

Pools Agenda for CSPSTC

Review of the questions that were brought up during the Nov. 19th, 2026 meeting.

302.3.1 Suction outlet fitting assembly sumps. Sump shall be inspected for dimensional conformance to APSP 16 as specified by the suction outlet fitting assembly installation instructions.

Commentary from ISPSC code and commentary book:

This section was added as “sumps” were not included into “fittings and components.” The dimensions of the sump can add a danger to swimmers if not correct. When installed they must be inspected to insure compliance to APSP 16 for safety.

Questions from our last meeting:

Who’s inspecting?

My thoughts: It’s an important question — and one that is broadly applicable across multiple sections of the ISPSC. My hope is that through this process, the committee will be able to make clear recommendations to the State of Oklahoma regarding which elements should be inspected on commercial pools.

302.6 Wastewater discharge. Where wastewater from 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.

Commentary: 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.

Question: How do you accomplish this with deck drains?

My thoughts: I have never tied deck drains into the same drainage system as the filter backwash. In all my builds, deck drains have always been directed to daylight. I’m currently doing further research on this topic to ensure full clarity and alignment with best practices.

303.1.1 Heaters. The electric power to heaters shall be controlled by an on-off switch with ready access that is an integral part of the heater, mounted on the exterior of the heater or external to and within 3 feet of the heater. Operation of such a 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.

Commentary: 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 the 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 bracket 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.

My thoughts: In the residential pool and spa industry, most automation systems already include a built-in timer, typically defaulted to 2–3 hours of spa or heater use, after which the heater will automatically shut down. In the commercial sector, heating systems are generally programmed according to the operational needs and direction of the client. Additionally, the ISPSC commentary specifies “where adjustment of a thermostat is required for turning off a heater.” In practice, modern heaters include a dedicated on/off control at the heater itself, meaning thermostat manipulation is not required to shut the unit down. Further, NFPA 70 — as well as the corresponding electrical provisions in the IRC — do not require a separate disconnecting switch when the circuit breaker is within direct line of sight of the equipment.

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 104.9.1.

Exception: Where more than 75% of the energy for heating, computed over an operating season of not fewer than three calendar months, is from a heat pump or an on-site, renewable energy system, covers or other vapor-retardant means shall not be required.

Commentary: 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 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.

My thoughts: This feels like government over-reach. While liquid products such as Leslie’s over Weekly and Lo-Chlor’s Aqua Blanket should qualify as compliant, I’m concerned that the vague language in the code — specifically “other approved vapor-retardant means in accordance with section 104.9.1” — leaves the interpretation up to the individual inspector. Their personal discretion could result in additional unnecessary costs to the owner (such as being required to purchase a solar blanket or physical cover), or even lead to delays in pool opening while compliance is debated.

305.2.1 barrier height and clearances. Barrier height and clearances shall be in accordance with all of the following: number one. The top of the barrier shall be not less than 48 inches 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 measured horizontally from the outside of the required barrier. Number two. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches for great surfaces that are not solid, such as grass or gravel, and were measured on the side of the barrier that faces away from the pool or spa. Number three. The vertical clearance between a surface below the barrier to the solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches where measured on the side of the required barrier that faces away from the pool or small. Number four. Where the top of the pool or spa structure is above grade the barrier shall be installed on a grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on top of the pool or spa, the vertical clearance between the top of the pool spa and the bottom of the barrier shall not exceed 4 inches. Commentary. Barrier height of 48 inches 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 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 grade or concrete slab for a distance of 3 feet away from the outside of the barrier. This requirement coordinates with section 305.2.9, which requires a clear zone of 36 inches 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 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 of settled natural 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 of the concrete surface to prevent a child from maneuvering through the opening to gain access to the pool or spa. The top of a pool or, 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. If the barrier is 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 to prevent the child from maneuvering through the opening to gain access to the pool or spa.

My Thoughts: In Section 305.2.2, it states that openings in the barrier must not allow the passage of a 4-inch diameter sphere. This section focuses on horizontal clearances, where the spacing is measured from the center of one post to the center of the next post. Conversely, Section 305.2.1 specifies that the vertical clearance should not exceed 4 inches. This section addresses the height from the ground to the bottom of the railing. Therefore, while both sections set limits to ensure safety, they focus on different dimensions: Section 305.2.1 relates to vertical spacing, and Section 305.2.2 pertains to horizontal spacing.

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 and not greater than 7 1/2 inches. The tread distance from front to back shall be not less than 11 inches. Step risers and treads for decks of *residential* pools and spas shall be in accordance with the *International Residential Code*.

My thoughts: This section contradicts the IBC 24 code which states step risers for decks of public pools and spas shall be uniform and have a height not less than 3 3/4 inches and not greater than 7 inches. We may want to amend this section to align with the IBC-24 code.

306.7.1 Joints at Coping. Joints that occur where the 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.

Commentary: There must be a joint between the pool, coping and the adjoining concrete deck so that the thermal expansion of those materials can occur without damage to the coping or deck. Typically, the joint will be a 1/4 to a 1/2 inch 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.

My Thoughts: I think we could go further in clarifying that a separation joint must occur at the bond beam and the deck. I see too often that builders will pour a cantilever deck on top of the coping without a separation membrane or a bond breaker and pour the deck monolithic without a separation joint between the coping and the deck. This should be inspected.

307.2.2 Materials and structural Design. Pools and spas shall conform to one or more of the standards indicated in table 307.2.2. The structural design of pools and spas shall be in accordance with the *international building code* or the *international residential code*, as applicable in accordance with section 102.7.one of this code.

Exception: Pools and spas constructed with reinforced concrete or reinforced shotcrete with a minimum compressive strength of 2500 pounds per square inch as designed by a design professional and approved shall be permitted.

Commentary: Table 307.2.2 indicates the common materials and their applicable standards, that pools and spas are made from. The IBC and the IRC do not currently have structural design requirements that are specifically for pools and spas. Note that section 304 does have requirements for pools and spas located and flood hazard areas. For concrete pools and spas, some people might say that their reference to IRC and the IBC for structural design requirements implies that the sections covering retaining walls and those codes apply. Section R404.4 of the IRC indicates that retaining walls are to be designed in accordance with accepted engineering practices. Section 1807.12 of the IBC covering retaining walls addresses issues that would be considered as accepted engineering practice. Although some of the same retaining wall engineering analysis might be necessary for the design of concrete swimming pool and spa structures, the design of swimming pool and spa structures of concrete or any other material is very 305 specialized and not within the attended coverage for structural design of the IRC and the IBC. The appropriate standard for both reinforced concrete and Shotcrete is the ACI 318. The exception allows for a lower compressive strength of concrete to be used for a pool shell. A design professional must specifically design the pool shell for the 2500 psi Shotcrete or Concrete and the design must be approved by the code official.

My Thoughts: The newly released ACI PRC-506.8-24, titled *Shotcrete Use in Pool Construction – Guide*, is specifically developed for swimming pool applications and intended to be used in conjunction with ACI 318. While ACI 318 provides general structural concrete

requirements, it was not written with the unique conditions of swimming pool construction in mind. In contrast, ACI PRC-506.8-24 directly addresses those needs.

Of particular relevance is the new recommendation increasing the minimum compressive strength of shotcrete from the 2500 psi standard of ACI 318 to 4000 psi. This higher standard provides a more appropriate level of durability and performance for pool structures.

ACI PRC-506.8-24 contains numerous best practices and technical improvements, and I strongly recommend we adopt the document as written into our review of ISPSC-24, specifically within Section 307.2.2. I will provide the committee with access to the complete ACI PRC-506.8-24 at our next meeting for detailed examination.