut Street.

Call to Order
Mayor Don L. Weiss Jr. called the meeting to order at 6:23 pm.

Roll Call	**Present**	**Absent**
Mayor		
Don L Weiss Jr.	X	
City Council (Ward)		
Jason Epley (1st)	X	
Brett Reynolds (1st)	X	
Shane Chandler (2nd)		X
Kyle Sanders (2nd)	X	
Stacey Levine (3rd)	X	
Horace Perkins III (3rd)	X	
Dwight Haynes (4th)	X	
Michael Outlaw (4th)	X	

A quorum was present and the following business transacted.
Recorder Chris Norman served as recording secretary.

Others present: City Attorney Jerry Smith, City Administrator Rydell Wesson, Tax Collector Angie Brown, Treasurer Tammy Dotson, Fire Chief Richard Greer, Acting Police Chief Seth Lyles, Recorder Chris Norman, Planning and Zoning Director Jason Pilkinton, Senior Activity Center Director Joan Rial, Emergency Communications Director Rosalind Sowell, Engineer Bret Stock, Court Clerk Gina Swaner, Public Works Director David Travis, Projects Director Christopher Hooper, Public Works Office Coordinator Jessi Starkey, retired Police Chief Jeff Lewis, accountant Matt Wood and others as indicated on the sign-in sheet.

Minutes

1. **Minutes of the April 17, 2023, Beer Board Special Session**
   No discussion.
   Motion to approve: Councilperson Levine
   Second: Vice Mayor Epley

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			

Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

Public Comments

1. Nobody registered for the Public Comment period.

Special Session

1. **Hearing for Scott's Market, 2023 Highway 70 West, for violation of Dickson Municipal Code § 8-2-213(4) on Feb. 9, 2024**
   Det. Katrena Pulley testified an employee at Scott's Market looked at an underage informant's identification and sold her a six pack of beer during a compliance sweep on Feb. 9, 2024. Attorney Smith said Scott's Market has a previous violation in 2018 under the name West End Market. Owner Scott Sadler admitted the violation.

   Motion to find Scott's Market in violation for a second offense: Vice Mayor Epley
   Second: Councilperson Sanders

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

   Motion to suspend Scott's Market's beer permit for 30 days: Councilperson Levine
   Second: Councilperson Outlaw
   Mr. Sadler said he thought the market was enrolled in the Tennessee Alcoholic Beverage Commission's Responsible Vendor program. Recorder Norman reported TABC's Tabetha Blackwell said Scott's Market and Liquors at 2021 Highway 70 West is enrolled in the Responsible Wine Vendor program as a retail package store but Scott's Market is not enrolled in the Responsible Beer Vendor program. Mr. Sadler said he didn't realize there are two separate programs. The permit of a Responsible Vendor participant cannot be suspended.

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			

Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

Motion to offer a $1,000 civil penalty in lieu of suspension: Councilperson Levine
Second: None
Mayor Weiss declared motion dies due to lack of a second.

Motion to make suspension effective 12:01 am March 22, 2024: Councilperson Perkins
Second: Councilperson Levine
Mr. Sadler requested the suspension be effective immediately.
Councilpersons Perkins and Levine accepted changing the motion and second to make the suspension effective 12:01 am March 19, 2024.

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

2. **Hearing for Tice's Springs Market, 703 Highway 48 South, for violation of Dickson Municipal Code § 8-2-213(4) on Feb. 9, 2024**
   Det. Katrena Pulley testified an employee at Tice's Springs Market did not ask for an underage informant's identification before selling her a six pack of beer during a compliance sweep on Feb. 9, 2024. Owner Ravi Patel admitted the violation.

   Motion to find Tice's Springs Market in violation for a first offense: Councilperson Levine
   Second: Vice Mayor Epley

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

Motion to suspend Tice's Springs Market's beer permit for 14 days: Councilperson Levine
Second: Councilperson Outlaw

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

Motion to offer a $500 civil penalty in lieu of suspension: Councilperson Sanders
Second: Councilperson Levine
Mayor Weiss said the penalty must be paid within seven days or the suspension will take effect 12:01 am on the eighth day.

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)		X		
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 6-1-0.

3. **Hearing for Kwik Stop Market, 1410 ½ Highway 70 East, for violation of Dickson Municipal Code § 8-2-213(4) on Feb. 9, 2024**
   Det. Katrena Pulley testified an employee at Kwik Stop Market scanned an underage informant's identification and the transaction was denied multiple times before the cashier overrode the system and sold her a malt beverage during a compliance sweep on Feb. 9, 2024. Attorney Smith said Kwik Stop Market has a previous violation in 2023. Manager Michael Erranton admitted the violation.

   Motion to find Kwik Stop Market in violation for a second offense: Councilperson Perkins
   Second: Councilperson Outlaw

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			

Stacey Levine (3rd)	X
Dwight Haynes (4th)	X
Michael Outlaw (4th)	X

Motion passed 7-0-0.

Motion to suspend Kwik Stop Market's beer permit for 30 days: Vice Mayor Epley
Second: Councilperson Levine

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

Motion to make suspension effective 12:01 am March 19, 2024: Vice Mayor Epley
Second: Councilperson Levine

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

Adjournment

With no other business to come before the Beer Board special session, Mayor Weiss adjourned the meeting at 6:58 pm without objection.

ATTEST:

_____ _____

Chris Norman, RECORDER **Don L. Weiss Jr., O.D., MAYOR**

MINUTES

Dickson City Council
7:00 pm Monday, March 4, 2024
Council Chambers at Dickson City Hall

The Council of the City of Dickson, Tennessee, met in regular session the fourth day of March, 2024, in the Council Chambers of Dickson City Hall, 600 East Walnut Street.

Call to Order

Mayor Don L. Weiss Jr. called the meeting to order at 7:01 pm.

Roll Call	**Present**	**Absent**
Mayor		
Don L Weiss Jr.	X	
City Council (Ward)		
Jason Epley (1st)	X	
Brett Reynolds (1st)	X	
Shane Chandler (2nd)	X	
Kyle Sanders (2nd)		X
Stacey Levine (3rd)	X	
Horace Perkins III (3rd)	X	
Dwight Haynes (4th)	X	
Michael Outlaw (4th)	X	

A quorum was present and the following business transacted.
Chris Norman served as recording secretary.

Others present: City Attorney Jerry Smith, City Administrator Rydell Wesson, Tax Collector Angie Brown, Treasurer Tammy Dotson, Fire Chief Richard Greer, Recorder Chris Norman, Planning and Zoning Director Jason Pilkinton, Senior Activity Center Director Joan Rial, Emergency Communications Director Rosalind Sowell, Engineer Bret Stock, Public Works Director David Travis, Projects Director Christopher Hooper, Public Works Office Coordinator Jessi Starkey, Acting Police Chief Seth Lyles, Sgt. Eric Chandler, Dickson Electric System General Manager Darrell Gillespie and others as indicated on the sign-in sheet.

Invocation

Councilperson Haynes presented the invocation.

Pledge of Allegiance

Mayor Weiss led the Pledge of Allegiance

Minutes

1. **Feb. 5, 2024, City Council regular session minutes**
   No discussion.
   Motion to approve: Councilperson Levine

Second: Councilperson Perkins

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

Public Comments

1. David Adams, 2879 Highway 70 East, said he is building a house on West Walnut Street and owns three lots across the street he plans to develop below a blind hill at the intersection with Dickson Avenue. He requests stop signs on West Walnut Street or some other method to reduce speed and protect drivers pulling in and out of driveways.

2. Dawn Dorland, 301 Wyburn Place, asked whether accepting the streets of Wyburn Downs would allow enforcement of traffic laws, specifically parking regulations. Mayor Weiss said it would. Mrs. Dorland said the Home Owners Board supports the city accepting the streets into the city system.

Old Business

1. **Second and Final Reading of Ordinance #1547: An Ordinance to rezone property located at 315 Lewis Hollow Road (Map 110L, Group A, Parcel 007.00) from B-3 (highway commercial) to R-2 (medium-density residential) and to repeal any ordinance or part of ordinance that conflicts herewith**
   Motion to approve: Councilperson Reynolds
   Second: Councilperson Levine

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

2. **Recommendation on Request to place Stop signs on West Walnut Street at Dickson Avenue to create three-way stop**

Administrator Wesson said the city's study of the request showed it does not meet any of the eight requirements of the Manual for Uniform Traffic Control Devices to warrant installation of stop signs. Public Works Director Travis said there are unopened alleys behind the lots on both sides of the street that Mr. Adams can develop at his expense to provide safer access to the new homes. Mayor Weiss asked Director Travis to look into the possibility and cost of placing a caution light or signage other than stop signs in the area to warn drivers and report back at a future meeting

3. **Streetlight proposal for Maid Marion Lane**
   Dickson Electric System proposes to install 3 poles and 92-watt LED lights at estimated construction cost of $5,429 and annual energy cost of $79.51.
   Motion to approve: Councilperson Haynes
   Second: Councilperson Outlaw

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

New Business

1. **Resolution #2024-1: A Resolution to designate an alley located between Center Avenue and South Main Street from East Broad Street to Center Avenue as "LoRita's Alley"**
   Motion to approve: Councilperson Chandler
   Second: Councilperson Levine

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

2. **Resolution #2024-2: A Resolution authorizing the Mayor of the City of Dickson, Tennessee, to enter into a contract with the State of Tennessee through the Surface Transportation Block Grant (STBG) program for Phase Three of the ITS Master Plan**

Administrator Wesson said the grant is for improvements to signals at the intersection of Highway 70 and Highway 96)
Motion to approve: Vice Mayor Epley
Second: Councilperson Reynolds

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

3. **Resolution #2024-3: A Resolution accepting the streets within the Wyburn Downs Subdivision into the City of Dickson, Tennessee, street system**
   Administrator Wesson said the acceptance will be contingent on receiving an updated maintenance bond or letter of credit valid for 12 months from the date of acceptance.
   Motion to approve: Councilperson Outlaw
   Second: Councilperson Haynes

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

4. **Resolution #2024-4: A Resolution of the Council of the City of Dickson, Tennessee, ratifying and confirming HEFB Resolution #2024-1 adopted by the Health and Educational Facilities Board of the City of Dickson, Tennessee, for the financing of a multifamily housing facility to be acquired, constructed and equipped by ECG Beasley, LP using not to exceed $55,000,000 in revenue bonds to be issued by the board**
   Motion to approve: Vice Mayor Epley
   Second: Councilperson Perkins

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			

Horace Perkins III (3rd)	X
Dwight Haynes (4th)	X
Michael Outlaw (4th)	X

Motion passed 7-0-0.

5. **Change Order #10 to the contract with Boger Construction for Dickson Fire Department Station #3**
   Administrator Wesson said the change order is adding 120 weather delay days to the completion date and reducing the contract by $28,250 in liquidated damages for exceeding the amended completion date by 113 days
   Motion to approve: Councilperson Perkins
   Second: Councilperson Levine

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

6. **Change Order #1 to the contract with Underground Pipe and Construction LLC**
   Administrator Wesson said the change order is adding $619,249.28 for increases in materials and labor due to design changes as a result of raising the road above utility lines.
   Motion to approve: Councilperson Perkins
   Second: Vice Mayor Epley

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

7. **Quotes for Pest Control Services for 14 City Properties**
   Administrator Wesson said staff recommends Servall with monthly service at $425 for annual cost of $5,100 for one year with renewal option.
   Motion to approve: Councilperson Perkins
   Second: Councilperson Levine

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			

Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

8. **Quotes for Sheet Rock Repair and Painting at Tennsco Community Center**
   Administrator Wesson said staff recommends D3 Renovations quote at $6,000
   Motion to approve: Councilperson Chandler
   Second: Councilperson Outlaw

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

9. **Bids for Towing Service**
   Administrator Wesson said staff recommends Christy's Towing LLC based on unit bid summary of $1,309 for two-year contract.
   Motion to approve: Councilperson Reynolds
   Second: Councilperson Perkins

Roll Call	**Yes**	**No**	**Abstain**	**Absent**
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

10. **Memorandum of Understanding for FEMA Assistance to Firefighters Grant**
    Mayor Weiss said the grant will fund radios for Dickson Fire Department, Dickson County Fire and Rescue, White Bluff Fire Department, Tennessee City Volunteer Fire Department and Harpeth Ridge Volunteer Fire Department with 10 percent match provided by Dickson County Emergency Communications Board.
    Motion to approve: Councilperson Perkins

Second: Vice Mayor Epley

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

11. Appointments

Mayor Weiss nominated Jordan James for reappointment to a five-year term on the Dickson Housing Authority Board of Directors.

Motion to approve: Councilperson Outlaw

Second: Councilperson Perkins

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)	X			
Kyle Sanders (2nd)				X
Stacey Levine (3rd)	X			
Horace Perkins III (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

12. Schedule the Finance and Management Committee meeting at 6:00 pm March 18, 2024

Mayor Weiss scheduled the Finance and Management Committee meeting for 6:00 pm Monday, March 18, 2024, in the Council Chambers at Dickson City Hall.

13. Schedule a Special Session of the City Council to follow the Finance and Management Committee on March 18, 2024, to consider agreements for Project Vulcan/Orange

Mayor Weiss scheduled a special session of the Dickson City Council to follow the Finance and Management Committee meeting on March 18, 2024, for the purpose of appointing a chief of the Dickson Police Department and considering an agreement for Project Vulcan/Orange.

14. Schedule a Special Session of the Beer Board to follow the City Council Special Session on March 18, 2024, for hearings into violations by three beer permit holders

Mayor Weiss scheduled a Special Session of the Beer Board to follow the City Council Special Session on March 18, 2024, to conduct hearings on violations by Scott's Market, Tice's Spring Market and Kwik Stop Market.

15. **Announce the City Council meeting for 7:00 pm Monday, April 1, 2024**
    Mayor Weiss announced the next regular session of the Dickson City Council will be 7:00 pm Monday, April 1, 2024, in the Council Chambers at Dickson City Hall.

16. **Schedule a public hearing for April 1, 2024, for Ordinance #1548: An Ordinance to rezone properties at 300 West College St., 302 West College St., 200 North Charlotte St., 202 North Charlotte St. and 204 North Charlotte St. from B-2 (central business district) to R-2 (medium-density residential) and to repeal any ordinance or part of ordinance that conflicts herewith**
    Mayor Weiss scheduled a public hearing on Ordinance #1548 for the April 1, 2024, City Council meeting.

Other Business

None

Communication from the Mayor

None

Adjournment

With no other business to come before the City Council, Mayor Weiss adjourned the meeting at 7:54 pm without objection.

ATTEST:

_____ _____

Chris Norman, RECORDER **Don L. Weiss Jr., O.D., MAYOR**

MINUTES

Dickson City Council Special Session
Monday, March 18, 2024
Following the Finance and Management Committee meeting
Council Chambers at Dickson City Hall

The Council of the City of Dickson, Tennessee, met in special session the eighteenth day of March, 2024, immediately following the Finance and Management Committee meeting in the Council Chambers of Dickson City Hall, 600 East Walnut Street.

Call to Order

Mayor Don L. Weiss Jr. called the meeting to order at 6:16 pm.

Roll Call	**Present**	**Absent**
Mayor		
Don L Weiss Jr.	X	
City Council (Ward)		
Jason Epley (1st)	X	
Brett Reynolds (1st)	X	
Shane Chandler (2nd)		X
Kyle Sanders (2nd)	X	
Stacey Levine (3rd)	X	
Horace Perkins III (3rd)	X	
Dwight Haynes (4th)	X	
Michael Outlaw (4th)	X	

A quorum was present and the following business transacted.
Recorder Chris Norman served as recording secretary.

Others present: City Attorney Jerry Smith, City Administrator Rydell Wesson, Tax Collector Angie Brown, Treasurer Tammy Dotson, Fire Chief Richard Greer, Acting Police Chief Seth Lyles, Recorder Chris Norman, Planning and Zoning Director Jason Pilkinton, Senior Activity Center Director Joan Rial, Emergency Communications Director Rosalind Sowell, Engineer Bret Stock, Court Clerk Gina Swaner, Public Works Director David Travis, Projects Director Christopher Hooper, Public Works Office Coordinator Jessi Starkey, retired Police Chief Jeff Lewis, accountant Matt Wood and others as indicated on the sign-in sheet.

Public Comments

1. Nobody registered for the Public Comment period.

Special Session

1. **Appoint Seth Lyles as Chief of the Dickson Police Department**
   Mayor Weiss nominated Seth Lyles to be the chief of the Dickson Police Department.
   Motion to approve: Councilperson Perkins

Second: Councilperson Outlaw

Roll Call	Yes	No	Abstain	Absent
Jason Epley (1st)	X			
Brett Reynolds (1st)	X			
Shane Chandler (2nd)				X
Kyle Sanders (2nd)	X			
Horace Perkins III (3rd)	X			
Stacey Levine (3rd)	X			
Dwight Haynes (4th)	X			
Michael Outlaw (4th)	X			

Motion passed 7-0-0.

2. **Discussion and vote on PILOT for Project Vulcan/Orange**
   Mayor Weiss said changes are being made to the draft PILOT and withdrew the item from consideration to be brought to a future meeting.

Adjournment

With no other business to come before the City Council Special Session, Mayor Weiss adjourned the meeting at 6:23 pm. A Special Session of the Beer Board followed.

ATTEST:

_____ _____

Chris Norman, RECORDER **Don L. Weiss Jr., O.D., MAYOR**

Total Investment

Revised PILOT based on discussion with Vulcan team

Annual Impact of Operations		
Employment, Direct (New full-time equivalent jobs)		139
Wages & Benefits, Direct	$	10,510,138
Direct Effect Employment Multiplier		1.9846
Total Employment		**276**
Employment, Indirect		137
DC Projected 2023 Annual Average Wage	$	48,747
Wages, Indirect	$	6,678,339
Total Wages	**$**	**17,188,477**
Local Sales Tax Revenue	$	169,660
Other Local Tax Revenue	$	24,601
Residential/Commercial Property Tax Revenue	$	182,083
Total Tax Revenue	**$**	**376,344**
Total Capital Investment	**$**	**345,000,000**

One-Time Expansion Impact		
Building-Real Property	$	255,000,000
Final Demand Output Multiplier		1.4748
Economic Impact	**$**	**376,074,000**
Personal Property	$	180,000,000
Final Demand Output Multiplier		1.3007
Economic Impact	**$**	**234,126,000**
Total Economic Impact	**$**	**610,200,000**
Local Sales Tax Revenue	$	2,391,302
Other Local Tax Revenue	$	346,739
Total Tax Revenue	**$**	**2,738,041**

Payback Summary			
PILOT Term		15	
Total Taxes Forgone	$	35,008,938	0
Total Hard Costs		0	
Total Taxes Forgone and Hard Costs	$	35,008,938	
Tax Revenue from Construction & Set Up	$	2,738,041	
Tax Revenue from Operations During PILOT Period	$	5,645,160	
Payments in Lieu of Tax	$	19,628,574	
Total Tax Revenues Received During PILOT Period	$	28,011,775	
Benefit/Cost Ratio		**0.800132099**	

Revised PILOT based on discussion with Vulcan team

Dickson, Tennessee
Draft-Project Vulcan
Payment In-Lieu-Of Tax (Pilot)

Total Investment **$435,000,000**

Building & Land (Real Property) $255,000,000 <========= ***Adjust the investment figures, Real and Personal (highlighted in yellow), to accuratley depict the project scope. This will allow the spreadsheet to calculate the tax savings of the PILOT***

Equipment $90,000,000 <=========
$90,000,000 **Phase II**

(Personal Property)

Annual Property Tax	***City & County***	***Phase II***
Real Property (40% Assessment)	$3,185,970	
Personal Property (30% Assessment)	$843,345	$843,345
Total Initial Annual Tax	**$4,029,315**	

	Tax Rate
Dickson County	$2.35
City of Dickson	$0.77
Combined Tax Rate	**$3.12**

End of Year	Real PILOT Savings %	Real Property Tax	Real Property Tax Savings	Real Property Tax PILOT	Personal PILOT Savings %	Personal Property Tax	Personal Property Tax Savings	Personal Property Tax PILOT	Personal PILOT Savings % Phase II	Personal Property Tax Phase II	Personal Property Tax Savings Phase II	Personal Property Tax PILOT Phase II	Total Tax	Total Tax PILOT	Total Tax Savings for Company
1	100%	$3,185,970	$3,185,970	$0	100%	$742,144	$742,144	$0					$3,928,114	$0	$3,928,114
2	100%	$3,185,970	$3,185,970	$0	100%	$632,509	$632,509	$0					$3,818,479	$0	$3,818,479
3	100%	$3,185,970	$3,185,970	$0	100%	$531,307	$531,307	$0					$3,717,277	$0	$3,717,277
4	90%	$3,185,970	$2,867,373	$318,597	90%	$421,673	$379,505	$42,167	0%	$421,673	$0	$421,673	$4,029,315	$782,437	$3,246,878
5	90%	$3,185,970	$2,867,373	$318,597	90%	$320,471	$288,424	$32,047	0%	$320,471	$0	$320,471	$3,826,912	$671,115	$3,155,797
6	80%	$3,185,970	$2,548,776	$637,194	80%	$210,836	$168,669	$42,167	0%	$210,836	$0	$210,836	$3,607,643	$890,198	$2,717,445
7	80%	$3,185,970	$2,548,776	$637,194	80%	$168,669	$134,935	$33,734	0%	$168,669	$0	$168,669	$3,523,308	$839,597	$2,683,711
8	70%	$3,185,970	$2,230,179	$955,791	70%	$168,669	$118,068	$50,601	0%	$168,669	$0	$168,669	$3,523,308	$1,175,061	$2,348,247
9	70%	$3,185,970	$2,230,179	$955,791	70%	$168,669	$118,068	$50,601	0%	$168,669	$0	$168,669	$3,523,308	$1,175,061	$2,348,247
10	60%	$3,185,970	$1,911,582	$1,274,388	60%	$168,669	$101,201	$67,468	0%	$168,669	$0	$168,669	$3,523,308	$1,510,525	$2,012,783
11	50%	$3,185,970	$1,592,985	$1,592,985	50%	$168,669	$84,335	$84,335	0%	$168,669	$0	$168,669	$3,523,308	$1,845,989	$1,677,320
12	40%	$3,185,970	$1,274,388	$1,911,582	40%	$168,669	$67,468	$101,201	0%	$168,669	$0	$168,669	$3,523,308	$2,181,452	$1,341,856
13	30%	$3,185,970	$955,791	$2,230,179	30%	$168,669	$50,601	$118,068	0%	$168,669	$0	$168,669	$3,523,308	$2,516,916	$1,006,392
14	20%	$3,185,970	$637,194	$2,548,776	20%	$168,669	$33,734	$134,935	0%	$168,669	$0	$168,669	$3,523,308	$2,852,380	$670,928
15	10%	$3,185,970	$318,597	$2,867,373	10%	$168,669	$16,867	$151,802	0%	$168,669	$0	$168,669	$3,523,308	$3,187,844	$335,464
TOTAL		**$47,789,550**	**$31,541,103**	**$16,248,447**		**$4,376,961**	**$3,467,835**	**$909,126**		**$2,471,001**	**$0**	**$2,471,001**	**$54,637,511**	**$19,628,574**	**$35,008,938**

Total Combined Tax Savings for Company Over Term of PILOT **$35,008,938** -$2,012,783

Total payment in lieu of taxes over 15 year period **$19,628,574**

Assumption 1) *Personal Property investment is all in manufacturing machinery, which is depreciated over 7 years with a bottom value of 20% of the original basis. Other personal property such as office equipment, dies and molds are depreciated at different schedules and were left out of this analysis due to the lack of specific information.*

Assumption 2) All real property and personal property will be sold to the Industrial Board and leased back to company for a token amount. At the conclusion of the pilot, the Industrial Board will transfer the property back to the project.

Revised PILOT based on discussion with Vulcan team

Dickson, Tennessee
Draft-Project Vulcan
Payment In-Lieu-Of Tax (Pilot)

Total Investment **$435,000,000**

Building & Land (Real Property) $255,000,000 <========== ***Adjust the investment figures, Real and Personal (highlighted in yellow), to accuratley depict the project scope. This will allow the spreadsheet to calculate the tax savings of the PILOT***

Equipment $90,000,000 <==========
$90,000,000 **Phase II**

(Personal Property)

Annual Property Tax	***City & County***	***Phase II***
Real Property (40% Assessment)	$788,970	
Personal Property (30% Assessment)	$208,845	$208,845

Total Initial Annual Tax **$997,815**

	Tax Rate
Dickson County	
City of Dickson	$0.77
Combined Tax Rate	**$0.77**

End of Year	Real PILOT Savings %	Real Property Tax	Real Property Tax Savings	Real Property Tax PILOT	Personal PILOT Savings %	Personal Property Tax	Personal Property Tax Savings	Personal Property Tax PILOT	Personal PILOT Savings % Phase II	Personal Property Tax Phase II	Personal Property Tax Savings Phase II	Personal Property Tax PILOT Phase II	Total Tax	Total Tax PILOT	Total Tax Savings for Company
1	100%	$788,970	$788,970	$0	100%	$183,784	$183,784	$0					$972,754	$0	$972,754
2	100%	$788,970	$788,970	$0	100%	$156,634	$156,634	$0					$945,604	$0	$945,604
3	100%	$788,970	$788,970	$0	100%	$131,572	$131,572	$0					$920,542	$0	$920,542
4	90%	$788,970	$710,073	$78,897	90%	$104,423	$93,980	$10,442	0%	$104,423	$0	$104,423	$997,815	$193,762	$804,053
5	90%	$788,970	$710,073	$78,897	90%	$79,361	$71,425	$7,936	0%	$79,361	$0	$79,361	$947,692	$166,194	$781,498
6	80%	$788,970	$631,176	$157,794	80%	$52,211	$41,769	$10,442	0%	$52,211	$0	$52,211	$893,393	$220,448	$672,945
7	80%	$788,970	$631,176	$157,794	80%	$41,769	$33,415	$8,354	0%	$41,769	$0	$41,769	$872,508	$207,917	$664,591
8	70%	$788,970	$552,279	$236,691	70%	$41,769	$29,238	$12,531	0%	$41,769	$0	$41,769	$872,508	$290,991	$581,517
9	70%	$788,970	$552,279	$236,691	70%	$41,769	$29,238	$12,531	0%	$41,769	$0	$41,769	$872,508	$290,991	$581,517
10	60%	$788,970	$473,382	$315,588	60%	$41,769	$25,061	$16,708	0%	$41,769	$0	$41,769	$872,508	$374,065	$498,443
11	50%	$788,970	$394,485	$394,485	50%	$41,769	$20,885	$20,885	0%	$41,769	$0	$41,769	$872,508	$457,139	$415,370
12	40%	$788,970	$315,588	$473,382	40%	$41,769	$16,708	$25,061	0%	$41,769	$0	$41,769	$872,508	$540,212	$332,296
13	30%	$788,970	$236,691	$552,279	30%	$41,769	$12,531	$29,238	0%	$41,769	$0	$41,769	$872,508	$623,286	$249,222
14	20%	$788,970	$157,794	$631,176	20%	$41,769	$8,354	$33,415	0%	$41,769	$0	$41,769	$872,508	$706,360	$166,148
15	10%	$788,970	$78,897	$710,073	10%	$41,769	$4,177	$37,592	0%	$41,769	$0	$41,769	$872,508	$789,434	$83,074
TOTAL		**$11,834,550**	**$7,810,803**	**$4,023,747**		**$1,083,906**	**$858,771**	**$225,135**		**$611,916**	**$0**	**$611,916**	**$13,530,371**	**$4,860,798**	**$8,669,574**

Total Combined Tax Savings for Company Over Term of PILOT **$8,669,574**

Total payment in lieu of taxes over 15 year period **$4,860,798**

Assumption 1) *Personal Property investment is all in manufacturing machinery, which is depreciated over 7 years with a bottom value of 20% of the original basis. Other personal property such as office equipment, dies and molds are depreciated at different schedules and were left out of this analysis due to the lack of specific information.*

Assumption 2) All real property and personal property will be sold to the Industrial Board and leased back to company for a token amount. At the conclusion of the pilot, the Industrial Board will transfer the property back to the project.

CONTRACT TO AUDIT ACCOUNTS
OF
City of Dickson

FROM July 01, 2023 TO June 30, 2024

This agreement made this **21st** day of **March 2024**, by and between **ATA CPAs + Advisors PLLC**, **227 Oil Well Road, Jackson, TN 38305**, hereinafter referred to as the "auditor" and **City of Dickson**, of **600 East Walnut Street, Dickson, TN 37055**, hereinafter referred to as the "organization", as follows:

1. In accordance with the requirements of the laws and/or regulations of the State of Tennessee, the auditor shall perform a financial and compliance audit of the organization for the period beginning **July 01, 2023**, and ending **June 30, 2024** with the **exceptions listed below**:

2. The auditor shall conduct the audit in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and requirements prescribed by the Comptroller of the Treasury, State of Tennessee, as detailed in the *Audit Manual*. Additional information and procedures necessary to comply with requirements of governments other than the State of Tennessee are permissible provided they do not conflict with or undermine the requirements previously referenced. If applicable, the audit is to be conducted in accordance with the provisions of the Single Audit Act and Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance).* The audit is also to be conducted in accordance with any other applicable federal agency requirements. It is agreed that this audit will conform to standards, procedures, and reporting requirements established by the Comptroller of the Treasury. It is further agreed that any deviation from these standards and procedures will be approved in writing by the Comptroller of the Treasury prior to the execution of the contract. The interpretation of this contract shall be governed by the above-mentioned publications and the laws of the State of Tennessee.

3. The auditor shall, as part of the written audit report, submit to the organization's management and those charged with governance:

a) a report containing an expression of an unmodified or modified opinion on the financial statements, as prescribed by the *Audit Manual*. This report shall state the audit was performed in accordance with *Government Auditing Standards*, except when a disclaimer of opinion is issued. If the organization is a component unit or fund of another entity, it is agreed that: (a) the financial statements may be included in the financial statements of the other entity; (b) the principal auditor for the other entity may rely upon the contracted auditor's report; and (c) any additional information required by the principal auditor of the other entity will be provided in a timely manner.

b) a report on the internal control and on compliance with applicable laws and regulations and other matters. This report shall be issued regardless of whether the organization received any federal funding. Audit reports of entities which are subject to the provisions of the Single Audit Act and OMB's Uniform Guidance shall include the additional reports required by that guidance. The reports will set forth findings, recommendations for improvement, concurrence or nonconcurrence of appropriate officials with the audit findings, comments on management's responses as appropriate, and comments on the disposition of prior year findings.

4. If a management letter or any other reports or correspondence relating to other matters involving internal controls or noncompliance are issued in connection with this audit, a copy shall be filed with the Comptroller of the Treasury by the auditor. Such management letters, reports, or correspondence shall be consistent with the findings published in the audit report (i.e., they shall disclose no reportable matters or significant deficiencies not also disclosed in the findings found in the published audit report). The report should also include a corrective action plan for findings developed under OMB's Uniform Guidance and for other findings in accordance with Tennessee Code Annotated § 9-3-407, and the *Audit Manual*. The corrective action plan is only applicable to findings published in the audit report.

5. The auditor shall file **one (1)** electronic copy of said report with the Comptroller of the Treasury, State of Tennessee. The auditor shall furnish **15** printed copies and/or an electronic copy of the report to the organization's management and those charged with governance. It is anticipated that the auditor's report shall be filed no later than **December 31, 2024**, **or six (6) months following the period to be audited, whichever is earlier, without explanation to the Comptroller of the Treasury, State of Tennessee, and the organization**. **(Audit documentation for additional procedures for centralized cafeteria systems contracted with audits of internal school funds must be completed and available for review by September 30 following the fiscal year being audited.)** Requirements for additional copies, including those to be filed with the appropriate officials of granting agencies, are listed below:

Additional copies provided upon request.

6. The auditor agrees to retain working papers for no less than five (5) years from the date the report is received by the Comptroller of the Treasury, State of Tennessee. In addition, the auditor agrees that all audit working papers shall, upon request, be made available in the manner requested by the Comptroller for review by the Comptroller of the Treasury or the Comptroller's representatives, agents, and legal counsel, while the audit is in progress and/or subsequent to the completion of the report. Furthermore, at the Comptroller's discretion, it is agreed that the working papers will be reviewed at the office of the auditor, the entity, or the Comptroller and that copies of the working papers can be made by the Comptroller's representatives or may be requested to be made by the firm and may be retained by the Comptroller's representatives.

7. Any reasonable suspicion of fraud, (regardless of materiality) or other unlawful acts including, but not limited to, theft, forgery, credit/debit card fraud, or any other act of unlawful taking, waste, or abuse of, or official misconduct, as defined in Tennessee Code Annotated § 39-16-402, involving

public money, property, or services shall, upon discovery, be promptly reported in writing by the auditor to the Comptroller of the Treasury, State of Tennessee, who shall under all circumstances have the authority, at the discretion of the Comptroller, to directly investigate such matters. Not withstanding anything herein to the contrary, the Comptroller of the Treasury, State of Tennessee, acknowledges that the auditor's responsibility hereunder is to design its audit to obtain reasonable, but not absolute, assurance of detecting fraud that would have a material effect on the financial statements, as well as other illegal acts or violations of provisions of contracts or grant agreements having a direct and material effect on financial statement amounts. If the circumstances disclosed by the audit call for a more detailed investigation by the auditor than necessary under ordinary circumstances, the auditor shall inform the organization's management and those in charge of governance in writing of the need for such additional investigation and the additional compensation required therefor. Upon approval by the Comptroller of the Treasury, an amendment to this contract may be made by the organization's management, those charged with governance, and the auditor for such additional investigation.

8. **Group Audits**. The provisions of Section 8 relate exclusively to contracts to audit components of a group under AU-C 600. (See definitions in AU-C 600, Paragraph 11.) Section 8 is only applicable to an auditor that audits a component (e.g., a fund, component unit, or other component) **of a county government that is audited by the Division of Local Government Audit (LGA)**. Section 8 is intended to satisfy the communication requirements for the group auditor (LGA) to the component auditor under AU-C 600.

a) The Division of Local Government Audit (LGA) shall be considered the "group auditor" for any contract to audit a component of an applicable county government. LGA shall present the county's financial statements in compliance with U.S. Generally Accepted Accounting Principles (GAAP) as promulgated by the Governmental Accounting Standards Board (GASB). LGA shall conduct the audit in accordance with auditing standards generally accepted in the United States of America and the auditing standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States.

b) The contracting auditor shall be considered the "component auditor" for purposes of this section.

c) The financial statements audited by the component auditor should be presented in accordance with GAAP as promulgated by GASB. If the financial reporting framework for any component does not conform to this basis, the financial reporting framework should be disclosed in Section 10 (Special Provisions). (Component financial statementsthat are not presented using the same financial reporting framework as the county's financial statements may cause this contract to be rejected.)

d) The component auditor shall conduct the component audit in accordance with auditing standards generally accepted in the United States of America and the auditing standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States.

e) The component auditor shall cooperate with LGA to accomplish the group audit. It is anticipated that LGA will make reference to the component auditor's report in the group audit report. Should LGA find it necessary to assume responsibility for the component auditor's work, the terms, if any, shall be negotiated under a separate addendum to this contract.

f) The component auditor shall follow the ethical requirements of *Government Auditing Standards* and affirms that the component auditor is independent to perform the audit and will remain independent throughout the course of the component audit engagement.

g) The component auditor affirms that the component auditor is professionally competent to perform the audit. LGA may confirm certain aspects of the component auditor's competence through the Tennessee State Board of Accountancy.

h) The component auditor will be contacted via email by the LGA's Audit Review Manager with the estimated date of the conclusion of LGA's audit of the county government**.** The component auditor agrees to **update subsequent events** between the date of the component auditor's report and the date of the conclusion of LGA's audit of the county government. Additional subsequent events should be communicated via email to LGA's Audit Review Manager.

i) The component auditor shall read LGA's audited financial statements for the county government for the previous fiscal year noting in particular **related parties** in the notes to the financial statements, and **material misstatement** findings in the Findings and Questioned Costs Section. The previous year audited financial statements can be obtained from the Comptroller's website at www.comptroller.tn.gov. As required by generally accepted auditing standards, we have identified Management Override of Controls and Improper Revenue Recognition as presumptive fraud risks. The component auditor shall communicate to LGA (i.e., group management) on a timely basis **related parties** not previously identified by the group management in LGA's prior year audited financial statements. Related parties should be communicated via email to LGA's Audit Review Manager.

j) The component auditor's report should not be restricted as to use in accordance with AU-C 905.

k) Sections 1-7 and Sections 10-14 of this contract are also applicable to the component auditor during the performance of the component audit.

9. **Municipal Chart of Accounts Crosswalk**. The provisions of Section 9 relate exclusively to contracts to audit of a municipality, municipality's fund(s), and municipality's school board of education. The auditor shall convert respective municipal audited financial data into a condensed chart of accounts by use of a Microsoft Excel crosswalk tool prescribed by the Comptroller of the Treasury, State of Tennessee, **or** if a respective municipality, municipality's fund(s), or municipality's school board of education chooses to convert their own audited financial data by use of the crosswalk, the auditor shall verify the accuracy of their conversion. The completed condensed chart of accounts crosswalk in Microsoft Excel format shall be filed with the Comptroller of the Treasury, State of Tennessee, by the auditor when the audited financial report is submitted.

10. (Special Provisions) **The stated fees are based on the records being in ready-to-audit condition. Should there be significant accounting and bookkeeping errors; an additional fee may be negotiated. These conditions, should they exist, will be discussed with management prior to additional work being performed.**

There will be an additional fee of $5,000 in the event that an audit in accordance with Uniform Guidance (Single Audit) is deemed necessary.

11. In consideration of the satisfactory performance of the provisions of this contract, the organization shall pay to the auditor the fee(s) listed below. (Fees may be fixed amounts or estimated.)

Fixed Contract Fee:

Audit

Municipal Chart of Accounts Crosswalk

Total Fixed Contract Fee

or

Estimated Contract Fee:

Audit **$41,750.00**

Municipal Chart of Accounts Crosswalk **$4,000.00**

Total Estimated Contract Fee **$45,750.00**

(If not a fixed amount, an estimated contract fee should be furnished to the governing unit for budgetary purposes. A schedule of fees and/or rates should be set forth below. Interim billings may be arranged with consent of both parties to this contract.) Provision for the payment of fees under this agreement has been or will be made by appropriation of management and those charged with governance.

SCHEDULE OF FEES AND/OR RATES:

The estimated fee for the Chart of Accounts Crosswalk is a max fee estimate. ATA will review the time specifically associated with the Crosswalk and discuss with the client.

12. As the authorized representative of the firm, I do hereby affirm that:

- our firm and all individuals participating in the audit are in compliance with all requirements of the Tennessee State Board of Accountancy and;
- our firm has participated in an external quality control review at least once every three (3) years, conducted by an organization not affiliated with our firm, and that a copy of our most recent external quality control review report has been provided to the organization and the office of the Tennessee Comptroller of the Treasury approving this contract;
- all members of the staff assigned to this audit have obtained the necessary hours of continuing professional education required by *Government Auditing Standards;*
- all auditors participating in the engagement are independent under the requirements of the American Institute of Certified Public Accountants and *Government Auditing Standards*.

13. This writing, including any amendments or special provisions, contains all terms of this contract. There are no other agreements between the parties hereto and no other agreements relative hereto shall be enforceable, unless entered into in accordance with the procedures set out herein and approved by the Comptroller of the Treasury, State of Tennessee. In the event of a conflict or inconsistency between this contract and the special provisions contained in paragraph 10 of this contract, the special provision(s) are deemed to be void. Any changes to this contract must be agreed to in writing by the parties hereto and must be approved by the Comptroller of the Treasury, State of Tennessee. All parties agree that the digital signatures, that is, the electronic signatures applied by submitting the contract, are acceptable as provided for in the Uniform Electronic Transaction Act. Any paper documents submitted related to this contract will be converted to an electronic format and such electronic document(s) will be treated as the official document(s).

14. If any term of this contract is declared by a court having jurisdiction to be illegal or unenforceable, the validity of the remaining terms will not be affected, and, if possible, the rights and obligations of the parties are to be construed and enforced as if the contract did not contain that term.

ATA CPAs + Advisors PLLC

Audit firm

Governmental Unit or Organization

By **Matthew Wood**

Signature

By

Signature

Title/Position: **Member/Partner**

Title/Position:

E-mail address **bknox@atacpa.net**

E-mail address

Date: **March 21, 2024**

Date:

Approved by the Comptroller of the Treasury, State of Tennessee

For the Comptroller:

By

Date:

DICKSON ELECTRIC SYSTEM
P. O. BOX 627
DICKSON, TENNESSEE 37056

April 1, 2024

To the Mayor and Council
City of Dickson
Dickson, Tennessee 37055

Re: Annual Report

In accordance with the requirements of Chapter 32, Section 19, Senate Bill No. 113, Public Acts of 1935, the Board of Public Utilities of the City of Dickson is submitting its annual report for the fiscal year ending June 30, 2023.

The following statistics listed below compare figures from this report with those of previous years:

1. The board's operating revenues increased from $91,451,727 last year to $99,191,857 or 8.46%.

2. The cost of purchased power amounted to 76% of operating revenues. This compares with 72.7% for the fiscal year ending June 30, 2021, and 74.4% for the year ending June 30, 2022.

3. Major elements of revenue distribution, as a percent of total revenues, were as listed below:

	Amount	% of Total Revenues	Last Year
a. Purchased Power	$75,391,409	76.00	74.44
b. Operating Expense	12,068,969	12.16	8.46
c. Maintenance Expense	7,289,969	7.35	6.21
d. Provisions for Depreciation	4,371,876	4.41	4.54
e. Taxes and Tax Equivalent	1,482,908	1.49	1.55
f. Interest for Long Term Debt	0.00	0.00	0.00
g. Net Revenue	(2,217,100)	(2.23)	4.79

4. Kilowatt-hour sales decreased 1.62% compared to an increase of 1.28% for the previous year.

5. Total consumers increased from 37,079 to 38,002.

The audit report by Alexander, Thompson & Arnold, PLLC is also made a part of this annual report.

Yours very truly,

Darrell Gillespie
General Manager
Dickson Electric System

RESOLUTION #2024-5

A RESOLUTION TO AUTHORIZE AND DIRECT THE BOARD OF PUBLIC UTILITIES FOR THE CITY OF DICKSON, TENNESSEE, TO MAKE PAYMENTS IN LIEU OF TAXES TO SURROUNDING MUNICIPALITIES AND COUNTIES AS SET FORTH BY THE LAWS OF THE STATE OF TENNESSEE AND BY CONTRACT WITH THE TENNESSEE VALLEY AUTHORITY

WHEREAS, the City of Dickson, acting by and through its Board of Public Utilities, operates a municipal electric system pursuant to the laws of the State of Tennessee, including Public Chapter No. 84, Senate Bill No. 932, 95th General Assembly of the State of Tennessee, 1987 Session, and the provisions of a long-term power contract with the Tennessee Valley Authority, which said public act and power contract provide, among other things, for electric system payments in lieu of taxes; and

WHEREAS, the above act requires that the total amounts in lieu of taxes to be paid for each fiscal year to the City and to other taxing jurisdictions shall be allocated among the taxing jurisdictions in accordance with Section B thereof and set forth in a resolution adopted by the City governing body, after consultation with the electric system supervisory body; and

WHEREAS, the Mayor and City Council have consulted with the Board of Public Utilities, which acts as the electric system supervisory body, have considered the financial condition of the electric system and have, in accordance with and subject to the provisions of the above act and the power contract, determined the amounts of the payments in lieu of taxes for the fiscal year beginning on July 1, 2023, and ending on June 30, 2024, which will represent a fair share of the cost of government to be borne by the electric system.

Now, therefore, **BE IT RESOLVED BY THE COUNCIL OF THE CITY OF DICKSON, TENNESSEE**, that the Board of Public Utilities be authorized and directed to make payments in lieu of taxes in the amounts and to the taxing jurisdictions set forth below:

Taxing Jurisdiction		**Amount**
City/Town of	Dickson	$ 1,282,216.78
	White Bluff	$ 95,745.23
	Charlotte	$ 32,555.21
	Vanleer	$ 10,562.58
	Burns	$ 36,944.67
	Kingston Springs	$ 51,817.86

Taxing Jurisdiction		**Amount**
County of	Dickson	$ 287,766.70
	Cheatham	$ 45,183.35
	Houston	$ 2,838.81
	Hickman	$ 43,286.92
	Montgomery	$ 2,528.59

Approved this _____ day of _____, 2024.

_____

Don L. Weiss Jr., O.D., MAYOR

ATTEST:

_____

Chris Norman, RECORDER

ORDINANCE #1548

AN ORDINANCE TO REZONE FIVE PROPERTIES LOCATED AT 300 WEST COLLEGE ST., 302 WEST COLLEGE ST., 200 NORTH CHARLOTTE ST., 202 NORTH CHARLOTTE ST. AND 204 NORTH CHARLOTTE ST. FROM B-2 (CENTRAL BUSINESS DISTRICT) TO R-2 (MEDIUM-DENSITY RESIDENTIAL) REQUESTED BY MULTIPLE OWNERS AND TO REPEAL ANY ORDINANCE OR PART OF ORDINANCE THAT CONFLICTS HEREWITH

WHEREAS, Mark and Fay Davidson applied to the Dickson Municipal Planning Commission to request rezoning of property at 300 West College St. (Map 103N, Group F, Parcel 006.00) from B-2 (central business district) to R-2 (medium-density residential); and

WHEREAS, the Office of Planning and Zoning recommended the properties at:

- 302 West College St. (Map 103N, Group F, Parcel 005.00) owned by Mark and Fay Davidson;
- 200 North Charlotte St. (Map 103N, Group F, Parcel 015.00) owned by Jennifer and Morrison Jones;
- 202 North Charlotte St. (Map 103N, Group F, Parcel 014.00) owned by James Petty; and
- 204 North Charlotte St. (Map 103N, Group F, Parcel 006.01 owned by Paul and Mitzi McCallister

be included in the rezoning from B-2 (central business district) to R-2 (medium-density residential) to make the zoning classification consistent with current usage and adjoining properties; and

WHEREAS, the owners of the additional properties consented in writing to the rezoning; and

WHEREAS, the Dickson Municipal Planning Commission reviewed and acted on such application on the 20th day of February, 2024, and recommended approval to the Dickson City Council.

Now, therefore, **BE IT ORDAINED BY THE COUNCIL OF THE CITY OF DICKSON, TENNESSEE**, that:

SECTION 1. The properties herein described be rezoned from B-2 (central business district) to R-2 (medium-density residential), said properties being more fully described in Exhibits "A" and "B" attached hereto.

SECTION 2. Any existing ordinance or part of existing ordinance conflicting herewith is repealed in whole or in part.

SECTION 3. This ordinance shall take effect thirty (30) days after passage on second and final reading, the welfare of the City requiring same.

Don L. Weiss Jr., O.D., MAYOR

ATTEST:

Chris Norman, RECORDER

Public Hearing: _____

Passed First Reading: _____

Passed Second Reading: _____

EXHIBIT 'A'

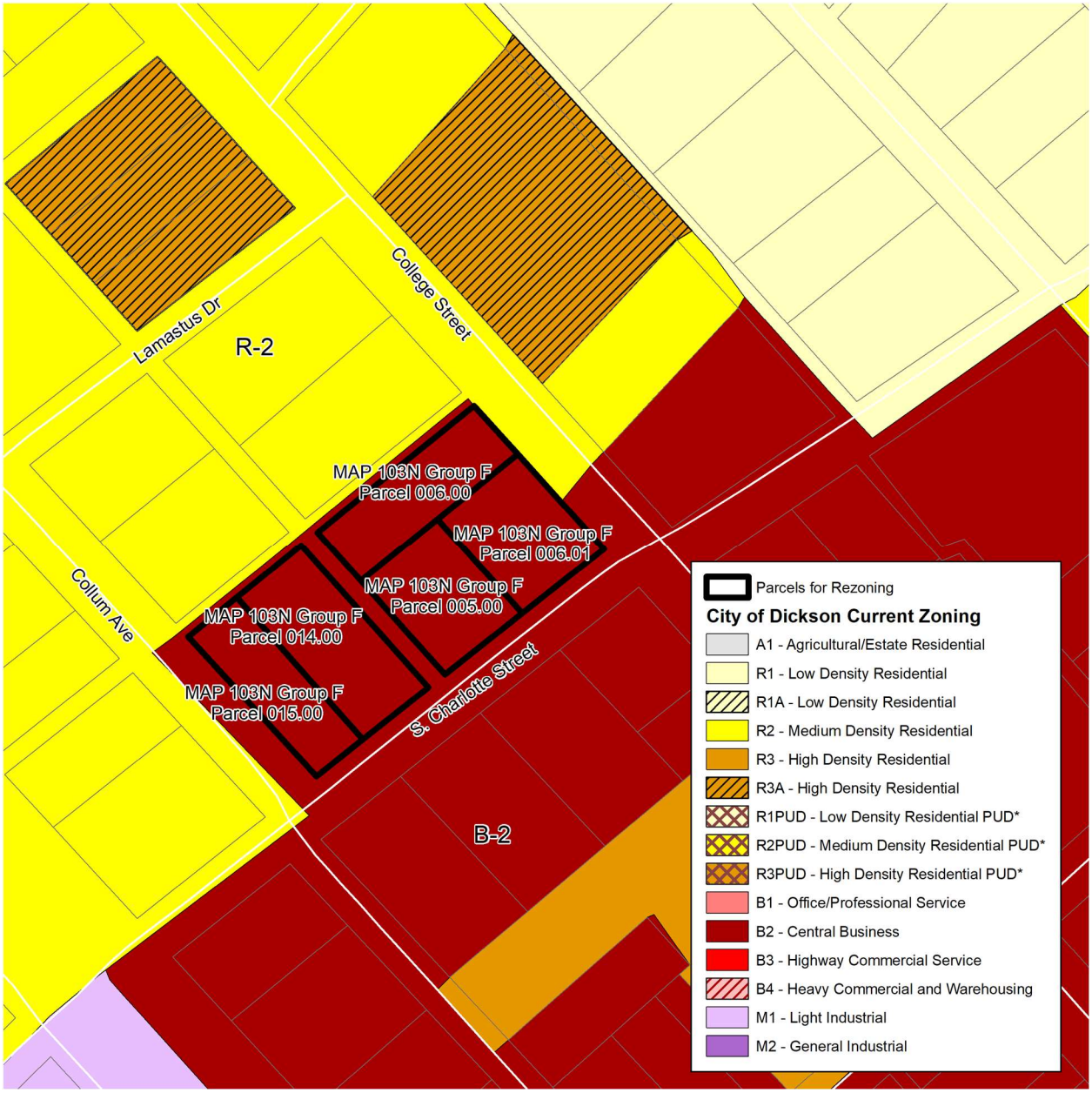
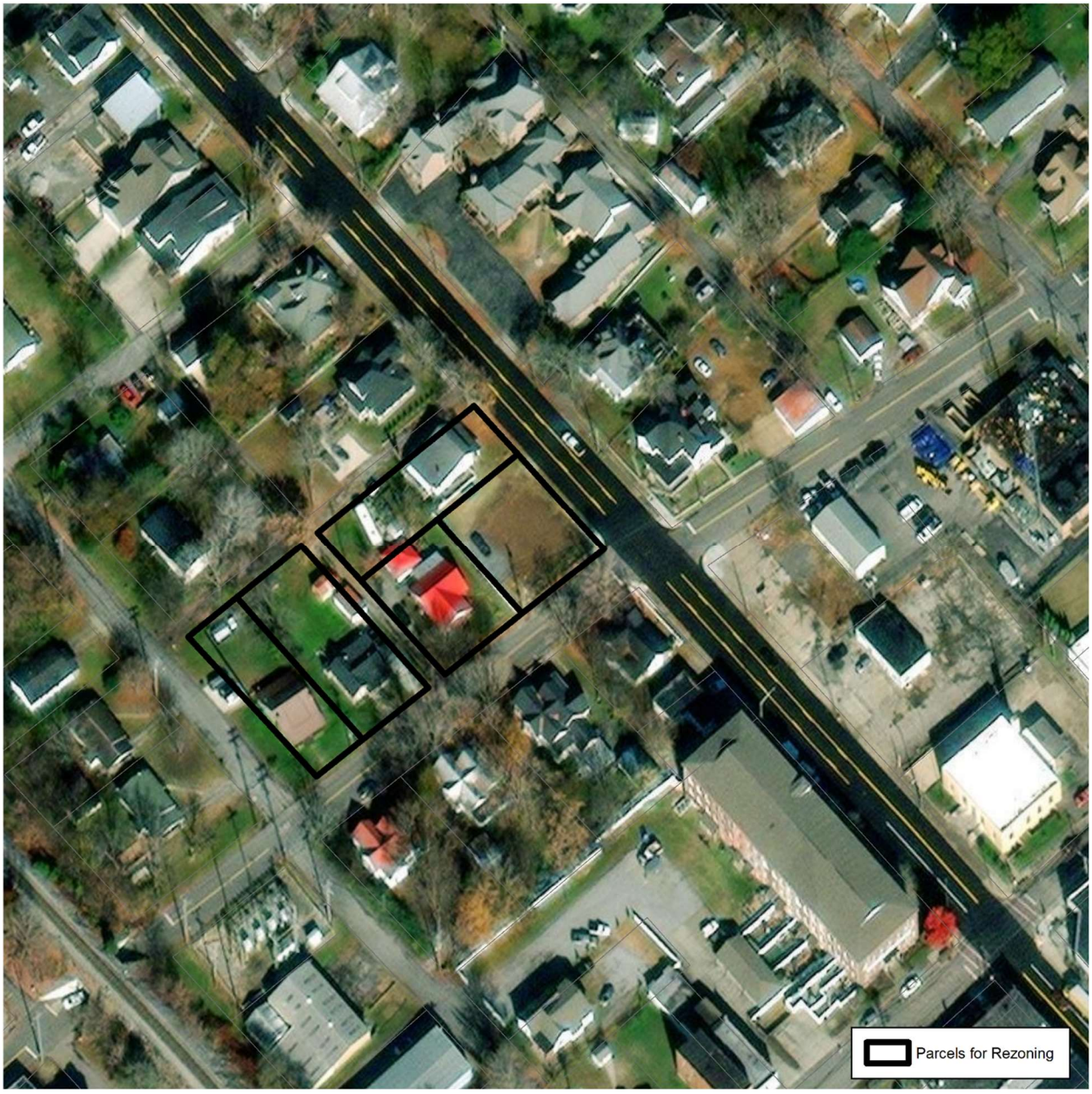

Lamastus Dr
College Street
R-2
MAP 103N Group F
Parcel 006.00
MAP 103N Group F
Parcel 006.01
MAP 103N Group F
Parcel 005.00
MAP 103N Group F
Parcel 014.00
MAP 103N Group F
Parcel 015.00
Collum Ave
S. Charlotte Street
B-2
Parcels for Rezoning
City of Dickson Current Zoning
A1 - Agricultural/Estate Residential
R1 - Low Density Residential
R1A - Low Density Residential
R2 - Medium Density Residential
R3 - High Density Residential
R3A - High Density Residential
R1PUD - Low Density Residential PUD*
R2PUD - Medium Density Residential PUD*
R3PUD - High Density Residential PUD*
B1 - Office/Professional Service
B2 - Central Business
B3 - Highway Commercial Service
B4 - Heavy Commercial and Warehousing
M1 - Light Industrial
M2 - General Industrial

EXHIBIT 'B'



ORDINANCE #1549

AN ORDINANCE TO AMEND THE CITY OF DICKSON, TENNNESSEE, MUNICIPAL BUILDING CODE BY ADOPTING PORTIONS OF THE 2018 INTERNATIONAL SWIMMING POOL AND SPA CODE AND APPENDIX J EXISTING BUILDINGS AND STRUCTURES OF THE 2018 INTERNATIONAL RESIDENTIAL CODE

WHEREAS, the City of Dickson, Tennessee, has adopted certain regulations to protect and promote the safety of residents collectively known at the Municipal Building Code; and

WHEREAS, the administration recommends certain amendments to update the Municipal Building Code when new rules and regulations are established by the specific organizations that promulgate such regulations;

Now, therefore, **BE IT ORDAINED BY THE COUNCIL OF THE CITY OF DICKSON, TENNESSEE**, that:

SECTION 1. The City of Dickson Municipal Building Code is amended by adopting by reference Chapter 1, Chapter 2, Chapter 3 Sections 3.01, 3.02, 3.05 and 3.06, Chapter 7, Chapter 8, Chapter 11 and the Index of the 2018 International Swimming Pool and Spa Code as adopted by the International Code Council, attached as Exhibit A hereto.

SECTION 2. The City of Dickson Municipal Code is amended by adopting by reference Appendix J Existing Buildings and Structures of the 2018 International Residential Code, attached as Exhibit B hereto.

SECTION 3. The amendments described herein and attached hereto shall be added to the Dickson Municipal Building Code in the appropriate placement by refernce.

SECTION 4. This ordinance shall take effect thirty (30) days after passage on second and final reading, the welfare of the City requiring same.

_____
Don L. Weiss Jr., O.D., MAYOR

ATTEST:

_____
Chris Norman, RECORDER

Passed First Reading: _____

Passed Second Reading: _____

EXHIBIT A

Chapter 1: Scope and Administration

General Comments

The law of building regulation is grounded on the police power of the state. In terms of how it is used, this is the power of the state to legislate for the general welfare of its citizens. This power enables passage of such laws as a swimming pool and spa code. It is from the police power delegated by the state legislature that local governments are able to enact building regulations. If the state legislature has limited this power in any way, the municipality may not exceed these limitations. Although the municipality may not further delegate its police power (e.g., by delegating the burden of determining code compliance to the building owner, contractor or architect), it may turn over the administration of building regulations to a municipal official, such as a code official, provided that he or she is given sufficient criteria to clearly establish the basis for decisions as to whether a proposed swimming pool or spa conforms to the code.

Chapter 1 is largely concerned with maintaining due process of law in enforcing the performance criteria contained in the code. Only through careful observation of the administrative provisions can the code official reasonably hope to demonstrate that equal protection under the law has been provided. Although it is generally assumed that the administrative and enforcement sections of a code are geared toward the code official, this is not entirely true. The provisions also establish the rights and privileges of the design professional, contractor and swimming pool or spa owner. The position of the code official is merely to review the proposed and completed work and determine whether a swimming pool or spa installation conforms to the code requirements. The design professional is responsible for the design of a safe swimming pool or spa.

The contractor is responsible for installing the swimming pool or spa in strict accordance with the plans.

During the course of the construction of a swimming pool or spa, the code official reviews the activity to make sure that the spirit and intent of the law are being met and that the swimming pool or spa provides adequate protection of public health. As a public servant, the code official enforces the code in an unbiased, proper manner. Every individual is guaranteed equal enforcement of the code. Further, design professionals, contractors and building owners have the right of due process for any requirement in the code.

Purpose

A swimming pool and spa code, as with any other code, is intended for adoption as a legally enforceable document to safeguard health, safety, property and public welfare. A swimming pool and spa code cannot be effective without adequate provisions for its administration and enforcement. The official charged with the administration and enforcement of pool and spa regulations has a great responsibility, and with this responsibility goes authority. No matter how detailed the swimming pool and spa code may be, the code official must, to some extent, exercise judgment in determining compliance. The code official has the responsibility for establishing that pools and spas are designed and constructed to be reasonably free from hazards associated with the presence and use of the pools and spas. The code is intended to establish an acceptable level of safety.

PART 1—SCOPE AND APPLICATION

SECTION 101 GENERAL

[A] 101.1 Title. These regulations shall be known as the Swimming Pool and Spa Code of [NAME OF JURISDICTION], hereinafter referred to as "this code."

❖ This section sets forth the scope and intent of the code as it applies to new and existing swimming pools and spas. The adopted regulations are identified by inserting the name of the adopting jurisdiction into the code.

[A] 101.2 Scope. The provisions of this code shall apply to the construction, alteration, movement, renovation, replacement, repair and maintenance of aquatic recreation facilities, pools and spas. The pools and spas covered by this code are either permanent or temporary, and shall be only those that are designed and manufactured to be connected to a circulation system and that are intended for swimming, bathing or wading.

❖ This section describes the types of construction-related activities to which the code is intended to apply. The applicability encompasses the initial design of swimming pools and spas, the installation and construction phases and the maintenance of operating systems. The code is intended to regulate any and all swimming pool- and spa-related appliances, systems and associated equipment that can affect the health, safety and welfare of users insofar as they are affected by the installation, operation and maintenance of such appliances and systems.

The key factors as to whether this code applies to a swimming pool or spa is the intended use of the pool or spa for swimming, bathing or wading and whether the pool or spa is designed and manufactured to be connected to a circulation system. The pools or spas can be of permanent construction or of portable construction.

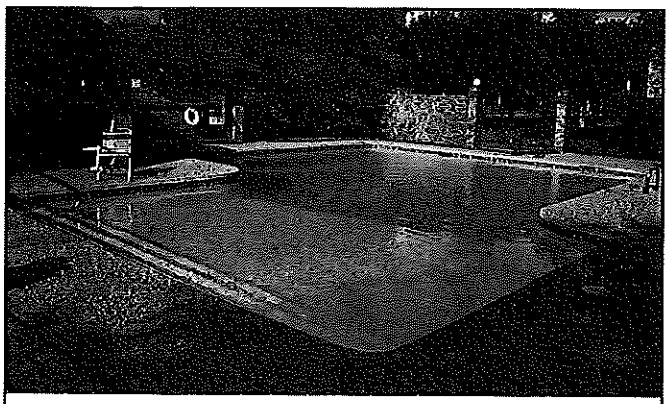
For example, although a permanent decorative fountain not associated with a pool has a circulation system, the fountain is not intended for swimming, bathing or wading. Thus, the fountain is not covered by this code. Similarly, a portable plastic wading pool intended for wading, but not designed to be connected to a circulation system is also not covered by the code. See Commentary Figures 101.2(1) through 101.2(4).

101.2.1 Flotation tanks. Flotation tank systems intended for sensory deprivation therapy shall not be considered to be included in the scope of this code.

❖ Flotation tanks are for sensory deprivation therapy. Although these products are similar in construction to spa in that they have circulated and filtered water, the ISPSC does not address these types of products.

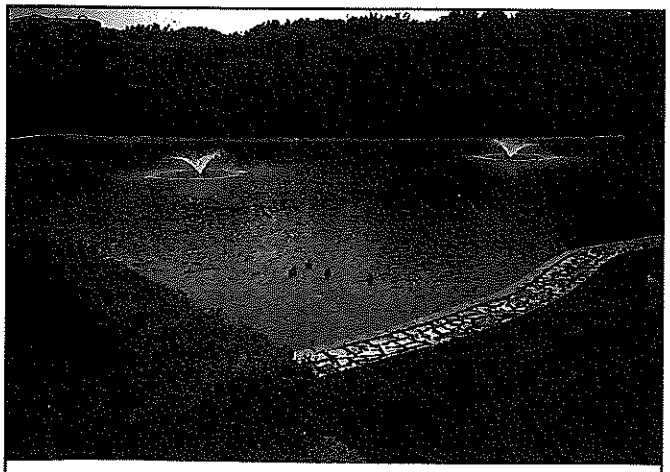
[A] 101.3 Intent. The purpose of this code is to establish minimum standards to provide a reasonable level of safety and protection of health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location and maintenance or use of pools and spas.

❖ The code is intended to set forth requirements that establish the minimum acceptable level to safeguard

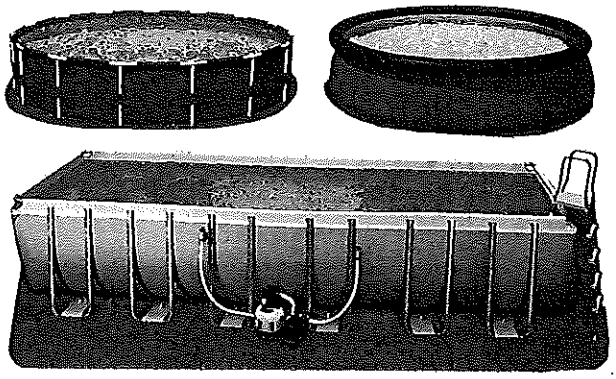


COMMENTARY FIGURE 101.2(1)
TYPICAL INGROUND POOL
(Photo courtesy of Hamilton & Associates Architecture, Engineering, Technical Services)

COMMENTARY FIGURE 101.2(3)
PORTABLE POOL NOT DESIGNED TO HAVE A CIRCULATION SYSTEM
(Photo courtesy of Intex Marketing Inc.)



COMMENTARY FIGURE 101.2(2)
NATURAL BODY OF WATER IS NOT POOL
(Photo courtesy of Hamilton & Associates Architecture, Engineering, Technical Services)



COMMENTARY FIGURE 101.2(4)
ONGROUND STORABLE POOLS WITH CIRCULATION SYSTEM
(Photos courtesy of Intex Marketing Inc.)

life or limb, health, property and public welfare. Intent becomes important in the application of sections, such as Sections 102, 104.2, 105.2 and 108, as well as any enforcement-oriented interpretive action or judgment. As with any code, the written text is subject to interpretation. Interpretations should not be affected by economics or the potential impact on any party. The only considerations should be protection of the public health, safety and welfare.

[A] 101.4 Severability. If any section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

❖ Only invalid sections of the code (as established by the court of jurisdiction) can be set aside. This is essential to safeguard the application of the code text to situations in which a provision of the code is declared illegal or unconstitutional. This section preserves the legislative action that put the legal provisions in place.

SECTION 102
APPLICABILITY

[A] 102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

❖ Specific requirements of the code override or take precedence over general requirements.

[A] 102.2 Existing installations. Any pool or spa and related mechanical, electrical and plumbing systems lawfully in existence at the time of the adoption of this code shall be permitted to have their use and maintenance continued if the use, maintenance or repair is in accordance with the original design and no hazard to life, health or property is created.

❖ An existing swimming pool or spa is generally considered to be "grandfathered" with code adoption if the system meets a minimum level of safety. Frequently the criteria for this level are the regulations (or code) under which the existing swimming pool or spa was originally constructed. If there are no previous code criteria to apply, the code official is to apply those provisions that are reasonably applicable to existing swimming pools and spas.

[A] 102.3 Maintenance. Pools and spas and related mechanical, electrical and plumbing systems, both existing and new, and parts thereof, shall be maintained in proper operating condition in accordance with the original design in a safe and sanitary condition. Devices or safeguards that are required by this code shall be maintained in compliance with the edition of the code under which they were installed.

The owner or the owner's authorized agent shall be responsible for maintenance of systems. To determine compliance with this provision, the code official shall have the authority to require any system to be reinspected.

❖ All swimming pools, spas and equipment are subject to deterioration resulting from aging, wear, accumulation of dirt and debris, corrosion and other factors. Maintenance is necessary to keep swimming pools, spas and equipment in proper operating condition. Required safety devices and controls must be maintained to continue providing the protection that they afford. Existing equipment and systems could have safety devices or other measures that were necessary because of the nature of the equipment, and such safeguards may have been required by a code that predates the current code. Safeguards required by previous or present codes must be maintained for the life of the equipment or system.

The maintenance of swimming pools and spas as prescribed in this section is the responsibility of the owner of the property. The owner may authorize another party to be responsible for the property, in which case that party is responsible for the maintenance of the swimming pools and spas involved.

The reinspection authority of the code official is needed to ensure compliance with the maintenance requirements in this section

[A] 102.4 Additions, alterations or repairs. Additions, *alterations*, renovations or *repairs* to any pool, spa or related system shall conform to that required for a new system without requiring the existing systems to comply with the requirements of this code. Additions, alterations or repairs shall not cause existing systems to become unsafe, insanitary or overloaded.

Minor additions, alterations, renovations and repairs to existing systems shall be permitted in the same manner and arrangement as in the existing system, provided that such repairs or replacement are not hazardous and are *approved*.

❖ Simply stated, new work must comply with current code requirements. Any alteration or addition to an existing swimming pool or spa involves some new work, and therefore is subject to the requirements of the code. Additions or alterations to an existing swimming pool or spa can place different demands on the system, which could necessitate changing all or part of the swimming pool or spa.

Repair of an existing, nonconforming swimming pool or spa is permitted without having to completely replace the nonconforming portion. This typically occurs when repairing the swimming pool or spa wall. This section distinguishes between alterations (subject to applicable provisions of the code) and ordinary repairs (maintenance activities not requiring a permit). This section is intended to allow the continued use of the existing swimming pools, spas and equipment that may or may not be designed and constructed as required for new installations.

Existing swimming pools, spas and equipment will normally require repair and component replacement to

remain operational. This section permits repair and component replacements without requiring the redesign, alteration or replacement of the entire system. In other words, the swimming pool or spa is allowed to stay as is if it is not hazardous. It is important to note that the word "minor" in this section is intended to modify "additions," "alterations," "renovations" and "repairs." It is not the intent of this section to waive code requirements for the replacement of all or major portions of systems under the guise of repair. Any work, other than minor repairs or replacement of minor portions of a swimming pool or spa, must be considered as new work subject to all applicable provisions of the code. Repairs and minor component replacements are permitted in a manner that is consistent with the existing swimming pool or spa if those repairs or replacements are approved by the code official; are not hazardous; do not cause the swimming pool, spa or equipment to be any less in compliance with the code than before; and are, to the extent practicable, in compliance with the provisions of the code applicable to new work.

[A] 102.5 Historic buildings. The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of pools, spas or systems shall not be mandatory for existing pools, spas or systems identified and classified by the state or local jurisdiction as part of a historic structure where such pools, spas or systems are judged by the code official to be safe and in the public interest of health, safety and welfare regarding any proposed construction, alteration, repair, enlargement, restoration, relocation or moving of such pool or spa.

❖ This section gives the code official the widest possible flexibility in enforcing the code where the swimming pool or spa in question has historic value. This flexibility does not come without conditions. The most important criterion for application of this section is that the swimming pool or spa must be specifically classified as being of historic significance by a qualified party or agency. Usually this is done by a state or local authority after considerable scrutiny. Most, if not all, states have such authorities, as do many local jurisdictions. Agencies with such authority typically exist at the state or local government level.

[A] 102.6 Moved pools and spas. Except as determined by Section 102.2, systems that are a part of a pool, spa or system moved into or within the jurisdiction shall comply with the provisions of this code for new installations.

❖ Swimming pools and spas that have been relocated are subject to the requirements of the code as if they were new construction. Placing a pool or spa where one did not previously exist is analogous to constructing a new swimming pool or spa. This section is intended to require alteration of the existing pool or spa to the extent necessary to bring it into compliance with the provisions of the code applicable to new construction or make the existing swimming pool or spa comply with Section 102.2.

Some onground storable pools are intended to be disassembled and stored during winter and need not be treated as a new pool when reassembled or placed back in use.

[A] 102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 11 and such codes and standards shall be considered to be part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements.

❖ The code references many standards and codes promulgated and published by other organizations. A complete list of referenced standards appears in Chapter 11. The wording of this provision, "shall be those that are listed in Chapter 11," was carefully chosen to establish the edition of the standard or code that is enforceable under the code.

[A] 102.7.1 Application of the International Codes. Where the *International Residential Code* is referenced in this code, the provisions of the *International Residential Code* shall apply to related systems in detached one- and two-family dwellings and townhouses not more than three stories in height. Other related systems shall comply with the applicable International Code or referenced standard.

❖ Where swimming pools or spas are associated with one- and two-family detached dwellings and townhouses not more than three stories in height, the *International Residential Code*® (IRC®) is the referenced building code. All other swimming pools or spas are covered by the remaining family of International Codes® (I-Codes®).

[A] 102.8 Requirements not covered by code. Any requirements necessary for the strength, stability or proper operation of an existing or proposed system, or for the public safety, health and general welfare, not specifically covered by this code shall be determined by the code official.

❖ Evolving technology in our society will inevitably result in a situation in which the code is comparatively silent on an identified hazard. The reasonable application of the code to such hazardous, unforeseen conditions is addressed in this section. Clearly this section and the code official's judicious and reasonable application of it are necessary. The purpose of this section, however, is not to impose code official-preferred requirements where the code provides alternative methods or is not silent on the circumstances. Additionally, this section can be used to implement the general performance-oriented language of the code to specific enforcement situations.

[A] 102.9 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

❖ Other laws enacted by the local, state or federal government may be applicable to a condition that is also

governed by a requirement in the code. In such circumstances, the requirements of the code are in addition to those other laws, even though the code official may not be responsible for the enforcement of those laws.

[A] 102.10 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

❖ In a situation where the code may make reference to a chapter or section number or to another code provision without specifically identifying its location in the code, assume that the referenced section, chapter or provision is in this code and not in a referenced code or standard.

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 103
DEPARTMENT OF BUILDING SAFETY

[A] 103.1 Creation of enforcement agency. The department of building safety is hereby created and the official in charge thereof shall be known as the code official.

❖ The executive official in charge of the building safety department is named the "code official" by this section. In actuality, the person who is in charge of the department may hold a different title, such as building commissioner, plumbing inspector or construction official. For the purpose of the code, the person is referred to as the "code official" on being appointed.

[A] 103.2 Appointment. The code official shall be appointed by the chief appointing authority of the jurisdiction.

❖ This section establishes the code official as an appointed position from which he or she cannot be removed, except for cause, subject to a due process review.

[A] 103.3 Deputies. In accordance with the prescribed procedures of the jurisdiction and with the concurrence of the appointing authority, the code official shall have the authority to appoint a deputy code official, the related technical officers, inspectors, plans examiners and other employees. Such employees shall have powers as delegated by the code official.

❖ This section gives the code official the authority to appoint other individuals to assist with the administration and enforcement of the code. These individuals have authority and responsibility as designated by the code official.

[A] 103.4 Liability. The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

❖ The code official is not intended to be held liable for actions performed in accordance with the code in a reasonable and lawful manner. The responsibility of the code official in this regard is subject to local, state and federal laws that may supersede this provision. This section further establishes that the code official (or subordinates) is not liable for costs in any legal action instituted in response to the performance of lawful duties. These costs are to be assumed by the state or municipality. The best way to be certain that the code official's action is a "lawful duty" is to always cite the applicable code section on which the enforcement action is based.

[A] 103.4.1 Legal defenses. Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representatives of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

❖ The cost of defending a code official in a legal action will be borne by the jurisdiction.

SECTION 104
DUTIES AND POWERS OF THE CODE OFFICIAL

[A] 104.1 General. The code official is hereby authorized and directed to enforce the provisions of this code. The code official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

❖ The duty of the code official is to enforce the code, and he or she is the "authority having jurisdiction" for all matters relating to the code and its enforcement. It is the duty of the code official to interpret the code and to determine compliance. Code compliance will not always be easy to determine and will require judgment and expertise, particularly when enforcing the provisions of Sections 104.10 and 104.11. In exercising this authority, however, the code official cannot set aside or ignore any provision of the code.

[A] 104.2 Applications and permits. The code official shall receive applications, review construction documents and issue permits for the erection, alteration, demolition and moving of pools, spas and related mechanical, electrical and plumbing systems. The code official shall inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

❖ The code enforcement process is normally initiated with an application for a permit. The code official is

responsible for processing the application and issuing permits for the installation, replacement, addition to or modification of swimming pools, spas and related systems in accordance with the code.

[A] 104.3 Notices and orders. The code official shall issue necessary notices or orders to ensure compliance with this code.

❖ An important element of code enforcement is the necessary advisement of deficiencies and needed corrections, which is accomplished through notices and orders. The code official is required to issue orders to abate illegal or unsafe conditions.

[A] 104.4 Inspections. The code official shall make the required inspections, or the code official shall have the authority to accept reports of inspection by *approved* agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved* agency or by the responsible individual. The code official is authorized to engage such expert opinion as deemed necessary to report on unusual technical issues that arise, subject to the approval of the appointing authority.

❖ The code official is required to make inspections, as necessary, to determine compliance with the code or to accept written reports of inspections by an approved agency. The inspection of the work in progress or accomplished is another significant element in determining code compliance. Even though a department may not have the resources to inspect every aspect of all work, the required inspections are those that are dictated by administrative rules and procedures based on many parameters, including available inspection resources. To expand the available inspection resources, the code official may approve an inspection agency that, in his or her opinion, possesses the proper qualifications. When unusual, extraordinary or complex technical issues arise relative to a pool or spa installation or to the safety of an existing pool or spa, the code official has the authority to seek the opinion and advice of experts. A technical report from an expert can be used to assist the code official in the approval process.

[A] 104.5 Identification. The code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

❖ This section requires the code official (including by definition all authorized designees) to carry identification in the course of conducting the duties of the position. This identification removes any question concerning the purpose and authority of the inspector.

[A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the code official has reasonable cause to believe that there exists in a structure or on a premises a condition that is contrary to or in violation of this code that makes the structure or premises unsafe, dangerous or hazardous, the code official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the structure or premises and request entry. If entry is refused, the code official shall have recourse to the remedies provided by law to secure entry.

❖ The first part of this section establishes the right of the code official to enter the premises to make the inspections required by Section 106. Permit application forms typically include a statement signed by the applicant (who is the owner or owner's authorized agent) granting the code official the authority to enter specific areas to enforce code provisions related to the permit. The right to enter other structures or premises is more limited. First, to protect the right of privacy, the owner or occupant must grant the code official permission before the interior of the property can be inspected. Permission is not required for inspections that can be accomplished from within the public right-of-way. Second, access may be denied by the owner or occupant. Unless the inspector has reasonable cause to believe that a violation exists, access may be unattainable. Third, code officials must present proper identification and request admittance during reasonable hours—usually the normal business hours of the establishment. Fourth, inspections must be aimed at securing or determining compliance with the provisions and intent of the regulations that are specifically within the established scope of the code official's authority.

Searches to gather information for the purpose of enforcing other codes, ordinances or regulations are considered unreasonable and are prohibited by the Fourth Amendment to the US Constitution. "Reasonable cause" in the context of this section must be distinguished from "probable cause," which is required to gain access to property in criminal cases. The burden of proof establishing reasonable cause may vary among jurisdictions. Usually, an inspector must show that the property is subject to inspection under the provisions of the code; that the interests of the public health, safety and welfare outweigh the individual's right to maintain privacy; and that such an inspection is required solely to determine compliance with the provisions of the code.

Many jurisdictions do not recognize the concept of an administrative warrant and may require the code official to prove probable cause in order to gain access upon refusal. This burden of proof is usually more substantial, often requiring the code official to stipulate in advance why access is needed (usually access is restricted to gathering evidence for seeking an indictment or making an arrest); what specific items or information is sought; its relevance to the case against the individual subject; how knowledge of the relevance of the information or items sought was obtained; and how the evidence sought will be used. In all such cases, the right to privacy must always be weighed against the right of the code official to conduct an inspection to establish public health, safety and welfare. Such

important and complex constitutional issues should be discussed with the jurisdiction's legal counsel. Jurisdictions should establish procedures for securing the necessary court orders when an inspection is deemed necessary following a refusal.

[A] 104.7 Department records. The code official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

❖ In keeping with the need for an efficiently conducted business practice, the code official must keep records pertaining to permit applications, permits, fees collected, inspections, notices and orders issued. Such documentation provides a valuable resource if questions arise regarding the department's actions with respect to a building. It requires that other documents be kept for the length of time mandated by a jurisdiction's, or its state's, laws or administrative rules for retaining public records.

[A] 104.8 Modifications. Where there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's authorized agent, provided that the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen sustainability, health, accessibility, life safety and structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

❖ The code official may amend or make exceptions to the code as needed where strict compliance is impractical. Only the code official has authority to grant modifications. Consideration of a particular difficulty is to be based on the application of the owner and a demonstration that the intent of the code is accomplished. This section is not intended to permit setting aside or ignoring a code provision: rather, it is intended to provide acceptance of equivalent protection. Such modifications do not, however, extend to actions that are necessary to correct violations of the code. In other words, a code violation, or the expense of correcting one, cannot constitute a practical difficulty.

[A] 104.9 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any design or material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability and safety. Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

❖ The code is not intended to inhibit innovative ideas or technological advances. A comprehensive regulatory document such as a swimming pool and spa code cannot envision and then address all future innovations in the industry. As a result, a performance code must be applicable to and provide a basis for the approval of an increasing number of newly developed, innovative materials, systems and methods for which no code text or referenced standards yet exist. The fact that a material, product or method of construction is not addressed in the code is not an indication that the material, product or method is prohibited. The code official is expected to apply sound technical judgment in accepting materials, systems or methods that, although not anticipated by the drafters of the current code text, can be demonstrated to offer equivalent performance. By virtue of its text, the code regulates new and innovative construction practices while addressing the relative safety of building occupants. The code official is responsible for determining whether a requested alternative provides an equivalent level of protection of the public health, safety and welfare as required by the code.

The most common application of an alternative approval occurs with the proposed use of new material. For example, if a new piping material is produced, the manufacturer may gain approval for use by submitting adequate technical data indicating it is equivalent in quality, strength, effectiveness, fire resistance, durability and safety to the piping material listed as acceptable in the code. At the same time, the manufacturer may submit a proposed code change to recognize the new piping material. If the code official rejects the request for an alternative approval, the applicant may appeal the decision, as regulated by Section 108.

[A] 104.10 Required testing. Where there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction.

❖ To provide the basis on which the code official can make a decision regarding an alternative material or type of equipment, sufficient technical data, test reports and documentation must be provided for evaluation. If evidence satisfactory to the code official proves that the alternative equipment, material or construction method is equivalent to that required by the code, the code official is obligated to approve it for use. Any such approval cannot have the effect of waiving any requirements of the code. The burden of proof of equivalence lies with the applicant who proposes the use of alternative equipment, materials or methods.

[A] 104.10.1 Test methods. Test methods shall be as specified in this code or by other recognized test standards. In the

absence of recognized and accepted test methods, the code official shall approve the testing procedures.

❖ The code official must require the submission of any appropriate information and data to assist in the determination of equivalency before a permit can be issued. The type of information required includes test data in accordance with the referenced standards, evidence of compliance with the referenced standard specifications and design calculations. An evaluation report issued by an authoritative agency, such as ICC Evaluation Service, Inc. (ICC-ES), is particularly useful in providing the code official with the technical basis for evaluation and approval of new and innovative plumbing materials and components. The use of authoritative research reports can greatly assist the code official by reducing the time-consuming engineering analysis necessary to review materials and products. Failure to adequately substantiate a request for the use of an alternative is a valid reason for the code official to deny a request.

[A] 104.10.2 Testing agency. Tests shall be performed by an *approved* agency.

❖ The testing agency must be approved by the code official. The testing agency should have the technical expertise, test equipment and quality assurance to properly conduct and report the necessary testing.

[A] 104.10.3 Test reports. Reports of tests shall be retained by the code official for the period required for retention of public records.

❖ Test reports substantiating the modification must be retained in accordance with public record laws. The attorney of the jurisdiction could be asked to verify the specific time period in applicable laws of the jurisdiction.

[A] 104.11 Alternative engineered design. The design, documentation, inspection, testing and approval of an alternative engineered design shall comply with Sections 104.11.1 through 104.11.6.

❖ This section permits an engineer or architect to design a swimming pool or spa that may not comply with all of the provisions found in Chapters 3 through 11. The design must be approved by the code official and must conform to accepted engineering principles. The engineered pool or spa must provide a level of protection of the public health, safety and welfare equivalent to that intended by the code.

[A] 104.11.1 Design criteria. An alternative engineered design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer's instructions.

❖ Although an engineered swimming pool or spa may not comply with all of the minimum requirements set forth in Chapters 3 through 11, it must comply with the intent of these provisions. This section permits the use of standard engineering principles in the design of an innovative system as long as there is no sacrifice of quality, strength, effectiveness, fire resistance, durability and safety. This section further reinforces the intent of Section 104.9 for the acceptance of alternative materials and equipment. The requirement for compliance with the manufacturer's installation instructions is generally intended to address entire engineered systems. The manufacturer or appropriate industry association provides criteria contained in design and installation handbooks. The manufacturer's instructions must be followed for all innovative fittings or products regulated by this section.

[A] 104.11.2 Submittal. The registered design professional shall indicate on the permit application that the system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the *approved* installation.

❖ The permit and permanent permit records must indicate that an alternative engineered design is part of the proposed swimming pool or spa design. This is essential information to have on file to maintain a complete legal record of the pool or spa. When future permits are applied for regarding alterations or modifications, appropriate measures can then be taken to determine that the future work will not adversely affect the original design.

[A] 104.11.3 Technical data. The registered design professional shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

❖ The appropriate information and data must be submitted to the code official to assist in the approval of the alternative engineered design. This is not an option; rather, it is a requirement. Acceptable data to substantiate the performance of the proposed swimming pool, spa or components include results of tests performed by an approved third-party testing agency, design calculations or an evaluation report issued by an authoritative agency, such as ICC-ES.

[A] 104.11.4 Construction documents. The registered design professional shall submit to the code official two complete sets of signed and sealed construction documents for the alternative engineered design.

❖ This section is used in conjunction with Section 105.3. The required detailing of such documents is needed to provide the code official with the necessary information to review and approve the plans.

[A] 104.11.5 Design approval. Where the code official determines that the alternative engineered design conforms to the intent of this code, the system shall be *approved*. If the alternative engineered design is not *approved*, the code official shall notify the registered design professional in writing, stating the reasons why the alternative was not *approved*.

❖ The code official is responsible for determining whether the requested alternative engineered design provides the level of protection of public health, safety and welfare required by the code. The code official's

response to the design professional must be in writing, stating the reason for either accepting or rejecting the request. If the code official rejects the request for the alternative engineered system, the registered design professional may appeal the decision.

[A] 104.11.6 Inspection and testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of Section 106.12.

❖ As is the case for all swimming pool and spa installations, the code official must inspect the alternative engineered design pools and spas to verify that the work is in compliance with the construction documents. Section 106 requires the code official to witness the testing of the swimming pool or spa before it is placed in service to verify that it is free from leaks or other defects.

[A] 104.12 Material and equipment reuse. Materials, equipment and devices shall not be reused unless such elements have been reconditioned, tested, placed in good and proper working condition and *approved*.

❖ The code criteria for materials and equipment have changed over the years. Evaluation of testing and materials technology has permitted the development of new criteria, which the old materials may not satisfy. As a result, used materials must be evaluated in the same manner as new materials. Used (previously installed) equipment must be equivalent to that required by the code if it is to be used in a new installation.

SECTION 105
PERMITS

[A] 105.1 When required. Any owner, or owner's authorized agent who desires to construct, enlarge, alter, repair, move, or demolish a pool or spa or to erect, install, enlarge, alter, repair, remove, convert or replace any system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the code official and obtain the required permit for the work.

❖ This section contains the administrative rules governing the issuance, suspension, revocation or modification of swimming pool and spa permits. It also establishes how and by whom the application for a pool or spa permit is to be made, how it is to be processed and what information it must contain or have attached to it. In general, a permit is required for all activities that are regulated by the code, and these activities cannot begin until the permit is issued.

A swimming pool or spa permit is required for the installation, replacement, alteration or modification of all pools, spas and components that are in the scope of applicability of the code. Replacement of an existing component, piece of equipment or related piping is treated no differently than a new installation in new swimming pool or spa construction. The purpose of a permit is to cause the work to be inspected to determine compliance with the intent of the code.

[A] 105.2 Application for permit. Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or the owner's authorized agent. The permit application shall contain such other information required by the code official.

❖ This section limits persons who may apply for a permit to the building owner or an authorized agent. An owner's authorized agent could be anyone who is given written permission to act in the owner's interest for the purpose of obtaining a permit, such as an architect, an engineer, a contractor or a tenant. Permit forms generally have sufficient space to write a very brief description of the work to be accomplished, which is acceptable for small jobs. For larger projects, the description will be augmented by construction documents.

[A] 105.3 Construction documents. Construction documents, engineering calculations, diagrams and other such data shall be submitted in two or more sets with each application for a permit. The code official shall require construction documents, computations and specifications to be prepared and designed by a registered design professional where required by state law. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code.

❖ A detailed description of the work for which application is made must be submitted. When the work is of a "minor nature," either in scope or needed description, the code official may use judgment in determining the need for a detailed description of the work. For example, the construction documents for an onground storable pool could be in the form of the manufacturer's installation instructions.

These provisions are intended to reflect the minimum scope of information needed to determine code compliance. A statement such as, "All swimming pool and spa work will comply with the 2015 ISPSC," on the construction document is not an acceptable substitute for showing the required information.

This section also requires the code official to determine compliance with any state professional registration laws as they apply to the preparation of construction documents.

[A] 105.4 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing unless such application has been pursued in good faith or a permit has been issued; except that the code official is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

❖ Once an application for a permit has been submitted for proposed work, a time limit of 180 days is established for issuance of the permit. This prevents the code official from having to hold on to incomplete or

delayed applications for an indefinite amount of time. The code official can grant extensions for this time period if provided with a written request with justifiable reasons for the extension request.

[A] 105.5 Permit issuance. The application, construction documents and other data filed by an applicant for permit shall be reviewed by the code official. If the code official finds that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, and that the fees specified in Section 105.6 have been paid, a permit shall be issued to the applicant.

❖ This section requires the code official to review all permit submittals for compliance with the code and to verify that the project will be carried out in accordance with any other applicable laws. This may involve interagency communication and cooperation so that all laws are being obeyed. Once the code official verifies this, a permit may be issued upon payment of the required fees.

[A] 105.5.1 Approved construction documents. When the code official issues the permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "APPROVED." Such *approved* construction documents shall not be changed, modified or altered without authorization from the code official. Work shall be done in accordance with the *approved* construction documents.

The code official shall have the authority to issue a permit for the construction of a part of a system before the entire construction documents for the whole system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire system will be granted.

❖ Construction documents that reflect compliance with code requirements form an integral part of the permit process. Successful execution of the work depends on these documents. This section requires the code official to stamp the complying construction documents as being "approved." Once approved, no further revisions to the documents may be made without the expressed authorization of the code official in order to maintain code compliance.

In the interest of saving time and coordinating construction phases, it is common practice for contractors to seek permits solely applicable to the installation of site work, such as water or electric services. This practice allows the project to proceed before the final construction documents are completed, thus minimizing delays in the construction process. This also allows the builder to perform site work while the weather permits.

The holder of a partial permit must realize that a permit for the remainder of the pool or spa may not be granted for various reasons. Issuance of a partial permit in no way guarantees issuance of a permit for the entire scope of the project.

[A] 105.5.2 Validity. The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or any other ordinance of the jurisdiction. Any permit presuming to give authority to violate or cancel the provisions of this code shall not be valid.

The issuance of a permit based on construction documents and other data shall not prevent the code official from thereafter requiring the correction of errors in said construction documents and other data or from preventing building operations being carried on thereunder where in violation of this code or of other ordinances of this jurisdiction.

❖ An important code section, this section states the fundamental premise that the permit is only a license to proceed with the work. It is not a license to violate, cancel or set aside any provisions of the code. This is important because it means that despite any errors in the approval process, the permit applicant is responsible for code compliance.

[A] 105.5.3 Expiration. Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The code official is authorized to grant, in writing, one or more extensions of time, for a period not more than 180 days. The extension shall be requested in writing and justifiable cause demonstrated.

❖ The permit becomes invalid under two distinct situations, both based on a 6-month period. The first situation is when no work has started 6 months from issuance of the permit. The second situation is when there is no continuation of authorized work for 6 months. The person who was issued the permit should be notified in writing that it is invalid and what steps must be taken to restart the work.

This section also provides the administrative authority with a means of offsetting the costs associated with expired permits by charging a nominal fee for permit reissuance. If, however, the nature or scope of the work to be resumed is different from that covered by the original permit, the permit process essentially starts from "scratch" and full fees are charged. The same procedure would also apply if the work has not commenced within one year of the date of permit issuance or if work has to be suspended for a year or more.

[A] 105.5.4 Extensions. Any permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The code official shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause. The fee for an extension shall be one-half the amount required for a new permit for such work.

❖ Although it is typical for a project to begin immediately following issuance of a permit, there are occasions

when an unforeseen delay may occur. This section is intended to afford the permit holder the opportunity to apply for and receive a single, 180-day extension within which to begin a project under a still-valid permit (i.e., less than 180 days old). The applicant must, however, provide the code official with an adequate explanation for the delay in starting a project, which could include such things as the need to obtain approvals or permits from other agencies having jurisdiction. This section requires the code official to determine what constitutes "good and satisfactory" reasons for any delay, and further allows the jurisdiction to offset its administrative costs for extending the permit by charging one-half the fee for a new permit for the extension.

[A] 105.5.5 Suspension or revocation of permit. The code official shall revoke a permit or approval issued under the provisions of this code in case of any false statement or misrepresentation of fact in the application or on the construction documents on which the permit or approval was based.

❖ A permit is, in reality, a license to proceed with the work. The code official must revoke all permits shown to be based, all or in part, on any false statement or misrepresentation of fact. An applicant may subsequently reapply for a permit with the appropriate corrections or modifications made to the application and construction documents.

[A] 105.5.6 Retention of construction documents. One set of *approved* construction documents shall be retained by the code official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws. One set of *approved* construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

❖ Once the code official has stamped or endorsed as approved the construction documents on which the permit is based (see the commentary to Section 105.5.1), one set of approved construction documents must be kept on the construction site to serve as the basis for all subsequent inspections. To avoid confusion, the construction documents on the site must be precisely the documents that were approved and stamped. This is because inspections are based on the approved documents. Additionally, the contractor cannot determine compliance with the approved construction documents unless those documents are readily available. Unless the approved construction documents are available, the inspection should be postponed and work on the project halted.

[A] 105.6 Fees. A permit shall not be valid until the fees prescribed by law have been paid. An amendment to a permit shall not be released until the additional fee, if any, has been paid.

❖ All fees are to be paid prior to permit issuance. This requirement establishes that the permit applicant intends to proceed with the work, as well as facilitates payment.

[A] 105.6.1 Work commencing before permit issuance. Any person who commences any work on a system before obtaining the necessary permits shall be subject to a fee as indicated in the adopted fee schedule and would be in addition to the required permit fees.

❖ This section is intended to serve as a deterrent to proceeding with work on a swimming pool or spa without a permit. As a punitive measure, it doubles the cost of the permit fee. This section is not, however, intended to penalize a contractor called on to do emergency work after hours, provided that he or she makes prompt notification to the code official the next business day, obtains the requisite permit for the work done and has the required inspections performed.

[A] 105.6.2 Fee schedule. The fees for work shall be as indicated in the following schedule:

[JURISDICTION TO INSERT APPROPRIATE SCHEDULE]

❖ A published fee schedule must be established for plans examination, permits and inspections. Ideally, the department should generate revenues that cover operating costs and expenses. The permit fee schedule is an integral part of this process.

[A] 105.6.3 Fee refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount of any fee paid hereunder that was erroneously paid or collected.
2. Not more than **[SPECIFY PERCENTAGE]** percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.
3. Not more than **[SPECIFY PERCENTAGE]** percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.

The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee not later than 180 days after the date of fee payment.

❖ This section allows for a partial refund of fees resulting from the revocation, abandonment or discontinuance of a swimming pool or spa project for which a permit has been issued and fees have been collected. The incomplete work for which the excess fees are to be refunded refers to the work that would have been required by the department had the permit not been terminated. The refund of fees should be related to the cost of enforcement services not provided because of termination of the project.

SECTION 106
INSPECTIONS

[A] 106.1 General. Construction or work for which a permit is required shall be subject to inspection by the code official and such construction or work shall remain visible and able to be accessed for inspection purposes until *approved*. Approval

as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the code official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

❖ The inspection function is one of the more important aspects of building department operations. This section authorizes the code official to inspect the work for which a permit has been issued and requires that the work to be inspected remain accessible to the code official until inspected and approved. Any expense incurred in removing or replacing material that conceals an item to be inspected is not the responsibility of the code official or the jurisdiction. As with the issuance of permits, an approval as a result of an inspection is not a license to violate the code. Any work approved that might contain a violation of the code does not relieve the applicant from complying with the code.

[A] 106.2 Preliminary inspection. Before issuing a permit, the code official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

❖ Some projects might require a preliminary inspection by the code official prior to a permit being issued. This is especially useful for remodel and addition projects where the conditions of the existing aquatic vessel are unknown or questionable. This section authorizes the code official to make such inspections.

[A] 106.3 Required inspections and testing. Pool and spa installations or alterations thereto, including equipment, piping, and appliances related thereto, shall be inspected by the code official to ensure compliance with the requirements of this code.

❖ This section requires that all portions of the swimming pool or spa be inspected before and after final accessories are installed. The code official has the authority to require noncomplying items to be brought into compliance and reinspected.

Inspections are necessary to determine that an installation conforms to all code requirements. Because some parts of swimming pool and spa systems are hidden underground, periodic inspections are necessary before portions of the system are concealed. The code official is required to determine that swimming pools, spas and equipment are installed in accordance with the approved construction documents and the applicable code requirements. All inspections that are necessary to provide such verification must be conducted. Generally, the administrative rules of a department may list the required interim inspections. Construction that occurs in steps or phases may necessitate multiple inspections; therefore, an exact number of required inspections cannot be specified. Where violations are noted and corrections are required, reinspections may be necessary. As time permits, frequent inspections of some job sites, especially where the work is complex, can be beneficial in detecting code compliance or other potential problems before they develop or become more difficult to correct.

It is the responsibility of the contractor, the builder, the owner or other authorized party to arrange for the required inspections and to coordinate them to prevent work from being concealed before it is inspected.

1. Inspection of underground piping is especially important because once it is covered, it is the most challenging part of a swimming pool and spa system in which to detect a leak. If repairs are necessary, underground repairs are proportionately more expensive because of the need for heavy equipment and the more labor-intensive nature of working below grade level.
2. A rough-in inspection is a visual observation of all parts of the piping system that will eventually be concealed. Rough-in inspections also include verification that the applicable test pressures are applied to the system and that leaks do not exist. The inspection must be made before any of the system is covered by finish materials or hidden by future work.

   A rough-in inspection may be completed in one visit or as a series of inspections. This is administratively determined by the local inspections department and typically is dependent on the size of the job.
3. A final inspection may be done as a series of inspections or in one visit, similar to a rough-in inspection. A final inspection is required prior to the approval of a swimming pool or spa installation. To verify that all previously issued correction orders have been complied with and to determine whether subsequent violations exist, a final inspection must be made. All violations observed during the final inspection must be noted and the permit holder must be advised.

   The final inspection follows the completion of the work or installation. The final inspection is an inspection of all that was installed after the rough-in inspection and not concealed in the construction. Subsequent reinspections are necessary if the final inspection generates a notice of violation.

[A] 106.4 Other inspections. In addition to the inspections specified in Sections 106.2 and 106.3, the code official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced.

❖ Any item regulated by the code is subject to inspection by the code official to determine compliance with the

applicable code provision, and no list can include all types of work in a given building. Also, other inspections before, during or after the rough-in could be necessary. This section gives the code official the authority to inspect any regulated work.

[A] 106.5 Inspection request. It shall be the duty of the holder of the permit or their duly authorized agent to notify the code official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

❖ This section clarifies that it is the responsibility of the permit holder to arrange for the required inspections when the completed work is ready. It also establishes his or her responsibility for keeping the work open for inspection and providing all means needed to accomplish the inspections.

[A] 106.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the code official. The code official, upon notification, shall make the requested inspection and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the code official.

❖ This section establishes that work cannot progress beyond the point of a required inspection without the code official's approval. On making the inspection, the code official must either approve the completed work or notify the permit holder or other responsible party of that which does not comply with the code. Approvals and notices of noncompliance must be in writing, as required by Section 104.4, to avoid any misunderstanding as to what is required. Any work not approved cannot be concealed until it has been corrected and approved by the code official.

[A] 106.7 Approved agencies. Test reports submitted to the code official for consideration shall be developed by *approved* agencies that have satisfied the requirements as to qualifications and reliability.

❖ The code official is responsible for determining whether to accept an agency's test report, as well as whether the reporting agency is acceptable.

[A] 106.8 Evaluation and follow-up inspection services. Prior to the approval of a closed, prefabricated system and the issuance of a permit, the code official shall require the submittal of an evaluation report on each prefabricated system indicating the complete details of the system, including a description of the system and its components, the basis on which the system is being evaluated, test results and similar information, and other data as necessary for the code official to determine conformance to this code.

❖ As an alternative to a physical inspection at the plant or location where systems and components are prefabricated, the code official has the option of accepting an evaluation report from an approved agency detailing such inspections. These evaluation reports can serve as the basis for code compliance.

[A] 106.9 Evaluation service. The code official shall designate the evaluation service of an *approved* agency as the evaluation agency, and review such agency's evaluation report for adequacy and conformance to this code.

❖ The code official is required to review all submitted reports for conformity to the applicable code requirements. If, in the judgment of the code official, the submitted reports are acceptable, he or she should document the basis for the approval.

[A] 106.10 Follow-up inspection. Except where ready access is provided to systems, service equipment and accessories for complete inspection at the site without disassembly or dismantling, the code official shall conduct the frequency of in-plant inspections necessary to ensure conformance to the *approved* evaluation report or shall designate an independent, *approved* inspection agency to conduct such inspections. The inspection agency shall furnish the code official with the follow-up inspection manual and a report of inspections on request, and the system shall have an identifying label permanently affixed to the system indicating that factory inspections have been performed.

❖ The owner is required to provide special inspections of fabricated assemblies at the fabrication plant. The code official or an approved inspection agency must conduct periodic in-plant inspections to ensure conformance to the approved evaluation report. Such inspections would not be required where the pool or spa can be inspected completely at the job site.

[A] 106.11 Test and inspection records. Required test and inspection records shall be available to the code official at all times during the fabrication of the system and the installation of the system, or such records as the code official designates shall be filed.

❖ All testing and inspection records related to a fabricated assembly must be filed with the code official so he or she can maintain a complete and legal record of the assembly and erection of the swimming pool or spa.

[A] 106.12 Special inspections. Special inspections of alternative engineered design systems shall be conducted in accordance with Sections 106.12.1 and 106.12.2.

❖ This section establishes that the design professional has to periodically inspect the alternative engineered design, keep records of such inspections and submit a final report to the code official certifying that all work conforms to the construction documents. Because of the unusual nature and possible complexity of alternative engineered swimming pools and spas, it is necessary for the designer to be involved in the inspection process.

[A] 106.12.1 Periodic inspection. The registered design professional or designated inspector shall periodically inspect and observe the alternative engineered design to determine that the installation is in accordance with the *approved* construction documents. Discrepancies shall be brought to the

immediate attention of the contractor for correction. Records shall be kept of inspections.

❖ The registered design professional must periodically inspect the engineered swimming pools and spas during installation to determine whether the pools and spas conform to the approved construction documents. This is an important step because the design professional can identify any deviations from the approved plans in the early stages of the work. The design professional must then advise the contractor of any problems so that corrective measures can be taken before needless costs are incurred, and labor and materials are wasted.

The design professional must compile a complete legal record of the project, which must include all inspections made, discrepancies found and resolutions of discrepancies. It is the responsibility of the design professional to document and submit inspection records and written certification in accordance with Section 106.12.2.

[A] 106.12.2 Written report. The registered design professional shall submit a final report in writing to the code official upon completion of the installation, certifying that the alternative engineered design conforms to the *approved* construction documents. A notice of approval for the system shall not be issued until a written certification has been submitted.

❖ After all work is completed, the design professional is required to inspect the entire alternative engineered swimming pool or spa. The details of that inspection, including verification of compliance with the approved construction documents, must be submitted in writing to the code official before final approval can be granted.

[A] 106.13 Testing. Systems shall be tested as required by this code. Tests shall be made by the permit holder and the code official shall have the authority to witness such tests.

❖ Visual inspection of a swimming pool or spa is not all that is required in the determination of compliance with the code. The code has requirements for testing to be performed to disclose leaks and defects.

[A] 106.14 New, altered, extended or repaired systems. New systems and parts of existing systems that have been altered, extended or repaired shall be tested as prescribed by this code.

❖ Every swimming pool or spa system must be tested before it is placed into service. Testing is necessary to make sure that the system is free from leaks or other defects. Testing is also required, to the extent practicable, for portions of existing systems that have been repaired, altered or extended.

[A] 106.15 Equipment, material and labor for tests. Equipment, material and labor required for testing a system or part thereof shall be furnished by the permit holder.

❖ The permit holder is responsible for performing tests, as well as for supplying all of the labor, equipment and apparatus necessary to conduct such tests. The code official observes, but never performs, the test.

[A] 106.16 Reinspection and testing. Where any work or installation does not pass any initial test or inspection, the necessary corrections shall be made to comply with this code. The work or installation shall then be resubmitted to the code official for inspection and testing.

❖ If a system, or portion thereof, does not pass the initial test or inspection, all violations must be corrected and the system must be reinspected.

To encourage code compliance and cover the expense of the code official's time, many jurisdictions charge fees for inspections that are required subsequent to the first reinspection.

[A] 106.17 Approval. After the prescribed tests and inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the code official.

❖ After the code official has performed the required inspections and observed the required equipment and system tests (or has received written reports of the results of such tests), he or she must determine whether the installation or work is in compliance with all applicable sections of the code. The code official must issue a written notice of approval if it has been determined that the work or installation is in apparent compliance with the code. The notice of approval is given to the permit holder, and a copy of the notice is retained on file by the code official.

[A] 106.17.1 Revocation. The code official is authorized to, in writing, suspend or revoke a notice of approval issued under the provisions of this code wherever the notice is issued in error, or on the basis of the incorrect information supplied, or where it is determined that the building or structure, premise, system or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

❖ This section is needed to give the code official the authority to revoke a notice of approval for the reasons indicated in the code text. The code official can suspend the notice until all of the code violations are corrected.

[A] 106.18 Temporary connection. The code official shall have the authority to authorize the temporary connection of the building or system to the utility source for the purpose of testing systems.

❖ The typical procedure for a local jurisdiction is to withhold the issuance of the certificate of occupancy until approvals have been received from each code official responsible for inspection of the structure. The code official is permitted to issue a temporary authorization to make connections to the public utility system prior to the completion of all work. The certification is intended to acknowledge that, because of seasonal limitations, time constraints, the need for testing or partial operation of equipment, some systems may be connected even though the pool or spa is not suitable for use. The intent of this section is that a request for temporary occupancy or the connection and use of systems should not be denied when the requesting permit holder has demonstrated to the code official's satisfaction that the public health, safety and welfare will not be endangered.

The code official should view the issuance of a temporary authorization or certificate of occupancy as an act as substantial as the issuance of the final certificate. Indeed, the issuance of a temporary certificate of occupancy offers a greater potential for conflict because once the pool or spa is in use, it is very difficult to remove the occupants through legal means.

[A] 106.19 Connection of service utilities. A person shall not make connections from a utility, source of energy, fuel, power, water system or sewer system to any building or system that is regulated by this code for which a permit is required until authorized by the code official.

❖ This section establishes the authority of the code official to approve utility connections to a building, such as water, sewer, electricity, gas and steam, and to require their disconnection where such approval has not been granted. For the protection of the people who work on swimming pools and spas, such systems must have had final inspection approvals.

SECTION 107
VIOLATIONS

[A] 107.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize any system, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

❖ This section describes the citing, recording and subsequent actions pursuant to observed code violations. Violations of the code are prohibited; this is the basis for all citations and correction notices.

[A] 107.2 Notice of violation. The code official shall serve a notice of violation or order to the person responsible for the erection, installation, alteration, extension, repair, removal or demolition of work in violation of the provisions of this code, or in violation of a detail statement or the *approved* construction documents there under, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

❖ The code official is required to notify the person responsible for the erection or use of a swimming pool or spa found to be in violation of the code. The section that is allegedly being violated must be cited so that the responsible party can respond to the notice.

[A] 107.3 Prosecution of violation. If the notice of violation is not complied with promptly, the code official shall request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful pool or spa in violation of the provisions of this code or of the order or direction made pursuant thereto.

❖ The code official must pursue, through the use of legal counsel of the jurisdiction, legal means to correct the violation. This is not optional.

Any extensions of time for voluntary correction of the violations must be for a reasonable, legitimate cause, or the code official may be subject to criticism for arbitrary and capricious actions. In general, it is better to have a standard time limitation for correction of violations. Departures from this standard must be for a clear and reasonable purpose, usually stated in writing by the violator.

[A] 107.4 Violation penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair a pool or spa in violation of the *approved* construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a **[SPECIFY OFFENSE]**, punishable by a fine of not more than **[AMOUNT]** dollars or by imprisonment not exceeding **[NUMBER OF DAYS]**, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

❖ A standard fine, or other penalty, as deemed appropriate by the jurisdiction is prescribed in this section. Additionally, this section identifies a principle that "each day that a violation continues . . . shall be deemed a separate offense" for the purpose of applying the prescribed penalty in order to facilitate prompt resolution.

[A] 107.5 Stop work orders. Upon notice from the *code official*, work on any system that is being performed contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's authorized agent, or to the person performing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than **[AMOUNT]** dollars or more than **[AMOUNT]** dollars.

❖ On receipt of a violation notice from the code official, the owner of the property, the owner's agent or the person doing the work must immediately cease all construction activities identified in the notice, except as expressly permitted to correct the violation. A stop work order can prevent a violation from becoming worse and more difficult or expensive to correct. However, it can result in inconvenience and monetary loss to the affected parties; therefore, justification must be evident and judgment must be exercised before such an order is issued.

A stop work order may be issued where work is proceeding without a permit. Hazardous conditions could develop where the code official is unaware of the nature of the work and a permit has not been issued. As determined by the adopting jurisdiction, a penalty may be assessed for failure to comply with this section, and it is to be inserted in the blanks provided.

[A] 107.6 Abatement of violation. The imposition of the penalties herein prescribed shall not preclude the legal officer of the jurisdiction from instituting appropriate action to prevent violation, or to prevent illegal use of a pool or spa, or to stop an illegal act, conduct, business or utilization of the plumbing on or about any premises.

❖ Despite the assessment of a penalty in the form of a fine or imprisonment against a violator, the violation itself must still be corrected. Failure to make the necessary corrections will result in the violator being subject to additional penalties as described in Section 107.5.

[A] 107.7 Unsafe systems. Any system regulated by this code that is unsafe or that constitutes a fire or health hazard, insanitary condition, or is otherwise dangerous to human life is hereby declared unsafe. Any use of a system regulated by this code constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is hereby declared an unsafe use. Any such unsafe system is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal.

❖ Unsafe conditions include those that constitute a health hazard, fire hazard, explosion hazard, shock hazard, asphyxiation hazard or physical injury hazard, or are otherwise dangerous to human life and property.

In the course of performing duties, the code official may identify a hazardous condition. Such condition must be declared in violation of the code and, therefore, must be abated.

[A] 107.7.1 Authority to condemn a system. Where the code official determines that any system, or portion thereof, regulated by this code has become hazardous to life, health or property or has become insanitary, the code official shall order in writing that such system either be removed or restored to a safe or sanitary condition. A time limit for compliance with such order shall be specified in the written notice. A person shall not use or maintain a defective system after receiving such notice.

Where such a system is to be disconnected, written notice as prescribed in Section 107.2 shall be given. In cases of immediate danger to life or property, such disconnection shall be made immediately without such notice.

❖ Where a swimming pool, spa or related equipment is determined to be unsafe, the code official is required to notify the owner or agent as the first step in correcting the difficulty. Such notice is to describe the repairs and improvements necessary to correct the deficiency or require removal or replacement of the unsafe equipment or system. All such notices must specify a time frame in which the corrective actions must occur. Additionally, such notice should require the immediate response of the owner or agent. If he or she is not available, public notice of such declaration should suffice for the purposes of complying with this section. The code official may also determine that disconnection of the utilities is necessary to correct an unsafe condition and must give written notice to that effect unless immediate disconnection is essential for public health and safety reasons (see the commentary to Section 107.7.2).

[A] 107.7.2 Authority to disconnect service utilities. The code official shall have the authority to authorize disconnection of utility service to the pool or spa regulated by the technical codes in case of an emergency, where necessary, to eliminate an immediate danger to life or property. Where possible, the owner or the owner's authorized agent and occupant of the building where the pool or spa is located shall be notified of the decision to disconnect utility service prior to taking such action. If not notified prior to disconnecting, the owner, the owner's authorized agent or the occupant of the building shall be notified in writing, as soon as practical thereafter.

❖ The code official must have the authority to order disconnection of any utility supplied to a swimming pool, spa or equipment regulated by the code when it is determined that the equipment or any portion thereof has become an immediate danger. Written notice of an order to disconnect service and the causes therefor should be given to the owner and the occupant of the swimming pool, spa or premises. However, disconnection should be done without such notice in cases of immediate danger to life or property.

[A] 107.7.3 Connection after order to disconnect. A person shall not make connections from any energy, fuel, power supply or water distribution system, or supply energy, fuel or water to any equipment regulated by this code that has been disconnected or ordered to be disconnected by the code official or the use of which has been ordered to be discontinued by the code official until the code official authorizes the reconnection and use of such equipment.

When any system is maintained in violation of this code, and in violation of any notice issued pursuant to the provisions of this section, the code official shall institute any appropriate action to prevent, restrain, correct or abate the violation.

❖ Once the reason for discontinuation of use or disconnection of the utility no longer exists, only the code official can authorize resumption of use or reconnection of the system after it is demonstrated to his or her satisfaction that all repairs or other work are in compliance with applicable sections of the code. This section also requires the owner to take action to abate code violations.

SECTION 108
MEANS OF APPEAL

[A] 108.1 Application for appeal. Any person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted there under have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better

form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.

❖ This section holds that any aggrieved party with a material interest in the decision of the code official may challenge such a decision before a board of appeals. This provides a forum, other than the court of jurisdiction, in which to review the code official's actions.

This section literally allows any person to appeal a decision of the code official. In practice, this section has been interpreted to permit appeals only by aggrieved parties with a material or definitive interest in the decision of the code official. An aggrieved party may not appeal a code requirement per se. The intent of the appeal process is not to waive or set aside a code requirement; rather, it is to provide a means of reviewing a code official's decision on an interpretation or application of the code or to review the equivalency of protection to the code requirements.

[A] 108.2 Membership of board. The board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for 5 years, one for 4 years, one for 3 years, one for 2 years and one for 1 year. Thereafter, each new member shall serve for 5 years or until a successor has been appointed.

❖ The board of appeals is to consist of five members appointed by the "chief appointing authority"—typically, the mayor or city manager. One member is to be appointed for 5 years, one for 4, one for 3, one for 2 and one for 1 year. This method of appointment allows for a smooth transition of board of appeals members, allowing continuity of action over the years.

[A] 108.2.1 Qualifications. The board of appeals shall consist of five individuals, one from each of the following professions or disciplines:

1. Registered design professional who is a registered architect; or a builder or superintendent of building construction with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.
2. Registered design professional with structural engineering or architectural experience.
3. Registered design professional with mechanical and plumbing engineering experience; or a mechanical and plumbing contractor with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.
4. Registered design professional with electrical engineering experience; or an electrical contractor with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.
5. Registered design professional with pool or spa experience; or a contractor with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.

❖ The board of appeals consists of five persons with the qualifications and experience indicated in this section. One must be a registered design professional (see Item 2) with structural or architectural experience. The others must be registered design professionals, construction superintendents or contractors with experience in various areas of swimming pool or spa construction. These requirements are important in that technical people rule on technical matters. The board of appeals is not the place for policy or political deliberations. It is intended that these matters be decided purely on their technical merits, with due regard for state-of-the-art construction technology.

[A] 108.2.2 Alternate members. The chief appointing authority shall appoint two alternate members who shall be called by the board chairman to hear appeals during the absence or disqualification of a member. Alternate members shall possess the qualifications required for board membership, and shall be appointed for 5 years or until a successor has been appointed.

❖ This section authorizes the chief appointing authority to appoint two alternate members who are to be available if the principal members of the board are absent or disqualified. Alternate members must possess the same qualifications as the principal members and are appointed for a term of 5 years or until such time that a successor is appointed.

[A] 108.2.3 Chairman. The board shall annually select one of its members to serve as chairman.

❖ It is customary to determine chairmanship annually so that a regular opportunity is available to evaluate and either reappoint the current chairman or appoint a new one.

[A] 108.2.4 Disqualification of member. A member shall not hear an appeal in which that member has any personal, professional or financial interest.

❖ All members must disqualify themselves regarding any appeal in which they have a personal, professional or financial interest.

[A] 108.2.5 Secretary. The chief administrative officer shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of proceedings in the office of the chief administrative officer.

❖ The chief administrative officer is to designate a qualified clerk to serve as secretary to the board. The secretary is required to record the proceedings using detailed records.

[A] 108.2.6 Compensation of members. Compensation of members shall be determined by law.

❖ Members of the board of appeals need not be compensated unless required by the local municipality or jurisdiction.

[A] 108.3 Notice of meeting. The board shall meet upon notice from the chairman, within 10 days of the filing of an appeal or at stated periodic meetings.

❖ The board must meet within 10 days of the filing of an appeal or at regularly scheduled meetings.

[A] 108.4 Open hearing. Hearings before the board shall be open to the public. The appellant, the appellant's representative, the code official and any person whose interests are affected shall be given an opportunity to be heard.

❖ All hearings before the board must be open to the public. The appellant, the appellant's representative, the code official and any person whose interests are affected must be heard.

[A] 108.4.1 Procedure. The board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information be received.

❖ The board is required to establish, and make available to the public, written procedures detailing how hearings are to be conducted. Additionally, this section provides that although strict rules of evidence are not applicable, the information presented must be deemed relevant.

[A] 108.5 Postponed hearing. When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.

❖ When all five members of the board are not present, either the appellant or the appellant's representative may request a postponement of the hearing.

[A] 108.6 Board decision. The board shall modify or reverse the decision of the code official by a concurring vote of three members.

❖ A concurring vote of three members of the board is needed to modify or reverse the decision of the code official.

[A] 108.6.1 Resolution. The decision of the board shall be by resolution. Certified copies shall be furnished to the appellant and to the code official.

❖ A formal decision in the form of a resolution is required to provide an official record. Copies of this resolution are to be furnished to both the appellant and the code official. The code official is bound by the action of the board of appeals unless he or she thinks that the board of appeals has acted improperly. In such cases, relief through the court having jurisdiction may be sought by corporate council.

[A] 108.6.2 Administration. The code official shall take immediate action in accordance with the decision of the board.

❖ To avoid any undue hindrance in the progress of construction, the code official is required to act without delay, based on the board's decision. This action may be to enforce the decision or to seek legislative relief if the board's action can be demonstrated to be inappropriate.

[A] 108.7 Court review. Any person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision in the office of the chief administrative officer.

❖ This section allows any person to request a review, by the court of jurisdiction, of perceived errors of law. Application for such review must be made after the decision of the board is filed with the chief administrative officer. This helps to establish the observance of due process for all concerned.

Bibliography

The following resource material was used in the preparation of the commentary for this chapter of the code.

Legal Aspects of Code Administration. Washington, DC: International Code Council, 2002.

Chapter 2: Definitions

General Comments

Chapter 2 establishes the meanings of key words and terms used in the code. The words or terms are deemed to be of prime importance in both specifying the subject matter and giving meaning to certain terms used throughout the code for administrative or enforcement purposes.

Purpose

Codes, by their very nature, are technical documents. Every word, term and punctuation mark can alter a sentence's meaning and, if misused, muddy its intent.

Further, the code, with its broad scope of applicability, includes terms used in a variety of construction disciplines. These terms can often have multiple meanings depending on the context or discipline being used at the time.

For these reasons, a consensus on the specific meaning of terms contained in the code must be maintained. Chapter 2 performs this function by stating clearly what specific terms mean for the purpose of the code.

SECTION 201 GENERAL

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

❖ This section contains language and provisions that are supplemental regarding the use of Chapter 2. It gives guidance to the use of the defined words relevant to tense, gender, and plurality.

201.2 Interchangeability. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

❖ Although the definitions contained in Chapter 2 are to be taken literally, gender and tense are considered to be interchangeable. This is so that any grammatical inconsistencies within the code do not hinder the understanding or enforcement of the requirements.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Building Code*, *International Energy Conservation Code*, *International Fire Code*, *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code* or *International Residential Code*, such terms shall have the meanings ascribed to them as in those codes.

❖ When a word or term appears in the code that is not defined in this chapter, other references may be used to find its definition, such as the other International Codes® (I-Codes®), which are coordinated to prevent conflict between documents.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

❖ Another resource for defining words or terms not defined herein or in other codes is their "ordinarily accepted meanings." The intent of this statement is that a dictionary definition could suffice, provided that such definition refers to the context.

Some of the construction terms used throughout the code may not be defined in Chapter 2 or in a dictionary. In such a case, one would first turn to the definitions contained in the referenced standards (see Chapter 11) and then to published textbooks on the subject in question.

SECTION 202 DEFINITIONS

ACCESSIBLE. Signifies access that requires the removal of an access panel or similar removable obstruction.

❖ Components and equipment for pools or spas must be provided with access so that they can be adjusted, repaired or replaced. The term "accessible" indicates that a component or item must be provided with access.

ACTIVITY POOL. A pool designed primarily for play activity that uses constructed features and devices including lily pad walks, flotation devices, small slide features, and similar attractions.

❖ Where a pool has features or equipment that offer activities other than just swimming in the water, the pool is considered an activity pool.

AIR INDUCTION SYSTEM. A system whereby a volume of air is introduced into hollow ducting built into a spa floor, bench, or hydrotherapy jets.

❖ Air is sometimes used to provide turbulence in spas and in localized areas of pools for stimulation and relaxation of the spa or pool users. The system that provides the air for such uses can be piping or cavities that carry pressurized air to the outlets, orifices and jets.

[A] ALTERATION. Any construction or renovation to an existing pool or spa other than repair.

❖ Alterations generally increase or decrease the size or function of an existing pool or spa. Such changes require a permit.

[A] APPROVED. Acceptable to the code official or authority having jurisdiction.

❖ As related to the process of acceptance of pool or spa installations, including materials, equipment and construction systems, this definition identifies where ultimate authority rests. Whenever this term is used, it intends that only the enforcing authority can accept a specific installation or component as complying with the code. It should be noted that the research reports prepared and published by ICC Evaluation Service, Inc. (ICC-ES) can be used by code officials to aid in their review and approval of the material or method described in the report. Publishing a report does not indicate any form of "approval" for the material or method described in the report.

[A] APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, or furnishing product certification where such agency has been *approved* by the code official.

❖ The word "approved" means "as approved by the code official." The basis for approval of an agency for a particular activity could include the capacity and capability of the agency to perform the work.

AQUATIC RECREATION FACILITY. A facility that is designed for free-form aquatic play and recreation. The facilities may include, but are not limited to, wave or surf action pools, leisure rivers, sand bottom pools, vortex pools, activity pools, inner tube rides, body slides and interactive play attractions.

❖ Aquatic recreation facilities typically are very large, have multiple sections with different activities, and are a centerpoint attraction for the region.

BACKWASH. The process of cleansing the filter medium or elements by the reverse flow of water through the filter.

❖ Filter mediums are cleaned by reversing the flow through the filter unit to flush out impurities trapped by the filter.

BACKWASH CYCLE. The time required to backwash the filter medium or elements and to remove debris in the pool or spa filter.

❖ Backwashing of a filter must occur for a specified amount of time in order to provide a filter that is sufficiently cleaned for the period of time that it will be in service.

BARRIER. A permanent fence, wall, building wall, or combination thereof that completely surrounds the pool or spa and obstructs the access to the pool or spa. The term "permanent" shall mean not being able to be removed, lifted, or relocated without the use of a tool.

❖ The purpose of a barrier is to provide significant restricted access and reliable latching devices on entry points to a pool or spa so that children cannot gain access unless an adult provides such access.

BATHER. A person using a pool, spa or hot tub and adjoining deck area for the purpose of water sports, recreation, therapy or related activities.

❖ Although the term "bathing" seems to imply that a user has the intent of cleaning body parts, in the context of the code, "bather" means a person who uses a pool or spa for activities other than personal hygiene maintenance.

BATHER LOAD. The number of persons in the pool or spa water at any given moment or during any stated period of time.

❖ The number of bathers in a body of water "loads" the water with impurities and bacteria that must be filtered and disinfected, respectively, in order to maintain sanitary conditions in the pool, spa or hot tub. Bather load is used in determining filter sizing and disinfectant levels.

BEACH ENTRY. Sloping entry starting above the waterline at deck level and ending below the waterline. The presence of sand is not required. Also called "zero entry."

❖ Just as one would find at a lake or the ocean, a beach entry permits entry into the water without having to use steps or ramps.

CHEMICAL FEEDER. A floating or mechanical device for adding a chemical to pool or spa water.

❖ The addition of chemicals to a pool or spa is necessary to maintain sanitary water conditions. Chemical feeders provide a metered amount of chemicals over time so that large doses of chemicals are not injected into the water all at once.

CIRCULATION EQUIPMENT. The components of a circulation system.

❖ This includes all of the pumping components of the circulation system.

CIRCULATION SYSTEM. The mechanical components that are a part of a recirculation system on a pool or spa. Circulation equipment may be, but is not limited to, categories of pumps, hair and lint strainers, filters, valves, gauges, meters, heaters, surface skimmers, inlet fittings, outlet fittings and chemical feeding devices. The components have separate functions, but where connected to each other by piping, perform as a coordinated system for purposes of maintaining pool or spa water in a clear and sanitary condition.

❖ This is an all-encompassing definition that includes every part in the path that the water takes from the pool or spa and back into the pool or spa.

[A] CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

❖ The statutory power to enforce the code is normally vested in a building department (or the like) of a state, county or municipality whose designated enforcement officer is termed the "code official" (see commentary, Section 103).

[A] CONSTRUCTION DOCUMENTS. Written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a project necessary for obtaining a building permit.

❖ For the code official to determine that proposed construction is in compliance with code requirements, sufficient information must be submitted for review. This typically consists of the drawings (floor plans, elevations, sections, details, etc.), specifications and product information describing the proposed work. Some onground storable pools could be installed by the consumer, in which case the manufacturer's instructions will serve as the construction documents.

DECK. An area immediately adjacent to or attached to a pool or spa that is specifically constructed or installed for sitting, standing, or walking.

❖ A deck for a pool or spa is that specific area next to the pool or spa that is intended for walking, sitting or standing directly adjacent to the pool or spa. The general requirements for decks in Section 306, and especially the slope requirement, also define a pool or spa deck.

DEEP AREA. Water depth areas exceeding 5 feet (1524 mm).

DESIGN PROFESSIONAL. An individual who is registered or licensed to practice his or her respective design profession as defined by the statutory requirements of the professional registration or licensing laws of the state or jurisdiction in which the project is to be constructed.

❖ This could be a professional engineer, a structural engineer, an architect, a mechanical engineer or any other type of design professional that the state or jurisdiction licenses to allow that person to do a specific type of design work.

DESIGN RATE OF FLOW. The rate of flow used for design calculations in a system.

❖ The system referred to is the circulating system of a pool or spa.

DESIGN WATERLINE. The centerline of the *skimmer* or other point as defined by the designer of the pool or spa.

❖ This is the design elevation of the water in a pool or spa. At this elevation, the skimmer system is fully operational. In practice, the waterline will vary depending on how many users are in the pool or spa, the amount of evaporation and rainfall.

DIVING AREA. The area of a swimming pool that is designed for diving.

❖ If diving will occur in a swimming pool, the pool must be specifically designed for that purpose. A pool designed for diving must consider the type of diving board and must have certain depths, widths and transition zones to allow for safe diving. Diving equipment is tested and rated for pool type based on length, spring characteristic and intended height, all of which can affect diver trajectory and velocity. Proper installation in accordance with the manufacturer's instructions is critical to ensure that the user is provided with a sufficient body of water in which to safely maneuver and complete the dive.

DIVING BOARD. A flexible board secured at one end that is used for diving such as a spring board or a jump board.

❖ Diving and jump boards are specifically designed for the type of pool for which they will be used.

DIVING PLATFORM. A stationary platform designed for diving.

❖ Diving platforms are used in a specific location where diving into the pool can be safely executed.

DIVING STAND. Any supporting device for a springboard, jump board or diving board.

❖ Most diving boards require some elevation above the design waterline so that there is enough vertical clearance to allow the board to be sufficiently depressed to project the diver into the air to perform diving maneuvers, such as flips and twists, before entering the water. Diving stands can be relatively short in height or a typical building story or more in height.

EXERCISE SPA (Also known as a swim spa). Variants of a spa in which the design and construction includes specific features and equipment to produce a water flow intended to allow recreational physical activity including, but not limited to, swimming in place. Exercise spas can include peripheral jetted seats intended for water therapy, heater, circulation and filtration system, or can be a separate distinct portion of a combination spa/exercise spa and can have separate controls. These spas are of a design and size such that they have an unobstructed volume of water large enough to allow the 99th Percentile Man as specified in APSP 16 to swim or exercise in place.

❖ Swimming "laps" is usually done in large, long pools. However, swimming can also be performed "in place" if the water in the pool is moving at the same speed as the swimmer is swimming. See Commentary Figure 202(1).

Commentary Figure 202(1)
PERMANENT RESIDENTIAL EXERCISE SPA

EXISTING POOL OR SPA. A pool or spa constructed prior to the date of adoption of this code, or one for which a legal building permit has been issued.

FILTER. A device that removes undissolved particles from water by recirculating the water through a porous substance such as filter medium or elements.

❖ Circulating systems for small spas typically use reusable filter elements that can be removed and manually cleaned. Pools and large spas typically use diatomaceous earth filter media that can be backwashed to renew the cleaning capability of the media.

FILTRATION. The process of removing undissolved particles from water by recirculating the water through a porous substance such as filter medium or elements.

[BS] FLOOD HAZARD AREA. The greater of the following two areas:

1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any year.
2. The area designated as *a flood hazard area* on a community's flood hazard map, or otherwise legally designated.

❖ The Federal Emergency Management Agency (FEMA) prepares Flood Insurance Rate Maps (FIRMs) that delineate the land area that is subject to inundation by the 1-percent annual chance flood. Some states and local jurisdictions develop and adopt maps of flood hazard areas that are more extensive than the areas shown on FEMA's maps. For the purposes of the code, the flood hazard area within which the requirements are to be applied is the greater of the two delineated areas.

FLUME. A trough-like or tubular structure, generally recognized as a water slide, that directs the path of travel and the rate of descent by the rider.

❖ In general terms, a flume is a sloped, open channel that conveys water from one point to another. In context with pools or spas, flumes are intended to also carry a rider along with the water flow. Flumes are attractions that allow riders to be safely transported at high velocity down the flume, ending in a big splash in a pool of water.

GUTTER. Overflow trough in the perimeter wall of a pool that is a component of the circulation system or flows to waste.

❖ Some pool and spa designs have perimeter gutters instead of skimmer openings. The gutters allow for more uniform skimming of the water surface and are often used for a handhold.

HAIR AND LINT STRAINER. A device attached on or in front of a pump to which the influent line (suction line) is connected for the purpose of entrapping lint, hair, or other debris that could damage the pump.

❖ Pumps can have difficulty with pumping lint and hair, so placing a strainer before the pump suction can eliminate those problems.

HANDHOLD. That portion of a pool or spa structure or a specific element that is at or above the *design waterline* that users in the pool grasp onto for support.

❖ Although a handhold is usually thought of as a rigid bar or tube that can be grasped for support, other features in a pool environment can provide the same intended support such as the edge of deck coping or rope handles.

HANDRAIL. A support device that is intended to be gripped by a user for the purpose of resting or steadying, typically located within or at exits to the pool or spa or as part of a set of steps.

❖ Handrails generally are round in shape, although other shapes are possible.

HYDROTHERAPY JET. A fitting that blends air and water, creating a high-velocity turbulent stream of air-enriched water.

❖ Air bubbles in a jet of water create turbulence. The turbulence massages areas of the body, allowing the bather to feel more refreshed than if the water was still. Hydrotherapy jets are the key feature that makes a spa relaxing.

JUMP BOARD. A manufactured diving board that has a coil spring, leaf spring, or comparable device located beneath the board that is activated by the force exerted by jumping on the board's end.

❖ The difference between a springboard and a jump board is that a springboard is designed to provide spring action through deflection of an engineered plank of composite materials, whereas a jump board obtains its spring action from an externally mounted spring. See "Diving board."

[A] JURISDICTION. The governmental unit that has adopted this code.

❖ The governmental unit adopting the code has legal authority to do so under state statutes.

[A] LABEL. An identification applied on a product by the manufacturer that contains the name of the manufacturer, the function and performance characteristics of the product or material, and the name and identification of an *approved* agency and that indicates that the representative sample of the product or material has been tested and evaluated by an *approved* agency.

❖ See "Labeled."

[A] LABELED. Equipment, materials or products to which has been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, *approved* agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above-labeled items and whose *labeling* indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose.

❖ When a product is labeled, the label indicates that the material has been tested for conformance to an applicable standard and that the component is subject to third-party inspection to verify that the minimum level of quality required by the standard has been maintained. Labeling provides a readily available source of information that is useful for field inspection of installed products. The label identifies the product or material and provides other information that can be further investigated if there is question concerning the suitability of the product or material for the specific installation. The labeling agency performing the third-party inspection must be approved by the code official, and the basis for this approval may include, but is not necessarily limited to, the capacity and capability of the agency to perform the specific testing and inspection.

LADDER. A structure for ingress and egress that usually consists of two long parallel side pieces joined at intervals by crosspieces such as treads.

Type A double access ladder. An "A-Frame" ladder that straddles the pool wall of an above-ground pool and provides ingress and egress and is intended to be removed when not in use.

❖ See Figure 702.2.

Type B limited access ladder. An "A-Frame" ladder that straddles the pool wall of an above-ground/onground pool. Type B ladders are removable and have a built-in feature that prevents entry to the pool when the pool is not in use.

❖ See Figure 702.2.

Type C ladder. A "ground to deck" staircase ladder that allows access to an above-ground pool deck and has a built-in entry-limiting feature.

❖ See Figure 702.3.

Type D in-pool ladder. Located in the pool to provide a means of ingress and egress from the pool to the deck.

❖ See Figure 702.4.

Type E or F in-pool staircase ladder. Located in the pool to provide a means of ingress and egress from the pool to the deck.

❖ See Figure 702.5.

LIFELINE. An anchored line thrown to aid in rescue.

❖ The key element of a lifeline is that it is anchored so that the person being rescued can pull himself or herself to safety without the aid of another person.

[A] LISTED. Equipment, materials, products or services included in a list published by an organization acceptable to the code official and concerned with evaluation of products or services that maintains periodic inspection of production of *listed* equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

❖ The term "listed," which is not to be confused with "labeled," is a form of quality control. Essentially, a particular product, piece of equipment or system is evaluated or tested and the results are published in a list by agencies, such as approved testing laboratories and inspection agencies. Listed products and equipment are periodically inspected to maintain the listing. The code often requires listed equipment or systems to be "labeled" (see the definition for "Labeled").

MAINTAINED ILLUMINATION. The value, in foot-candles or equivalent units, below which the average illuminance on a specified surface is not allowed to fall. *Maintained illumination* equals the initial average illuminance on the specified surface with new lamps, multiplied by the light loss factor (LLF), to account for reduction in lamp intensity over time.

❖ Proper illumination for public pools is critical for safety of the users. The design of lighting systems must consider the "aging" of the light source so, after a period of time of operation, specific lighting levels are still maintained at the surface of the water.

NEGATIVE EDGE. See "Vanishing edge."

NONENTRY AREA. An area of the deck from which entry into the pool or spa is prohibited.

❖ Certain areas of a pool or spa may be unsafe for entry by the user. One example is behind a caisson wall, in a wave action pool.

ONGROUND STORABLE POOL. A pool that can be disassembled for storage or transport. This includes portable pools with flexible or nonrigid walls that achieve their structural integrity by means of uniform shape, a support frame or a combination thereof, and that can be disassembled for storage or relocation.

❖ Onground storable pools include those that have inflatable walls.

OVERFLOW GUTTER. The *gutter* around the top perimeter of the pool or spa, which is used to skim the surface.

❖ See definition for "Gutter."

[A] OWNER. Any person, agent, operator, entity, firm or corporation having any legal or equitable interest in the property; or recorded in the official records of the state, county or municipality as holding an interest or title to the property; or otherwise having possession or control of the property, including the guardian of the estate of any such person, and the executor or administrator of the estate of such person if ordered to take possession of real property by a court.

❖ This broad definition for who is ultimately responsible for compliance with the requirements of this code makes it clear that all possibilities are covered.

[A] PERMIT. An official document or certificate issued by the authority having jurisdiction that authorizes performance of a specified activity.

❖ Permits control activity by requiring that the person doing such activity reports to the code official prior to the activity being performed.

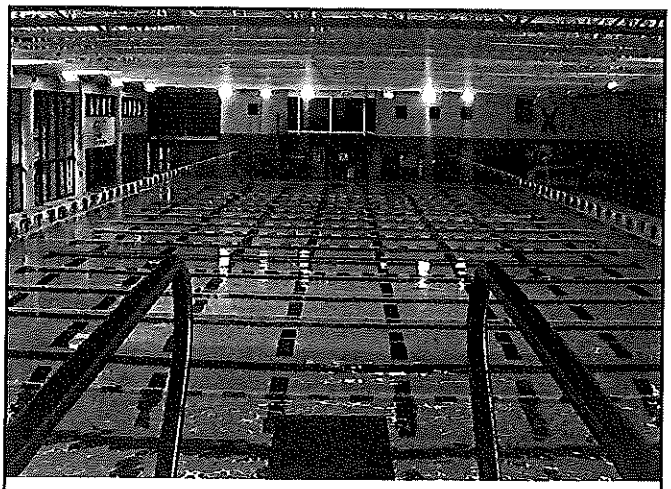
POOL. See "Public swimming pool" and "Residential swimming pool."

POWER SAFETY COVER. A pool cover that is placed over the water area, and is opened and closed with a motorized mechanism activated by a control switch.

❖ The purpose of a power safety cover is to protect a pool against entry during the period of time when the pool is not open for use.

PUBLIC SWIMMING POOL (Public Pool). A pool, other than a *residential* pool, that is intended to be used for swimming or bathing and is operated by an owner, lessee, operator, licensee or concessionaire, regardless of whether a fee is charged for use. Public pools shall be further classified and defined as follows:

❖ If a pool is not a residential swimming pool as defined in this chapter, the pool is considered public.



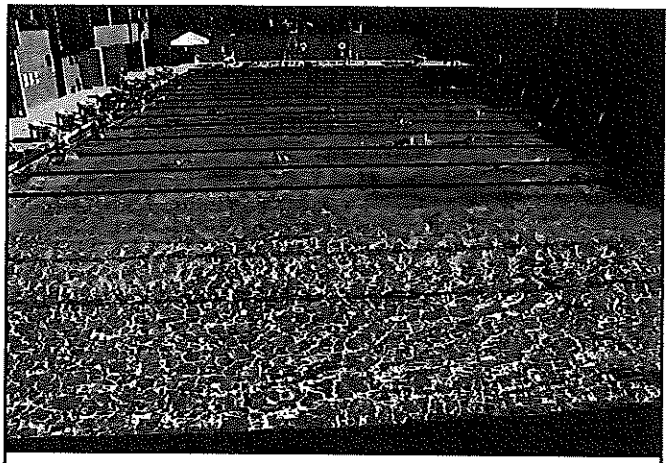
Commentary Figure 202(2)
INDOOR CLASS A COMPETITION POOL

Class A competition pool. A pool intended for use for accredited competitive aquatic events such as Federation Internationale De Natation (FINA), USA Swimming, USA Diving, USA Synchronized Swimming, USA Water Polo, National Collegiate Athletic Association (NCAA), or the National Federation of State High School Associations (NFHS).

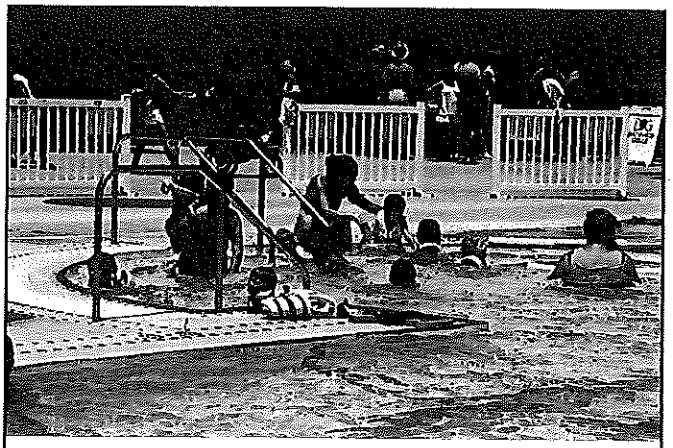
❖ Competition pools are built to the stringent requirements of national or international competitive event organizations so that such pools offer the same competitive conditions no matter where they are constructed [see Commentary Figures 202(2) and 202(3)].

Class B public pool. A pool intended for public recreational use that is not identified in the other classifications of public pools.

❖ Public pools can be of any shape, volume or depth. They are intended to be used by the public for play, exercise and relaxation [see Commentary Figures 202(4) and 202(5)]. Some public pools can be classi-



Commentary figure 202(3)
OUTDOOR CLASS A COMPETITION POOL



Commentary Figure 202(4)
CLASS B PUBLIC POOL

fied as being in another class. But where public pools do not fit into another class, they are classified as a Class B pool.

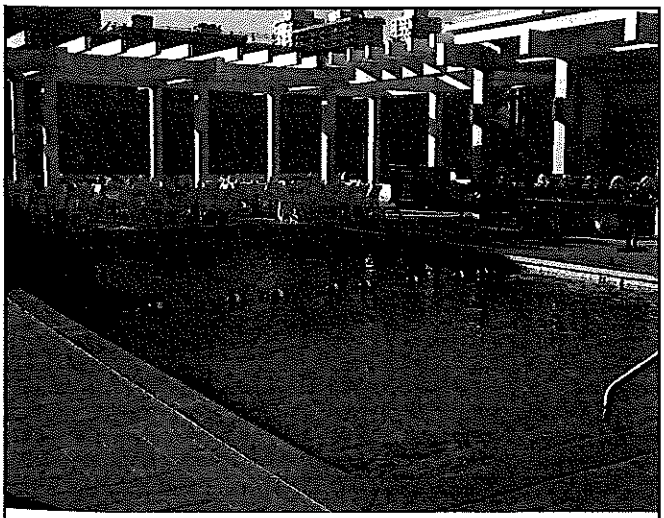
Class C semi-public pool. A pool operated solely for and in conjunction with lodgings such as hotels, motels, apartments or condominiums.

❖ Semi-public pools are connected with hotels, motels, apartments and condominiums [see Commentary Figure 202(6)]. The code does not currently have any special consideration for semi-public pools. They are regulated the same as any other public pool.

Class D-1 wave action pool. A pool designed to simulate breaking or cyclic waves for purposes of general play or surfing.

❖ A wave pool simulates the action of ocean water at the beach.

Commentary Figure 202(5)
CLASS B PUBLIC POOL



Commentary Figure 202(6)
CLASS C SEMI-PUBLIC POOL

Class D-2 activity pool. A pool designed for casual water play ranging from simple splashing activity to the use of attractions placed in the pool for recreation.

❖ Activity pools provide for self-directed activities in the water through the use of specialized equipment that enhances the enjoyment of being in and around the water [see Commentary Figure 202(7)].

Class D-3 catch pool. A body of water located at the termination of a manufactured waterslide attraction. The body of water is provided for the purpose of terminating the slide action and providing a means for exit to a deck or walkway area.

❖ Catch pools are receptors of the persons who have ridden a water slide attraction to its end. The body of water provides for deceleration of the person coming from the slide and allows the person to stand to walk out of the catch pool [see Commentary Figures 202(8) through 202(10)].

Commentary Figure 202(7)
CLASS D-2 ACTIVITY POOL

Commentary Figure 202(8)
CLASS D-3 CATCH POOL
(Photo courtesy of Tolomato Community Development District—Novatee)

Class D-4 leisure river. A manufactured stream of water of near-constant depth in which the water is moved by pumps or other means of propulsion to provide a river-like flow that transports bathers over a defined path that may include water features and play devices.

❖ A leisure river simulates the action of a natural stream or river. Participants usually ride individual floating tubes or multiperson round floating vessels [see Commentary Figure 202(11)].

Class D-5 vortex pool. A circular pool equipped with a method of transporting water in the pool for the purpose of propelling riders at speeds dictated by the velocity of the moving stream of water.

❖ Usually part of and within a larger pool, vortex pools are round and have a water current that moves the pool occupants around in a circular path.

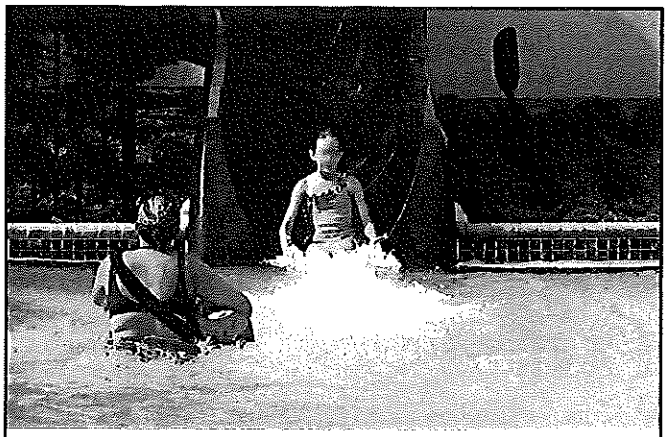
Class D-6 interactive play attraction. A manufactured water play device or a combination of water-based play devices in which water flow volumes, pressures or patterns can be varied by the bather without negatively influencing the hydraulic conditions for other connected devices. These attractions incorporate devices or activities such as slides, climbing and crawling structures, visual effects, user-actuated mechanical devices and other elements of bather-driven and bather-controlled play.

❖ An interactive pool has many features that allow the occupants to direct water streams, change patterns of flow and generally interact with the water using various mechanisms [see Commentary Figures 202(12) and 202(13)].

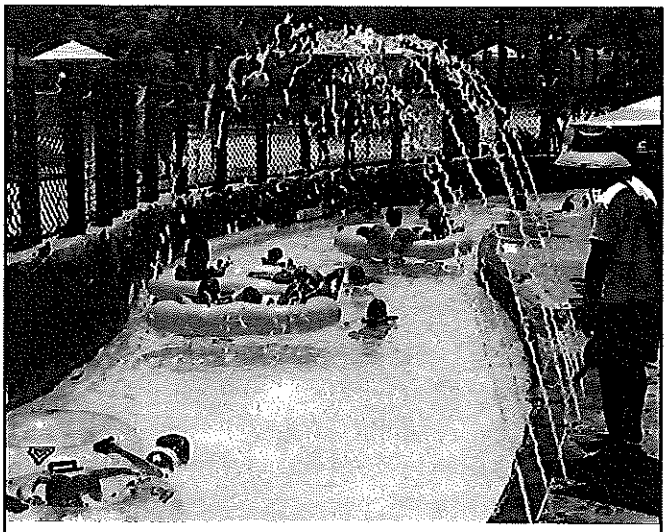
Class E. Pools used for instruction, play or therapy and with temperatures above 86°F (30°C).

❖ This type of pool has water purposely heated to greater than 86°F (30°C).

Commentary Figure 202(9)
CLASS D-3 CATCH POOL



Commentary Figure 202(10)
CLASS D-3 CATCH POOL
(Photo courtesy of Tolomato Community Development District—Novatee)



Commentary Figure 202(11)
CLASS D-4 LEISURE RIVER

Commentary Figure 202(12)
CLASS D-6 INTERACTIVE PLAY ATTRACTION

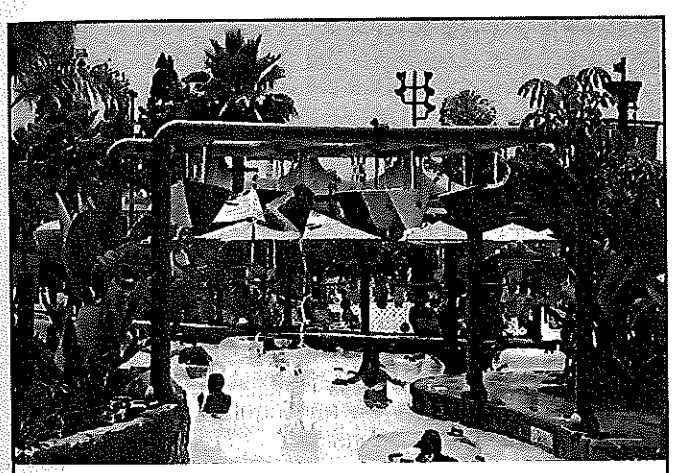
Class F. Class F pools are wading pools and are covered within the scope of this code as set forth in Section 405.

❖ Wading pools are pools specifically designed for small children just learning to become adjusted to bodies of water that are much larger than a bathtub but not as expansive and deep as a regular swimming pool. The shallow depth allows for adults to easily sit in the water with the child and assist/encourage the child with learning the playful nature of pool use [see Commentary Figure 202(14)].

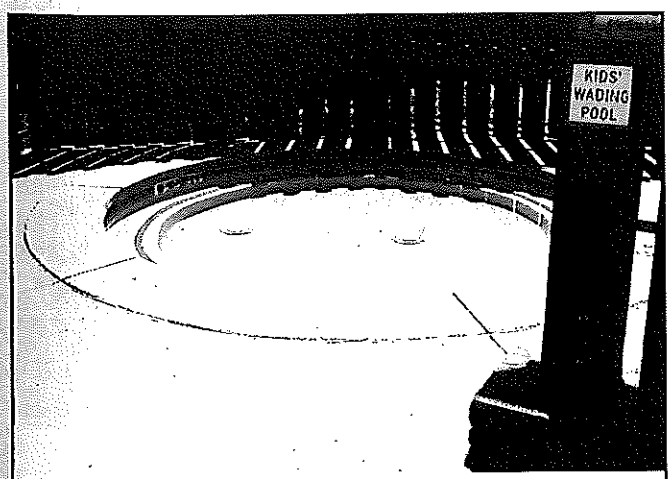
Public pools are either a diving or nondiving type. Diving types of public pools are classified into types as an indication of the suitability of a pool for use with diving equipment.

Types VI–IX. Public pools suitable for the installation of diving equipment by type.

❖ Pool types indicate what type of diving equipment can be used in a public pool, based on the pool's diving envelope dimensions (see Table 402.12).



Commentary Figure 202(13)
CLASS D-6 INTERACTIVE PLAY ATTRACTION



Commentary Figure 202(14)
WADING POOL

Type O. A nondiving public pool.

❖ A Type O pool is a pool where a diving envelope has not been provided. Such pools must not be used for diving.

RECESSED TREADS. A series of vertically spaced cavities in a pool or spa wall creating tread areas for step holes.

❖ Recessed treads offer the same convenience of use that a ladder does, except without ladder hardware creating an obstruction in the main body of water.

RECIRCULATION SYSTEM. See "Circulation system."

[A] REPAIR. The reconstruction or renewal of any part of a pool or spa for the purpose of its maintenance or to correct damage.

❖ Repairs might include replacement of broken piping, caulking cracks in concrete decks, resurfacing the inside of a concrete pool or replacement of broken tile or coping [see Commentary Figure 202(15)].

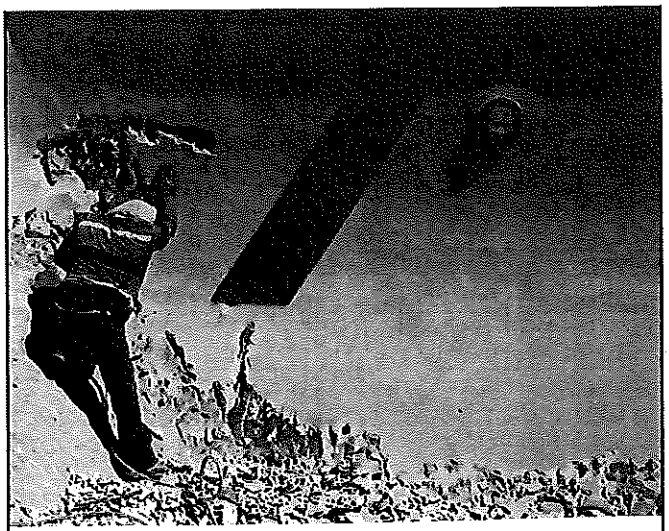
RESIDENTIAL. For purposes of this code, *residential* applies to detached one- and two-family dwellings and townhouses not more than three stories in height.

❖ The term "residential," as used in this code, does not include apartment buildings because in the family of I-Codes, apartment buildings are regulated by the *International Building Code*® (IBC®).

RESIDENTIAL SWIMMING POOL (Residential Pool). A pool intended for use that is accessory to a *residential* setting and available only to the household and its guests. Other pools shall be considered to be public pools for purposes of this code.

❖ Residential swimming pools are only those pools that are associated with buildings that are covered by the *International Residential Code*® (IRC®) [see Commentary Figures 101.2(4), 202(16) and 202(17)].

The use of the term "residential" in this definition appears to make clear that these pools are only those



Commentary Figure 202(15)
REPAIR ON INSIDE OF POOL

associated with detached one- and two- family dwellings and townhouses that are not more than three stories in height; in other words, buildings that would typically be constructed using the IRC. Section 102.7.1 provides some support for making the connection that "residential" means "in accordance with the IRC."

There are, however, at least a few gray areas known to exist for interpretation about whether a pool should be built under residential or public regulations.

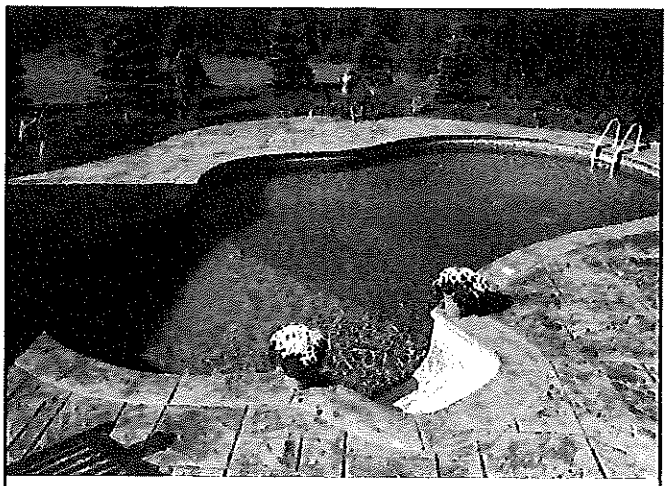
One example is a townhouse development built under the IRC. There could be a "central" pool associated with the townhouses. Should the pool be built using the residential sections of this code? If the residential swimming pool definition is read literally, "...accessory to a residential setting" and "to the household," seem to imply that "residential" only applies to a pool for a single home (or dwelling unit in a townhouse building). The use of the term "it's" (as opposed to "their") in describing the household in which guests are allowed, makes a stronger connection. This interpretation is further complicated where jurisdictions allow support buildings such as a clubhouses and party rooms adjacent to the pool to be built under the IRC. Perhaps those jurisdictions consider such a building not much different than someone's home where the homeowner invited a number of guests to attend a pool party. These pool support buildings are usually occupied on a less-frequent basis than a typical one- or two-family dwelling and located on a dedicated parcel of land owned by the housing subdivision (not a public entity). In making the "it's an IRC building" assessment, a cost-effective resolution is provided for a number of IBC-generated design and cost issues, such as design for accessibility, fire sprinkling, egress requirements and toilet facility requirements. As such, perhaps the jurisdiction has made a logical and realistic judgment call about these types of buildings. But how those pool support buildings are classified is not the direct subject of this code because such pools can be built without a pool support building.

Also creating an interpretation issue are some types of Group R3 buildings (IBC occupancy classification) that are allowed to be built (or renovated) under the IRC. IBC Sections 310.5.1 or 310.5.2 are involved. IBC Section 310.5.1 is about "care" homes that have five or fewer persons who receive care; for example, a single-family dwelling where persons not related to the owner/occupant of the dwelling are provided custodial care (such as meals prepared, laundry performed, assistance with everyday living tasks) and a sleeping room. One example of such an arrangement would be a small group home involved with social rehabilitation of individuals. IBC Section 310.5.2 concerns small lodging houses, sometimes called "bed-and-breakfast" homes. The threshold is five or fewer guest rooms (sleeping rooms), regardless of how many persons are in each sleeping room. Given that these buildings are built (or renovated) under the IRC and, as such, are considered to be detached one- or two-family dwellings, should the pools for these buildings be allowed to comply with residential provisions of this code?

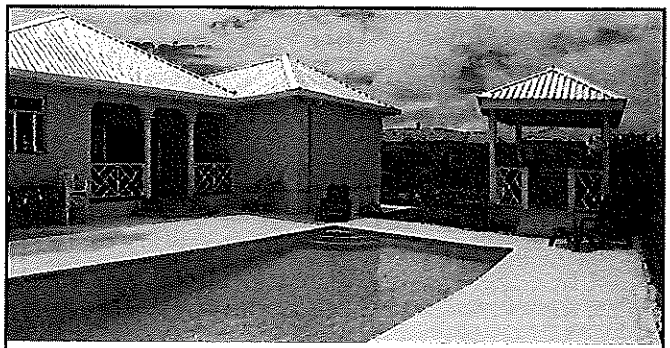
Where the jurisdiction must coordinate with a public health department involved with the regulation of the operation of pools for health purposes, the decision as to whether the pool is residential or public may already be made by pool heath regulations. If not, the code official will need to carefully consider how to apply the intent of this code, as there are significant impacts to the pool design with regard to costs and aesthetics. For example, an onground storable residential pool may or may not be an applicable choice for some applications that are considered to be "residential" by the IBC and IRC.

Types I–V. *Residential* pools suitable for the installation of diving equipment by type.

❖ Pool types indicate different sizes of diving envelopes so that equipment manufacturers can refer to a type of their choice for a specific product as it relates to Point A on the diving envelope (see Table 804.1). Note that



Commentary Figure 202(16)
RESIDENTIAL POOL



Commentary Figure 202(17)
RESIDENTIAL POOL AT REAR OF HOME

if a residential pool has diving envelope dimensions meeting or exceeding the diving envelope dimensions for a public pool or a competitive diving event-type pool, those residential pools can have diving equipment that matches the diving envelope requirements for public pools or competitive diving pools.

Type O. A nondiving *residential* pool.

❖ A Type O pool is a pool where a diving envelope has not been provided. Such pools must not be used for diving.

RETURN INLET. The aperture or fitting through which the water under positive pressure returns into a pool.

❖ Water that has been drawn from the vessel and filtered is returned to the vessel through a return inlet.

RING BUOY. A ring-shaped floating buoy capable of supporting a user, usually attached to a throwing line.

❖ Ring buoys come in various diameters and are especially useful if a throwing line is attached so that the thrower can retrieve the buoy in case the intended target (a swimmer in distress) is missed. The throwing rope can also be used to tow the swimmer to the side of the vessel.

ROPE AND FLOAT LINE. A continuous line not less than $^1/_4$ inch (6 mm) in diameter that is supported by buoys and attached to opposite sides of a pool to separate the deep and shallow ends.

❖ Rope and float lines can be of any color. There is no requirement for the number of floats to be used for such a line.

RUNOUT. A continuation of water slide flume surface where riders are intended to decelerate and come to a stop.

❖ A runout is an area of the pool where riders of water slide flumes are deposited at the end of the flume.

SAFETY COVER. A structure, fabric or assembly, along with attendant appurtenances and anchoring mechanisms, that is temporarily placed or installed over an entire pool, spa or hot tub and secured in place after all bathers are absent from the water.

❖ When properly installed or deployed, a safety cover (listed and labeled to ASTM F1346) provides the same protection against entry to the vessel by children as does a fence-type barrier constructed in accordance with Section 305.

SHALL. The term, where used in the code, is construed as mandatory.

SHALLOW AREAS. Portions of a pool or spa with water depths less than 5 feet (1524 mm).

❖ The definition of the shallow area of the pool or spa is necessary for establishing where the deep end begins.

SKIMMER. A device installed in the pool or spa that permits the removal of floating debris and surface water to the filter.

❖ A skimmer is an outlet (but not a suction outlet) from the pool or spa that captures flow at the top surface of the water.

SLIP RESISTANT. A surface that has been treated or constructed to significantly reduce the chance of a user slipping. The surface shall not be an abrasion hazard.

❖ It is very difficult to define the slip resistance of a surface with respect to secure footing. It is also just as difficult to determine what might be an abrasion hazard. This definition simply requires that surfaces are to be slip resistant but also specially constructed or treated to reduce slipping hazards.

SLOPE BREAK. Occurs at the point where the slope of the pool floor changes to a greater slope.

❖ See Commentary Figure 811.1 for illustrations of slope break.

SPA. A product intended for the immersion of persons in temperature-controlled water circulated in a closed system, and not intended to be drained and filled with each use. A spa usually includes a filter, an electric, solar or gas heater, a pump or pumps, and a control, and can include other equipment, such as lights, blowers, and water-sanitizing equipment.

❖ A spa is a relatively small vessel of water (as compared to a swimming pool) where persons sit or recline while enjoying the warm, effervescent water. Because the volume of such vessels is too large to be refilled for each use, these vessels have circulating systems that filter the water.

Permanent residential spa. A spa, intended for use that is accessory to a *residential* setting and available to the household and its guests and where the water heating and water-circulating equipment is not an integral part of the product. The spa is intended as a permanent plumbing fixture and not intended to be moved.

❖ A permanent spa is field assembled. The vessel could be a factory-built plastic or fiberglass tub or could be field constructed using vinyl or other materials such as shotcrete. Other factory-manufactured components are installed and field connected to the vessel. Typically, a permanent spa is built in a deck so that the top surface of the spa is at or just above the deck surface. The residential part of this defined term means that the vessel is used by the residents and guests of a residential household. Commentary Figure 202(18) shows a permanent spa.

Portable residential spa. A spa intended for use that is accessory to a *residential* setting and available to the

household and its guests and where it is either self- contained or nonself-contained.

❖ A portable spa is an appliance that is factory built, manufactured, sold, purchased and transported as a unit ready for use by the consumer. It is designed and intended to be capable of being readily relocated. A portable spa incorporates a number of unique features that differentiate it from a permanent spa. These unique features include a preinstalled, connected and electrically bonded frame; pump, filtration, heating, low-voltage lighting and control equipment; provisions for electrically grounding conductive portions of the entire manufactured assembly and for electrical connection to power via a properly sized and protected grounding-type wiring arrangement (cord-and-plug or hard-wired); and construction by the manufacturer with an enclosure on all four sides extending from the base to the top of the tub. Manufactured and listed self-contained portable spas and hot tubs are designed and intended to be placed on a deck surface and have relatively tall perimeter walls, making it extremely unlikely that a user immersed in the water will make solid contact with the perimeter surfaces at the same time. Therefore, a portable spa is not intended, designed or manufactured to be either partially or completely buried in the earth or abutted by berms or other similar structures [see Commentary Figure 202(19)].

Public spa. A spa other than a permanent *residential* spa or portable *residential* spa that is intended to be used for bathing and is operated by an owner, licensee or concessionaire, regardless of whether a fee is charged for use.

❖ Simply stated, a public spa is any spa that is not a residential spa.

Self-contained spa. A factory-built spa in which all control, water heating and water-circulating equipment is an integral part of the product. Self-contained spas may be permanently wired or cord connected.

❖ A self-contained spa is a complete, packaged unit that does not require assembly at the job site. All that is required is connection to a power supply and filling with water.

Nonself-contained spa. A factory-built *spa* in which the water heating and circulating equipment is not an integral part of the product. Nonself-contained spas may employ separate components such as an individual filter, pump, heater and controls, or they can employ assembled combinations of various components.

❖ A nonself-contained spa could be a complete, factory-supplied package that requires field assembly at the job site. Field assembly might include mounting heaters, pumps and controls on field-built equipment pads and installing piping to and from the vessel.

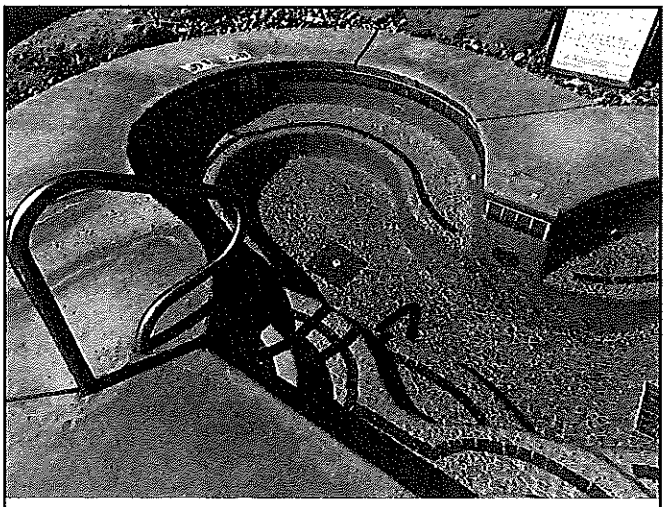
SPRAY POOL. A pool or basin occupied by construction features that spray water in various arrays for the purpose of wetting the persons playing in the spray streams.

❖ A spray pool is a vessel of water having features that spray water onto the persons in the water.

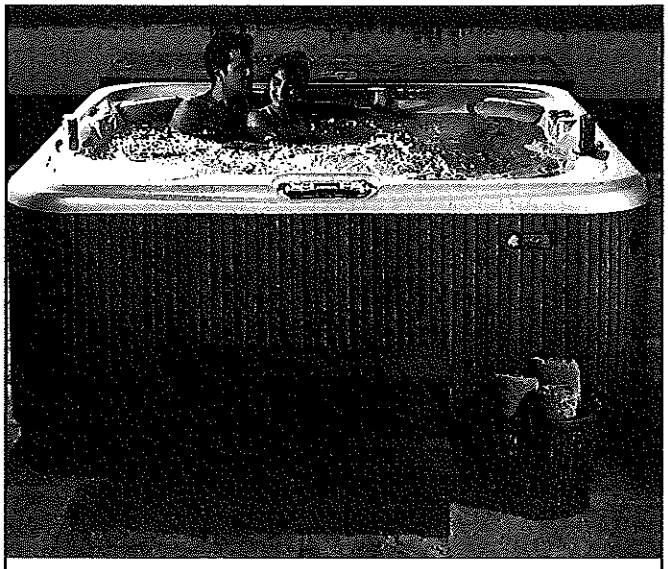
SUBMERGED VACUUM FITTING. A fitting intended to provide a point of connection for suction side automatic swimming pool, *spa*, and hot tub cleaners.

❖ Pools and large spas periodically need to have their floors vacuumed to remove settled dirt. Vacuum equipment could connect to a port in the side of the pool or spa wall. The port is below the water level of the vessel.The port is connected to the suction side of the filtration pump.

SUCTION OUTLET. A submerged fitting, fitting assembly, cover/grate and related components that provide a localized



Commentary Figure 202(18)
PERMANENT SPA
(Photo courtesy of Hamilton & Associates Architecture, Engineering, Technical Services)



Commentary Figure 202(19)
TYPICAL PORTABLE SPA
(Photo courtesy of Hot Springs Spas)

low-pressure area for the transfer of water from a swimming pool, spa or hot tub. Submerged suction outlets have been referred to as main drains.

❖ Essentially, a suction outlet is any designed and installed opening, below the design water line, through which water from the pool, spa or hot tub could escape. Although the term "suction" seems to imply that a pump suction inlet is connected to the opening, this is not always the situation. Any transfer of water through the outlet to a zone of lower pressure outside of the pool or spa creates a localized "suction" at the outlet. This is no different than removing a drain stopper in a kitchen sink full of water. The initial removal of the stopper requires minimal effort. However, once the water begins draining and flow is well established in the drain pipe below the sink, placing the stopper just above and in close proximity to the drain opening will result in the stopper being pulled into the drain opening with significant force. Such suction forces are of great concern to the designer of pools and spas as the suction force can pull a bather in close proximity toward the outlet and prevent the bather from surfacing.

Many pools and spas are designed with a main drain located at the bottom. A main drain allows for an easy way to drain all of the water in the pool or spa. A main drain is also a convenient location (in addition to the outflow from skimmers) for water to flow to the circulation system for filtration. Main drains for swimming pools and spas are not required.

SURFACE SKIMMING SYSTEM. A device or system installed in the pool or spa that permits the removal of floating debris and surface water to the filter.

❖ See the commentary for "Skimmer."

SURGE CAPACITY. The storage volume in a surge tank, *gutter*, and plumbing lines.

❖ When a pool or spa is at rest and bathers are not in the water, the water level is at the design water level. When bathers enter the water, the water level rises and the excess water spills over into the gutter system. The excess water is stored in a surge tank. As bathers leave the water, the water in the pool or spa drops below the design water level. The water in the surge tank is pumped back into the pool or spa to restore the water level to the design water level. The volume of the surge tank, gutter, and associated piping between the two is known as the surge capacity.

SURGE TANK. A storage vessel within the pool recirculating system used to contain the water displaced by bathers.

❖ See the commentary for "Surge capacity."

SWIMOUT. An underwater seat area that is placed completely outside of the perimeter shape of the pool. Where located at the deep end, swimouts are permitted to be used as the deep-end means of entry or exit to the pool.

❖ A swimout is a feature that allows swimmers an area of rest at the side of a pool but still within the water.

TUBE RIDE. A gravity flow attraction found at a waterpark designed to convey riders on an inner-tube-like device through a series of chutes, channels, flumes or pools.

❖ Also see "Leisure river."

TURNOVER RATE. The period of time, usually in hours, required to circulate a volume of water equal to the pool or spa capacity.

❖ Shorter turnover rates are required for heavier demands on the filtration system. For example, a public pool has many bathers, creating a heavier demand than a private pool that does not have as many bathers. Therefore, public pools are required to have a shorter turnover rate as compared to private pools.

UNDERWATER LEDGE. A narrow shelf projecting from the side of a vertical structure whose dimensions are defined in the appropriate standard.

❖ Underwater ledges are typically used for standing.

UNDERWATER SEAT. An underwater ledge that is placed completely inside the perimeter shape of the pool, generally located in the shallow end of the pool.

❖ Underwater seats are wider than underwater ledges and typically are not more than 20 inches below the water level.

VANISHING EDGE. Water-feature detail in which water flows over the edge of not fewer than one of the pool walls and is collected in a catch basin. Also called "Negative edge."

❖ Visually, a pool with a vanishing edge appears not to be bounded by a wall along the vanishing edge.

WATERLINE. See "Design waterline."

WAVE POOL CAISSON. A large chamber used in wave generation. This chamber houses pulsing water and air surges in the wave generation process and is not meant for human occupancy.

❖ Most wave pools are pneumatically driven, although some designs use hydraulics. The caisson chamber holds water that is forced out into the wave pool to create a surge or wave in the pool.

ZERO ENTRY. See "Beach entry."

Chapter 3: General Compliance

General Comments

There are a significant number of aspects concerning pool and spa design and installation that are common to all. For example, piping materials, suction entrapment avoidance, decks, dimensional tolerances, circulation systems, heater systems and barriers have general characteristics that are the same no matter with what pool or spa they are connected. Placing the regulations for these common items in one location, Chapter 3, makes them easier to find and results in fewer coordination problems as the code is changed in future editions.

Purpose

Chapter 3 contains regulations for electrical, plumbing, energy consumption, barriers, decks, suction entrapment avoidance, circulation systems, heaters and lighting for all types of pools and spas. First and foremost, these regulations provide for the protection of the users of pools and spas. The regulations also provide for a level of quality necessary to ensure that the pools and spas are installed correctly to provide for long-term performance.

SECTION 301 GENERAL

301.1 Scope. The provisions of this chapter shall govern the general design and construction of public and *residential* pools and spas and related piping, equipment, and materials. Provisions that are unique to a specific type of pool or spa are located in Chapters 4 through 10.

❖ Many requirements for different types of pools or spas are identical. For example, barriers (such as fences and walls) have the same requirements no matter what pool or spa the barriers protect. Rather than repeat these common requirements for each type of pool or spa, the requirements are stated once in this chapter. Requirements that are specific to each type of pool or spa are indicated in Chapters 4 through 10.

301.1.1 Application of Chapters 4 through 10. Where differences occur between the provisions of this chapter and the provisions of Chapters 4 through 10, the provisions of Chapters 4 through 10 shall apply.

❖ Chapters 4 through 10 have requirements that are specific to each type of pool or spa. Where Chapter 3 has a requirement that is also discussed in each of Chapters 4 through 10, and the requirements are different, the requirements in Chapters 4 through 10 take precedence over the requirement in Chapter 3. In other words, the specific overrides the general.

SECTION 302 ELECTRICAL, PLUMBING, MECHANICAL AND FUEL GAS REQUIREMENTS

302.1 Electrical. Electrical requirements for aquatic facilities shall be in accordance with NFPA 70 or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

Exception: Internal wiring for portable *residential* spas and portable *residential* exercise spas.

❖ The *National Electrical Code* (NEC), NFPA 70, is to be applied to the electrical installations in connection with pools and spas except for those pools and spas that are associated with residential structures covered by the *International Residential Code*® (IRC®). The IRC contains chapters on electrical installation that are based on residential-appropriate portions of NFPA 70. Internal wiring requirements for portable residential spas and portable residential exercise spas are covered under UL 1563 or CSA C22.2 No. 218.1. Chapter 10 requires portable residential spas and portable residential exercise spas to be listed and labeled to one of those standards.

This code references specific editions of NFPA 70 and the IRC. Unless the jurisdiction makes an amendment to the code at the time of adoption to change the year of NFPA 70 or the IRC that is referenced, the editions that are referenced in Chapter 11 are to be enforced. Note that a jurisdiction has the authority to adopt local amendments to the code as well as to NFPA 70 and the IRC. Local amendments to the electrical codes might be the result of formal interpretations (FI) or temporary interim amendments (TIA) that were generated by NFPA for the NEC. Designers and installers should never assume that these FIs or TIAs are part of the electrical codes being enforced in any jurisdiction. Designers and installers should always consult with each jurisdiction to determine what local amendments might apply for that jurisdiction.

This code, the IRC and the NEC do not address who is responsible for performing the design and installation of electrical work covered by the regulations in these codes. Each jurisdiction decides who is qualified to perform such work and typically requires licensure of those individuals at either a state or local level. The licensing laws of the jurisdiction dictate the extent of work that can be performed by licensed individuals.

Section 102.4 covers additions, alterations, renovations or repairs to existing pools and spas. The code official has the responsibility to decide how much of an existing electrical installation must be brought up to the current code. Designers and installers should always consult with each jurisdiction to determine the extent of electrical rework that is necessary for any remodeling project on a pool or spa.

The electrical requirements in NFPA 70 and the IRC are minimum requirements. These codes do not prohibit designs that exceed the minimum requirements.

302.2 Water service and drainage. Piping and fittings used for water service, makeup and drainage piping for pools and spas shall comply with the *International Plumbing Code*. Fittings shall be *approved* for installation with the piping installed.

❖ This section addresses piping for the supply of potable water to the pool or spa and drainage (wastewater) from the pool or spa. The *International Plumbing Code*® (IPC®) has provisions for the installation of such piping.

302.3 Pipe, fittings and components. Pipe, fittings and components shall be *listed* and *labeled* in accordance with NSF 50 or NSF 14. Plastic jets, fittings, and outlets used in public spas shall be *listed* and *labeled* in accordance with NSF 50.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas *listed* and *labeled* in accordance with UL 1563 or CSA C22.2 No. 218.1.
2. *Onground storable pools* supplied by the pool manufacturer as a kit that includes all pipe, fittings and components.

❖ The requirement for the listing and labeling of items to NSF 50 or NSF 14 provides for a certain level of quality for those items so that they will not structurally fail under the intended service conditions, not impart harmful chemicals to the water in the pool or spa, and will properly fit with other listed and labeled components. Where pipe, fittings, components, plastic jets and outlets are part of portable residential spas and portable residential exercise spas listed and labeled to UL 1563 or CSA C22.2 No. 218.1, the quality of the items are controlled, as necessary, by those standards.

Because onground storable pools are made for disassembly and storage, replacement of pipe and fittings is more easily accomplished. More frequent replacement of these types of components is generally expected by the owner of this type of pool. The owner will most likely not purchase replacement components listed and labeled to NSF 50 or NSF 14 because similar components that will "do the job" will be less expensive and be readily available at local hardware stores. Thus, from a manufacturer's point of view, there is no need to initially build these systems with components meeting NSF 50 because replacement of components is relatively easy and inexpensive. See Section 704.5.

302.4 Concealed piping inspection. Piping, including process piping, that is installed in trenches, shall be inspected prior to backfilling.

❖ Piping installed in trenches must be inspected prior to backfilling the trench so that the installation can be checked for leaks, proper piping bedding and the use of appropriate fittings.

302.5 Backflow protection. Water supplies for pools and spas shall be protected against backflow in accordance with the *International Plumbing Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

❖ Potable water supplies to pools or spas must be kept safe from contamination. The IPC or the IRC, as applicable, provides the necessary requirements for protection against backflow.

302.6 Wastewater discharge. Where wastewater from pools or spas, such as backwash water from filters and water from deck drains discharge to a building drainage system, the connection shall be through an air gap in accordance with the *International Plumbing Code* or the *International Residential Code* as applicable in accordance with Section 102.7.1.

❖ Wastewater from a pool or spa must be discharged to a building drainage system. The requirements of the IPC or the IRC, as applicable, must be followed.

302.7 Tests. Tests on water piping systems constructed of plastic piping shall not use compressed air for the test.

❖ Air testing of plastic piping is dangerous because compressed air contains significant potential energy. Should the piping or fittings have imperfections or cracks created during manufacturing, such defects could explode during testing. Dirt, rocks and plastic pipe shrapnel propelled by a failure of the piping could injure nearby personnel. Testing piping systems, including the equipment such as filters and pumps connected to the piping, with water, is much safer.

302.8 Maintenance. Pools and spas shall be maintained in a clean and sanitary condition, and in good repair.

❖ Pools and spas that are not maintained become breeding grounds for mosquitoes. A pool or spa in need of repair can be dangerous to users and possibly to the environment where water leaks out of the pool or spa into the surrounding earth. This section provides the code official with the authority to make the owner of a pool or spa perform the necessary maintenance and repairs.

302.8.1 Manuals. An operating and maintenance manual in accordance with industry-accepted standards shall be provided for each piece of equipment requiring maintenance.

❖ In order to properly maintain equipment associated with pools and spas, instructions in written form must be provided for each piece of equipment. Equipment manuals typically are included within the product or component packaging. Such materials, if not placed in a secure location, can be inadvertently lost, discarded or damaged. The contractor should deliver all product and component manuals, instructions, accompanying signage and other literature to the owner/operator at or before the completion of the project. Because manuals contain important end user safety, operation and maintenance information, it is helpful to include this requirement on inspection checklists.

SECTION 303
ENERGY

303.1 Energy consumption of pools and permanent spas. The energy consumption of pools and permanent spas shall be controlled by the requirements in Sections 303.1.1 through 303.1.3.

❖ The energy consumption of pools and permanent spas can be significant because filter pumps operate continuously. This section covers methods and equipment to limit energy consumption. Note that Section 303.3 has additional requirements for residential pools and permanent residential spas.

303.1.1 Heaters. The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater, mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

❖ The provision of an easily accessed on-off switch for a heater goes a long way toward offering the user of the pool or spa a method to limit energy use. Where adjustment of a thermostat is required for turning off a heater, most users will elect not to make the adjustment because they have it set to their preferred temperature. The switch for the heater needs to be within close proximity to the heater (or mounted externally on the heater) so that a person knows to what piece of equipment the switch belongs. This is especially useful (and safe) for servicing a heater where there are multiple heaters in one location. Although NFPA 70 (and the electrical chapters of the IRC) do not require a separate switch where the circuit breaker is within sight of the equipment, having such a switch further enables users to turn off the heater when not in use. Some users might have safety concerns (generally unwarranted) about "flipping" a circuit breaker in a circuit breaker panel (having multiple circuit breakers). Also, some circuit breaker panel doors are difficult to open, especially those suitable for outdoor service. Older circuit breakers in existing circuit breaker panels might not have circuit breakers that are rated for "switch duty." Frequent use of those older circuit breakers might result in damage to the circuit breaker. Gas heaters with "standing pilots" (continuously burning pilots) waste energy. There are other technologies available to provide ignition for gas-fired heaters.

303.1.2 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- or waste-heat recovery pool heating systems.

❖ The area where the pools or spas are located might not be open to users during certain hours of the day or on certain days. A time switch is a simple way to automatically shut off heaters and pumps during these times. The first exception allows for not providing the time switch where the public health standards require that the pool be heated or circulated (or both) 24 hours per day. The second exception is for pools that are provided with a heat recovery pool heating system or solar heating system. Pumps for these systems need to run when the heat source is available to maximize the energy savings that those systems offer.

303.1.3 Covers. Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover or other *approved* vapor-retardant means in accordance with Section 104.11.

Exception: Where more than 70 percent of the energy for heating, computed over an operating season, is from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

❖ The majority of energy loss from a heated pool or spa is from the open surface of the water, primarily because of the cooling effect that evaporation of water from the surface causes. Covering pools and spas with a vapor-retardant cover when the pool or spa is not in use is highly beneficial. As an encouragement for pool and spa owners to actually install a cover on the pool or spa, this section requires that a cover be present (but not necessarily installed) at final inspection. Although the code official cannot make the owner install the cover, it is hoped that if the owner incurred the expense for having the cover present, he will use it to his benefit for saving money on energy use.

A vapor-retardant cover is a solid layer of material (not mesh or netting) that rests on or at the water's surface to retard or curtail evaporation. In a swimming pool, the solid, vapor-retardant cover must touch most of the water's surface to impede the majority of water molecules from escaping [see Commentary Figures 303.1.3(1) and (2)].

along many rivers and streams shown on FIRMs. Placement of pools and spas that encroach into floodways, especially those that are on ground, partially in the ground and those that involve fill, are required to be evaluated by a qualified professional in accordance with accepted engineering practices. To be acceptable, the encroachment analysis must demonstrate that there will be no increase in the design flood elevation. Several states have more restrictive requirements, which can be determined by contacting the NFIP state coordinator (each state has an agency designated to coordinate the NFIP with communities).

[BS] 304.2.2 Pools and spas located where floodways have not been designated. Where pools and spas 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 or spa and any associated grading and filling, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

❖ Although FEMA has mapped floodways along many rivers and streams shown on a community's FIRM, other riverine flood hazard areas have base flood elevations but do not have designated floodways. In these areas, the potential effects that floodplain activities may have on flood elevations have not been evaluated. If FEMA has not designated a regulatory floodway, the community is responsible for regulating development that encroaches into these areas so as not to increase flood elevations by more than 1 foot (305 mm) at any point in the community. In effect, this means a community must either prepare a hydraulic analysis for proposed activities or require permit applicants to do so. Encroachment analyses should be prepared by a qualified professional in accordance with accepted engineering practices. Several states have more restrictive requirements, which can be determined by contacting the NFIP state coordinator.

[BS] 304.3 Pools and spas in coastal high-hazard areas. Pools and spas installed in coastal high-hazard areas shall be designed and constructed in accordance with ASCE 24.

❖ Flood hazard areas in a coastal community include areas subject to flooding that are not expected to have high waves and usually have coastal high-hazard areas where wave heights of 3 feet (914 mm) or higher are expected above the elevation of floodwaters during the base flood (identified on FIRMs as "Zone V"). Some FIRMs also delineate areas where wave heights of 1.5 to 3 feet are expected to occur (called "Coastal A Zones"). Waves impose significant loads on structures, including pools and spas. ASCE 24 requires consideration of flood loads and requires pools to be elevated and designed to break away without producing debris capable of causing significant damage to adjacent structures or designed to remain in the ground. Alternatively, pools may be designed and constructed to remain in the ground during design flood conditions without obstructing flow that results in damage to any structure. The IBC (by reference to ASCE 24) and IRC Section R322.3.3 require pools to be structurally independent of buildings unless the buildings are designed to resist the additional imposed flood load. Additional guidance is found in FEMA TB #5.

[BS] 304.4 Protection of equipment. Equipment shall be elevated to or above the design flood elevation or be anchored to prevent flotation and protected to prevent water from entering or accumulating within the components during conditions of flooding.

❖ Equipment associated with a pool or spa, such as filters, pumps and heaters, must be installed above the design flood elevation to protect such equipment. If equipment cannot be elevated and still serve the intended function, it can be installed below the flood elevation if it is anchored and protected.

304.5 GFCI protection. Electrical equipment installed below the design flood elevation shall be supplied by branch circuits that have ground-fault circuit interrupter protection for personnel.

❖ Electrical equipment that is installed below the elevation required in ASCE 24, such as lighting, receptacle outlets and motorized pool covers, must be supplied by circuits that have ground-fault circuit-interrupter (GFCI) protection. Caution should be used to ensure that the GFCI device, whether a GFCI receptacle or GFCI breaker, is located above the elevation required in ASCE 24, as the line side of the GFCI device may remain energized even after all downstream devices have be de-energized.

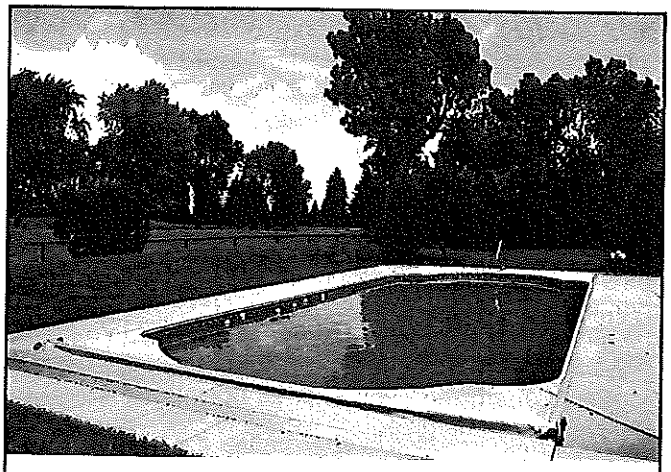
SECTION 305
BARRIER REQUIREMENTS

305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable safety cover complying with ASTM F1346 and swimming pools are equipped with a powered safety cover that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 305.2 through 305.7.

❖ Barriers around pools and spas significantly restrict unauthorized access to such pools and spas. The perimeter barrier design requirements in this section are especially focused on preventing children from having access to an area where the potential for drowning or near drowning is very high. Once children are inside the barrier perimeter, only constant adult supervision of those children can prevent drowning or near drowning. Thus, when adults choose to leave the pool and spa area, common sense dictates that all children should also leave the area and be taken outside of the perimeter barrier. Therefore, a thorough inspection of perimeter barriers is necessary, as they are the only required line of defense against drowning or near drowning of children when adults are not present.

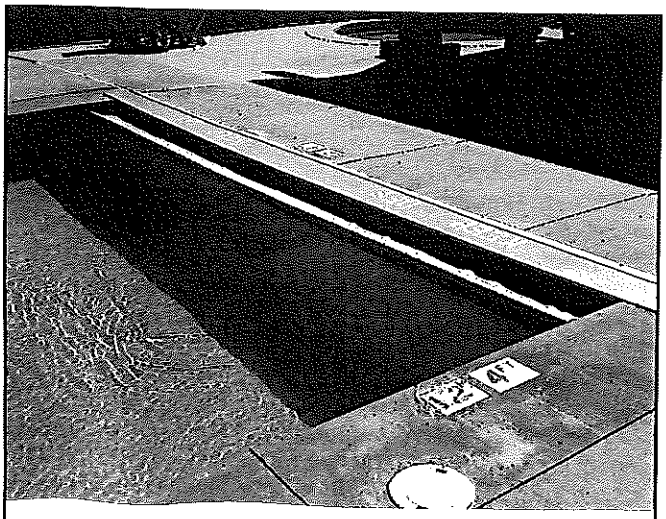
Where spas and hot tubs are provided with lockable covers complying with ASTM F1346 and pools are provided with power safety covers complying with ASTM F1346, barriers are not required. Commentary Figures 305.1(1) and 305.1(2) show powered safety covers on residential and public swimming pools, respectively. When covers are retracted on pools or removed from spas, only constant adult supervision of a pool and spa can prevent children from drowning or near drowning. Thus, when adults choose to leave the pool or spa area, common sense dictates that children are removed from the pool or spa and the cover installed immediately. Therefore, a thorough inspection of covers, cover latching systems and cover deployment systems (and their operation) is necessary, as these covers are the only required line of defense against drowning or near drowning of children when adults are not present. Although the code is silent about the controls for electric-powered safety covers for pools, it is a reasonable assumption that care would be taken to keep the operating controls secured so only those persons responsible enough to not trap users in the pool would be operating the cover [see Commentary Figure 305.1(3)].

Note that a nonpowered pool cover (i.e., one that is manually installed) does not provide relief of the barrier requirement [see Commentary Figure 305.1(4)]. Even though a manual pool cover might comply with the requirements of ASTM F1346, installation of manually installed covers are time consuming and could be somewhat complicated such that they would not be used every time the pool was not in use.



Commentary Figure 305.1(1)
ON-DECK-TYPE POWERED SAFETY COVER FOR RESIDENTIAL POOL

Commentary Figure 305.1(3)
KEY SWITCH FOR POWERED POOL COVER OPERATION



Commentary Figure 305.1(2)
INTEGRAL-TYPE POWERED SAFETY COVER FOR PUBLIC POOL

Commentary Figure 305.1(4)
NONPOWERED MESH COVER DOES NOT ALLOW FOR ABSENCE OF BARRIER AROUND POOL

305.2 Outdoor swimming pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7.

❖ Sections 305.2 through 305.7 cover the requirements for barriers.

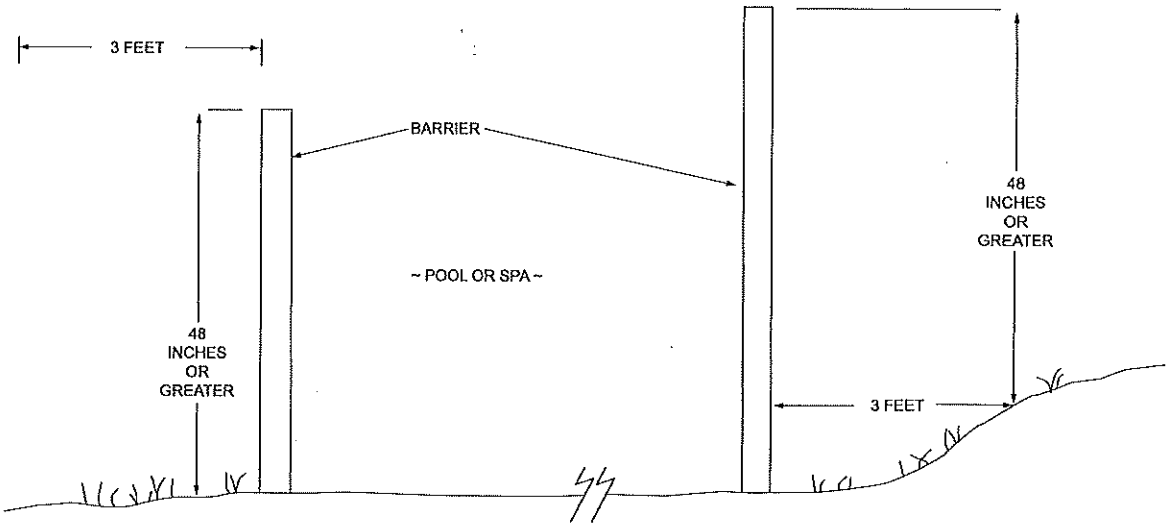
305.2.1 Barrier height and clearances. Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.
4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

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

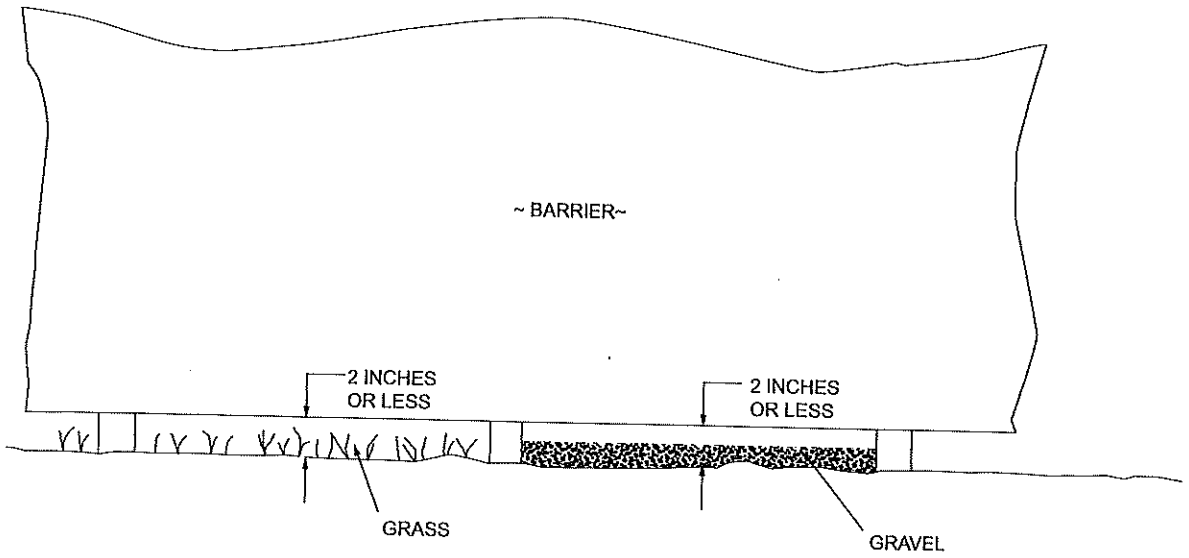
Barriers that are not close to the ground could be bypassed by a child maneuvering under the barrier. Where over grass or gravel, the bottom of the barrier must be within 2 inches (51 mm) of the ground surface from which the grass grows from or onto which the gravel is placed. It is unlikely that a child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

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



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

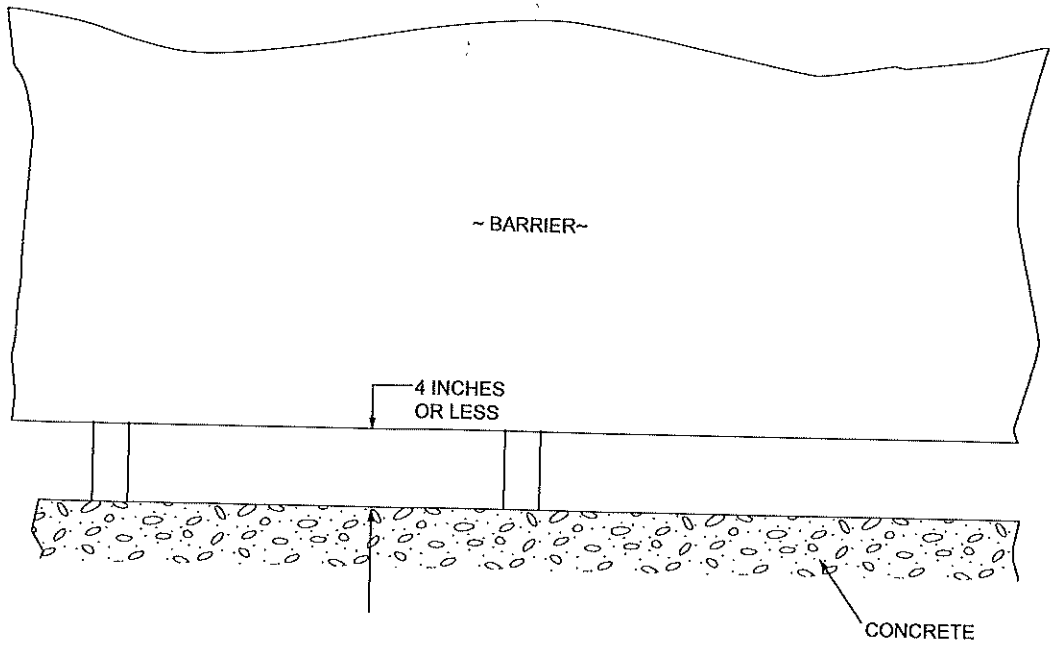
Commentary Figure 305.2.1(1)
HEIGHT OF BARRIER ABOVE GRADE



ELEVATION VIEW FROM OUTSIDE
BARRIER SURROUNDING THE POOL OR SPA

For SI: 1 inch = 25.4 mm.

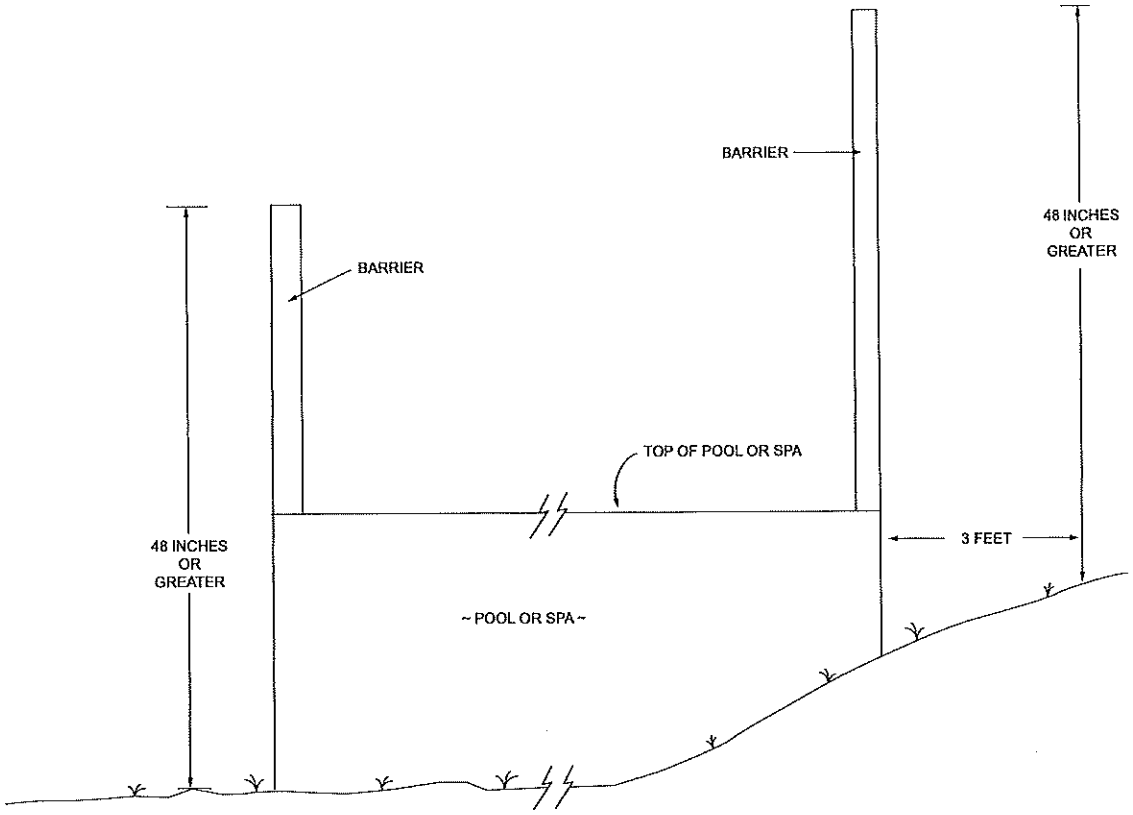
Commentary Figure 305.2.1(2)
MAXIMUM CLEARANCE FROM BOTTOM OF BARRIER TO GRADE



ELEVATION VIEW FROM OUTSIDE
OF BARRIER SURROUNDING THE POOL OR SPA

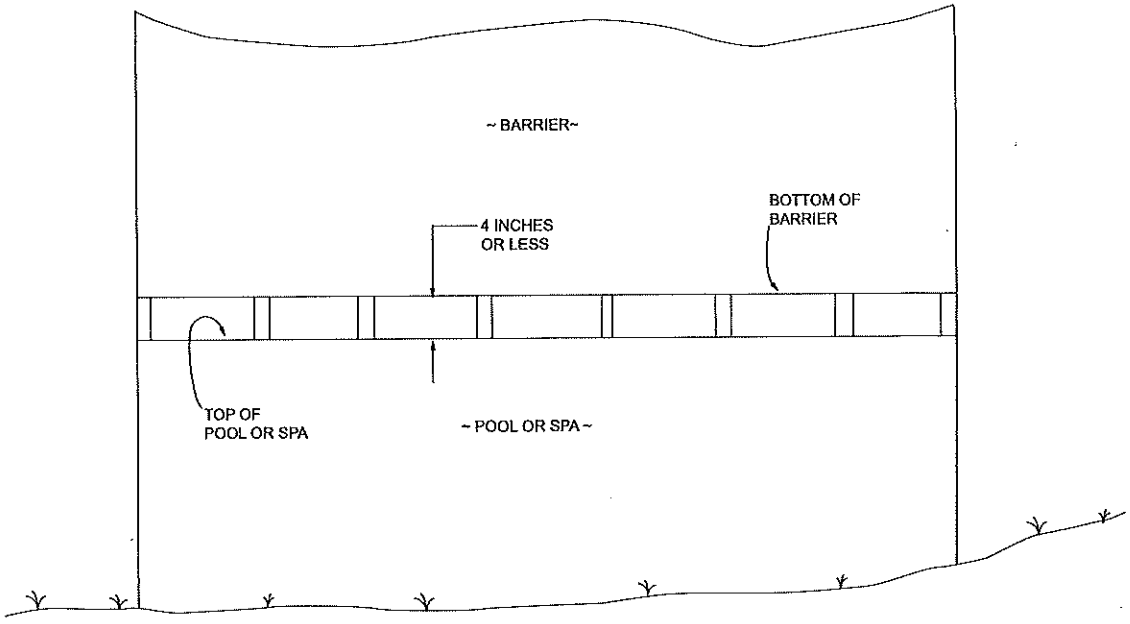
For SI: 1 inch = 25.4 mm.

Commentary Figure 305.2.1(3)
MAXIMUM CLEARANCE FROM BOTTOM OF BARRIER TO SOLID SURFACE



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

Commentary Figure 305.2.1(4)
HEIGHT OF BARRIER WHERE MOUNTED ON TOP OF THE POOL OR SPA



Commentary Figure 305.2.1(5)
MAXIMUM CLEARANCE FROM BOTTOM OF BARRIER TO TOP OF THE POOL OR SPA WHERE BARRIER IS MOUNTED ON TOP OF THE POOL OR SPA

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

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

305.2.3 Solid barrier surfaces. Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

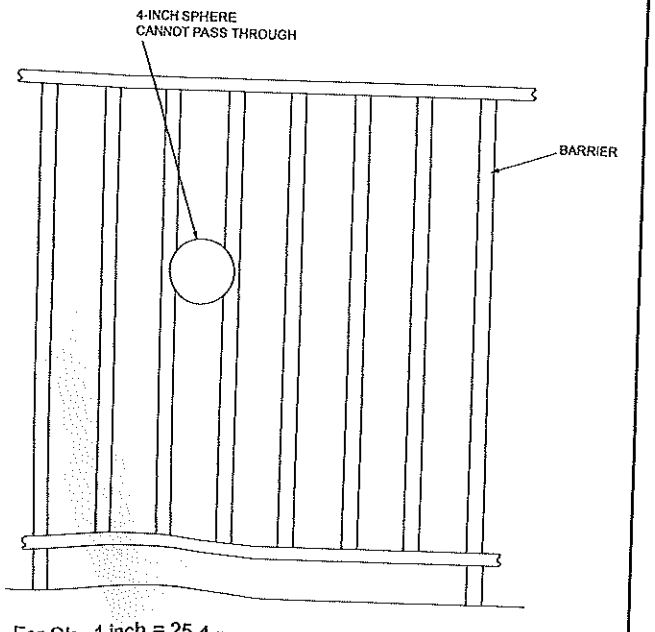
❖ An important characteristic of a barrier is that the exterior vertical face not offer any protrusions or indentations such that a toehold or handhold could assist in the climbing of the barrier.

305.2.4 Mesh fence as a barrier. Mesh fences, other than chain link fences in accordance with Section 305.2.7, shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall be not greater than 4 inches (102 mm) from grade or decking.
4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices include, but are not limited to, devices that provide the security equal to or greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.
5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground *residential* pools.

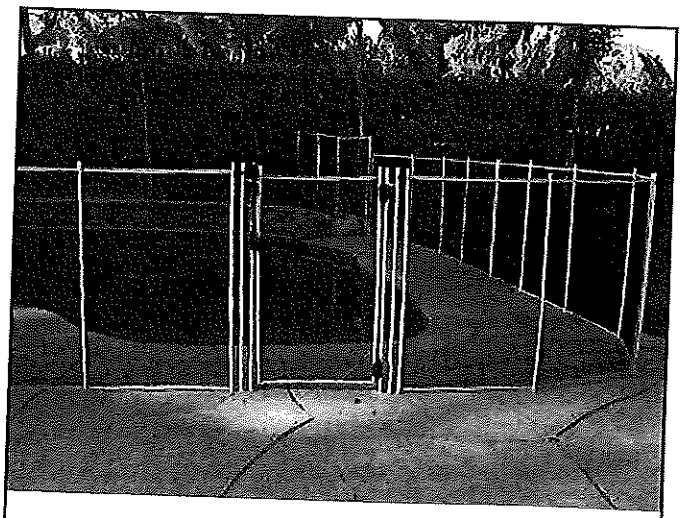
❖ Mesh fences provide a removable barrier for a pool or spa. For example, consider a pool with a permanent barrier on three sides and the fourth side is bounded by a building. During times when the pool is not in use, a mesh barrier could be erected between the pool and the building so that the space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

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



For SI: 1 inch = 25.4 mm.

Commentary Figure 305.2.2
FOUR-INCH SPHERE CANNOT PASS THROUGH BARRIER OPENINGS



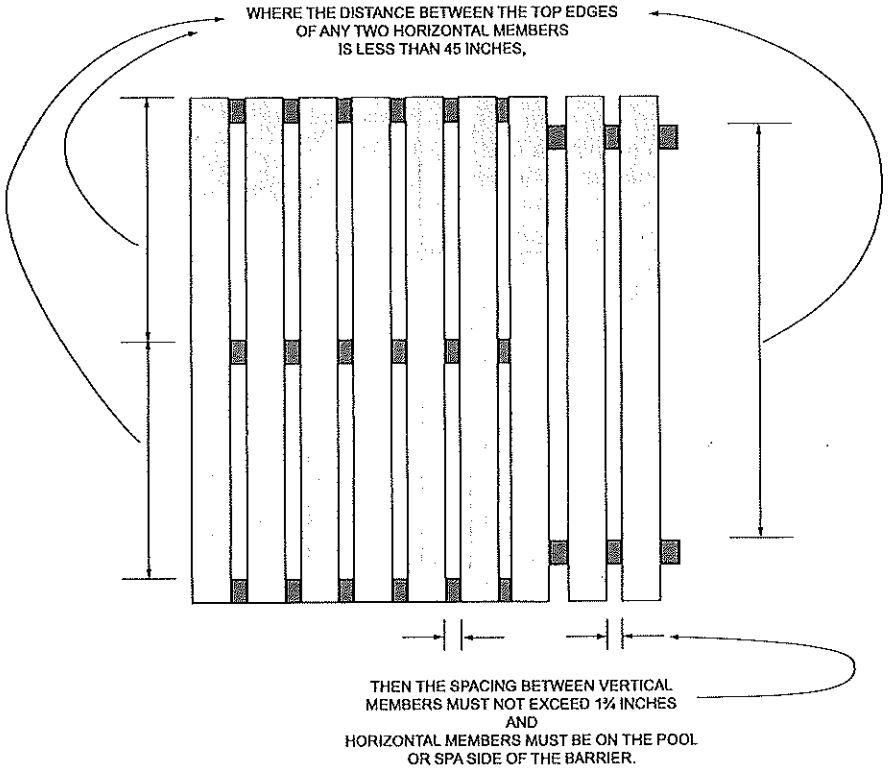
Commentary Figure 305.2.4
MESH FENCE AS A STRUCTURE-TO-POOL BARRIER

305.2.5 Closely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed $1^3/_4$ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1^3/_4$ inches (44 mm) in width.

❖ Conventional fencing that is not chain link fence is typically constructed with horizontal rails attached to vertical posts. Vertical pickets are fastened to the horizontal rails to complete the barrier. If the distance between the top surface of the horizontal rails is less than 45 inches (1143 mm), such spacing could allow a child to climb up and over the barrier. Therefore, these closely spaced rails must be located on the pool or spa side of the barrier so that a child on the outside of the barrier cannot climb over it. Where closely spaced rails exist and are exposed between vertical members on the exterior of the fence, the gap between vertical pickets must not be more than $1^3/_4$ inches (44 mm) wide so that a child cannot wedge his or her foot in the gap and gain a handhold on the top closely spaced horizontal member in order to scale the fence [see Commentary Figure 305.2.5(1)]. Any decorative cutouts in the pickets must not have an opening greater than $1^3/_4$ inches (44 mm) for the same reason [see Commentary Figure 305.2.5(2)].

There are welded metal wire mesh products and flexible "on a roll" plastic fence products that "technically comply" with the dimensional requirements of this section. However, this section was written with typical wood or rigid vinyl fence construction in mind. Consider a wood fence with 4-inch by 4-inch vertical posts with two 2-inch by 4-inch horizontal rails (one near the top, one near the bottom of the fence) with $^3/_4$-inch-thick vertical pickets (4 to 6 inches wide) horizontally spaced apart not more than about the thickness of 2-inch (nominal) material. Such construction has "thickness of its vertical members," making it difficult to climb. For example, reaching between the pickets to grab onto a 2-inch by 4-inch horizontal rail will be difficult. Similarly, wedging the toe of a shoe between the (thick) pickets to get a toe-hold onto the horizontal rail will be difficult. And generally, such a fence would not be constructed with many closely spaced horizontal rails as it would be too costly and structurally unnecessary.

Do these metal or plastic mesh products with horizontal "members" every 4 inches or closer (but with the width between vertical "members" less than $1^3/_4$



For SI: 1 inch = 25.4 mm.

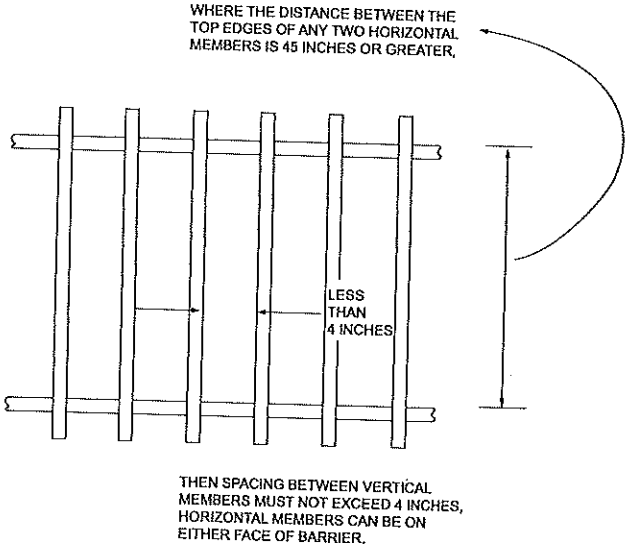
Commentary Figure 305.2.5(1)
MAXIMUM SPACING BETWEEN VERTICAL MEMBERS WHERE DISTANCE BETWEEN TOP OF HORIZONTAL MEMBERS IS LESS THAN 45 INCHES

inches) offer an equivalent resistance to climbing by children? Does such a product offer a similar rigidity and ruggedness to a fence constructed of wood members given that the code does not specify a distance between vertical posts? There are situations where, for public safety, a code official might have to make a decision about items that are not specifically covered by the code. Section 102.8 provides support to the code official in these instances.

305.2.6 Widely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed $1^3/_4$ inches (44 mm).

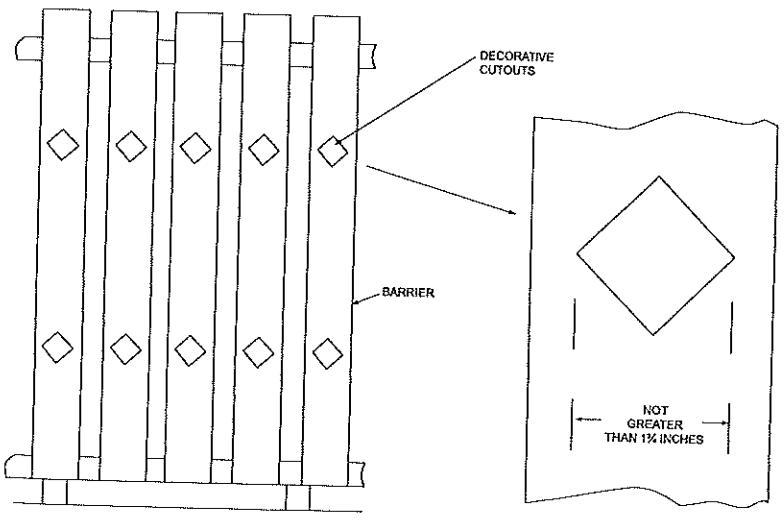
❖ Conventional fencing that is not chain link fencing is typically constructed with horizontal rails attached to vertical posts. Vertical pickets are fastened to the horizontal rails to complete the barrier. If the distance between the top surface of the horizontal rails is greater than or equal to 45 inches (1143 mm), such spacing poses a climbing difficulty for children. Therefore, these widely spaced rails could be located on either side of the fence. Because there is not a reachable horizontal top member to gain a handhold, the vertical pickets could be spaced as far as 4 inches apart [see Commentary Figure 305.2.6(1)]. However, note that Section 305.2.2 requires that openings in the barrier must not allow the passage of a 4-inch (102 mm) sphere. Any decorative cutouts in the pickets must not have an opening that is greater than $1^3/_4$ inches (44 mm) to prevent a child from gaining a foothold to scale the fence [see Commentary Figure 305.2.5(2)].

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



For SI: 1 inch = 25.4 mm.

Commentary Figure 305.2.6(1)
MAXIMUM SPACING BETWEEN VERTICAL MEMBERS WHERE DISTANCE BETWEEN TOPS OF HORIZONTAL MEMBERS IS 45 INCHES OR GREATER



For SI: 1 inch = 25.4 mm.

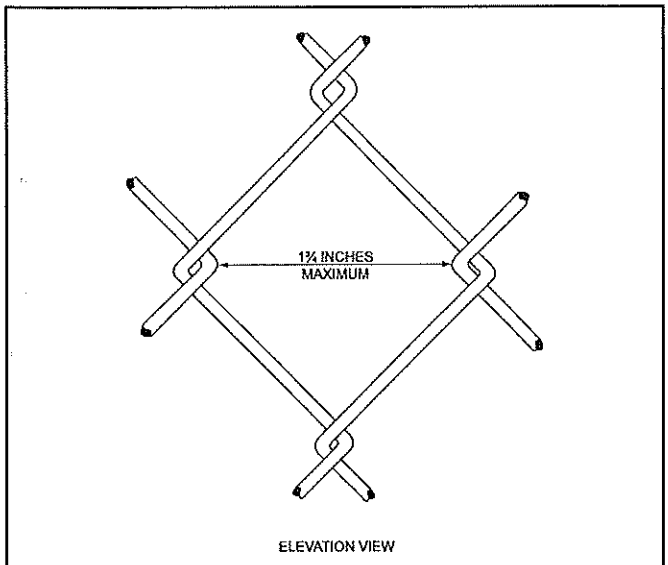
Commentary Figure 305.2.5(2)
MAXIMUM OPENING WIDTH OF DECORATIVE CUTOUTS IN BARRIER MATERIALS

Commentary Figure 305.2.6(2)
VIOLATION—BARRIER (FENCE) HORIZONTAL MEMBERS TOO CLOSE

305.2.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than $1^3/_4$ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than $1^3/_4$ inches (44 mm).

❖ Chain link fencing has diamond-shaped or square openings. The most common sizes of chain link openings (measured between parallel sides of the opening) are 2 inches (51 mm) and $2^1/_4$ inches (57 mm). This section requires that the openings be not greater than $1^3/_4$ inches (44 mm) so that a child cannot wedge his or her foot in the opening in order to climb the fence (see Commentary Figure 305.2.7). Two-inch (51 mm) and $2^1/_4$-inch (57 mm) chain link fence must have the openings reduced in size by the installation of slats (sometimes called privacy slats) vertically or diagonally. Where slats are used, they must be attached to the top and bottom of the fence so that they cannot be removed for gaining a hand- or foothold on the fence. The slats must be of a width that reduces the openings to less than $1^3/_4$ inches (44 mm).

Chain link fencing is also available in $1^1/_4$-inch (32 mm) size (mesh). The resulting diagonal opening is $1^3/_4$ inches (44 mm). Therefore, slats would not be required for this size of chain link fence.



For SI: 1 inch = 25.4 mm.

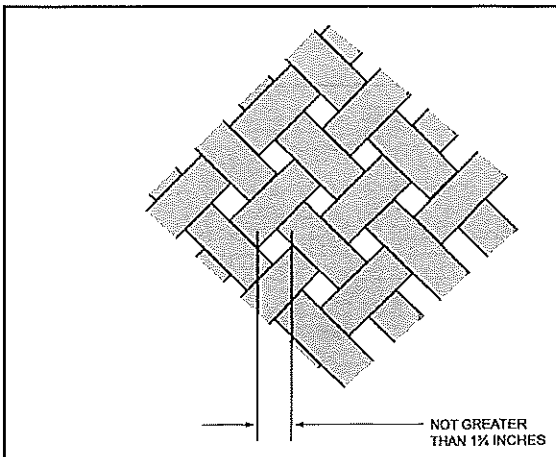
Commentary Figure 305.2.7
MAXIMUM OPENING WIDTH IN BARRIERS BUILT WITH CHAIN LINK FENCING

305.2.8 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not greater than $1^3/_4$ inches (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

❖ Some barrier designs use diagonal members (latticework) as part of the barrier. Where diagonal members are installed, the angle cannot be more than 45 degrees (0.79 rad) from vertical and the opening created by the diagonal members cannot be greater than $1^3/_4$ inches (44 mm) so a child cannot wedge a foot in the opening to climb the barrier (see Commentary Figure 305.2.8).

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

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



For SI: 1 inch = 25.4 mm.

Commentary Figure 305.2.8
MAXIMUM OPENING WIDTH IN BARRIERS BUILT WITH DIAGONAL MEMBERS

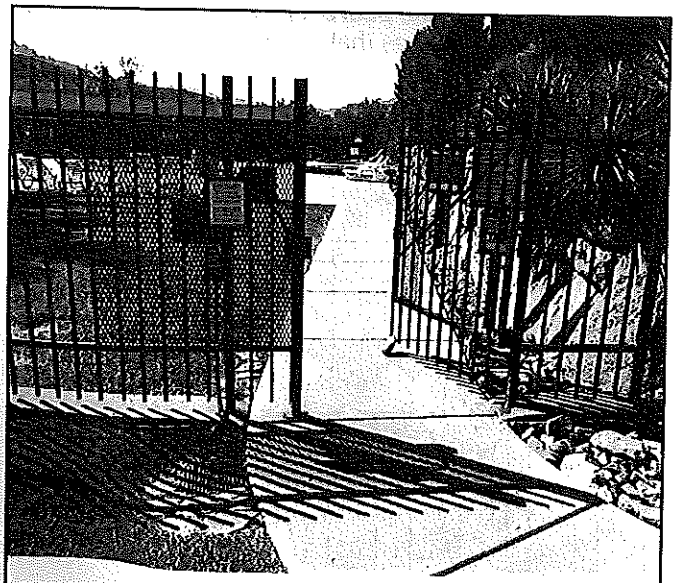
305.2.10 Poolside barrier setbacks. The pool or spa side of the required barrier shall be not less than 20 inches (508 mm) from the water's edge.

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

305.3 Gates. Access gates shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

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

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



Commentary Figure 305.3
VIOLATION—WRONG SWING DIRECTION ON PEDESTRIAN ACCESS GATE

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

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

305.3.2 Double or multiple gates. Double gates or multiple gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device. The gate and barrier shall not have openings larger than $^1/_2$ inch (12.7 mm) within 18 inches (457 mm) of the latch release mechanism. The self-latching device shall comply with the requirements of Section 305.3.3.

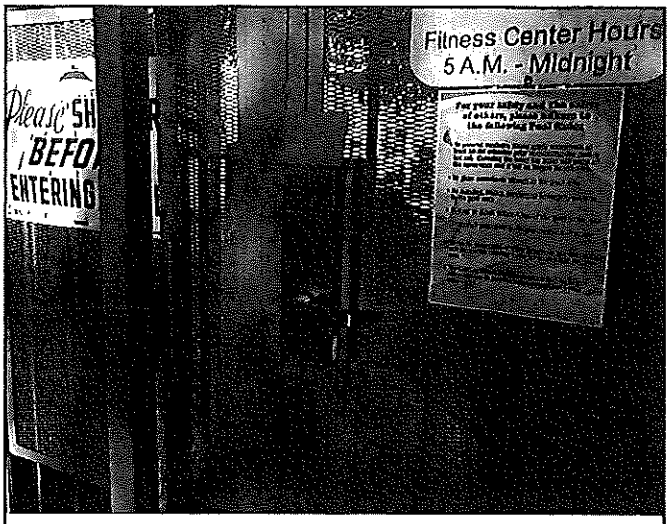
❖ In some cases, gates could be installed with several movable (swinging) sections. One swinging section must be provided with a self-latching device that is located on the pool or spa side of the gate. The other portions of the gate must be secured so that they are normally stationary. For example, the normally stationary side of the gate might be prevented from swinging by a sliding rod mounted on the gate that can penetrate into a hole in the deck or walkway. The latch on the other gate must be of the self-latching type and must be on the pool or spa side of the gate. The inside release mechanism must be protected against tampering from the outside of the gate by providing a solid panel or mesh with openings of not greater than $^1/_2$ inch (12.7 mm). The panel or small opening mesh must extend not less than 18 inches (457 mm) in all directions (except not beyond the top of the required gate height) of the inside latch-release mechanism (see commentary, Section 305.3.3).

305.3.3 Latches. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches (76 mm) below the top of the gate, and the gate and barrier shall not have openings greater than $^1/_2$ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

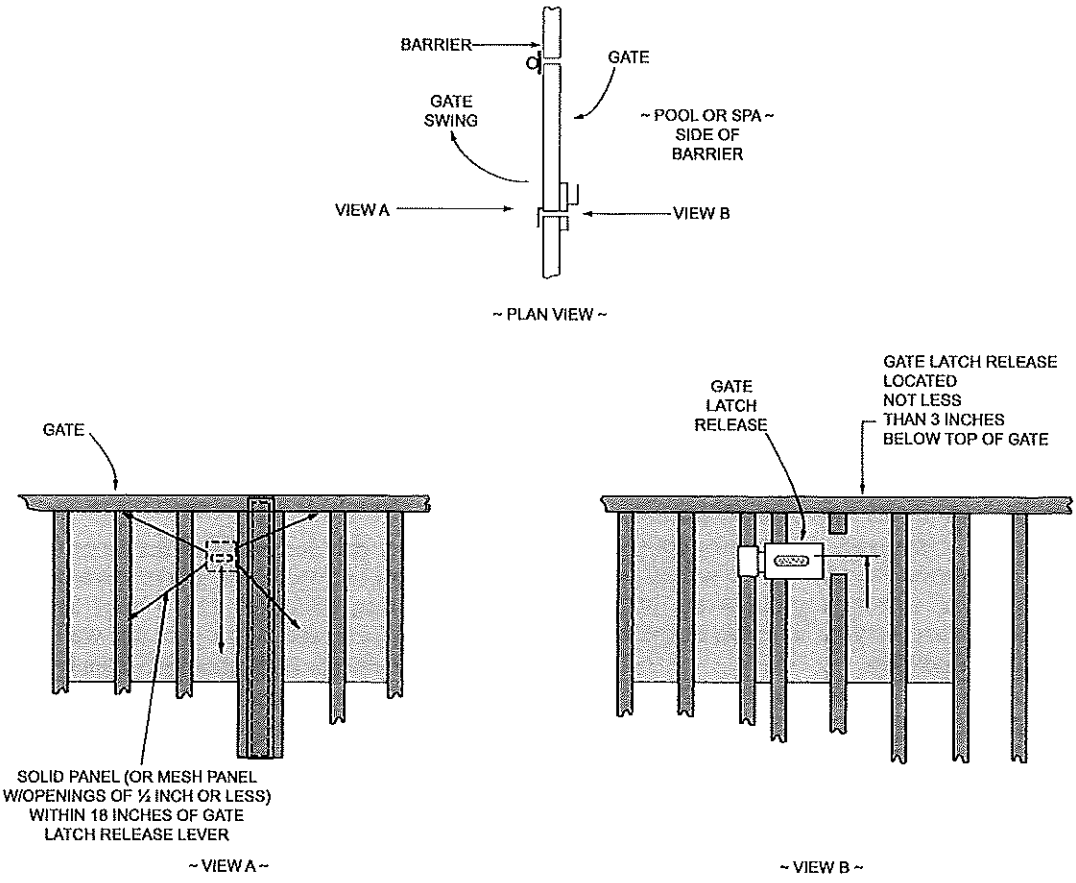
❖ This section requires that the gate's latch-release mechanism on the nonpool or spa side of the gate be not less than 54 inches (1372 mm) above grade or, if less than 54 inches (1372 mm), then the release mechanism must be on the pool or spa side of the gate. Placing the release mechanism at 54 inches (1372 mm) puts the release out of reach of small children. But there may be aesthetic reasons for having the latch at less than 54 inches (1372 mm) above grade. Where located on the pool or spa side of the gate, the latch must be not less than 3 inches (76 mm) below the top of the gate. This allows for adults outside of the gate to reach the release but prevents children outside the gate from reaching the latch release. The inside (backside of the gate) release mechanism must be protected against tampering from the outside of the gate by providing a solid panel or mesh with openings of not greater than $^1/_2$ inch (12.7 mm). The panel or small opening mesh must extend not less than 18

inches (457 mm) in all directions of the inside latch-release mechanism [see Commentary Figure 305.3.3(1)].

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



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



For SI: 1 inch = 25.4 mm.

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

305.4 Structure wall as a barrier. Where a wall of a dwelling or structure serves as part of the barrier and where doors or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor and doors shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be *listed* and *labeled* as a water hazard entrance alarm in accordance with UL 2017. In dwellings or structures not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located 54 inches (1372 mm) or more above the finished floor. In dwellings or structures required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
2. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F1346 is installed for the pools and spas.
3. An *approved* means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

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

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

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

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

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

305.5 Onground residential pool structure as a barrier. An onground *residential* pool wall structure or a barrier mounted on top of an onground *residential* pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.
2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.

4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102 mm) diameter sphere.
5. Barriers that are mounted on top of onground *residential* pool walls are installed in accordance with the pool manufacturer's instructions.

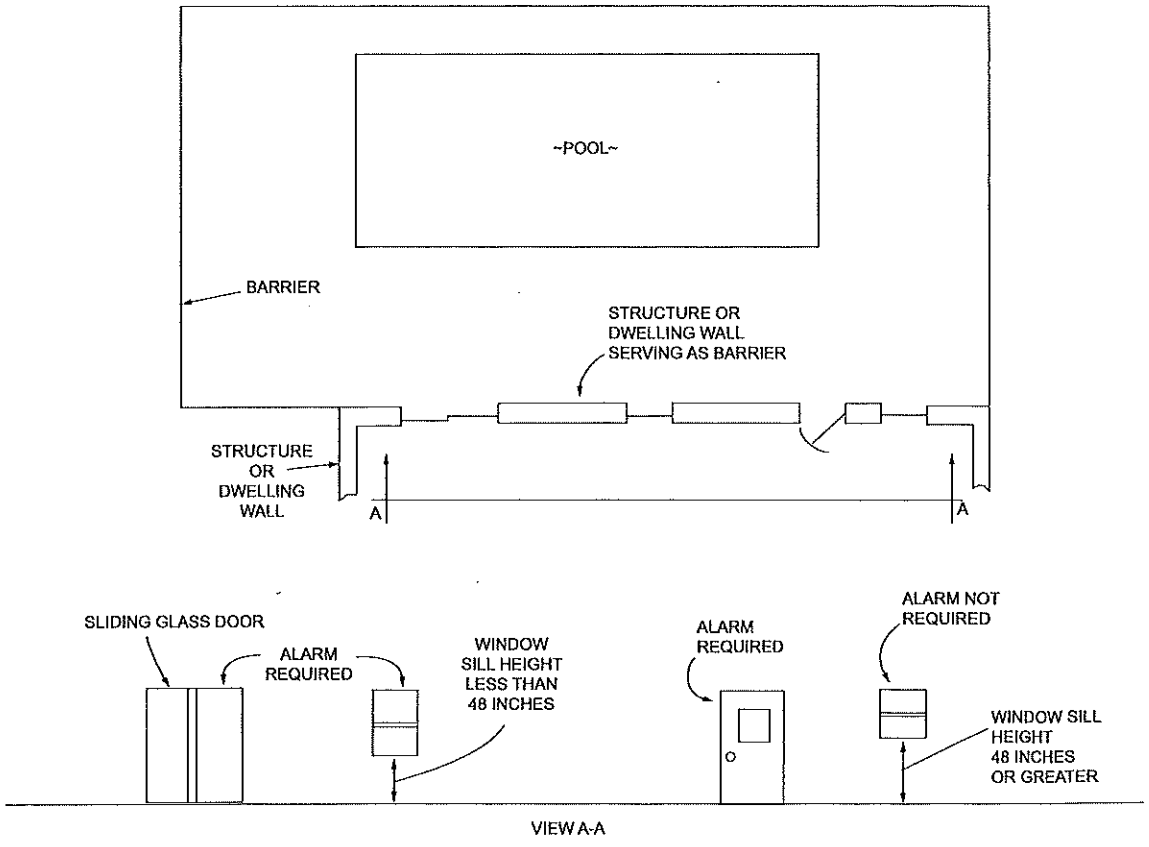
❖ Onground pools that have the top of the structure at 48 inches (1219 mm) or more above grade around the entire perimeter can serve as their own barrier from entry to the vessel. In order to serve as the barrier, all the requirements of Section 305.2 must be met; for example, a clear zone of 36 inches (914 mm) around the vessel and the outside of the pool wall cannot be climbable by children. Because the pool is above ground, a stairway or ladder is needed to access the vessel. Such ladders or stairways must be either removable or locked in some manner so that children cannot access the vessel. Any resulting opening from the removal or securing of a stairway must not leave openings where a 4-inch sphere (102 mm) will pass through. Barriers for stairways are provided by the manufacturer of the stairway, so the installation of such barriers must be in accordance with the manufacturer's instructions.

305.6 Natural barriers. In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches (457 mm), a barrier is not required between the natural body of water shoreline and the pool or spa.

❖ Although natural bodies of water are not a barrier, they can restrict access to pools and spas by a child simply because he or she would have to navigate through not less than 18 inches (457 mm) depth of the natural body of water before reaching the pool or spa. If the child is successful, there is a low probably that he or she will have difficulty in the pool and spa water.

305.7 Natural topography. Natural topography that prevents direct access to the pool or spa area shall include but not be limited to mountains and natural rock formations. A natural barrier approved by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by the requirements of Sections 305.2 through 305.5.

❖ Natural topography could present significant difficulty for children to access the pool and spa. For example,



For SI: 1 inch = 25.4 mm.

Commentary Figure 305.4(1)
STRUCTURE OR DWELLING WALL SERVING AS A BARRIER TO A POOL OR SPA

a pool or spa area that is adjacent to a steep and rocky hillside might be too treacherous for anyone to traverse, let alone a child. However, the code official must approve such arrangements to allow elimination of a barrier or portion thereof.

SECTION 306
DECKS

306.1 General. The structural design and installation of decks around pools and spas shall be in accordance with the *International Residential Code* or the *International Building Code,* as applicable in accordance with Section 102.7 and this section.

❖ The structural design and construction of decks around pools and spas must follow the requirements of the IBC or IRC, as applicable, and the requirements of this section.

306.2 Slip resistant. Decks, ramps, coping, and similar step surfaces shall be slip resistant and cleanable. Special features in or on decks such as markers, brand insignias, and similar materials shall be slip resistant.

❖ The presence of water on a walking surface significantly increases the slip potential. Special attention must be given to markers and insignias to make sure that they do not present an increased slip hazard.

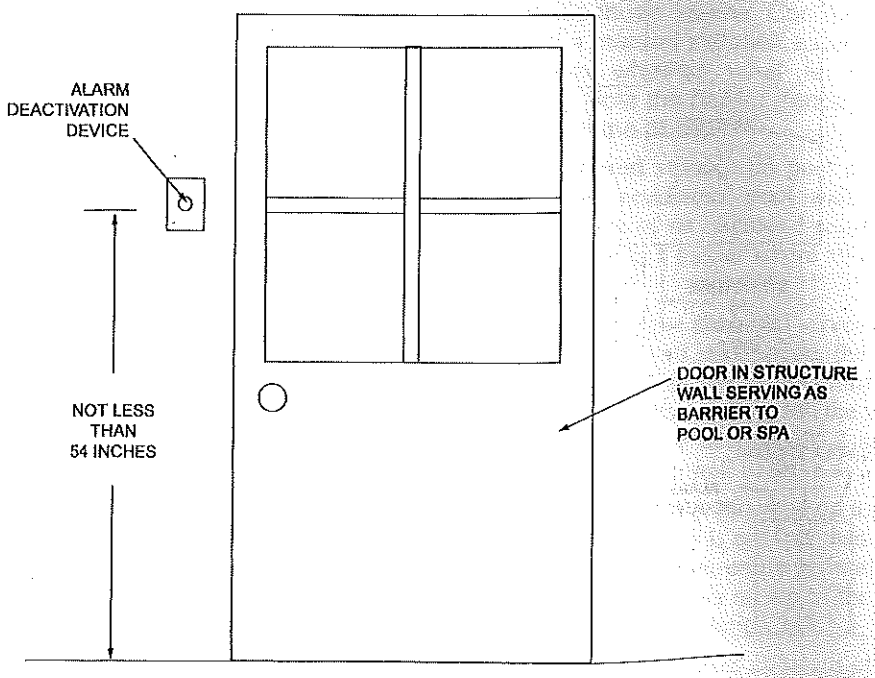
306.3 Step risers and treads. Step risers for decks of public pools and spas shall be uniform and have a height not less than $3^3/_4$ inches (95 mm) and not greater than $7^1/_2$ inches (191 mm). The tread distance from front to back shall be not less than 11 inches (279 mm). Step risers for decks of *residential* pools and spas shall be uniform and shall have a height not exceeding $7^1/_2$ inches (191 mm). The tread distance from front to back shall be not less than 10 inches (254 mm).

❖ Step riser heights and tread depths are slightly different for decks associated with pools and spas, depending on whether they are associated with the IBC or the IRC.

306.4 Deck steps handrail required. Public pool and spa deck steps having three or more risers shall be provided with a handrail.

❖ For three or more steps associated with a pool or spa deck for a public pool or public spa, a handrail is needed. There is not a similar requirement for steps associated with pool or spa decks for residential pools or spas, noting the definition of "residential" in Chapter 2. Note that the IRC does require handrails for stairways with four or more risers where the stairway is part of the means of egress for an IRC building (see IRC Section 311). However, not all exterior doors (such as a sliding patio door) of an IRC building are intended to be means of egress doors.

306.5 Slope. The minimum slope of decks shall be in accordance with Table 306.5 except where an alternative drainage method is provided that prevents the accumulation or pooling of water. The slope for decks, other than wood decks, shall be not greater than $^1/_2$ inch per foot (1 mm per 24 mm) except for ramps. The slope for wood and wood/plastic composite decks



For SI: 1 inch = 25.4 mm.

Commentary Figure 305.4(2)
ALARM DEACTIVATION DEVICE LOCATION FOR OPENING IN STRUCTURE OR DWELLING WALL SERVING AS BARRIER TO A POOL OR SPA

shall be not greater than $^1/_4$ inch per 1 foot (1 mm per 48 mm). Decks shall be sloped so that standing water will not be deeper than $^1/_8$ inch (3.2 mm), 20 minutes after the cessation of the addition of water to the deck.

❖ Decks around pools and spas must be sloped to drain excess water. Puddles of water deeper than $^1/_8$ inch (3.2 mm) are a slip hazard. The maximum slope of a deck other than a wood deck cannot be more than $^1/_2$ inch per foot (41.7 mm per meter) because an excessively sloped wet surface is also a slip hazard. The slope of wood and wood/plastic decks must be held to not greater than $^1/_4$ inch per foot (20.8 mm per meter), as these surfaces are considerably "slicker" than decks of other material. See Table 306.5.

306.6 Gaps. Gaps shall be provided between deck boards in wood and wood/plastic composite decks. Gaps shall be consistent with *approved* engineering methods with respect to the type of wood used and shall not cause a tripping hazard.

❖ Floor planks of wood and wood/plastic composite decks must be properly gapped to prevent buckling when the planks expand.

306.6.1 Maximum gap. The open gap between pool decks and adjoining decks or walkways, including joint material, shall be not greater than $^3/_4$ inch (19.1 mm). The difference in vertical elevation between the pool deck and the adjoining sidewalk shall be not greater than $^1/_4$ inch (6.4 mm).

❖ Gaps between pool decks and adjoining decks and walkways must be limited to not greater than $^3/_4$ inch (19.1 mm) so that toes will not get caught in the gap. The vertical elevation between decks must not exceed $^1/_4$ inch (6.4 mm) to prevent a tripping hazard.

306.7 Concrete joints. Isolation joints that occur where the pool coping meets the concrete deck shall be water tight.

❖ Water intrusion between the coping of the pool and the adjacent concrete deck can cause damage to both the deck and the coping.

306.7.1 Joints at coping. Joints that occur where the pool coping meets the concrete deck shall be installed to protect the coping and its mortar bed from damage as a result of the anticipated movement of adjoining deck.

❖ There must be a joint between the pool coping and the adjoining concrete deck so that thermal expansion of those materials can occur without damage to the coping or deck. Typically, the joint will be $^1/_4$ to $^1/_2$ inch (6.4 mm to 12.8 mm) in width and will be occupied by compressible foam material that completely separates the coping mortar bed and coping from the concrete deck slab. The top of the joint is filled with a flexible caulking material to prevent water entry into the joint.

306.7.2 Crack control. Joints in a deck shall be provided to minimize visible cracks outside of the control joints caused by imposed stresses or movement of the slab.

❖ Concrete decks must have an adequate number of control joints to limit random cracking in the concrete slab. The control joints can be tooled into the slab when the concrete is in a plastic state or cut into the slab when the concrete is in a "green" state. Control joints are typically not deeper than one-third of the slab thickness and must not cut any reinforcing steel that was placed in the slab. Control joints provide a weakened area in the slab so that when stresses develop in the slab, the slab will be most likely to crack along these joint lines.

306.7.3 Movement control. Areas where decks join existing concrete work shall be provided with a joint to protect the pool from damage caused by relative movement.

❖ New concrete decks placed against existing concrete must have a joint between the two so that differential movement does not cause damage.

306.8 Deck edges. The edges of decks shall be radiused, tapered, or otherwise designed to eliminate sharp corners.

❖ A sharp edge on a concrete slab can be very dangerous, especially to wet feet.

306.9 Valves under decks. Valves installed in or under decks shall be accessible for operation, service, and maintenance. Where access through the deck walking surface is required, an access cover shall be provided for the opening in the deck. Such access covers shall be slip resistant and secured.

❖ There could be a need for a valve to be placed below a pool or spa deck. Such valves must be provided with access, and the opening must have a cover. The cover's walking surface must be slip resistant.

306.9.1 Hose bibbs. Hose bibbs shall be provided for rinsing down the entire deck and shall be installed in accordance with the *International Plumbing Code* or *International Residential*

TABLE 306.5
MINIMUM DRAINAGE SLOPES FOR DECK SURFACES

SURFACE	MINIMUM DRAINAGE SLOPE (INCH PER FOOT)
Carpet	$^1/_2$
Exposed aggregate	$^1/_4$
Textured, hand-finished concrete	$^1/_8$
Travertine/brick-set pavers, public pools or spas	$^3/_8$
Travertine/brick-set pavers, residential pools or spas	$^1/_8$
Wood	$^1/_8$
Wood/plastic composite	$^1/_8$

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

Code, as applicable in accordance with Section 102.7.1, and shall be located not greater than 150 feet (45 720 mm) apart. Water-powered devices, such as water-powered lifts, shall have a dedicated hose bibb water source.

Exception: *Residential* pools and spas shall not be required to have hose bibbs located at 150-foot (45 720 mm) intervals, or have a dedicated hose bibb for water-powered devices.

❖ Decks around pools and spas need periodic wash downs. Therefore, hose bibbs must be located every 150 feet (45 720 mm) around the deck to facilitate this maintenance operation. Where water power devices are installed on a pool or spa, a dedicated hose bibb must be provided for these devices. As most residential pools and residential spas are small and typically are located close to a building, hose bibbs are not required to be installed as part of those pool or spa installations. A hose can always be connected to an available hose connection located on the residential building.

SECTION 307
GENERAL DESIGN

307.1 General design requirements. Sections 307.1.1 through 307.1.4 shall apply to all pools and spas.

❖ Sections 307.1.1 through 307.1.4 cover the general design requirements for all pools and spas.

307.1.1 Glazing in hazardous locations. Hazardous locations for glazing shall be as defined in the *International Building Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1 of this code. Where glazing is determined to be in a hazardous location, the requirements for the glazing shall be in accordance with those codes, as applicable.

❖ Section R308 of the IRC defines what glazing is considered hazardous. Section R308.4.5 of the IRC specifically covers walls, enclosures or fences that are 60 inches (1524 mm) or less from the water's edge. Where the bottom edge of the glazing is 60 inches (1524 mm) or less above the walking surfaces, the glazing must be safety glazing.

Section 2406.4 of the IBC defines what glazing is considered hazardous. Section 2406.4.5 specifically covers walls, enclosures or fences that are 60 inches (1524 mm) or less from the water's edge. Where the bottom edge of the glazing is 60 inches (1524 mm) or less above the walking surfaces, the glazing must be safety glazing.

307.1.2 Colors and finishes. For other than *residential* pools and *residential* spas, the colors, patterns, or finishes of the pool and spa interiors shall not obscure objects or surfaces within the pool or spa.

❖ In a public setting, it is imperative that the operators of pools and spas have the best possible view of all swimmers and bathers in the pool or spa so that it can be easily and quickly determined if someone is in distress. Typically, light pastel blue to white colors are used to color the pool or spa interior, providing for maximum visibility of swimmers and bathers in and under the water. The exception allows the interior surfaces of residential pools and spas to have any colors, patterns or finishes that the customer desires.

307.1.3 Roofs or canopies. Roofs or canopies over pools and spas shall be in accordance with the *International Building Code* or *International Residential Code*, as applicable in accordance with Section 102.7.1 and shall be constructed so as to prevent water runoff into the pool or spa.

❖ Structures such as roofs or canopies built over a pool or spa must be designed in accordance with the IRC or the IBC, as applicable. Rainwater runoff from such structures must not be allowed to flow into the pool or spa, because roof surfaces collect dirt, pollutants and bird droppings that would wash into the pool or spa and contaminate the water with a concentrate of pollutants. The concentrated polluted rainwater could make the pool or spa water unsuitable for use until after the circulation system has had time to process the pool or spa water.

307.1.4 Accessibility. An accessible route to public pools and spas shall be provided in accordance with the *International Building Code*. Accessibility within public pools and spas shall be provided as required by the accessible recreational facilities provisions of the *International Building Code*.

❖ The term "accessible" in this code section concerns facilities designed to accommodate persons having physical disabilities. For public pools and spas, Chapters 10 and 11 of the IBC cover the requirements for accessible routes to and around pool and spa areas. Section 1110.4.13 of the IBC states that all swimming pools, wading pools, hot tubs and spas are required to be accessible. There are few exceptions in that section that relax this requirement. Note that Section 411.1 of this code indicates that pool lifts, transfer walls and transfer systems provided for accessibility cannot be counted as a means of entry and exit as required by Section 411.

Residential pool and spa areas associated with a detached one- or two-family dwelling or a townhouse dwelling unit not more than three stories in height are not required to have accessible routes or to have pools and spas be accessible.

307.2 Specific design and material requirements. Sections 307.2.1 through 307.2.4 shall apply to all pools and spas except for *listed* and *labeled* portable *residential* spas, and *listed* and *labeled* portable *residential* exercise spas.

❖ Except for listed and labeled residential spas, Sections 307.2.1 through 307.3.4 cover specific design and material requirements for pools and spas.

307.2.1 Materials. Pools and spas and appurtenances thereto shall be constructed of materials that are nontoxic to humans and the environment; that are generally or commonly regarded to be impervious and enduring; that will withstand the design stresses; and that will provide a watertight structure with a smooth and easily cleanable surface without cracks or joints, excluding structural joints, or that will pro-

Chapter 7: Onground Storable Residential Swimming Pools

General Comments

Onground storable pools for residential use are extremely popular as they have a relatively low initial cost of ownership (as compared to permanent inground residential pools) and can be disassembled and moved to another location. While these kinds of pools have special unique requirements for equipment, overall they are still required to comply with Chapter 3, except as specifically noted.

Purpose

The purpose of this chapter is to regulate the unique features of onground storable pools including, but not limited to, floor slopes, ladders, stairs, decks and circulation systems.

SECTION 701 GENERAL

701.1 Scope. This chapter describes certain criteria for the design, manufacturing, and testing of *onground storable pools* intended for *residential* use. This includes portable pools with flexible or nonrigid side walls that achieve their structural integrity by means of uniform shape, support frame or a combination thereof, and that can be disassembled for storage or relocation. This chapter includes what has been commonly referred to in past standards or codes as onground or above-ground pools.

❖ Onground storable pools are sometimes referred to as onground pools or above-ground pools. This chapter applies to onground storable pools that are installed for residential use. Onground storable pools can have metal or fiberglass walls that support an internal liner or flexible walls that contain the water by the nature of their shape and top edge reinforcement. All onground pools are designed with the intention to be disassembled/taken down and moved to another location or stored. Pools with rigid walls typically remain erected throughout the year, even though winter conditions could occur. Flexible wall pools are sometimes taken down and moved to storage during the winter months [see Commentary Figure 101.2(4)].

701.1.1 Permanent inground residential swimming pool. This chapter does not apply to permanent inground *residential* pools, as defined in Chapter 8.

❖ None of the special provisions for factory-manufactured pools that can be disassembled and reassembled apply to permanent inground residential pools.

701.2 General. In addition to the requirements of this chapter, onground storable *residential* swimming pools shall comply with the requirements of Chapter 3.

❖ The requirements of Chapter 3 apply to onground storable pools, except where specific exceptions in Chapter 3 exempt such pools from a requirement.

701.3 Floor slopes. Floor slopes shall be uniform and in accordance with Sections 701.3.1 through 701.3.4.

❖ In between transition points of the slope in the floor, floor slopes need to be uniform so that the bather has some expectation of where the floor is when walking. An uneven floor makes walking difficult and could result in stumbles and falls. Sections 701.3.1 through 701.3.4 cover the requirements for floor slopes.

701.3.1 Shallow end. The slope of the floor from the shallow end wall towards the deep area shall not exceed 1 unit vertical in 7 units horizontal (14-percent slope) to the point of the first slope change.

❖ A floor slope of one unit vertical in seven units horizontal in the shallow end of onground storable pools provides for an adequate walking surface that allows bathers to feel comfortable.

701.3.2 Transition. The slope of the floor from the point of the first slope change towards the deepest point shall not exceed 1 unit vertical in 3 units horizontal (33-percent slope).

❖ The slope of the floor at the transition point from shallow to deep water needs to be controlled so that the bathers are not startled by an abrupt change in slope.

701.3.3 Adjacent. The slope adjacent to the shallow area shall not exceed 1 unit vertical in 3 units horizontal (33-per-

cent slope) and the slope adjacent to the side walls shall not exceed 1 unit vertical in 1 unit horizontal (100-percent slope).

❖ Where the floor meets the sidewall, the slope of the floor cannot be greater than one unit vertical in one unit horizontal so that bathers will not stub their toes when approaching the sidewall.

701.3.4 Change point. The point of the first slope change shall be defined as the point at which the shallow area slope exceeds 1 unit vertical in 7 units horizontal (14-percent slope) and is not less than 6 feet (1889 mm) from the shallow end wall of the pool.

❖ The transition point where the shallow end of the pool becomes the deep end of the pool must be at least 6 feet (1889 mm) from the shallow end wall.

701.4 Identification. For onground storable *residential* pools with a vinyl liner, the manufacturer's name and the liner identification number shall be affixed to the liner. For onground storable *residential* pools without a liner, the manufacturer's name and identification number shall be affixed to the exterior of the pool structure.

❖ For onground storable pools that have vinyl liners, the liner manufacturer's name and liner identification number must be affixed to the liner so that the customer has access to the information for replacement purposes. Some onground storable pools do not have liners so the information about the pool needs to be on the exterior of the pool structure.

701.5 Installation. *Onground storable pools* shall be installed in accordance with the manufacturer's instructions.

❖ Manufacturer's instructions must be followed when installing onground storable pools because the manufacturer knows how the product was designed to be installed for safe operation and reliable service. Installation instructions and other important safety-related information, including NO DIVING signs, are provided by the manufacturer, although in some cases, typically with flexible or inflatable pools, the signage is embossed on the exterior of the pool. It is the contractor's responsibility (where one is used) to deliver all product or component manuals, instructions, and accompanying signage and other literature to the owner/operator at or before the completion of the project. Signage must be installed in accordance with the manufacturer's instructions as part of the installation.

SECTION 702
LADDERS AND STAIRS

702.1 Ladders and stairs. Pools shall have a means of entry and exit consisting of not less than one ladder or a ladder and staircase combination.

❖ Onground storable pools will have a wall height above ground that requires a ladder or ladder/staircase arrangement to enable bathers to enter and exit the pool safety.

702.2 Type A and Type B ladders. Type A, double access, and Type B, limited access, A-frame ladders shall comply with Sections 702.2.1 through 702.2.7. See Figure 702.2.

❖ Type A and Type B A-frame ladders are defined in Chapter 2. Detailed requirements for A-frame ladders are covered in Sections 702.2.1 through 702.2. Figure 702.2 illustrates a Type A, A-frame ladder with a top platform. A Type B ladder would have some type of panel installed on one side of the ladder so the steps on the outside of the pool could not be used when the pool is closed.

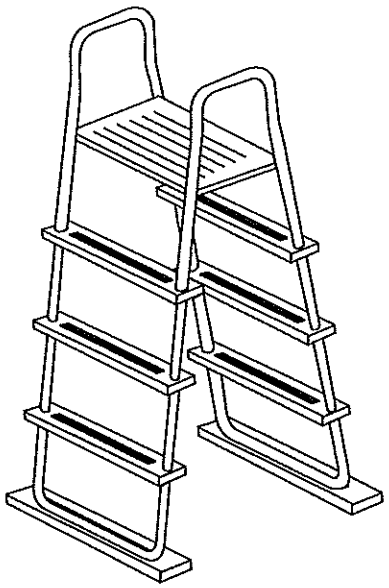


FIGURE 702.2
TYPICAL A-FRAME LADDER, TYPES A AND B

702.2.1 Barrier required. Ladders in the pool shall have a physical barrier to prevent children from swimming through the riser openings or behind the ladder.

Exception: Barriers for ladders shall not be required where the ladder manufacturer provides a certification statement that the ladder complies with the ladder entrapment test requirements of APSP 4.

❖ Figure 702.2 does not show barriers that are required to prevent children from swimming between the ladder and the pool wall or between the risers. The manufacturer of the ladder can certify that the ladder meets the ladder entrapment standard of APSP 4 and in that situation, barriers on the ladder are not required. If a manufacturer does not want to make such certification, then the ladder has to be supplied with barriers. Such barriers can be of any configuration that restricts access to the openings of the ladder.

702.2.2 Platform. Where an A-frame ladder has a platform between the handrails, the platform shall have a width of not less than 12 inches (305 mm) and a length of not less than 12 inches (305 mm). The platform shall be at or above the high-

est ladder tread. The walking surface of the platform shall be slip resistant.

❖ Some A-frame ladders could be designed with a top platform (see Figure 702.2). The platform must be at least 12 inches by 12 inches (305 mm by 305 mm) so that an adult can have adequate space to place his or her feet. The platform must be slip resistant to reduce the potential for falls into the pool or onto the ground.

702.2.3 Handrails or handholds. A-frame ladders shall have two handrails or handholds that serve all treads. The height of the handrails and handholds shall be not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

❖ Two handrails are required for a ladder because climbing a ladder is nearly impossible without using two hands on separate handholds or handrails. The handrails must rise up above the top tread of the ladder by at least 20 inches (508 mm) so that the user can steady themselves on the top rung (step).

702.2.4 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

❖ The A-frame type of ladder is designed to be able to be removed and installed by one able adult while at the same time providing basic access from grade to pool. If the ladder was made to comply with the general handrail requirements (larger diameter tube) in Chapter 3, the ladder would be difficult to remove and install on a frequent basis (perhaps multiple times in a day). Thus, a heavier ladder would not be removed and the safety of the pool would be compromised because access would not be limited as intended (by the removal of the ladder).

702.2.5 Clear distance. The clear distance between ladder handrails shall be not less than a space of 12 inches (305 mm).

❖ The required clear distance between A-frame ladder handrails specifies the required usable tread width for the ladder. Too narrow of tread width would make standing on a tread unstable for the user.

702.2.6 Treads. Ladder treads shall have a horizontal uniform depth of not less than 2 inches (51 mm).

❖ Two inches (51 mm) is the minimum tread depth for comfort to the arch of an adult foot. Lesser tread depth imparts too much pressure per square inch on an adult foot.

702.2.7 Riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the platform or top of the pool structure to the uppermost tread shall be the same as the uniform riser heights.

❖ Uniformity of riser heights reduces the potential for a user missing or stubbing their toe into the tread. Either event could cause the user to fall from the ladder. The indicated range of riser heights is climbable by both adults and children. The height of the bottom riser is required to be variable; the ladder might have to be shortened to accommodate differences in elevation between the top of the pool and the ground outside of the pool.

702.3 Type C staircase ladders (ground to deck). Type C staircase ladders shall comply with Sections 702.3.1 through 702.3.6. See Figure 702.3.

❖ The Type C staircase ladder is defined in Chapter 2. Detailed requirements for Type C staircase ladders are covered in Sections 702.3.1 through 702.3.6. Figure 702.3 illustrates a Type C staircase ladder.

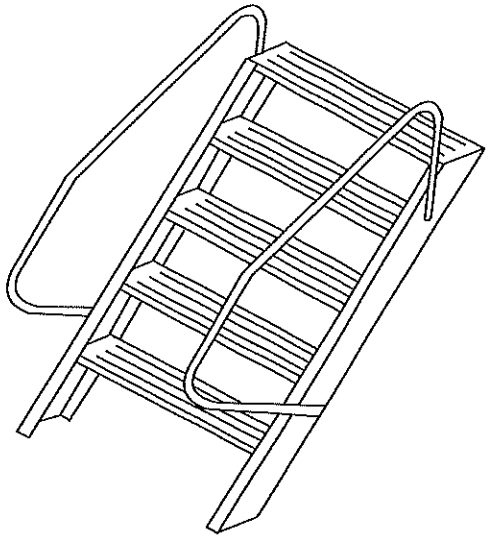


FIGURE 702.3
TYPICAL STAIRCASE LADDER, TYPE C

702.3.1 Handrails or handholds. Staircase ladders shall have not less than two handrails or handholds that serve all treads. The height of the handrails and handholds shall be not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

❖ Because a staircase user is somewhat unsteady when transferring their weight from one foot to the other when ascending or descending stairs, there is a significant potential for falls if handrails or handholds are not provided for the user to steady himself or herself. Because staircase ladder treads are at least 19 inches (483 mm) wide, handrails or handholds need to be on both sides of the staircase ladder. The handrails or handholds must be at least 20 inches (508 mm) above the uppermost tread (or platform) so the user can easily reach the handrail or handhold before stepping off the top tread (or platform) down to the next tread.

702.3.2 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

❖ A too-small handrail diameter is difficult to grip for adults with large hands. Too large of a handrail diam-

eter is difficult to grip for children. The dimension range has been an onground storable pool industry standard for decades.

702.3.3 Treads. Ladder treads shall have a horizontal uniform depth of not less than 4 inches (102 mm).

❖ Four inches (102 mm) is a comfortable tread depth for user's placement of the ball of the foot on the tread. Lesser tread depth imparts too much pressure per square inch on the ball of an adult foot.

702.3.4 Riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the platform or top of the pool structure to the uppermost tread shall be the same as the uniform riser heights.

❖ Uniformity of riser heights reduces the potential for a user missing or stubbing their toe into the tread. Either event could cause the user to fall. The indicated range of riser heights is climbable by both adults and children. The exception allows for the height of the bottom riser to vary, as the overall height of the staircase ladder might have to be shortened (at the bottom) to adjust for a difference in elevation between the top of the pool wall (or a platform) and the ground surface.

702.3.5 Top step. The top step of a staircase ladder shall be flush with the deck or 7 inches (178 mm) to 12 inches (305 mm) below the deck level.

❖ Staircase ladders are sometimes used in conjunction with the decks that are installed around the pool perimeter. The top tread (or platform) of a staircase ladder must either be flush with the top of the deck or must be located below the deck by a distance that equals the uniform riser height of the staircase ladder. In other words, the deck surface is really serving as the top tread of a set of stairs and needs to be located at the same riser height as the other steps in the set of stairs so that users do not stumble and fall at the top step (see the last sentence of Section 702.3.4).

702.3.6 Width. Steps shall have a minimum unobstructed width of 19 inches (483 mm) between the side rails.

❖ A step width of 19 inches (483 mm) provides for adequate width for an adult to use the stairs safely.

702.4 Type D in-pool ladders. Type D in-pool ladders shall be in accordance with Sections 702.4.1 through 702.4.7. See Figure 702.4.

❖ The Type D in-pool ladder is defined in Chapter 2. Detailed requirements for Type D in-pool ladders are covered in Sections 702.4.1 through 702.4.7. Figure 702.4 illustrates a Type D in-pool ladder.

702.4.1 Clearance. There shall be a clearance of not less than 3 inches (76 mm) and not greater than 6 inches (152 mm) between the pool wall and the ladder.

❖ The minimum clearance indicated provides adequate toe clearance for an adult foot that is placed on the ladder rung. The maximum clearance indicated significantly reduces the potential that a child could be trapped between the backside of the ladder and the pool wall.

702.4.2 Handrails or handholds. Ladders shall be equipped with two handrails or handholds that extend above the platform or deck not less than 20 inches (508 mm).

❖ Two handrails are required for a ladder because climbing a ladder is nearly impossible without using two hands on separate handholds or handrails. The handrails must rise up above the platform or deck by at least 20 inches (508 mm) so that the user can steady themselves on the top rung (step).

702.4.3 Clear distance. The clear distance between ladder handrails shall be not less than 12 inches (305 mm).

❖ The required clear distance between Type D in-pool ladder handrails specifies the required useable tread width for the ladder. Too narrow of tread width would make standing on a tread unstable for the user.

702.4.4 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

❖ A too-small handrail diameter is difficult to grip for adults with large hands. Too large of a handrail diameter is difficult to grip for children.

702.4.5 Riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

❖ Uniformity of riser heights reduces the potential for a user missing or stubbing their toe into the tread. Either event could cause the user to fall. The indicated range of riser heights is climbable by both adults and chil-

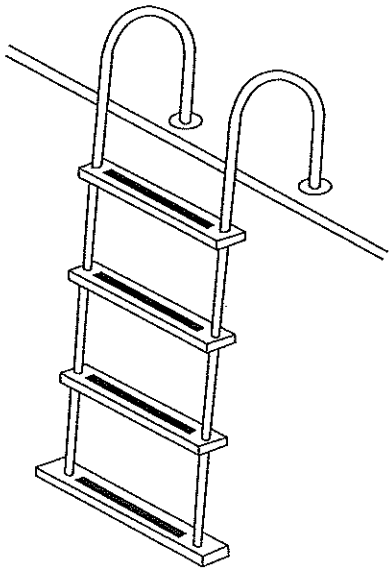


FIGURE 702.4
TYPICAL IN-POOL LADDER, TYPE D

dren. The height of the bottom riser is allowed to vary as the height of a Type D ladder is selected so that the bottom rung of the ladder is above the floor of the pool. That distance above the floor could vary from pool to pool.

702.4.6 Top tread. The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm) and uniform with other riser heights.

❖ The handrails of Type D in-pool ladders are designed to be attached to the deck around the pool (see Figure 702.4). The top tread of the ladder must be located below the deck by a distance that equals the uniform riser height of the other rungs of the ladder so that users do not stumble and fall at the top step.

702.4.7 Tread depth. Ladder treads shall have a horizontal uniform depth of not less than 2 inches (51 mm).

❖ Two inches (51 mm) is the minimum tread depth for comfort to the arch of an adult foot. Lesser tread depth imparts too much pressure per square inch on an adult foot.

702.5 Type E protruding in-pool stairs. Type E protruding in-pool stairs shall be in accordance with Sections 702.5.1 through 702.5.7. See Figure 702.5.

❖ The Type E in-pool staircase is defined in Chapter 2. Detailed requirements for Type E in-pool staircases are covered in Sections 702.5.1 through 702.5.7. Figure 702.5 illustrates a Type E in-pool staircase.

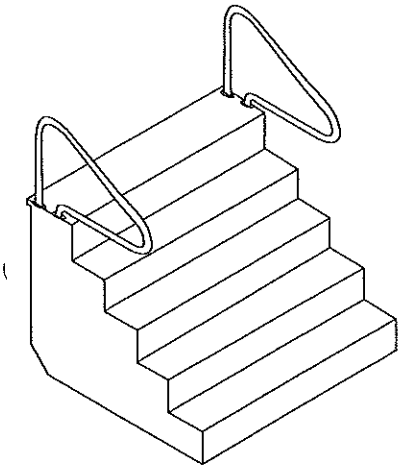


FIGURE 702.5
TYPICAL IN-POOL STAIRCASE, TYPES E AND F

702.5.1 Barrier required. In-pool stairs shall have a physical barrier to prevent children from swimming through the riser openings or behind the in-pool stairs.

❖ Staircases in the pool need to be designed so that a child cannot swim between the staircase and the pool wall or swim between the risers of the staircase. These areas could entrap a child (or even an adult) if not protected.

702.5.2 Handrails or handholds. In-pool stairs shall be equipped with not less than one handrail or handhold that serves all treads with a height of not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

❖ Only one handrail or handhold is required for an in-pool staircase. The handrail or handhold must rise up above the platform or deck by at least 20 inches (508 mm) so that the user can steady themselves on the top step before descending the staircase.

702.5.3 Removable handrails. Where handrails are removable, they shall be installed such that they cannot be removed without the use of tools.

❖ Requiring the use of tools reduces the risk that the handrails will become loose or missing. Tools include typical hand tools, such as screwdrivers, wrenches or pliers.

702.5.4 Leading edge distance. The leading edge of handrails shall be 18 inches (457 mm) ± 3 inches (± 76 mm), horizontally from the vertical plane of the bottom riser.

❖ Users of the staircase need to be able to reach the handrail before they step onto the bottom step of the staircase. The 18-inch (457 mm) dimension provides adequate access for most users.

702.5.5 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

❖ A too-small handrail diameter is difficult to grip for adults with large hands. Too large of a handrail diameter is difficult to grip for children. The dimension range has been an onground storable pool industry standard for decades.

702.5.6 Tread width and depth. Treads shall have an unobstructed horizontal depth of not less than 10 inches (254 mm) and an unobstructed surface area of not less than 240 square inches (0.15 m^2).

❖ A 10-inch (254 mm) tread depth is adequate for most adults to place their feet securely on the steps of the staircase.

702.5.7 Uniform riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the pool coping, deck or step surface to the uppermost tread of the stairs shall be the same as the uniform riser heights.

❖ Uniformity of riser heights reduces the potential for a user missing or stubbing their toe into the tread. Either event could cause the user to fall. The indicated range of riser heights is climbable by both adults and children. The height of the bottom riser is allowed to vary, as the bottom riser height is the only variable that can be changed where all other riser heights are fixed. The top step to the top of the deck, pool coping or step sur-

face must be located at the same height as the riser height for the other steps in the staircase.

702.6 Type F recessed in-pool stairs. Type F recessed in-pool stairs shall be in accordance with Sections 702.6.1 through 702.6.7. See Figure 702.5.

❖ The Type F recessed in-pool staircase is defined in Chapter 2. Detailed requirements for Type F recessed in-pool staircases are covered in Sections 702.6.1 through 702.6.7. Figure 702.5 illustrates a Type F recessed in-pool staircase.

702.6.1 Barrier required. In-pool stairs shall have a physical barrier to prevent children from swimming through the riser openings or behind the in-pool stairs.

❖ Staircases in the pool need to be designed so that a child cannot swim between the staircase and the pool wall or swim between the risers of the staircase. These areas could entrap a child (or even an adult) if not protected.

702.6.2 Handrails or handholds. In-pool stairs shall be equipped with not less than one handrail or handhold that serves all treads with a height of not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

❖ Only one handrail or handhold is required for a recessed in-pool staircase. The handrail or handhold must rise up above the platform or deck by at least 20 inches (508 mm) so that the user can steady themselves on the top step before descending the staircase.

702.6.3 Removable handrails. Where handrails are removable, they shall be installed such that they cannot be removed without the use of tools.

❖ Requiring the use of tools reduces the risk that the handrails will become loose or missing. Tools include typical hand tools, such as screwdrivers, wrenches or pliers.

702.6.4 Leading edge distance. The leading edge of handrails shall be 18 inches (457 mm) ± 3 inches (± 76 mm), horizontally from the vertical plane of the bottom riser.

❖ Users of the staircase need to be able to reach the handrail before they step onto the bottom step of the staircase. The 18-inch (457 mm) dimension provides adequate access for most users.

702.6.5 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

❖ A too-small handrail diameter is difficult to grip for adults with large hands. Too large of a handrail diameter is difficult to grip for children. The dimension range has been an onground storable pool industry standard for decades.

702.6.6 Tread width and depth. Treads shall have an unobstructed horizontal depth of not less than 10 inches (254 mm) at all points and an unobstructed surface area of not less than 240 square inches (0.15 m^2).

❖ A 10-inch (254 mm) tread depth is adequate for most adults to place their feet securely on the steps of the staircase.

702.6.7 Uniform riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the pool coping, deck or step surface to the uppermost tread of the stairs shall be the same as the uniform riser heights.

❖ Uniformity of riser heights reduces the potential for a user missing or stubbing their toe into the tread. Either event could cause the user to fall. The indicated range of riser heights is climbable by both adults and children. The height of the bottom riser is allowed to vary, as the bottom riser height is the only variable that can be changed where all other riser heights are fixed. The top step to the top of the deck, pool coping or step surface must be located at the same height as the riser height for the other steps in the staircase.

SECTION 703
DECKS

703.1 General. Decks provided by the pool manufacturer shall be installed in accordance with the manufacturer's instructions. Decks fabricated on-site shall be in accordance with the *International Residential Code*.

❖ Decks for onground storable residential pools can be provided by the pool manufacturer. Because the manufacturer designed the deck, they know the method to ensure the deck is safely installed. Other decks that are field fabricated must comply with the deck requirements of the *International Residential Code*® (IRC®).

703.2 Cantilevered. The top surface of a cantilevered deck shall be not greater than 1 inch (25 mm) higher than the top of the pool wall. See Figure 703.4. The top surface of a noncantilevered deck shall be not higher than the top of the pool wall.

❖ A cantilevered deck is where the deck structure relies on the pool structure for support.

703.3 No gaps. Decks that are installed flush with the top rail of the pool shall have all gap openings between the deck and top rails closed-off or capped.

❖ Gaps between the deck and the top rail could cause a toe to become caught and cause the user of the pool to fall.

703.4 Extension over pool. Where a deck extends inside the top rail of the pool, it shall extend not more than 3 inches (76

mm) beyond the inside of the top rail of the pool in accordance with Figure 703.4 and shall have a smooth finish.

❖ The deck must not cover the water surface too much because this could obscure visibility into the water for someone who is watching others swim.

703.5 Slip resistant. The deck walking surface shall be slip resistant.

❖ The presence of water on a walking surface significantly increases the slip potential. Special attention must be given to markers and insignias to make sure that they do not present an increased slip hazard.

703.6 Walk-around decks. Walk-around decks shall have a level walking surface of not less than 15 inches (381 mm) in width, as measured from the inside edge of the pool top rail to the outside of the pool walk-around. See Figure 703.6.

❖ A walking surface of at least 15 inches (381 mm) allows for convenience and safety of the user.

SECTION 704
CIRCULATION SYSTEM

704.1 General. A circulation system consisting of pumps, hoses, tubing, piping, return inlets, suction outlets, filters and other related equipment that provides for the circulation of water throughout the pool shall be located so that such items cannot be used by young children as a means of access to the pool.

❖ The installer must not put the circulation equipment where children could climb on the equipment to gain access to the pool.

704.2 Installation and support. Circulation equipment shall be installed, mounted and supported in accordance with the manufacturer's instructions.

❖ For circulation systems to operate as intended and have reasonable life, the system needs to be supported as the manufacturer intended.

704.3 Draining the system. In climates subject to freezing, circulation system equipment shall be designed and fabricated to drain the pool water from the equipment and exposed piping, by removal of drain plugs and manipulating valves or by other methods in accordance with the manufacturer's instructions.

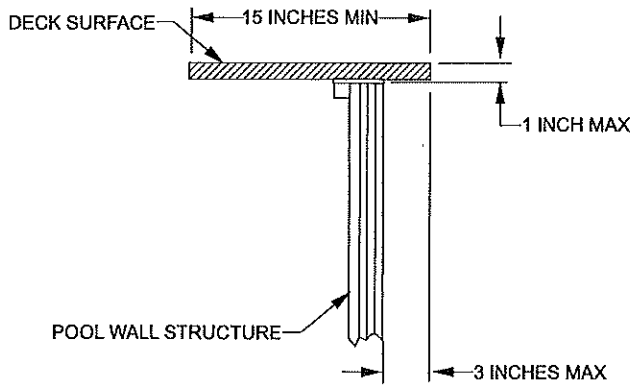
❖ Some onground storable pools are intended to remain erected during periods of the year where freezing conditions are possible. Circulation equipment for those pools must have means for draining water from the equipment and piping so that remaining water does not freeze and damage the components and piping. Other onground storable pools are drained, folded up and stored along with the circulation equipment.

704.4 Turnover. A pump including a motor shall be provided for circulation of the pool water. The equipment shall be sized to provide a turnover of the pool water not less than once every 12 hours. The system shall be designed to provide the required turnover rate based on the manufacturer's specified maximum flow rate of the filter, with a clean media condition of the filter. The system flow shall not exceed the filter manufacturer's maximum filter flow rate.

❖ Turnover or turnover rate is determined by dividing the volume of the pool by the flow rate of the circulation system. For example, a 10,000-gallon (37 854 L) pool with a 36-gallon-per-minute (gpm) (136.3 lpm) filtration pump with filter will have a 4.6-hour turnover rate. In other words, it will take 4.6 hours for the entire volume of the pool to be filtered one time.

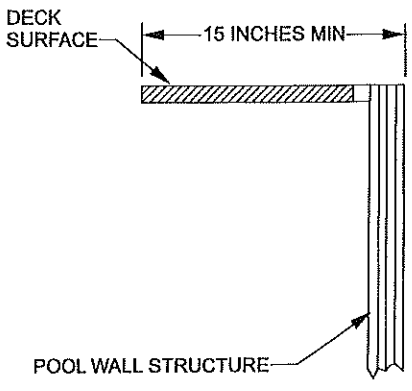
704.5 Piping and fittings. The process piping of the circulation system, including but not limited to hoses, tubing, piping, and fittings, shall be made of nontoxic material and shall be capable of withstanding an internal pressure of not less than $1^1/_2$ times the rated pressure of the pump. Piping on the suction side of the pump shall not collapse when flow into such piping is blocked.

❖ Section 302.3 has an exception that allows for circulation system components for onground storable pools to not meet NSF 50. However, that does not mean that just any component in these systems is suitable. This section requires two criteria for components: nontoxicity and ability to withstand the pressure of service.



For SI: 1 inch = 25.4 mm.

FIGURE 703.4
TYPICAL CANTILEVERED DECK SUPPORT



For SI: 1 inch = 25.4 mm.

FIGURE 703.6
WALK-AROUND DECK WIDTH

These simple criteria keep the cost of the product affordable while providing for a safe circulation system.

704.6 Filters. Pressure-type filters shall have an automatic internal means or a manual external means to relieve accumulated air pressure inside the filter tank. Filter tanks composed of upper and lower tank lids that are held in place by a perimeter clamp shall have a perimeter clamp that provides for a slow and safe release of air pressure before the clamp disengages the lids.

❖ Pressure-type filters can retain pressure long after the circulation pump is shut off. The section requires safety mechanisms to prevent a filter from being completely opened when pressure is still on the filter.

704.6.1 Automatic internal air relief. Filter tanks incorporating an automatic internal air relief as the principal means of air release shall be designed with a means to provide for a slow and safe release of pressure.

❖ A manual air release on a filter tank allows for the user to adjust the rate at which pressure is released, hopefully in a responsible manner. Where the air release is automatic, the mechanism is required to control the pressure release in a safe manner.

704.6.2 Separation tank. A separation tank used in conjunction with a filter tank shall have a manual air release or the tank shall be designed to provide for a slow and safe release of pressure when the tank is opened.

❖ Separation tanks are similar to filters with regard to holding pressure after the pump is shut off. Thus, a separation tank has same requirements for safe release of pressure.

704.7 Pumps. Pool pumps shall be tested and certified by a nationally recognized testing laboratory in accordance with UL 1081.

❖ An exception in Section 313.1 allows for pumps and motors that are supplied as part of the "kit" with an onground storable pool package to not comply with the requirements in Section 313. Pool pumps for onground storable pools are only required to be tested and certified to UL 1081.

704.7.1 Cleanable strainer. Where a pressure-type filter is installed, a cleanable strainer or screen that captures materials such as solids, debris, hair and lint shall be provided upstream of the circulation pump.

❖ A strainer is only required where a pressure-type filter is installed. Although Section 313 requires a strainer for all pool circulation systems, Exception 2 of Section 313.1 removes this requirement for onground storable pools.

704.7.2 Accessible pumps and motors. Pumps and motors shall be accessible for inspection and service in accordance with the pump and motor manufacturer's instructions.

❖ For proper servicing, which increases longevity, a pump and motor has to be in the right environment and in a location where the user can maintain them.

704.7.3 Pump shutoff valves. An *accessible* means of shut off of the suction and discharge piping for the pump shall be provided for maintenance and removal of the pump.

❖ As most pumps are below the water line of the pool, valves are needed to shut off the water to the pump so the pool does not require draining to replace or repair the pump.

704.8 Outlets and return inlets. Outlets or suction outlets and return inlets shall be provided and arranged to produce uniform circulation of water so that sanitizer residual is maintained throughout the pool. Where installed, submerged suction outlets shall conform to APSP 16.

❖ The pool manufacturer typically decides how many inlets and outlets are necessary and where placement should be to achieve proper circulation of the pool water. Many onground storable pools have one or more skimmers as the only outlets for the pool. Where a suction outlet is needed for a pool, the outlet is required to comply with the standard for suction outlets. (APSP 16)

704.9 Surface skimmer systems. The surface skimming system provided shall be designed and constructed to skim the pool surface where the water level is maintained between the minimum and maximum fill level of the pool.

❖ A surface skimming system is always necessary to provide for clear, properly filtered water.

704.9.1 Coverage where used as a sole outlet. Where surface skimmers are used as the only pool water outlet system, not less than one skimmer shall be provided for each 800 square feet (74.3 m^2), or fraction thereof, of the water surface area.

❖ The section states the minimum number of skimmers required based on water surface area. A 30-foot-diameter (9.1 m) pool has about 700 square feet (65 m^2) of water surface area. Thus only one skimmer is required for a 30-foot-diameter (9.1 m) pool. Note that the minimum skimmer coverage is the same as for any other type of residential pool (see Table 315.3)

704.9.2 Coverage where used in combination with other outlets. Where surface skimmers are not the only outlet for pool water, they shall be considered to cover only that fraction of the 800 square feet (74.3 m^2).

❖ Outlets, other than surface skimmers, might be present. For example, there might be a water overflow along one portion of the pool wall. In this situation, one skimmer covers 50 percent of the water surface area and the overflow outlet covers the other 50 percent of the area.

704.9.3 Location and venting. Skimmers shall be equipped with a vent that serves as a vacuum break.

❖ A vacuum break is necessary to prevent the skimmer from causing a siphon that would drain the pool to the lowest level of the skimmer.

SECTION 705
SAFETY SIGNS

705.1. Signs to be installed prior to final inspection. Safety signage such as "NO DIVING" signs and other safe use instruction signs that are provided by the pool and ladder manufacturer shall be posted in accordance with the manufacturer's instructions prior to final inspection.

❖ It is not enough that the pool manufacturer supplies the safety signage. The signs are only effective when they are posted.

705.2 Safety signs for ladders. Safety signage for ladders shall be in accordance with Sections 705.2.1 through 705.2.3.2.

❖ Advisements on how to use each type of ladder are necessary to encourage safe use and significantly reduce the potential for accidents.

705.2.1 A-frame ladders. Safety signage for A-frame ladders shall be in accordance with Sections 705.2.1.1 through 705.2.1.4.1. The words on the signage shall be readable by persons standing in the pool and standing outside of the pool as applicable for the required location of each sign.

❖ Signage has to be readable by the pool users who are about to use the ladders. This could mean that some signs would have to be facing a user who is in the pool.

705.2.1.1 No diving warning. A-frame ladders shall have the following words posted on the in-pool side of the ladder and on the pool entry side of the ladder: "NO DIVING." The location of the words shall be above the elevation of the design water level of the pool.

❖ The designated entry and exits point(s) of an onground storable pool are the best locations to warn the user that diving is prohibited. Children frequently attempt to dive from a ladder as it is the easiest way to climb above the water surface.

705.2.1.2 Entrapment warning. A-frame ladders shall have the following words posted on the pool side of the ladder: "TO PREVENT ENTRAPMENT OR DROWNING DO NOT SWIM THROUGH, BEHIND, OR AROUND LADDER."

❖ Even though A-frame ladders are either designed to reduce entrapment or are equipped with blocking material and means to reduce entrapment, users still need to be warned to stay away from A-frame ladders while swimming.

705.2.1.3 Type A, A-frame ladders. Type A double access A-frame ladders shall have the following words posted on the ladder: "REMOVE AND SECURE LADDER WHEN POOL IS NOT OCCUPIED."

❖ The Type A ladder is made to be removed to limit access to the pool. The signage reminds the responsible person to remove the ladder.

705.2.1.4 Type B, A-frame ladders. Type B limited access A-frame ladders shall have the following words posted on the ladder: "SECURE LADDER WHEN POOL IS NOT OCCUPIED."

❖ The Type B ladder is made to be "secured" to limit access to the pool. "Secured" means to close off with the ladder manufacturer-supplied cover or blocking mechanism to limit access to the pool. The signage reminds the responsible person to "secure" the ladder.

705.2.1.4.1 Swing up or slide up secured ladders. Type B limited access A-frame ladders that utilize swing-up or slide-up sections for limiting access to the pool shall have the following words posted on the ladder as applicable for the type of securing method:

1. "WHEN POOL IS NOT OCCUPIED, SWING UP AND SECURE."
2. "WHEN POOL IS NOT OCCUPIED, LIFT OFF."
3. "WHEN POOL IS NOT OCCUPIED, SLIDE UP AND SECURE."

❖ Some Type B ladders are made having "swing up," "lift off" or integral sliding cover capability. Specific signage is required for those special types of Type B ladders.

705.2.2 Type C staircase ladders. Type C staircase ladders that swing up to limit access to the pool or that are removed to limit access to the pool shall have the following words posted on the ladder: "WHEN NOT IN USE SWING UP AND SECURE OR REMOVE."

❖ Some Type C ladders are "swing up" or removal types. Special signage is required for those types where the ladder is the primary access limitation for the pool.

705.2.3 Type D in-pool ladder. Safety signage for Type D in-pool ladders shall be in accordance with Sections 705.2.3.1 and 705.2.3.2. The words on the signage shall be readable by persons standing in the pool or standing outside the pool as applicable for the required location of each sign.

❖ Signage has to be readable by the pool users who are about to use the ladders. This could mean that some signs would have to be facing a user who is in the pool.

705.2.3.1 No diving warning. Type D in-pool ladders shall have the following words posted on the in-pool side of the ladder and on the pool entry side of the ladder: "NO DIVING." The location of the words shall be above the elevation of the design water level of the pool.

❖ The designated entry and exit point(s) of an onground storable pool are the best locations to warn the user that diving is prohibited. Children frequently attempt to dive from a ladder as it is the easiest way to climb above the water surface.

705.2.3.2 Entrapment warning. Type D in-pool ladders shall have the following words posted on the ladder: "WARNING: TO PREVENT ENTRAPMENT OR DROWNING, DO NOT SWIM THROUGH, BEHIND, OR AROUND LADDER."

❖ Even though Type D ladders are designed to reduce entrapment or are equipped with blocking material and means to reduce entrapment, users still need to be warned to stay away from ladders while swimming.

Chapter 8: Permanent Inground Residential Swimming Pools

General Comments

By some estimates, there are over 7 million permanent inground residential swimming pools in the United States alone. This far surpasses the number of public pools in the United States. Permanent inground residential pools are designed with a variety of shapes and water depths. The design possibilities are endless. However, no matter the shape or size of the pool, certain criteria for the design must be followed to provide for safe use of the pool.

Purpose

The purpose of this chapter is to regulate the design and installation of permanent inground residential swimming pools. Features such as steps, diving water envelopes, floor slopes, underwater benches and circulation systems have detailed requirements and restrictions. These regulations, in addition to those found in Chapter 3, control the installation of permanent inground residential swimming pools.

SECTION 801 GENERAL

801.1 Scope. The provisions of this chapter shall govern permanent inground *residential* swimming pools. Permanent inground *residential* swimming pools shall include pools that are partially or entirely above grade. This chapter does not cover pools that are specifically manufactured for aboveground use and that are capable of being disassembled and stored. This chapter covers new construction, modification and repair of inground *residential* swimming pools.

❖ Even though the chapter title and this section imply that permanent residential pools are always "in the ground," there are some arrangements where permanent residential pools are partially "in the ground," "on the ground" or even far above the ground. The latter two arrangements are rare as compared to millions of pools "site constructed in an excavation" that have been built and will continue to be built in the future. The possibilities for permanent residential pool designs are endless. This chapter offers the widest latitude for design conceptualization by the future pool owner while at the same time regulating important design aspects for safety in the residential-use environment.

Permanent inground residential pools are not necessarily completely site constructed. They can be fabricated by the manufacturer, in part or whole, brought to the site, and lowered into an excavation or placed in its permanent location. Ancillary equipment packages (filters, pumps, blowers, water features, etc.) can be fabricated by a manufacturer, shipped to the job site and connected to the pool itself. The key point to make is that even though built in a factory and job-site assembled, permanent inground residential pools are not manufactured with the intent to be disassembled, stored or reassembled elsewhere. Once installed, permanent inground residential pools will be as permanent as any other permanent building structure, until the pool structure is demolished.

801.2 General. Permanent inground *residential* pools shall comply with the requirements of Chapter 3.

❖ All requirements of Chapter 3 apply to residential pools except where the code exempts residential pools from complying with specific sections of the code. Note that Section 301.1.1 states that where there are differences between the provisions of this chapter and the provisions of Chapter 3, the provisions of Chapter 8 apply.

SECTION 802 DESIGN

802.1 Materials of components and accessories. The materials of components and accessories used for permanent inground *residential* swimming pools shall be suitable for the environment in which they are installed. The materials shall be capable of fulfilling the design, installation and the intended use requirements in the *International Residential Code*.

❖ A pool environment can be harsh on many materials because of the exposure to sanitizing chemicals and sunlight.

802.2 Structural design. The structural design and materials shall be in accordance with the *International Residential Code*.

❖ See the commentary to Section 307.4.

SECTION 803
CONSTRUCTION TOLERANCES

803.1 Construction tolerances. The construction tolerance for dimensions for the overall length, width and depth of the pool shall be ± 3 inches (76 mm). The construction tolerance for all other dimensions shall be ± 2 inches (51 mm), unless otherwise specified by the design engineer.

❖ In typical building construction, dimensional tolerances are usually much smaller than those given in this section. However, in the construction of inground pools, it is much more difficult to control the overall dimensions of the vessel because of the way that the materials are placed on the reinforcing framework. A tolerance of plus or minus 3 inches (76 mm) provides adequate construction allowance for the length, width and depth of the pool. Other construction dimensions are allowed to vary within plus or minus 2 inches (51 mm). The design engineer for the pool could specify closer tolerances.

SECTION 804
DIVING WATER ENVELOPES

804.1 General. The minimum diving water envelopes shall be in accordance with Table 804.1 and Figure 804.1. Negative construction tolerances shall not be applied to the dimensions of the minimum diving water envelopes given in Table 804.1.

❖ Diving water envelopes may vary, within tolerances, to create larger water envelopes, but may not vary to create a smaller diving water envelope. In other words, the dimensions in Table 804.1 are absolute minimums.

TABLE 804.1. See below.

❖ The basis for the information in this table comes from *Diving Safety in Swimming Pools: A Report to the National Swimming Pool Foundation*, written by Richard Stone, PhD, and published in 1980.

SECTION 805
WALLS

805.1 General. Walls in the shallow area and deep area of the pool shall have a wall-to-floor transition point that is not less than 33 inches (838 mm) below the *design waterline*. Above the transition point, the walls shall be within 11 degrees (0.19 rad) of vertical.

❖ See Chapter 2 for the definition of "Design waterline." The wall-to-floor transition point all around the pool must be at least 33 inches (838 mm) below the design waterline and the wall above the transition point must be within 11 degrees (0.19 rad) of vertical, so that a bather jumping in at the side of the pool has a low probability of hitting the side of the pool. Note that Section 807.2 allows for the depth of the shallow area of pools to be less than 33 inches (838 mm) where steps, beach entries or architectural features are installed in the shallow end of the pool.

SECTION 806
OFFSET LEDGES

806.1 Maximum width. Offset ledges shall be not greater than 8 inches (203 mm) in width.

❖ Offset ledges are for standing or walking along the walls of a pool. The ledges must not be more than 8 inches (1067 mm) wide so that they do not create an obstruction for someone jumping into the pool, right alongside the wall. See the commentary to Section 807.1.

806.2 Reduced width required. Where an offset ledge is located less than 42 inches (1067 mm) below the *design waterline*, the width of such ledge shall be proportionately less than 8 inches (203 mm) in width so as to fall within 11 degrees of vertical as measured from the top of the *design waterline*.

❖ Offset ledges must become narrower than the allowable 8 inches (203 mm), where the depth of the ledge is less than 42 inches (1067 mm) below the design waterline. Therefore, the width of the offset ledge is equal to water depth times the tangent of 11 (0.19 rad) or 0.194. For example, at a 36-inch (914 mm) depth, the offset ledge width can only be 36 (0.194) = 7 inches (178 mm).

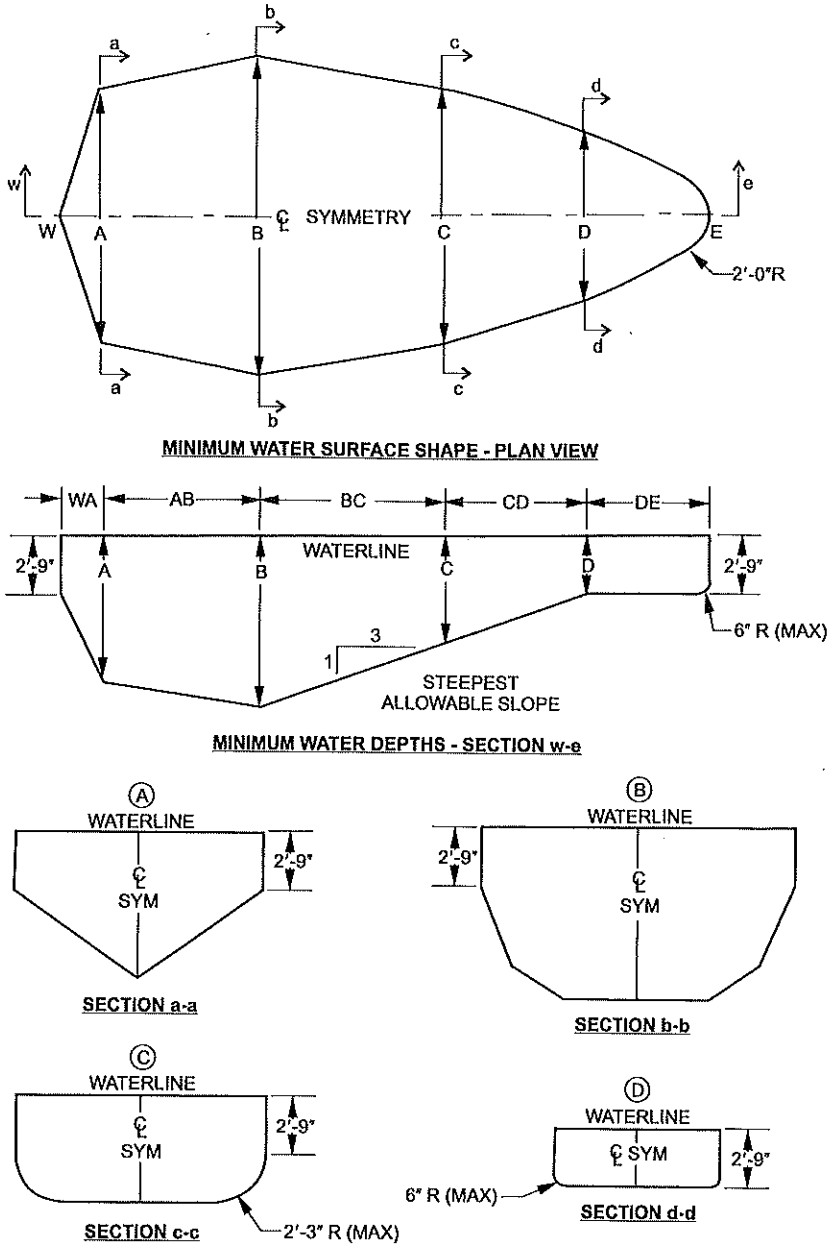
TABLE 804.1
MINIMUM DIVING WATER ENVELOPE FOR SWIMMING POOLS DESIGNATED TYPES I-V[b]

POOL TYPE	MINIMUM DEPTHS AT POINT FEET-INCHES				MINIMUM WIDTHS AT POINT FEET-INCHES				MINIMUM LENGTHS BETWEEN POINTS FEET-INCHES					
	A	B	C	D	A	B	C	D	WA	AB	BC	CD	DE	WE
I	6-0	7-6	5-0	2-9	10-0	12-0	10-0	8-0	1-6	7-0	7-6	Note a	6-0	28-9
II	6-0	7-6	5-0	2-9	12-0	15-0	12-0	8-0	1-6	7-0	7-6	Note a	6-0	28-9
III	6-10	8-0	5-0	2-9	12-0	15-0	12-0	8-0	2-0	7-6	9-0	Note a	6-0	31-3
IV	7-8	8-0	5-0	2-9	15-0	18-0	15-0	9-0	2-6	8-0	10-6	Note a	6-0	31-3
V	8-6	9-0	5-0	2-9	15-0	18-0	15-0	9-0	3-0	9-0	12-0	Note a	6-0	36-9

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

a. The minimum length between points C and D varies based on water depth at point D and the floor slope between points C and D.

b. See Figure 804.1 for location of points.



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

FIGURE 804.1
MINIMUM DIVING WATER ENVELOPE

SECTION 807
POOL FLOORS

807.1 Floor slopes. Floor slopes shall be in accordance with Sections 807.1.1 through 807.1.3.

❖ Sections 807.1 through 807.1.3 cover the requirements for floor slopes.

807.1.1 Shallow end. The slope of the floor from the beginning of the shallow end to the deep area floor slope transition point, indicated in Figure 804.1 as Point E to Point D, shall not exceed 1 unit vertical in 7 units horizontal.

❖ A gradual slope of one unit vertical to seven units horizontal in the shallow end of a pool is easily walkable by most bathers with little fear that they will slip and slide into the deep end. The rope and float line required by Section 811.1 is an indicator to alert bathers that they are getting close to the transition point to the deep end of the pool.

807.1.2 Shallow to deep transition. The shallow to deep area floor slope transition point, indicated in Figure 804.1 as Point D, shall occur at a depth not less than 33 inches (838 mm) below the *design waterline* and at a point not less than 6 feet (1829 mm) from the beginning of the shallow end, indicated in Figure 804.1 as Point E, except as specified in Section 809.7.

❖ The change in the floor slope at the shallow-to-deep end transition point must be at a water depth of not less than 33 inches (838 mm) and located not less than 6 feet (1829 mm) from the shallow end pool wall.

807.1.3 Deep end. The slope of the floor in the deep end, indicated in Figure 804.1 as Point B to Point D, shall not exceed a slope of 1 unit vertical in 3 units horizontal (33-percent slope).

❖ After the shallow to deep end transition point, the deep end floor slope from Point B to Point D in Figure 804.1 must not be greater than one unit vertical in three units horizontal. Slopes steeper than this can create a serious slip and fall hazard when walking from the shallow to the deep area.

807.2 Shallow end water depths. The design water depth as measured at the shallowest point in the shallow area shall be not less than 33 inches (838 mm) and not greater than 4 feet (1219 mm). Shallow areas designed in accordance with Sections 809.6, 809.7 and 809.8 shall be exempt from the minimum depth requirement.

❖ The floor of the shallow end of the pool must be at least 33 inches (838 mm) deep, but not more than 4 feet (1219 mm) deep, so that children and nonswimmers have a relatively safe area for enjoyment of the pool. The minimum depth of the pool can be less than 33 inches (838 mm) where beach entries, steps or architectural features are installed in the shallow end.

SECTION 808
DIVING EQUIPMENT

808.1 Manufactured and fabricated diving equipment. Manufactured and fabricated diving equipment shall be in accordance with this section. Manufactured and fabricated diving equipment and appurtenances shall not be installed on a Type O pool.

❖ Manufactured diving equipment includes diving boards and jump boards. Fabricated diving equipment includes built-on-site platforms, diving rocks, cavern roofs, etc. Where a pool is not designed in accordance with the minimum diving water envelope dimensions of Table 804.1, the pool is a nondiving pool and diving equipment, manufactured or fabricated, must not be installed on the pool.

808.2 Manufactured diving equipment. Manufactured diving equipment shall be designed for swimming pool use.

❖ Manufacturers of diving equipment will typically specify pool type based on testing and evaluation by the manufacturer of the specific equipment design and performance. Two types of manufactured diving equipment are shown in Commentary Figure 808.2.

808.3 Installation. Where manufactured diving equipment is installed, the installation shall be located in the deep area of the pool so as to provide the minimum dimensions as shown in Table 804.1 and shall be installed in accordance with the manufacturer's instructions.

❖ Manufactured diving equipment must be located such that the entry point from diving is into the deep area of the pool. Section 808.6 covers the precise location for placement of diving equipment. Diving equipment must be installed in accordance with the manufacturer's instructions.

808.4 Labeling. Manufactured diving equipment shall have a permanently affixed label indicating the manufacturer's name and address, the date of manufacture, the minimum diving envelope and the maximum weight limitation.

❖ Identification of the manufacturer of diving equipment and the specifics concerning the equipment must be on the board so that the owner can replace the board with the same model (or manufacturer's replacement model), report any manufacturing defects and obtain any written instructions about the use of the board.

808.5 Slip resistant. Diving equipment shall have slip-resistant walking surfaces.

❖ The walking surfaces of diving equipment must not be so smooth that the user will lose traction, slip and fall onto the pool deck or onto the board.

808.6 Point A. For the application of Table 804.1, Point A shall be the point from which all dimensions of width, length and depth are established for the minimum diving water envelope. If the tip of the diving board or diving platform is located at a distance of WA or greater from the deep end wall and the water depth at that location is equal to or greater than the water depth requirement at Point A, then the point on the water surface directly below the center of the tip of the diving board or diving platform shall be identified as Point A.

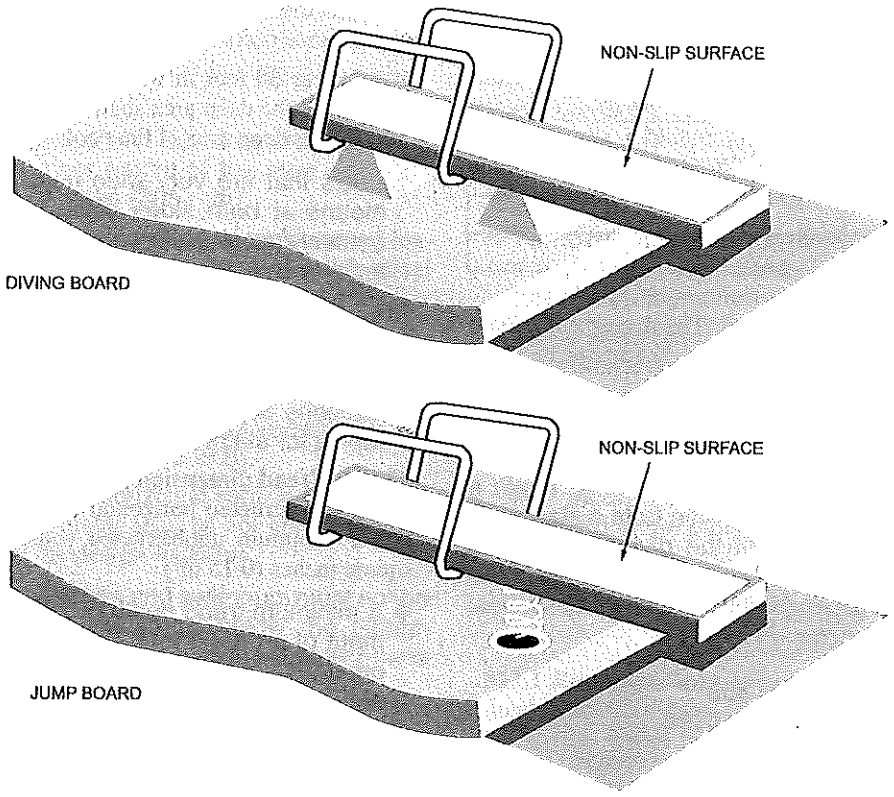
❖ The location of Point A on the water surface establishes where the pool walls and floor need to be constructed to provide the minimum diving water envelope.

808.7 Location of pool features in a diving pool. Where a pool is designed for use with diving equipment, the location of steps, pool stairs, ladders, underwater benches, special features and other accessory items shall be outside of the minimum diving water envelope as indicated in Figure 322.2.

❖ No features or equipment of the pool are allowed to encroach into the diving water envelope.

808.8 Stationary diving platforms and diving rocks. Stationary diving platforms and diving rocks built on-site shall be permitted to be flush with the wall and shall be located in the diving area of the pool. Point A shall be in front of the wall at the platform or diving rock centerline.

❖ Where platforms or rocks are installed on a pool, some designs place them at the edge of the deep end of the pool. In these circumstances, Point A (see Section 808.6) is considered to be directly below the center of the front edge of the platform or rock.



Commentary Figure 808.2
MANUFACTURED DIVING EQUIPMENT
[Illustration courtesy of the Association of Pool and Spa Professionals (APSP)]

808.9 Location. The forward tip of manufactured or fabricated diving equipment shall be located directly above Point A as defined by Section 808.6.

❖ All measurements for the diving water envelope are derived from Point A, as referenced in Section 808.6.

808.10 Elevation. The maximum elevation of a diving board above the *design waterline* shall be in accordance with the manufacturer's instructions.

❖ Diving boards are designed and tested by the manufacturer to determine a maximum installation height to ensure that a diver does not enter the pool at too great a velocity. Given this maximum entry velocity, the specified diving water envelope for the diving board should provide sufficient room for the diver to maneuver safely and recover from the dive. Installing a diving board higher than the maximum allowable by the board manufacturer will result in a higher entry velocity and a distance which could result in diver injury.

808.11 Minimum water envelope. Manufactured diving equipment installation and use instructions shall be provided by the diving equipment manufacturer and shall specify the minimum water dimensions required for each diving board and diving stand combination. The board manufacturer shall indicate the water envelope type by dimensionally relating their products to Point A on the water envelopes as shown in Figure 804.1 and Table 804.1. The board manufacturer shall specify which boards fit on the design pool geometry types as indicated in Table 804.1.

❖ The type of diving equipment to be used on a pool drives the design of the pool with respect to the diving water envelope required. Diving boards are tested by the manufacturer who typically selects a pool type based on the board's length, spring characteristic and intended installation height. These factors can affect diver trajectory and velocity of entry into the water. Installation in accordance with the manufacturer's instructions is critical to ensure that the equipment is provided with a sufficient body of water in which the diver can safely maneuver and recover from the dive. Table 804.1 and the associated Figure 804.1 provide the minimum diving envelope dimensions for different types of pools intended for diving.

808.12 Platform height above waterline. The height of a stationary diving platform or a diving rock above the *design waterline* shall not exceed the dimensions in Table 808.12.

❖ Manufactured or fabricated diving platforms or diving rocks must be installed in accordance with Table 808.12.

TABLE 808.12
DIVING PLATFORM OR APPURTENANCE
HEIGHT ABOVE DESIGN WATERLINE

POOL TYPE	HEIGHT INCHES
I	42
II	42
III	50
IV	60
V	69

For SI: 1 inch = 25.4 mm.

808.13 Headroom above the board. The diving equipment manufacturer shall specify the minimum headroom required above the board tip.

❖ This section applies to manufactured diving equipment, especially springboards and jump boards. The spring of such boards enables the diver to attain a higher altitude above the board than from a stationary surface. The manufacturer of the diving equipment must specify a required headroom above the tip of the board so that the diver doesn't hit overhead obstacles.

SECTION 809
SPECIAL FEATURES

809.1 Slides. Slides shall be installed in accordance with the manufacturer's instructions.

❖ The manufacturer knows how the slide is intended to be used and must provide instructions that address the required installation details for ensuring safe use of the slide.

809.2 Entry and exit. Pools shall have a means of entry and exit in all shallow areas where the design water depth of the shallow area at the shallowest point exceeds 24 inches (610 mm). Entries and exits shall consist of one or a combination of the following: steps, stairs, ladders, treads, ramps, beach entries, underwater seats, benches, swimouts and other *approved* designs. The means of entry and exit shall be located on the shallow side of the first slope change.

❖ Shallow areas of pools are required to have a water depth of at least 33 inches (838 mm) (see Section 807.2). A means of entry and exit must be provided because it is too difficult to enter and exit at the side of the pool at the 33-inch (838 mm) depth. A number of means of exit/entry can be used.

809.3 Secondary entries and exits. Where water depth in the deep area of a pool exceeds 5 feet (1524 mm), a means of entry and exit as indicated in Section 809.2 shall be provided in the deep area of the pool.

Exception: Where the required placement of a means of exit from the deep end of a pool would present a potential hazard, handholds shall be provided as an alternative for the means of exit.

❖ The means of entry and exit from the deep end of a pool include all of the types indicated in Section 809.2. The exception recognizes that some means of exit from a deep end would cause a hazard, therefore, handholds can be provided so that the bather can assist themselves in moving along the perimeter of the pool to a point where they can reach a means of exit.

809.4 Over 30 feet in width. Pools over 30 feet (9144 mm) in width at the deep area shall have an entry and exit on both sides of the deep area of the pool.

❖ Pools that are very wide need to have an entry/exit means at both sides of the deep area so that the bather is not challenged by having to traverse too far of a distance just to get out of the pool.

809.5 Pool stairs. The design and construction of stairs into the shallow end and recessed pool stairs shall conform to Sections 809.5.1 through 809.5.3.

❖ Sections 809.5.1 through 809.5.4 cover the requirements for stairs and recessed stairs.

809.5.1 Tread dimension and area. Treads shall have a minimum unobstructed horizontal depth of 10 inches (254 mm) and a minimum unobstructed walking surface area of 240 square inches (0.15 m^2).

❖ A minimum tread depth provides for the entire placement of an adult foot. The minimum area of the step provides enough space for an adult to stand comfortably with both feet on the step.

809.5.2 Riser heights. Risers, other than the top and bottom riser, shall have a uniform height of not greater than 12 inches (305 mm). The top riser height shall be any dimension not exceeding 12 inches (305 mm) for the width of the walking surface. The bottom riser height shall be any dimension not exceeding 12 inches (305 mm). The top and bottom riser heights shall not be required to be equal to each other or equal to the uniform riser height. Riser heights shall be measured at the horizontal centerline of the walking surface area.

❖ The bottom riser of stairs in the shallow area of a pool can vary in height from the floor because the floor could be sloped or uneven. The top riser of stairs in the pool can vary in height from the deck because it is often difficult to know the exact elevation of deck when the pool steps are being constructed. Also, in renovations of the pool deck, overlays (such as tile or special surfacing) would impact the top riser dimension triggering special reconstruction of the pool stairs. Just as long as the riser heights at the top and bottom of the stairs do not exceed 12 inches (305 mm), a residential user will easily become accustomed to a top and bottom riser height that are different from all of the other risers.

809.5.3 Additional steps. In design water depths exceeding 48 inches (1219 mm), additional steps shall not be required.

❖ Steps could be installed in the deep area of the pool [areas where the water depth is greater than 48 inches (1219 mm)].

809.6 Beach and sloping entries. The slope of beach and sloping entries used as a pool entrance shall not exceed 1 unit vertical in 7 units horizontal (14-percent slope).

❖ The slope of the floor for beach entries to a pool cannot be greater than the maximum slope allowed for the shallow area of the pool.

809.7 Steps and sloping entries. Where steps and benches are used in conjunction with sloping entries, the vertical riser distance shall not exceed 12 inches (305 mm). For steps used in conjunction with sloping entries, the requirements of Section 809.6 shall apply.

❖ Regardless of how steps and benches are used with sloping entries, the riser height of the step or bench must not exceed 12 inches (305 mm).

809.8 Architectural features. Surfaces of architectural features shall not be required to comply with the 1 unit vertical in 7 units horizontal (14-percent slope) slope limitation.

❖ Architectural features are not intended to be used by bathers, so they are not restricted to a floor slope of one unit vertical in seven units horizontal. These architectural features include items such as vanishing edge walls (see Commentary Figure 809.8).

809.9 Maximum depth. The horizontal surface of underwater seats, benches and swimouts shall be not greater than 20 inches (508 mm) below the design waterline.

❖ Underwater seats, benches and swimouts must not be more than 20 inches (508 mm) below the design waterline so that when bathers sit on them, their heads remain above water.

SECTION 810
CIRCULATION SYSTEMS

810.1 Turnover rate. The circulation system equipment shall be sized to provide a turnover of the pool water not less than once every 12 hours. The system shall be designed to provide the required turnover rate based on the manufacturer's specified maximum flow rate of the filter, with a clean media condition of the filter.

❖ Turnover at least once every 12 hours is essential to maintaining water clarity and quality. Filter manufacturer instructions may call for a faster turnover.

810.2 Strainer required. Pressure filter systems shall be provided with a strainer located between the pool and the circulation pump.

❖ The strainer basket at the inlet of a typical pool pump complies with this requirement. If the pump used does not incorporate a strainer basket, one must be installed in the piping from the pool into the pump.

SECTION 811
SAFETY FEATURES

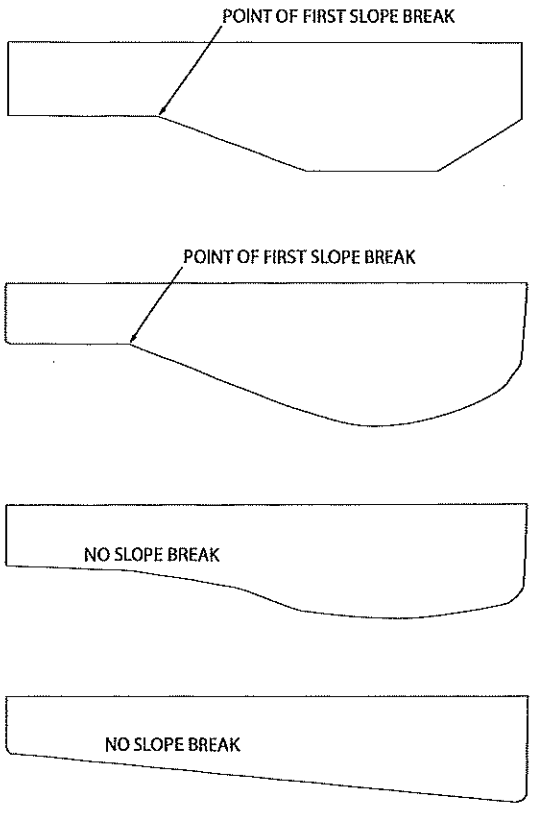
811.1 Rope and float. In pools where the point of first slope break occurs, a rope and float assembly shall be installed across the width of the pool. The rope assembly shall be

Commentary Figure 809.8
SLOPED VANISHING EDGE WALL
(Photo courtesy of Swim, Inc.)

located not less than 1 foot (305 mm) and not greater than 2 feet (610 mm) towards the shallow side of the slope break. Rope anchoring devices shall be permanently attached to the pool wall, coping or deck. Rope ends shall attach to the rope anchor devices so that the rope ends can be disconnected from the rope anchor device.

❖ The rope and float assembly on the shallow side of a slope break is intended to indicate an approaching significant change in slope which might create a slip hazard into deeper water. Slope break is a break in the angle or slant of the pool floor, typically found in vinyl liner pools with a hopper and potentially in pools designed for diving.

Pools with constant slope floors or gently curving floors from shallow to deep areas do not incorporate a slope break and do not require a rope and float assembly. Commentary Figure 811.1 illustrates various slope breaks.



Commentary Figure 811.1
ILLUSTRATION OF SLOPE BREAK

Chapter 11: Referenced Standards

General Comments

This chapter lists the standards that are referenced in various sections of the code. The standards are listed herein by the promulgating agency, the standard identification, the date and title, and the section or sections of the code that reference the standard. The application of the referenced standards is as specified in Section 102.7.

It is important to understand that not every document related to building design and construction is qualified to be a "referenced standard." The International Code Council® (ICC®) has adopted a criteria that standards referenced in the *International Codes*® (I-Codes®) and standards intended for adoption into the I-Codes must meet to qualify as a referenced standard. The policy is summarized as follows:

- Code references: The scope and application of the standard must be clearly identified in the code text.
- Standard content: The standard must be written in mandatory language and be appropriate for the subject covered. The standard must not have the effect of requiring proprietary materials or prescribing a proprietary testing agency.
- Standard promulgation: The standard must be readily available and developed and maintained in a consensus process such as ASTM or ANSI.

The ICC Code Development Procedures, of which the standards policy is a part, are updated periodically. A copy of the latest version can be obtained from the ICC offices.

Once a standard is incorporated into the code through the code development process, it becomes an enforceable part of the code. When the code is adopted by a jurisdiction, the standard also is part of that jurisdiction's adopted code. It is for this reason that the criteria were developed. Compliance with this policy means that documents incorporated into the code are developed through the use of a consensus process, written in mandatory language and do not mandate the use of proprietary materials or agencies. The requirement for a standard to be developed through a consensus process is vital because it means that the standard will be representative of the most current body of available knowledge on the subject as determined by a broad spectrum of interested or affected parties without dominance by any single interest group. A true consensus process has many attributes, including but not limited to:

- An open process that has formal (published) procedures that allow for the consideration of all viewpoints.
- A definitive review period that allows for the standard to be updated or revised.
- A process of notification to all interested parties.
- An appeals process.

Many available documents related to design, installation and construction, though useful, are not "standards" and are not appropriate for reference in the code. Often, these documents are developed or written with the intention of being used for regulatory purposes and are unsuitable for use as a regulation because of extensive use of recommendations, advisory comments and nonmandatory terms. Typical examples of such documents include installation instructions, guidelines and practices.

The objective of ICC's standards policy is to provide regulations that are clear, concise and enforceable—thus the requirement for standards to be written in mandatory language. This requirement is not intended to mean that a standard cannot contain informational or explanatory material that will aid the user of the standard in its application. When it is the desire of the standard's promulgating agency for such material to be included, however, the information must appear in a nonmandatory location, such as an annex or appendix, and be clearly identified as not being part of the standard.

Overall, standards referenced by the code must be authoritative, relevant, up to date and, most importantly, reasonable and enforceable. Standards that comply with the ICC standards policy fulfill these expectations.

Purpose

As a performance-oriented code, the code contains numerous references to documents that are used to regulate materials and methods of construction. The references to these documents within the code text consist of the promulgating agency's acronym and its publication designation (e.g., ASME A112.1.2) and a further indication that the document being referenced is the one that is listed in Chapter 11. Chapter 11 contains all of the information that is necessary to identify the specific referenced document. Included is the following information on a document's promulgating agency (see Commentary Figure 11):

- The promulgating agency (i.e., the agency's title).
- The promulgating agency's acronym.
- The promulgating agency's address. For example, a reference to an ASME standard within the code indicates that the document is promulgated by the American Society of Mechanical Engineers

(ASME), which is located in New York City. Chapter 11 lists the standards agencies alphabetically for ease of identification.

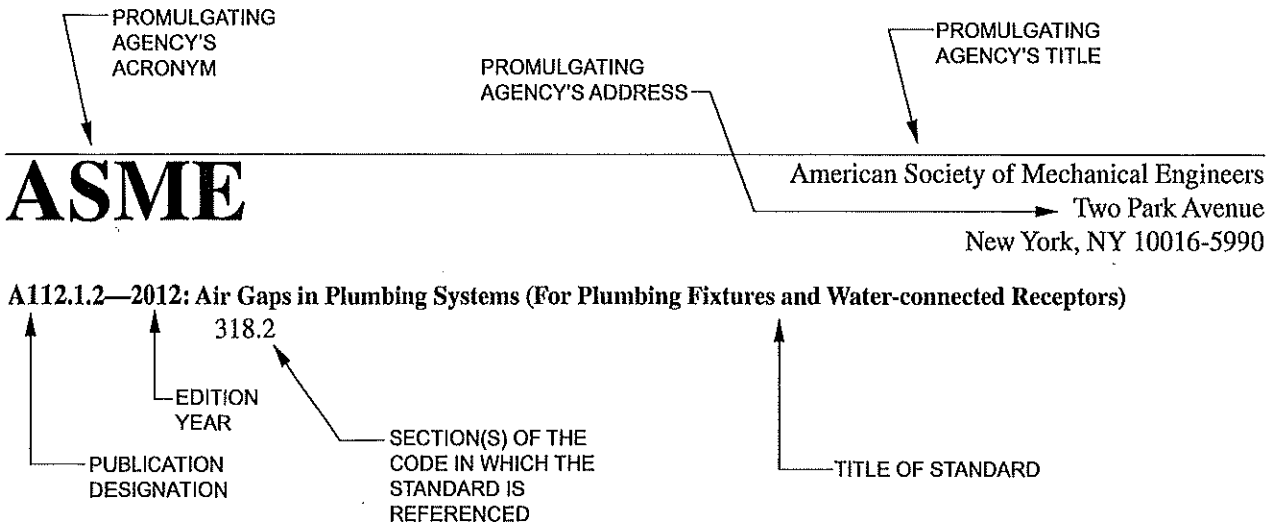
Chapter 11 also includes the following information on the referenced document itself (see Commentary Figure 11):

- The document's publication designation.
- The document's edition year.
- The document's title.
- Any addenda or revisions to the document that are applicable.
- Every section of the code in which the document is referenced.

For example, a reference to ASME A112.1.2 indicates that this document can be found in Chapter 11 under the heading ASME. The specific standards designation is A112.1.2. For convenience, these designations are listed in alphanumeric order. Chapter 11 identifies that ASME A112.1.2 is titled *Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-connected Receptors)*; the applicable edition (i.e., its year of publication) is 2012; and it is referenced in one section of the code (Section 318.2).

The key aspect of the manner in which standards are referenced by the code is that a specific edition of a specific standard is clearly identified. In this manner, the requirements necessary for compliance can be readily determined. The basis for code compliance is, therefore, established and available on an equal basis to the code official, the contractor, the designer and the owner.

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards must be as specified in Section 102.7.



Commentary Figure 11
REFERENCED STANDARDS

AHRI

Air Conditioning, Heating & Refrigeration Institute
2111 Wilson Boulevard, Suite 500
Arlington, VA 22201

400 (I-P)—2015: Performance Rating of Liquid to Liquid Heat Exchangers
Table 316.2

1160 (I-P)—2014: Performance Rating of Heat Pump Pool Heaters
Table 316.2

ANSI

American National Standards Institute
25 West 43rd Street, 4th Floor
New York, NY 10036

A108/A118/A136.1—2008: Specifications for Installation of Ceramic Tile
Table 307.2.2

Z21.56a/CSA 4.7—2017: Gas Fired Pool Heaters
Table 316.2

APSP

The Association of Pool & Spa Professionals
2111 Eisenhower Avenue, Suite 500
Alexandria, VA 22314

ANSI/APSP/ICC 4—12: American National Standard for Aboveground/Onground Residential Swimming Pools—Includes Addenda A Approved April 4, 2013
702.2.1

ANSI/APSP/ICC 7—13: American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins
310.1

ANSI/APSP/ICC 14—2014: American National Standard for Portable Electric Spa Energy Efficiency
303.2

ANSI/APSP/ICC 15a—2011: American National Standard for Energy Efficiency Residential Inground Swimming Pool and Spas—Includes Addenda A Approved January 9, 2013
303.3

ANSI/APSP/ICC 16—11: American National Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs
202, 311.4.1, 311.4.4, 505.2.1

ASCE/SEI

American Society of Civil Engineers
Structural Engineering Institute
1801 Alexander Bell Drive
Reston, VA 20191-4400

ASCE 24—14: Flood Resistant Design & Construction
304.3

ASME

American Society of Mechanical Engineers
Two Park Avenue
New York, NY 10016-5990

A112.1.2—2012: Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-connected Receptors)
318.2

B16.15—2013: Cast Alloy Threaded Fittings: Classes 125 and 250
Table 311.4.1

ASTM

ASTM International
100 Barr Harbor, P.O. Box C700
West Conshohocken, PA 19428-2959

A182—15: Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-temperature Service
Table 311.4.1

A240/A240M—15a: Standard Specification for Chromium and Chromium-nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications
Table 307.2.2

A312/A312M—15a: Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
Table 311.4

A403—15: Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings
Table 311.4.1

B88—14: Standard Specification for Seamless Copper Water Tube
Table 311.4

B447—12a: Specification for Welded Copper Tube
Table 311.4

D1527—99(2005): Specifications for Acrylonitrile Butadiene Styrene (ABS) Plastic Pipe, Schedules 40 and 80
Table 311.4, Table 311.4.1

D1593—13: Standard Specification for Nonrigid Vinyl Chloride Plastic Film and Sheeting
Table 307.2.2

D1785—15: Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80 and 120
Table 311.4

D2241—15: Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-rated Pipe (SDR Series)

D2464—15: Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
Table 311.4.1

D2466—15: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
Table 311.4.1

D2467—15: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
Table 313.4.1

D2672—14: Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
Table 311.4

D2846/D2846M—14: Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
Table 311.4, Table 311.4.1

F437—15: Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
Table 311.4.1

F438—15: Standard Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
Table 311.4.1

F439—13: Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
Table 311.4.1

F1346—91(2010): Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs
305.1, 305.4

CPSC

Consumer Product Safety Commission
4330 East-West Highway
Bethesda, MD 20814

16 CFR Part 1207—04: Safety Standard for Swimming Pool Slides
406.10

CSA

CSA Group
8501 East Pleasant Valley Road
Cleveland, OH 44131-5516

B137.2—16: Polyvinylchloride (PVC) Injection-moulded Gasketed Fittings for Pressure Application
Table 311.4, Table 311.4.1

B137.3—16: Rigid Polyvinylchloride (PVC) Pipe and Fitting and Pressure Applications
Table 311.4, Table 311.4.1

B137.6—16: Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing, and Fitting for Hot- and Cold-water Distribution Systems
Table 311.4, Table 311.4.1

C22.2 No. 108—14: Liquid Pumps
313.8

C22.2 No. 218.1—13: Spas, Hot Tubs and Associated Equipment
302.3, 309.1, 310.1, 313.8, Table 316.2, 317.2, 509.1, 1001.4, 1001.7

C22.2 No. 236—15: Heating and Cooling Equipment
Table 316.2

Z21.56a/CSA 4.7—2017: Gas Fired Pool Heaters
Table 316.2

IAPMO

IAPMO
4755 E. Philadelphia Street
Ontario, CA 91761-USA

IAPMO Z124.7—2013: Prefabricated Plastic Spa Shells
Table 307.2.2

ICC

International Code Council, Inc.
500 New Jersey Avenue, NW
6th Floor
Washington, DC 20001

IBC—18: International Building Code®
201.3, 304.2, 306.1, 307.2, 307.4, 307.8, 307.9, 410.1

IECC—18: International Energy Conservation Code®
201.3, 316.4

IFC—18: International Fire Code®
201.3

IFGC—18: International Fuel Gas Code®
201.3, 316.4

IMC—18: International Mechanical Code®
201.3, 316.4

IPC—18: International Plumbing Code®
201.3, 302.2, 302.5, 302.6, 306.8, 306.8.1, 318.2, 410.1

IRC—18: International Residential Code®
102.7.1, 201.3, 302.1, 302.5, 302.6, 304.2, 306.1, 306.3, 306.8, 306.8.1, 307.2, 307.4, 307.8, 307.9, 316.4, 318.2, 321.2.1, 321.4, 703.1, 802.1, 802.2

ICC 900/SRCC 300—2015: Solar Thermal System Standard
316.6.2

ICC 901/SRCC 100—2015: Solar Thermal Collector Standard
316.6.2

NEMA

National Electrical Manufacturers Association
1300 North 17th Street
Suite 900
Rosslyn, VA 22209

NEMA Z535—2017: ANSI/NEMA Color Chart
409.3

NFPA

National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

NFPA 70—2017: National Electrical Code
302.1, 316.4, 321.2.1, 321.4

NSF

NSF International
789 N. Dixboro Road
P.O. Box 130140
Ann Arbor, MI 48105

NSF 14—2015: Plastics Pumping Systems Components and Related Materials
302.3, 311.4

NSF 50—2015: Equipment for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities
302.3, 309.2, Table 316.2, 508.1

UL

UL LLC
333 Pfingsten Road
Northbrook, IL 60062

372—2007: Automatic Electrical Controls for Household and Similar Use—Part 2: Particular Requirements for Burner Ignition Systems and Components—with revisions through July 2012
506.2.1, 506.2.2

873—2007: Temperature-indicating and Regulating Equipment—with revisions through February 2015
506.2.1, 506.2.2

1004-1—12: Standard for Rotating Electrical Machines General Requirements—with revisions through June 2011
313.8

1081—2008: Standard for Swimming Pool Pumps, Filters and Chlorinators—with revisions through March 2014
313.8

1261—2001: Standard for Electric Water Heaters for Pools and Tubs—with revisions through July 2012
Table 316.2

1563—2009: Standard for Electric Hot Tubs, Spas and Associated Equipment—with revisions through March 2015
302.3, 309.1, 310.1, 313.8, Table 316.2, 317.2, 509.1, 1001.4, 1001.7

1995—2011: Heating and Cooling Equipment—with revisions through July 2015
Table 316.2

2017—2008: General-purpose Signaling Devices and Systems—with revisions through May 2011
305.4

INDEX

F

G

H

I

J

L

M

N

O

P

R

S

T

U

V

W

EXHIBIT B

APPENDIX J

EXISTING BUILDINGS AND STRUCTURES

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

User note:

About this appendix: Appendix J regulates the repair, renovation alteration and reconstruction of existing buildings that are within the scope of this code. It is intended to encourage the continued safe use of existing buildings and ensure that new work conforms to the intent of the code and that exiting conditions remain at their current level of compliance or are improved.

SECTION AJ101
PURPOSE AND INTENT

AJ101.1 General. The purpose of these provisions is to encourage the continued use or reuse of legally existing buildings and structures. These provisions are intended to permit work in existing buildings that is consistent with the purpose of this code. Compliance with these provisions shall be deemed to meet the requirements of this code.

AJ101.2 Classification of work. For purposes of this appendix, work in existing buildings shall be classified into the categories of repair, renovation, *alteration* and reconstruction. Specific requirements are established for each category of work in these provisions.

AJ101.3 Multiple categories of work. Work of more than one category shall be part of a single work project. Related work permitted within a 12-month period shall be considered to be a single work project. Where a project includes one category of work in one building area and another category of work in a separate and unrelated area of the building, each project area shall comply with the requirements of the respective category of work. Where a project with more than one category of work is performed in the same area or in related areas of the building, the project shall comply with the requirements of the more stringent category of work.

SECTION AJ102
COMPLIANCE

AJ102.1 General. Regardless of the category of work being performed, the work shall not cause the structure to become unsafe or adversely affect the performance of the building; shall not cause an existing mechanical or plumbing system to become unsafe, hazardous, insanitary or overloaded; and unless expressly permitted by these provisions, shall not make the building any less compliant with this code or to any previously *approved* alternative arrangements than it was before the work was undertaken.

AJ102.2 Requirements by category of work. Repairs shall conform to the requirements of Section AJ301. Renovations shall conform to the requirements of Section AJ401. *Alterations* shall conform to the requirements of Section AJ501 and the requirements for renovations. Reconstructions shall conform to the requirements of Section AJ601 and the requirements for *alterations* and renovations.

AJ102.3 Smoke detectors. Regardless of the category of work, smoke detectors shall be provided where required by Section R314.2.2.

AJ102.4 Replacement windows. Regardless of the category of work, where an existing window, including the sash and glazed portion, or safety glazing is replaced, the replacement window or safety glazing shall comply with the requirements of Sections AJ102.4.1 through AJ102.4.4, as applicable.

AJ102.4.1 Energy efficiency. Replacement windows shall comply with the requirements of Chapter 11.

AJ102.4.2 Safety glazing. Replacement glazing in hazardous locations shall comply with the safety glazing requirements of Section R308.

AJ102.4.3 Emergency escape and rescue openings. Where windows are required to provide emergency escape and rescue openings, replacement windows shall be exempt from the maximum sill height requirements of Section R310.2.2 and the requirements of Sections R310.2.1 and R310.2.3 provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
2. The replacement window is not part of a change of occupancy.
3. Window opening control devices complying with ASTM F2090 shall be permitted for use on windows required to provide emergency escape and rescue openings.

AJ102.4.4 Window control devices. Where window fall prevention devices complying with ASTM F2090 are not provided, window opening control devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. The window replacement includes replacement of the sash and the frame.

3. The top of the sill of the window opening is at a height less than 24 inches (610 mm) above the finished floor.
4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere where the window is in its largest opened position.
5. The vertical distance from the top of the sill of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit.

AJ102.5 Flood hazard areas. Work performed in existing buildings located in a flood hazard area as established by Table R301.2(1) shall be subject to the provisions of Section R105.3.1.1.

AJ102.6 Equivalent alternatives. Work performed in accordance with the *International Existing Building Code* shall be deemed to comply with the provisions of this appendix. These provisions are not intended to prevent the use of any alternative material, alternative design or alternative method of construction not specifically prescribed herein, provided that any alternative has been deemed to be equivalent and its use authorized by the *building official*.

AJ102.7 Other alternatives. Where compliance with these provisions or with this code as required by these provisions is technically infeasible or would impose disproportionate costs because of construction or dimensional difficulties, the building official shall have the authority to accept alternatives. These alternatives include materials, design features and operational features.

AJ102.8 More restrictive requirements. Buildings or systems in compliance with the requirements of this code for new construction shall not be required to comply with any more restrictive requirement of these provisions.

AJ102.9 Features exceeding code requirements. Elements, components and systems of existing buildings with features that exceed the requirements of this code for new construction, and are not otherwise required as part of *approved* alternative arrangements or deemed by the *building official* to be required to balance other building elements not complying with this code for new construction, shall not be prevented by these provisions from being modified as long as they remain in compliance with the applicable requirements for new construction.

SECTION AJ103
PRELIMINARY MEETING

AJ103.1 General. If a building *permit* is required at the request of the prospective *permit* applicant, the *building official* or his or her designee shall meet with the prospective applicant to discuss plans for any proposed work under these provisions prior to the application for the *permit*. The purpose of this preliminary meeting is for the *building official* to gain an understanding of the prospective applicant's intentions for the proposed work, and to determine, together with the prospective applicant, the specific applicability of these provisions.

SECTION AJ104
EVALUATION OF AN EXISTING BUILDING

AJ104.1 General. The *building official* shall have the authority to require an existing building to be investigated and evaluated by a registered *design professional* in the case of proposed reconstruction of any portion of a building. The evaluation shall determine the existence of any potential nonconformities to these provisions, and shall provide a basis for determining the impact of the proposed changes on the performance of the building. The evaluation shall use the following sources of information, as applicable:

1. Available documentation of the existing building.
   - 1.1. Field surveys.
   - 1.2. Tests (nondestructive and destructive).
   - 1.3. Laboratory analysis.

Exception: Detached one- or two-family dwellings that are not irregular buildings under Section R301.2.2.2.5 and are not undergoing an extensive reconstruction shall not be required to be evaluated.

SECTION AJ105
PERMIT

AJ105.1 Identification of work area. The work area shall be clearly identified on the *permits* issued under these provisions.

SECTION AJ201
DEFINITIONS

AJ201.1 General. For purposes of this appendix, the terms used are defined as follows.

ALTERATION. The reconfiguration of any space; the *addition* or elimination of any door or window; the reconfiguration or extension of any system; or the installation of any additional *equipment*.

CATEGORIES OF WORK. The nature and extent of construction work undertaken in an existing building. The categories of work covered in this appendix, listed in increasing order of stringency of requirements, are repair, renovation, *alteration* and reconstruction.

DANGEROUS. Where the stresses in any member; the condition of the building, or any of its components or elements or attachments; or other condition that results in an overload exceeding 150 percent of the stress allowed for the member or material in this code.

EQUIPMENT OR FIXTURE. Any plumbing, heating, electrical, ventilating, air-conditioning, refrigerating and fire protection *equipment*; and elevators, dumb waiters, boilers, pressure vessels, and other mechanical facilities or installations that are related to building services.

MATERIALS AND METHODS REQUIREMENTS. Those requirements in this code that specify material standards; details of installation and connection; joints; penetrations; and continuity of any element, component or system in the building. The required quantity, fire resistance, flame spread, acoustic or thermal performance, or other performance attribute is specifically excluded from materials and methods requirements.

RECONSTRUCTION. The reconfiguration of a space that affects an exit, a renovation or *alteration* where the work area is not permitted to be occupied because existing means-of-egress and fire protection systems, or their equivalent, are not in place or continuously maintained; or there are extensive *alterations* as defined in Section AJ501.3.

REHABILITATION. Any repair, renovation, *alteration* or reconstruction work undertaken in an existing building.

RENOVATION. The change, strengthening or *addition* of load-bearing elements; or the refinishing, replacement, bracing, strengthening, upgrading or extensive repair of existing materials, elements, components, *equipment* or fixtures. Renovation does not involve reconfiguration of spaces. Interior and exterior painting are not considered refinishing for purposes of this definition, and are not renovation.

REPAIR. The patching, restoration or minor replacement of materials, elements, components, *equipment* or fixtures for the purposes of maintaining those materials, elements, components, *equipment* or fixtures in good or sound condition.

WORK AREA. That portion of a building affected by any renovation, *alteration* or reconstruction work as initially intended by the owner and indicated as such in the *permit*. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed, and portions of the building where work not initially intended by the owner is specifically required by these provisions for a renovation, *alteration* or reconstruction.

SECTION AJ301
REPAIRS

AJ301.1 Materials. Except as otherwise required herein, work shall be done using like materials or materials permitted by this code for new construction.

AJ301.1.1 Hazardous materials. Hazardous materials no longer permitted, such as asbestos and lead-based paint, shall not be used.

AJ301.1.2 Plumbing materials and supplies. The following plumbing materials and supplies shall not be used:

1. All-purpose solvent cement, unless *listed* for the specific application.
2. Flexible traps and tailpieces, unless *listed* for the specific application.
3. Solder having more than 0.2-percent lead in the repair of potable water systems.

AJ301.2 Water closets. Where any water closet is replaced with a newly manufactured water closet, the replacement water closet shall comply with the requirements of Section P2903.2.

AJ301.3 Electrical. Repair or replacement of existing electrical wiring and *equipment* undergoing repair with like material shall be permitted.

Exceptions:

1. Replacement of electrical receptacles shall comply with the requirements of Chapters 34 through 43.
2. Plug fuses of the Edison-base type shall be used for replacements only where there is not evidence of overfusing or tampering in accordance with the applicable requirements of Chapters 34 through 43.
3. For replacement of nongrounding-type receptacles with grounding-type receptacles and for branch circuits that do not have an *equipment* grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system, or to any accessible point on the grounding electrode conductor, as allowed and described in Chapters 34 through 43.

SECTION AJ401
RENOVATIONS

AJ401.1 Materials and methods. The work shall comply with the materials and methods requirements of this code.

AJ401.2 Door and window dimensions. Minor reductions in the clear opening dimensions of replacement doors and windows that result from the use of different materials shall be allowed, whether or not they are permitted by this code.

AJ401.3 Interior finish. Wood paneling and textile wall coverings used as an interior finish shall comply with the flame spread requirements of Section R302.9.

AJ401.4 Structural. Unreinforced masonry buildings located in Seismic Design Category D_2 or E shall have parapet bracing and wall anchors installed at the roofline whenever a reroofing *permit* is issued. Such parapet bracing and wall anchors shall be of an *approved* design.

SECTION AJ501
ALTERATIONS

AJ501.1 Newly constructed elements. Newly constructed elements, components and systems shall comply with the requirements of this code.

Exceptions:

1. Added openable windows are not required to comply with the light and *ventilation* requirements of Section R303.
2. Newly installed electrical *equipment* shall comply with the requirements of Section AJ501.5.

AJ501.2 Nonconformities. The work shall not increase the extent of noncompliance with the requirements of Section AJ601, or create nonconformity to those requirements that did not previously exist.

AJ501.3 Extensive alterations. Where the total area of all of the work areas included in an *alteration* exceeds 50 percent of the area of the *dwelling unit*, the work shall be considered to be a reconstruction and shall comply with the requirements of these provisions for reconstruction work.

Exception: Work areas in which the *alteration* work is exclusively plumbing, mechanical or electrical shall not be included in the computation of the total area of all work areas.

AJ501.4 Structural. The minimum design loads for the structure shall be the loads applicable at the time the building was constructed, provided that a dangerous condition is not created. Structural elements that are uncovered during the course of the *alteration* and that are found to be unsound or dangerous shall be made to comply with the applicable requirements of this code.

AJ501.5 Electrical equipment and wiring.

AJ501.5.1 Materials and methods. Newly installed electrical *equipment* and wiring relating to work done in any work area shall comply with the materials and methods requirements of Chapters 34 through 43.

Exception: Electrical *equipment* and wiring in newly installed partitions and ceilings shall comply with the applicable requirements of Chapters 34 through 43.

AJ501.5.2 Electrical service. Service to the *dwelling unit* shall be not less than 100 ampere, three-wire capacity and service *equipment* shall be dead front having no live parts exposed that could allow accidental contact. Type "S" fuses shall be installed where fused *equipment* is used.

Exception: Existing service of 60 ampere, three-wire capacity, and feeders of 30 ampere or larger two- or three-wire capacity shall be accepted if adequate for the electrical load being served.

AJ501.5.3 Additional electrical requirements. Where the work area includes any of the following areas within a *dwelling unit*, the requirements of Sections AJ501.5.3.1 through AJ501.5.3.5 shall apply.

AJ501.5.3.1 Enclosed areas. Enclosed areas other than closets, kitchens, *basements*, garages, hallways, laundry areas and bathrooms shall have not less than two duplex receptacle outlets, or one duplex receptacle outlet and one ceiling- or wall-type lighting outlet.

AJ501.5.3.2 Kitchen and laundry areas. Kitchen areas shall have not less than two duplex receptacle outlets. Laundry areas shall have not less than one duplex receptacle outlet located near the laundry *equipment* and installed on an independent circuit.

AJ501.5.3.3 Ground-fault circuit-interruption. Ground-fault circuit-interruption shall be provided on newly installed receptacle outlets if required by Chapters 34 through 43.

AJ501.5.3.4 Lighting outlets. Not less than one lighting outlet shall be provided in every bathroom, hallway, stairway, attached garage and detached garage with electric power to illuminate outdoor entrances and exits, and in utility rooms and *basements* where these spaces are used for storage or contain *equipment* requiring service.

AJ501.5.3.5 Clearance. Clearance for electrical service *equipment* shall be provided in accordance with Chapters 34 through 43.

AJ501.6 Ventilation. Reconfigured spaces intended for occupancy and spaces converted to habitable or occupiable space in any work area shall be provided with *ventilation* in accordance with Section R303.

AJ501.7 Ceiling height. *Habitable spaces* created in existing *basements* shall have ceiling heights of not less than 6 feet, 8 inches (2032 mm), except that the ceiling height at obstructions shall be not less than 6 feet 4 inches (1930 mm) from the *basement* floor. Existing finished ceiling heights in nonhabitable spaces in *basements* shall not be reduced.

AJ501.8 Stairs.

AJ501.8.1 Stair width. Existing *basement* stairs and handrails not otherwise being altered or modified shall be permitted to maintain their current clear width at, above and below existing handrails.

AJ501.8.2 Stair headroom. Headroom height on existing *basement* stairs being altered or modified shall not be reduced below the existing stairway finished headroom. Existing *basement* stairs not otherwise being altered shall be permitted to maintain the current finished headroom.

AJ501.8.3 Stair landing. Landings serving existing *basement* stairs being altered or modified shall not be reduced below the existing stairway landing depth and width. Existing *basement* stairs not otherwise being altered shall be permitted to maintain the current landing depth and width.

SECTION AJ601
RECONSTRUCTION

AJ601.1 Stairways, handrails and guards.

AJ601.1.1 Stairways. Stairways within the work area shall be provided with illumination in accordance with Section R303.6.

AJ601.1.2 Handrails. Every required exit stairway that has four or more risers, is part of the means of egress for any work area, and is not provided with not fewer than one handrail, or in which the existing handrails are judged to be in danger of collapsing, shall be provided with handrails designed and installed in accordance with Section R311 for the full length of the run of steps on not less than one side.

AJ601.1.3 Guards. Every open portion of a stair, landing or balcony that is more than 30 inches (762 mm) above the floor or *grade* below, is part of the egress path for any work area, and does not have *guards*, or in which the existing *guards* are judged to be in danger of collapsing, shall be provided with *guards* designed and installed in accordance with Section R312.

AJ601.2 Wall and ceiling finish. The interior finish of walls and ceilings in any work area shall comply with the requirements of Section R302.9. Existing interior finish materials that do not comply with those requirements shall be removed

or shall be treated with an *approved* fire-retardant coating in accordance with the manufacturer's instructions to secure compliance with the requirements of this section.

AJ601.3 Separation walls. Where the work area is in an attached *dwelling unit*, walls separating *dwelling units* that are not continuous from the foundation to the underside of the roof sheathing shall be constructed to provide a continuous fire separation using construction materials consistent with the existing wall or complying with the requirements for new structures. Performance of work shall be required only on the side of the wall of the *dwelling unit* that is part of the work area.

AJ601.4 Ceiling height. *Habitable spaces* created in existing *basements* shall have ceiling heights of not less than 6 feet, 8 inches (2032 mm), except that the ceiling height at obstructions shall be not less than 6 feet 4 inches (1930 mm) from the *basement* floor. Existing finished ceiling heights in nonhabitable spaces in *basements* shall not be reduced.

SECTION AJ701
REFERENCED STANDARDS

ASTM F2090—17	Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms	AJ102.4.3 AJ102.4.4
IEBC—18	*International Existing Building Code*®	AJ102.6

RESOLUTION #2024-6

A RESOLUTION AUTHORIZING THE MAYOR OF THE CITY OF DICKSON, TENNESSEE, TO MAKE APPLICATION TO AND ENTER INTO AN AGREEMENT WITH THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION FOR THE 2024 LOCAL PARKS AND RECREATION FUND GRANT

WHEREAS, The Tennessee Department of Environment and Conservation provides funds through the Local Parks and Recreation Fund (LPFR) Grant; and

WHEREAS, the Local Parks and Recreation Fund (LPFR) Grant requires a fifty percent (50%) match for all awarded funds; and

WHEREAS, these funds can be utilized by local government entities for the purchase of lands for parks, nature areas, greenways, recreation facilities, trail development and other capital improvements in parks, nature areas and greenways; and

WHEREAS, the City of Dickson wishes to utilize these funds for development and construction of Phase 2 of a revitalization project at J. Dan Buckner Park;

Now, therefore**, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF DICKSON, TENNESSEE,** that:

SECTION 1: The Mayor be, and hereby is, authorized to make application to and execute all documents necessary to enter into an agreement with the Tennessee Department of Environment and Conservation for funding through the Local Parks and Recreation Fund (LPFR) Grant for the development and construction of J. Dan Buckner Park Revitalization Phase 2.

SECTION 2: The City Council hereby agrees to obligate the necessary fifty percent (50%) local match of any awarded grant funds.

SECTION 3: This resolution is to become effective from and after its adoption, the welfare of the City of Dickson requiring it.

Adopted this _____ day of _____, 2024.

_____

Don L. Weiss Jr., O.D., MAYOR

ATTEST:

_____

Chris Norman, RECORDER

RESOLUTION #2024-7

A RESOLUTION AUTHORIZING AND DIRECTING THE MAYOR OF THE CITY OF DICKSON, TENNESSEE, TO MAKE APPLICATION TO AND ENTER INTO AN AGREEMENT WITH THE TENNESSEE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPEMNT FOR FUNDING THROUGH THE HISTORIC DEVELOPMENT GRANT PROGRAM

WHEREAS, the Tennessee General Assembly developed the Historic Development Grant Program in April 2021; and

WHEREAS, the Historic Development Grant Program will allocate funds for the preservation and restoration of Certified Historic Structures within the State of Tennessee; and

WHEREAS, the Historic Development Grant Program provides for thirty percent (30%) of total project cost not to exceed $500,000.00 from grant funds; and

WHEREAS, the City of Dickson would provide seventy percent (70%) of total project cost; and

WHEREAS, the City Council and Mayor desire to preserve and renovate the War Memorial Building in the City of Dickson; and

WHEREAS, the War Memorial Building and the City of Dickson meet all the requirements to participate in the Historic Development Grant Program;

Now, therefore, **BE IT RESOLVED BY THE COUNCIL OF THE CITY OF DICKSON, TENNESSEE,** that:

SECTION 1: The Mayor be, and hereby is, authorized and directed to make application to and enter into agreement with the Tennessee Department of Economic and Community Development for the renovation and preservation of the War Memorial Building through the Historic Development Grant Program.

SECTION 2: The Council of the City of Dickson, Tennessee, hereby agrees to obligate the necessary seventy percent (70%) local match for the project as required by the Tennessee Department of Economic and Community Development's Historic Development Grant Program application.

SECTION 3: This resolution is to become effective from and after its adoption, the welfare of the City of Dickson requiring it.

Adopted this _____ day of _____, 2024.

Don L. Weiss Jr., O.D., MAYOR

ATTEST:

Chris Norman, RECORDER

INDIVIDUAL PROJECT ORDER NUMBER (IPO) 006

Describing a specific agreement between Kimley-Horn and Associates, Inc. (the Consultant), and the City of Dickson, Tennessee (the Client) in accordance with the terms of the Master Agreement for Continuing Professional Services dated April 17, 2023, which is incorporated herein by reference.

Identification of Project:

Project Name:	Tennessee Department of Environment and Conservation's (TDEC) Local Parks and Recreation Fund (LPRF) Grant Application Services
Kimley-Horn Project Manager:	Alisha Eley
Project Number:	118178016

Specific Scope of Services:

We understand that the Client desires for Kimley-Horn and Associates, Inc. to assist the Client with the preparation of an LPRF grant application for Phase 2 Improvements at Buckner Park. The grant is set up in two (2) phases, and the scope of this IPO will complete the second phase of the application.

Task 4 – Property Information

Kimley-Horn will acquire the deeds and metes/bounds survey for Buckner Park from the City and upload them to GMS. Kimley-Horn will also research the tax map and upload it to the GMS to complete the Property tab.

Task 5 – Maps

Kimley-Horn will complete the following required maps:

- Location Map – this will also provide written directions to the site as required
- Topographical Map of the site
- Vicinity Map – showing location of the project, City boundary, County boundary, major roads, and rivers

Task 6 – Photos

Kimley-Horn will provide photos of the grant site documenting existing conditions and upload them to the GMS.

Task 7 – Site Plan and Component Plans

Kimley-Horn will draft a preliminary site plan depicting the proposed amenities identified in the grant application. The plan will also provide dimensions of proposed elements. This plan will also document proposed ADA access routes and parking areas.

Kimley-Horn will submit a preliminary component plan for each element being requested in the grant.

Kimley-Horn will make one (1) round of edits after receiving a consolidated list of comments from the City.

Task 8 – Project Proposal Presentation

Kimley-Horn will prepare slides for the required proposal presentation. Slides will be provided of the following required items:

- Population of Dickson
- Total acres of park land in Dickson
- Demographics of target audience for the proposed project
- Activities and programs provided by the proposed project
- Positive impact on the community by the proposed project
- Goal of the project and how it relates to the needs of the community
- Funding explanation for the project
- Suitability of the site for the project (i.e. location, topography, etc.)
- Future phases within Buckner Park improvements
- SCORP goals and initiatives met by this project (paragraph for each one)
- Three (3) year timeline for project
- Design elements of the proposed project
- Cost estimates for the proposed project
- Photos of the site
- Project location map
- Topographic map
- Preliminary site plan showing existing and proposed site elements

Kimley-Horn will prepare a graphic flyer to be used to advertise the three (3) required meetings. The City will be responsible for posting signs on the project site and taking photos of the sign advertising the public meetings.

For the two (2) required public meetings, Kimley-Horn will upload the slides, dates of meetings, flyer advertisements of meetings, copy of sign-in sheets and meeting minutes for the three (3) meetings, and photos of the signs advertising the meetings posted on the site into GMS for TDEC approval. Kimley-Horn will attend and facilitate the two (2) meetings as well.

For the one (1) required Parks Board meeting, Kimley-Horn will upload a copy of the meeting agenda and a copy of the minutes from the meeting noting the meeting date and results of the motion for support of the project. Kimley-Horn will attend and facilitate this meeting.

Task 9 – Assurance of Match Documentation

Kimley-Horn will complete the budget justification worksheet in GMS. The City will provide a signed and dated resolution of the governing board acknowledging approval of the grant application submission and commitment to the 50 percent match noting the source of the funds. Kimley-Horn will upload this document to the GMS to complete the Budget tab.

Task 10 – Current System Development

Kimley-Horn will complete the required spreadsheet regarding the City's existing parks system. The following items will be required:

- Facility name and list of amenities in the park
- Address of facility
- Acreage of park

- List any LPRF, LWCF, and/or RTP grants that have been awarded to the site
- List of renovations or additions within the last 10 years and associated costs
- List of programs and activities at each facility conducted in 2023

Additional Services if required:

Any services not specifically provided for in the above scope will be billed as additional services and performed at our then current hourly rates. Additional services we can provide include, but are not limited to, the following:

- Title VI Application – to be completed by the City
- Meetings beyond those listed in the scope above
- Others as requested by the City

Schedule:

Once given notice to proceed via a signed copy of this IPO, Kimley-Horn will complete the services listed in Tasks 4-10 based upon a mutually agreed upon schedule to meet the grant phase two deadline yet to be announced but expected to be in May 2024.

Terms of compensation:

Kimley-Horn will perform the services in Tasks 4-10 for the total lump sum labor fee of $15,900. All permitting, application, and similar project fees will be paid directly by the Client.

ACCEPTED:

CITY OF DICKSON, TENNESSEE	**KIMLEY-HORN AND ASSOCIATES, INC**.
SIGNED:_____	SIGNED: Christ D. Rhod
PRINTED NAME:_____	PRINTED NAME: Christopher D. Rhodes
TITLE:_____	TITLE: Vice President
DATE:_____	DATE: March 11, 2024

INDIVIDUAL PROJECT ORDER NUMBER 004.3

Describing a specific agreement between Kimley-Horn and Associates, Inc. (the Consultant), and the City of Dickson, Tennessee (the Client) in accordance with the terms of the Master Agreement for Continuing Professional Services dated April 17, 2023, which is incorporated herein by reference.

Identification of Project:

Project Name:	State Route 46 at Alexander Drive / Livestock Road Intersection Improvements
Kimley-Horn Project Manager:	Ben Vondenbrink

Specific Scope of Services:

Kimley-Horn understands that the Client desires to the construct roadway improvements and signal modifications associated with the referenced intersection based on construction plans previously completed by Kimley-Horn. This IPO builds upon IPO 004.1 and IPO 004.2 which previously provided for traffic studies, roadway design, and traffic signal design for the described intersection. This IPO details scope / fee for the preparation of right-of-way exhibits and legal descriptions, as well as construction support services by Kimley-Horn for the Client.

Task 8 – Right-of-Way Services

Based on the Construction Plans submitted to the Client on 02/28/24, it is anticipated that there will be a maximum of two (2) properties that will require some form of easement or right-of-way acquisition. Kimley-Horn will prepare exhibits and legal descriptions for the required right-of-way and easements on the project for up to two (2) properties. If additional exhibits and descriptions are required for additional properties beyond this number, Kimley-Horn will notify the Client to discuss a contract amendment. Kimley-Horn will share the exhibits and legal descriptions with the Client for review. Kimley-Horn will address comments from the Client for up to one (1) round of review.

The City of Dickson will be responsible for all activities associated with the acquisition of right-of-way and easements from property owners for this project. If the City needs additional assistance with any right-of-way or easement acquisition services beyond the exhibits and descriptions, these may be added on to the project as an additional service.

Task 9 – Construction Support Services

Kimley-Horn will attend construction progress meetings and provide general coordination with all stakeholders associated with the construction of the project. These project stakeholders include but are not limited to; the City of Dickson, James + Associates Engineering, the Contractor, and any utility providers with potential relocations. This scope will also consist of tasks such as any Client requested meetings, site visits, construction progress meetings, pay application meetings, and other miscellaneous tasks required by the Project.

This task includes up two (2) Kimley-Horn employees to complete up to two (2) site visits throughout the duration of construction. The purpose of the site visits will be to enable Kimley-horn to better carry out the duties and responsibilities specifically assigned in this Agreement, and to provide the Client a greater degree of confidence that the completed work will conform in general to the Construction Plans.

Kimley-Horn shall not, during such visits or as a result of such observations of the Contractor's work in progress, supervise, direct, or have control over the Contractor's work, nor shall the Consultant have authority over or responsibility for the means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction selected by the Contractor, for safety precautions and programs incident to the Contractor's work, nor for any failure of the Contractor to comply with laws and regulations applicable to the Contractor's furnishing and performing the work. Accordingly, the Consultant neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform its work in accordance with the contract documents.

Kimley-Horn will respond to reasonable and appropriate requests for additional information or plan revisions by the Contractor. These efforts will consist of preparation and documentation time associated with each activity. Up to thirty (30) hours of Kimley-Horn staff time has been included in this task for coordination with the Contractor and the associated time for any plan revisions. If any additional time is required from Kimley-Horn for responses to Contractor requests, these additional hours may be added as an additional service.

Kimley-Horn will review and approve or take other appropriate action in respect to Shop Drawings and Samples and other data which Contractor is required to submit, but only for conformance with the information given in the Contract Documents. Such review and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction or to related safety precautions and programs.

Concerning limitations of responsibility, Kimley-Horn shall not be responsible for the acts or omissions of any contractor, or of any of their subcontractors, suppliers, or of any other individual or entity performing or furnishing the work. Kimley-Horn shall not have the authority or responsibility to stop the work of any contractor.

The budget for this task was developed with an assumed schedule of up to six (6) months for construction. If the project schedule is extended, these efforts will be considered additional services beyond the scope of this contract.

Additional Services if Requested:

Any services not specifically provided for in the above scope will be billed as additional services and performed at our then current hourly rates. Additional services we can provide include, but are not limited to, the following:

- Preparation of an engineer's opinion of probable construction cost
- Technical specifications / project bid book
- At-grade railroad crossing design services
- Permitting services
- ROW acquisition services beyond those listed above
- Construction support services beyond those listed above
- Others as requested by the City

Schedule:
Once given notice to proceed via a signed copy of this IPO, Kimley-Horn will complete the services listed in Tasks 8 - 9 based upon a mutually agreed upon schedule.

Deliverables:
Kimley-Horn will prepare the following deliverables:

- Two (2) Right-of-Way Exhibits and Legal Descriptions (PDF format)

Terms of compensation:
Kimley-Horn will perform the services in Tasks 8 - 9 for the total lump sum as summarized below. Individual task amounts are informational only. All permitting, application, and similar project fees will be paid directly by the Client.

Task 8 – Right-of-Way Services	$3,600
Task 9 – Construction Support Services	$13,500
Tasks 8 - 9, Total Lump Sum Fee (inclusive of direct expenses):	$16,800

ACCEPTED:

CITY OF DICKSON, TENNESSEE

SIGNED:_____

PRINTED NAME:_____

TITLE:_____

DATE:_____

KIMLEY-HORN AND ASSOCIATES, INC.

SIGNED: Meridith Krebs

PRINTED NAME: Meridith Krebs

TITLE: Associate

DATE: March 25, 2024

GRANT AMENDMENT

Agency Tracking #	Edison ID	Contract #	Amendment #
31602-24818	80316	80316	1

Contractor Legal Entity Name	Edison Vendor ID
City of Dickson	1522

Amendment Purpose & Effect(s)

To update payment methodology and agency contact information.

Amendment Changes Contract End Date: ☐ YES ☒ NO **End Date:** 9/30/2024

TOTAL Contract Amount INCREASE or DECREASE per this Amendment (zero if N/A)**:** **$ 0**

Funding —

FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
FY 24	8,000				8,000
TOTAL:	**8,000**				**8,000**

Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.

gw

CPO USE

Speed Chart (optional)	Account Code (optional)

AMENDMENT 1
OF GRANT CONTRACT

This Grant Contract Amendment is made and entered by and between the State of Tennessee, Tennessee Commission on Aging and Disability, hereinafter referred to as the "State", "Grantor State Agency", and/or "SUA" and City of Dickson, hereinafter referred to as the "Grantee." It is mutually understood and agreed by and between said, undersigned contracting parties that the subject Grant Contract is hereby amended as follows:

1. Grant Contract section C.3 is deleted in its entirety and replaced with the following:

C.3. Payment Methodology – Total Advance Payment. The Grantee shall be reimbursed for actual, reasonable, and necessary costs based upon the Grant Budget, not to exceed the Maximum Liability established in Section C.1. Payment to the Grantee shall be a lump sum made in advance upon approval of this Grant Contract.

2. Grant Contract section C.5 is deleted in its entirety and replaced with the following:

C.5. Reserved.

3. Grant Contract section C.7 is deleted in its entirety and replaced with the following:

C.7. Disbursement Reconciliation and Close Out. The Grantee shall submit a grant disbursement reconciliation report within thirty (30) days of the Grant Contract end date and in form and substance acceptable to the State (and include, as applicable, documentation and receipts as required by the above-referenced "State Comprehensive Travel Regulations").

a. If total disbursements by the State pursuant to this Grant Contract exceed the amounts permitted by the section C, payment terms and conditions of this Grant Contract, the Grantee shall refund the difference to the State. The Grantee shall submit the refund with the final grant disbursement reconciliation report.

b. The State shall not be responsible for the payment of any invoice submitted to the State after the grant disbursement reconciliation report. The State will not deem any Grantee costs submitted for reimbursement after the grant disbursement reconciliation report to be allowable and reimbursable by the State, and such invoices will NOT be paid.

c. The Grantee's failure to provide a final grant disbursement reconciliation report to the State as required by this Grant Contract shall result in the Grantee being deemed ineligible for reimbursement under this Grant Contract, and the Grantee shall be required to refund any and all payments by the State pursuant to this Grant Contract.

d. The Grantee must close out its accounting records at the end of the Term in such a way that reimbursable expenditures and revenue collections are NOT carried forward.

4. Grant Contract Section D.8 is deleted in its entirety and replaced with the following:

D.8. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Grant Contract shall be in writing and shall be made by certified, first-class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by email or facsimile transmission with recipient confirmation. All communications, regardless of method of transmission, shall be addressed to the respective party as set out below:
The State:

Brad Turner, Executive Director

Tennessee Commission on Aging and Disability
9th Floor Andrew Jackson Bldg, Nashville, TN 37243-0860
Brad.Turner@tn.gov
Telephone # 615-532-5862
FAX # 615-532-9940

The Grantee:

Don Weiss, Mayor
City of Dickson
100 Payne Springs Rd, Dickson, TN 37055
Mayor@cityofdickson.com
Telephone # 615-441-9508

A change to the above contact information requires written notice to the person designated by the other party to receive notice.

All instructions, notices, consents, demands, or other communications shall be considered effectively given upon receipt or recipient confirmation as may be required.

Required Approvals. This Amendment shall not be effective until it is approved by all appropriate officials in accordance with applicable Tennessee laws (depending upon the specifics of this delegated authority, officials may include, but are not limited to, the Chief Procurement Officer, the Commissioner of Finance and Administration, the Commissioner of Human Resources, or the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective once all required approvals are obtained. All other terms and conditions of this Contract or Grant Contract not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF,

CITY OF DICKSON:

DON WEISS, MAYOR **DATE**

TENNESSEE COMMISSION ON AGING AND DISABILITY:

BRAD TURNER, EXECUTIVE DIRECTOR **DATE**

Contract for Professional IT Services

Between TForce Inc. dba TechForce Consultants ("Service Provider") and the City of Dickson ("Client"), a municipality established under the statutes of the State of Tennessee.

This Contract is made and entered into as of April 2, 2024, by and between TForce, Inc dba TechForce Consultants ("Service Provider"), offices located at 122 Reep Rd, Dickson, Tennessee, and the City of Dickson, with its administrative offices located at 600 East Walnut Street, Dickson, Tennessee ("Client").

1. Scope of Services Provided

The Service Provider agrees to provide the Client with IT service and IT management services ("Services") including:

The Retainer Services:

The service provider will supply a skilled onsite technician who will be available to respond to service calls from the Client between 9:00 AM and 5:30 PM, Monday through Friday, providing level 1 and level 2 service as well as IT administration services as defined below. Service calls outside these hours for critical requests will be billed at hourly rates beyond the retainer fee.

Level One IT Services:

Desktop Support and service calls for Windows-based PCs, tablets, iPads, and standard non-proprietary software applications, printers, televisions and projection systems, in-car camera and computer installations, police body cameras, and general technical assistance with copiers, printers, and faxes for City of Dickson employees and facilities.

Level Two Services:

Basic networking and security services, including ongoing security assessment and recommendations.

IT administration and project management services:

Service Provider will engage in sourcing and purchasing IT-related services, equipment, and computers as requested. The Service Provider will also interface with and manage relationships with technology, hardware, and software vendors on behalf of the Client to implement cost effective technology solutions in the client's best interest. The Service Provider may accept requests to manage, consult, advise, and educate on technology-related and cybersecurity-related projects and initiatives at the client's request.

The Service Provider will maintain a City of Dickson email address(es) for official communications and will be provided with necessary access fobs, codes, and keys, and administrative level access to systems necessary to conduct IT services business on behalf of the client.

2. Rates and Yearly Amounts

Additional services beyond the retainer service will be billed at $55 per hour for Level One Services and $75 per hour for Level Two Services. Services are billed in fifteen-minute increments, where a five-minute service call is billed as fifteen minutes or one-fourth of the applicable hourly rate. Invoices will be submitted bi-weekly and are payable within 15 days (Net 15).

In cases where additional workforce is needed, additional technicians are approved, and services are provided onsite for the City of Dickson, time for each additional technician provided to the City of Dickson will be billed at the rates above.

The annual amount of this contract will not exceed $100,000 without additional approval from the client.

3. Payment Terms and Additional Services

The Client shall pay the Service Provider an annual retainer fee of $60,000 paid upon invoice in twenty-four bi-weekly increments of $2500. An invoice will be submitted biweekly showing the retainer service amount of $2500 and any additional technician hours at approved rates.

4. Approval and Reimbursement for Expenditures

Requests for reimbursement for approved purchases for the client's exclusive use and benefit will be submitted bi-weekly or as incurred as part of the ongoing financial management of this Contract.

The Client must approve all expenditures and equipment purchases made by the Service Provider, which will be included separately with the bi-weekly invoice. The Service provider is authorized to purchase reasonable routine maintenance items for clients' exclusive use and benefit under $500 without prior approval and be reimbursed as detailed in this agreement.

5. Term of Contract

This Contract begins on April 2nd, 2024, and shall continue for a period of one year. It will automatically renew for subsequent one-year terms unless either party provides written notice of its intent not to renew at least 30 days before the current term's expiration. Either party may request to renegotiate the rates outlined in this Contract prior to the commencement of each renewal term. Any changes to the rates must be agreed upon in writing by both parties before the start of the new term.

6. Termination

Either party may terminate the Contract with 90 days written notice or by mutual consent of the parties upon 30 days' notice. The Client is responsible for payment of services rendered and reimbursement of allowable expenses up to the termination date.

7. Confidentiality

Both parties agree to maintain the confidentiality of information and will not disclose any contract details or services provided to third parties without consent. Nothing herein shall be construed to suggest noncompliance with applicable laws regarding public records.

8. Governing Law

This Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The parties agree to submit to the exclusive jurisdiction of the courts located in Dickson County, Tennessee, for any disputes arising out of or related to this Contract.

9. Additional Resource Allocation

With prior approval from the Client, the Service Provider may allocate additional technicians at the rates to ensure timely completion of scheduled and approved projects.

10. Force Majeure Clause

The Service Provider shall not be held liable for any delay or failure in the performance of any part of this Contract due to events beyond its reasonable control, including but not limited to natural disasters, acts of God, labor disputes, war, terrorism, governmental actions, pandemics, or supply chain disruptions. In the event of such force majeure circumstances, the affected party shall notify the other party promptly and shall make all reasonable efforts to resume performance as soon as possible. If the force majeure event continues for a period exceeding 30 days, either party may terminate the Contract without penalty upon written notice to the other party.

11. Data Protection Clause

The Service Provider agrees to comply with all applicable data protection laws and regulations in the handling, processing, and storage of any personal or sensitive data obtained in the course of providing services to the Client. The Service Provider shall implement and maintain appropriate technical and organizational measures to protect such data against unauthorized or unlawful processing, accidental loss, destruction, or damage.

The Service Provider shall only process personal data to the extent necessary for the provision of the contracted services and shall not disclose this data to any third party without the prior written consent of the Client, except where required by law.

In the event of a data breach, the Service Provider shall promptly notify the Client of the breach, describe the nature of the breach, the categories and approximate number of data subjects and data records affected, and take all necessary measures to mitigate the effects and to prevent future occurrences.

Upon termination of the contract, the Service Provider shall return or securely destroy all personal data obtained during the course of the contract, as directed by the Client. The Service Provider agrees to provide the Client with all necessary assistance to demonstrate compliance with this clause upon the Client's request.

Signatures

The parties have executed this Contract as of the date first written above.

TForce, Inc dba TechForce Consultants Company:

Signature: _____
Name: Buddy Tidwell
Title: Principal Consultant, Founder TechForce Consultants
Date: _____

City of Dickson:

Signature: _____
Name: Don L. Weiss Jr.
Title: Mayor
Date: _____