

	Code Section	Description of Requirement																
1	390.10(2)	LOCATION. Pools and water attractions shall be located on a site conducive to proper operation, maintenance and safety of the pool or water attraction. The site shall be well drained.																
2	390.10(4)	MATERIALS. (a) Pools and water attraction surfaces shall be impervious, easy to clean, inert and nontoxic to humans.																
3	390.10(5)	FREEZING. Where subject to freezing temperatures, the basin and appurtenances, piping, filter system, pump and motor and other components shall be designed and constructed to facilitate protection from damage due to freezing.																
4	390.10(6)	EQUIPMENT AND MATERIAL APPROVAL. All material and equipment used in the operation of a pool or water attraction within the scope of ANSI/NSF 50 shall conform to ANSI/NSF 50 or the equivalent.																
5	390.10(7)	VENTILATION. Ventilation shall be provided for all indoor pools and water attractions.																
6	390.10(8)(a)	SLIP RESISTANCE. (a) The surfaces intended to provide patron footing within the pool enclosure or on the deck shall have a slip-resistant surface.																
7	390.10(9)	<p>CONSTRUCTION TOLERANCES. Construction tolerances may not exceed the applicable design dimensions beyond those designated in Table 390.10.</p> <p style="text-align: center;">Table 390.10 Construction Tolerances</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Design Dimension</th> <th>Construction Tolerance Permitted</th> </tr> </thead> <tbody> <tr> <td>Water depth in areas greater than 5' deep</td> <td>± 3"</td> </tr> <tr> <td>Water Depth in areas up to 5' deep</td> <td>± 2"</td> </tr> <tr> <td>Floor nozzle protrusion</td> <td>± 1/8"</td> </tr> <tr> <td>Stair treads and risers</td> <td>± 1/2"^a</td> </tr> <tr> <td>Waterline for skimmer pools^b</td> <td>± 1/4"</td> </tr> <tr> <td>Waterline for gutter and overflow trench pools</td> <td>± 1/8"</td> </tr> <tr> <td>Wall variance from vertical</td> <td>± 3°</td> </tr> </tbody> </table> <p>^a The construction tolerance is measured over the entire staircase at the center of the treads.</p> <p>^b The construction tolerance for skimmer pools is measured as the difference between skimmer vertical center lines.</p>	Design Dimension	Construction Tolerance Permitted	Water depth in areas greater than 5' deep	± 3"	Water Depth in areas up to 5' deep	± 2"	Floor nozzle protrusion	± 1/8"	Stair treads and risers	± 1/2" ^a	Waterline for skimmer pools ^b	± 1/4"	Waterline for gutter and overflow trench pools	± 1/8"	Wall variance from vertical	± 3°
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8	390.11(2)	STRESS RELIEF. Provision shall be made for the relief of stress to basin walls and floors which may occur as a result of unbalanced hydrostatic pressures.																
		Minimum Check: Toilet & locker rooms bases, coves, WC caulk, Changing stations, paved areas, & HBs, Barriers & Gates & Door latches, Ladders, Steps, Railings, Pool Ventilation, Markers & Symbols & Letters & depths, Decks & Drains & HB's, Inlets, Outlets, Skimmers, Main drain sump pics & VGBs, Equipment room drain & HB, Equipment List, Valving, Heater P&T valve & mech room venting & both chemical interlock checks.																

DIVING AREAS. (a) Basins that include diving apparatus shall conform to one of the following:
 (b) The design of a basin that includes a diving area shall comply with the profiles in Figure 390.11-1 and Table 390.11-1.

Figure 390.11-1
Diving Area Dimensions

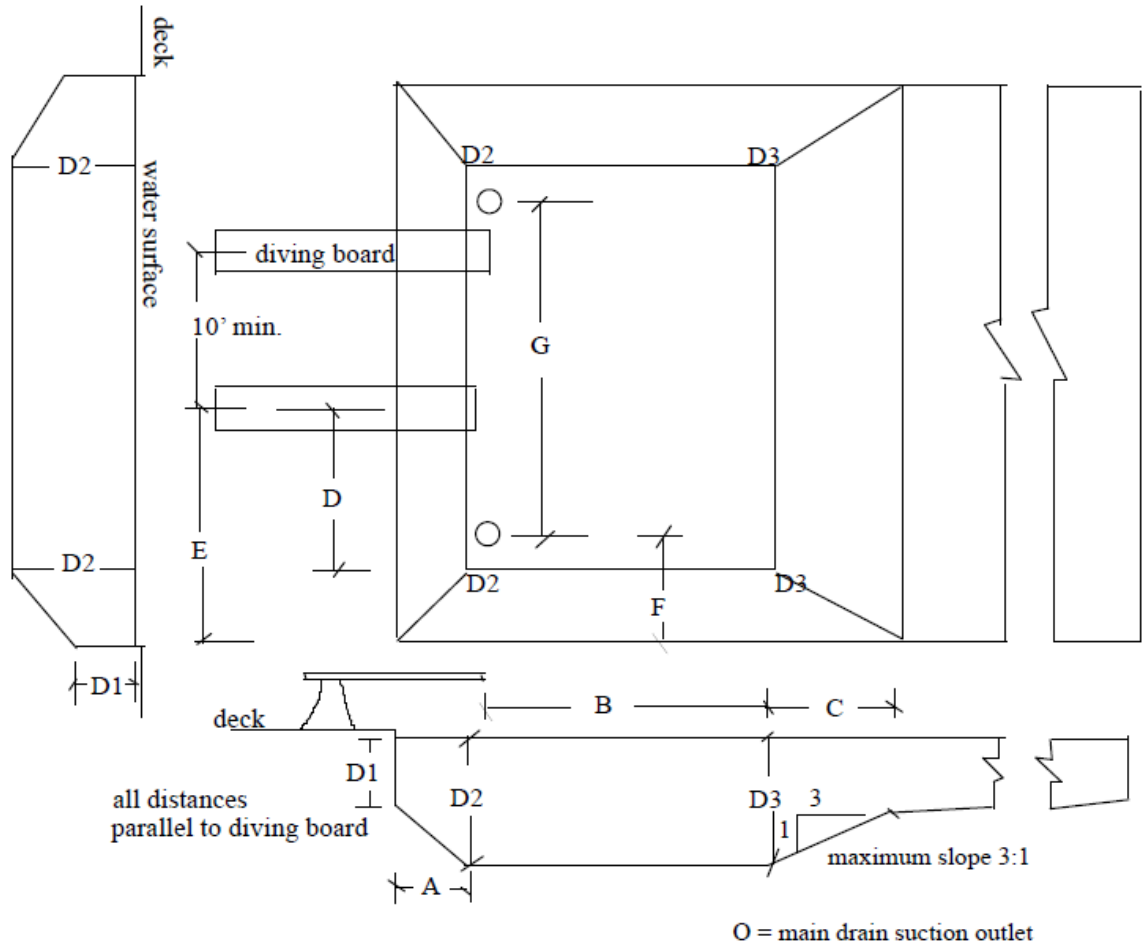


Table 390.11-1
Dimensions Related to Figure 390.11-1

Type of Pool		Depths			Lengths						
		D-1 ¹	D-2	D-3	A ²	B	C	D	E	F ³	G ³
With 26" (2/3 M) Diving Board	Min	5'0"	9'0"	8'6"	2'6"	**	10'0"	5'0"	10'0"	*	*
	Max	D-2	*	D-2	3'0"	*	*	*	*	10'0"	20'0"
With 30" (3/4 M) Diving Board	Min	5'0"	10'0"	9'6"	3'0"	**	12'0"	5'0"	10'0"	*	*
	Max	D-2	*	D-2	4'0"	*	*	*	*	10'0"	20'0"
With One Meter Diving Board	Min	5'0"	11'0"	10'6"	4'0"	**	15'0"	8'0"	10'0"	*	*
	Max	D-2	*	D-2	5'0"	*	*	*	*	10'0"	20'0"
With 3 Meter Diving Board	Min	5'0"	12'0"	11'6"	5'0"	**	18'0"	10'0"	15'0"	*	*
	Max	D-2	*	D-2	6'0"	*	*	*	*	10'0"	20'0"

* No limiting dimension.

** Distance is as required by the diving equipment manufacturer.

¹ The D-1 measurement shall be taken at the end wall or not more than 6 inches from the wall.

² The diving board length extending over the pool shall not be less than "A" and in accordance with the diving equipment manufacturer's installation instructions.

³ This dimension is only applicable to pools with wall inlets.

9 390.11(3)

10	390.11(4)(a)1	(4) BASIN OBSTRUCTIONS. (a) 1. Protrusions, extensions and other functional elements within a basin may not create a safety hazard.
11	390.11(4)(a)3	When an obstruction is a recreational object in water of 24 inches or more in depth, the obstruction shall be a color that contrasts with the color of the basin.
12	390.11(4)(a)4	Basin obstructions in public swimming pools shall be no more than 2 feet in diameter, protrude undiminished in diameter to at least 5 feet above the pool floor and no less than 3 feet above the water level.
13	390.11(4)(a)5	Obstructions including handrails, exercise equipment and therapy structures may only be installed in therapy pools.
14	390.11(5)(a)1	WALLS AND BULKHEADS. (a) <i>Basin walls.</i> 1. Basin walls shall be vertical.
15	390.11(5)(a)2	Except for vanishing edge designs, basin walls shall extend above the highest water level at all times during operation.
16	390.11(5)(a)3	Protruding corners shall be rounded so as to protect users from lacerations.
17	390.11(5)(b)	<i>Interior walls and common walls.</i> interior walls and common walls may not exceed 18 inches in width
18	390.11(6)(a)	COLORS AND FINISHES. (a) All pool interiors shall be light in color, having a value of 6.5 or greater on the Munsell color-order system.
19	390.11(6)(b)	All colors, patterns or demarcation lines may not negatively impact observer's visualization of bathers.
20	390.11(6)(c)	All demarcation lines shall be of contrasting color to the pool interior
21	390.11(7)(a)	FLOOR SLOPE. (a) Basin floors shall slope to drain.
22	390.11(7)(b)	Basin floor slopes may not exceed 1:12 in water depths less than 5 feet
23	390.11(7)(a)	TRANSITIONAL RADIUS. Basin walls shall be joined to the floor with a tangent radius.
24	390.11(7)(b)	For areas less than 5 feet in depth, the maximum radius between the floor and the basin wall shall be 6 inches.
25	390.11(9)(a)	WATER DEPTHS. Basin depths for diving areas shall comply with Table 390.11-1.
26	390.11(9)(b)	Basin depths for slide installations shall comply with Table 390.31-1.
27	390.11(9)(c)	Except as permitted for wading pools in s. SPS 390.20, the shallowest water depth of the shallow end of pools shall be a minimum of 30 inches and a maximum of 42 inches.
28	390.11(9)(d)	The water depth at the breakpoint in a combination pool shall be no less than 4.5 feet and no more than 5.5 feet.
29	390.11(10)	VANISHING EDGES. A single vanishing edge basin wall occupying a maximum of 50% of the basin perimeter may be included within a water attraction when all of the following are included in the design: (a) The vanishing edge is located adjacent to water that is at least 5 feet deep. (b) A catch ledge, a minimum of 3 feet in width or equivalent protection, is included on the dry side of the basin wall. (c) The catch ledge shall be located outside of the basin within 3 feet vertically from the top of the basin wall. (d) The catch ledge shall be designed to prevent a patron from rolling off the catch ledge. (e) The catch ledge surface shall be constructed of materials that will not cause injury from abrasions or lacerations.

Entries and exits, stairs, ladders, swimouts and benches.

(1) **ENTRIES AND EXITS.** The minimum number, type and location of entries per approved plan.

**Table 390.12-1
Entry and Exit Locations and Type**

Basin Type	Entry and Exit Requirements
POOLS	
Swimming Pools	Minimum of two exits Exits within 75 feet along perimeter
Therapy Pools	As approved by the department
Wading Pools	Minimum of 50 percent of the pool
Whirlpools or Cold Soak Pools	Recessed stairs 25 feet from any point in the pool ^a
WATER ATTRACTIONS	
Wave Pools	Entry and exit at zero-depth entry, only ^b
Activity Pools	Exits within 50 feet from any point in the pool
Plunge Pools	Entry from slide, only Exits within 50 feet from any point in the pool ^a
Leisure Rivers	Minimum of one entry and exit
Vortex Pools	Minimum of one entry and exit
DIVING AREAS as delineated in s. SPS 390.11 (3)	
Diving Areas	On the perimeter of the pool within 50 feet of any point in the diving area ^a
Other Basin Types	Contact the department

^a Travel to stairs is measured as the most direct path within the basin.

^b Emergency exits may be permitted with written approval of the department.

30 390.12(1)

STAIRS AND HANDRAILS.

Stairways.

1. Stairways shall be located only in areas of the basin with less than 5 feet of water depth.
2. Stairways shall be recessed so as not to protrude onto the basin floor.
3. All risers at the centerline shall have a maximum uniform height of 10 inches.
4. All treads shall have a minimum depth of 10 inches.
5. Stairways shall have a minimum width of 17 inches.
6. All treads shall have a minimum unobstructed surface area of 240 square inches.
7. Except as permitted in subd. 8., treads may not project beyond the face of the riser.
8. The maximum cantilevered coping at the deck level is one inch.
9. a. Except as required in subd. 9. b., stairways shall extend to the basin floor.
- b. When stairways are located in a water depth over 4 feet, the lowest tread shall not be more than 4 feet below the deck.
10. The bottom riser height shall be allowed to vary from the other risers as may be required to meet the floor.
11. The leading edge of all steps shall be distinguished by a color contrasting with the color of the steps and pool floor.
12. All step corners shall be rounded to a radius of 1/2 inch.

31 390.12(3)(a)

32	390.12(3)(b)	<p>Handrails.</p> <ol style="list-style-type: none"> 1. Handrails shall be provided for all stairways and ramps. 2. Handrails shall be located between 30 and 34 inches above the ramp surface or nosing of the stair treads. 3. Handrails shall be a maximum of 8 feet apart at deck level. 4. Handrails shall return to the pool wall, guard or deck or shall be continuous to the handrail of an adjacent stair. 5. Handrails shall be made of corrosion resistant materials. 6. Handrails shall be securely anchored. 7. Handrails shall be installed so they cannot be removed without the use of tools. 8. The leading edge of stair tread-mounted handrails shall be located on the bottom tread. 9. The leading edge of entirely deck-mounted handrails shall be located so as to extend to within 3 inches of the vertical plane of the bottom riser. 10. The outside diameter of handrails shall be a minimum of 1-1/4 inches and may not exceed 1-15/16 inches. 11. There shall be at least 3 inches but not more than 6 inches clearance between the pool wall and the handrail.
33	390.12(4)	<p>LADDERS. (a) Ladders shall be provided with two handrails. (b) There shall be at least 3 but not more than 6 inches clearance between the basin wall and the ladder. (c) The distance between ladder handrails shall be 17 inches minimum and 24 inches maximum. (d) There shall be a uniform distance between ladder treads with a 7-inch minimum distance and 12-inch maximum distance. (e) Ladder treads shall have a minimum horizontal uniform depth of 2 inches.</p>
34	390.12(5)	<p>RECESSED TREADS. (a) Recessed treads in a basin wall shall have a uniform vertical spacing of no less than 7 inches and no greater than 12 inches measured at the centerline. (b) The vertical distance between the pool coping edge, deck or step surface and the uppermost recessed tread shall be 12 inches maximum. (c) Recessed treads shall have a depth of no less than 5 inches and width of no less than 12 inches. (d) Recessed treads shall drain into the pool. (e) Recessed treads shall be provided with a handrail on each side of the treads.</p>
35	390.12(6)	<p>SWIMOUTS. (a) The horizontal surface of a swimout may not be greater than 20 inches below the waterline. (b) A minimum unobstructed surface equal to that required for a stair under sub. (5) shall be provided in a swimout. (c) The leading edge of a swimout shall be visually set apart with a marking color to contrast with the swimout. (d) A swimout may occupy no more than 20 percent of the perimeter of the basin. (e) The horizontal surface of a swimout may extend no further than 48 inches from the main basin wall.</p>
36	390.12(7)	<p>UNDERWATER SEATS AND BENCHES. (a) Underwater seats and benches shall be located in a recessed area to eliminate any protrusion beyond the main basin wall except in whirlpools and cold soak pools. (b) 1. The width of the bench seat may not exceed 18 inches. 2. The depth of the water above the bench seat may not exceed 20 inches. (c) The surface of all underwater seats and benches shall be of a color in distinct contrast to the color of the surrounding basin or have a 2-inch leading edge of contrasting boundary line. (d) The words "bench below" shall be placed on the deck at the edge of the basin at the bench area in a color in distinct contrast to the deck background. (e) Underwater seats and benches may not be considered an entry or exit.</p>
37	390.12(8)	<p>LIFT CHAIRS. Water supply outlets serving lift chairs shall terminate within 18 inches of the chair's support post.</p>

38	390.13(1)	<p>MINIMUM DECK. (a) Except as permitted in pars. (b) to (e), deck shall extend around the entire perimeter of all basins within the same enclosure.</p> <p>(b) A water attractions shall be provided with deck immediately adjacent to a basin where patrons are allowed to walk.</p> <p>(c) A wading pool shall be provided with deck around at least 50 percent of the basin perimeter.</p> <p>(d) A whirlpool shall be provided with deck around at least 50 percent of the basin perimeter.</p> <p>(e) A therapy pool shall be provided with deck at all entry and exit points.</p>
39	390.13(2)	<p>DECKWIDTH.</p> <p>(a) Except as required in pars. (b) to (e), deck shall extend for at least 6 feet from all basins.</p> <p>(b) Deck shall extend for at least 5 feet from a whirlpool basin.</p> <p>(c) Deck shall extend for at least 3 feet around deck obstructions and equipment.</p> <p>(d) Deck shall extend for at least 12 feet from a basin with a water depth exceeding 24 inches to a basin with a water depth less than 30 inches or an interactive play attraction.</p> <p>(e) Deck shall extend for a minimum 15 feet from a basin to locker or shower room doors where the basin meets all of the following criteria:</p> <ol style="list-style-type: none"> 1. The basin consists of 3,500 square feet of water surface. 2. The basin has a water depth exceeding 24 inches. <p>(f) Deck required in par. (e) shall extend for at least 12 feet wide at all locker or shower room doors.</p> <p>(g) Deck areas that do not provide the minimum deck required in pars. (b) to (f) shall be installed so as to permanently prohibit public access from the deck.</p>
40	390.13(3)	<p>DECK OBSTRUCTIONS.</p> <p>(a) Except as permitted in par. (c), deck obstructions, including roof support columns, may be no greater than 2 feet in diameter and of contrasting color so as to provide adequate clearance, safety, visibility and access where a department of health services–approved lifeguard staffing plan is not required.</p> <p>Note: Deck obstructions include pillars, play equipment and theming. Equipment includes but is not limited to ladders, life guard chairs, lift chairs and handrails.</p> <p>(b) Deck obstructions shall extend a minimum of 3 feet above the deck so as not to create a tripping hazard.</p> <p>(c) Deck obstructions may occupy a maximum of 10 percent of the pool perimeter for basins where a lifeguard staffing plan is not required.</p>
41	390.13(4)	<p>IN-DECK VENTILATION (a) Ventilation registers in decks shall be installed so that water flowing from the surrounding pool deck will not enter the registers, but will flow to the deck drains serving the deck.</p> <p>(b) Ventilation registers in decks shall be installed so that the registers are one inch higher than the deck drain grating.</p> <p>(c) Where ventilation registers are installed in decks, the owner of the facility shall obtain approval from the department of health services for their means of deck maintenance.</p>
42	390.13(5)	<p>DECK SLOPES.</p> <p>(a) Except as permitted in subds. 2. and 3., interior decks shall be sloped so as to effectively drain to deck drains.</p> <ol style="list-style-type: none"> 1. The maximum slope of interior decks shall be 1/2 inch per foot. 2. A maximum of 6 feet of deck adjacent to a plunge pool exit, stairway or runout slide terminal section may discharge to the surge tank. 3. A maximum width of 20 inches of deck between a wall and a basin may discharge to the basin. <p>(b) 1. Except as permitted in subd. 2., exterior decks shall be sloped a maximum of ½ inch per foot as to effectively drain to deck drains, perimeter areas or to the plumbing storm system.</p> <ol style="list-style-type: none"> 2. Exterior elevated decks may be drained to underlying soils to infiltrate. <p>(c) Decks shall be constructed so that standing water shall be no deeper than 1/8 inch, 20 minutes after the cessation of the addition of water to the deck.</p> <p>Note: Two USA quarters may be stacked in order to test the standing water depth.</p>

43	390.13(6)	<p>DECKS, RAMPS AND WALKING AND STEP SURFACES.</p> <p>(a) 1. Decks, ramps walking and step surfaces shall be nontoxic. 2. Surfaces shall be slip resistant. 3. Surfaces shall be easily cleanable. 4. Surfaces shall not cause injury to user's feet under normal conditions. (b) The deck edge that pool patrons may come in contact with shall be radiused, tapered or otherwise relieved to minimize sharpness.</p>
44	390.13(7)	<p>JOINTS. (a) The maximum joint width between pool decks and other decks or walkways, including joint material, shall be 3/8 inch of horizontal clearance with a maximum difference in vertical elevation of _ inch. 45Note: This section refers to joint widths between the pool deck and other adjacent decks. (b) Construction joints between pools and concrete decks shall be watertight.</p>
45	390.13(8)	<p>DECK STAIRS. (a) Exterior deck stair risers shall be uniform and have a minimum height of 4 inches and a maximum height of 7 inches. (b) Exterior deck stair treads shall be uniform and have a minimum depth of 11 inches. (c) A handrail shall be provided along both sides of stairs having more than one riser including the riser to the deck. (d) The height of the handrail shall be at least 34 inches but not more than 38 inches above the nosing of the tread. (e) Handrails shall return to the pool wall, guard or deck or shall be continuous to the handrail of an adjacent stair. (f) Handrails shall be located at the outside edge of stairs. Note: Interior deck stairs shall comply with the requirements in chs. SPS 60 to 66, the Commercial Building Code.</p>
46	390.13(9)	<p>SERVICE EQUIPMENT. (a) <i>Access to valves.</i> 1. Valves installed in or under any deck shall have access provided for operation, service and maintenance. 2. Access covers shall be provided for valve pits. (b) <i>Cleaning.</i> 1. One hose bibb shall be provided in each public swimming pool or water attraction equipment room. 2. Additional hose bibbs shall be provided as necessary, and at intervals so as to permit adequate cleaning of the deck and toilet facilities using a maximum of 100 feet of hose when laid across the deck surface.</p>
47	390.13(10)	<p>LANDSCAPING. (a) Landscaping within the barrier required in s. SPS 390.18 (4) shall comply with at least one of the following: 1. Organic material and inorganic pervious material shall be separated from the otherwise required deck by an additional 5 feet of deck. 2. Organic material and inorganic pervious material shall be installed in a 4-inch depression surrounded by a 42-inch high barrier. (b) Sand play areas may not be located within a pool enclosure unless all of the following are met: 1. The sand play area is separated from the deck by a 42-inch high rope and bollard or other fence barrier. 2. Foot or body showers shall be provided at any entrances to the deck from the sand play area. 3. Sand play areas shall be located outside the deck required in sub. (2).</p>
48	390.14(2)	<p>CIRCULATION SYSTEMS. Separate systems. The circulation system shall be separate for each public swimming pool or water attraction.</p>
49	390.14(4)	<p>ACCESSIBILITY. Circulation system equipment, including but not limited to pumps, skimmers, filters, gauges, meters and thermometers, shall be readily accessible for inspection, repair or replacement.</p>
50	390.14(5)	<p>COMPONENT STANDARDS. Equipment shall be listed by an acceptable listing agency to meet ANSI/NSF 50 or equivalent. Per Approved Plan</p>
51	390.14(6)	<p>INSTALLATION. (a) Pool equipment and related piping shall be supported to prevent damage from misalignment and settling. (b) Pool equipment shall be installed in accordance with manufacturer's printed instructions and/or as specified in this chapter.</p>

52	390.14(8)	<p>GAUGES AND FLOW METERS.</p> <p>(a) A pump suction compound gauge shall be included in all circulation systems.</p> <p>(b) A pump discharge gauge shall be located upstream of all throttling valves.</p> <p>(c) A filter pressure gauge shall be included serving all filters in circulation systems.</p> <p>(d) A flow meter capable of displaying flow during filtration shall be included in all circulation systems.</p> <p>Installed properly.</p>
53	390.14(10)	<p>FILTERS. Per approved plan.</p> <p>(c) <i>Pressure release.</i> 1. Pressure-type filters shall be provided with a means to permit the release of internal pressure.</p> <p>2. Filters incorporating an automatic air vent as the principal means of air release shall have a lid that provides a slow and safe release of pressure as a part of the design and have manual air release in addition to the automatic release.</p> <p>4. The following statement shall be placed within the area of the air release so as to be clearly visible: "WARNING. DO NOT START UP THE SYSTEM AFTER MAINTENANCE WITHOUT FIRST OPENING THE AIR RELEASE AND PROPERLY ASSEMBLING THE FILTER AND SEPARATION TANK."</p>
54	390.14(11)	<p>CIRCULATION PIPING. Circulation piping shall be listed as meeting one of the following methods: ANSI/NSF 50 by a listing agency acceptable to the department or Chapter SPS 384.</p>
55	390.14(12)	<p>PUMPS AND MOTORS. (per approved plan)</p> <p>(b) Pumps located below the waterline of a basin shall have isolation valves installed on suction and discharge lines.</p> <p>(d) Intake strainers shall be provided upstream of all circulations pumps on pressure filter systems.</p>
56	390.14(13)	<p>RETURN INLETS.</p> <p>(b) <i>Return inlets.</i> 1. Return inlets shall be designed and installed so as to not constitute a hazard to the patron. Note: An example of an inlet installation constituting a hazard to a patron is an inlet installed on a racing lane cross.</p> <p>2. Inlets per plan. There shall be at least 2 inlets per circulation system.</p> <p>6. There shall be at least one wall return inlet for each 10 feet of stairway width, recessed bench length or swimout length or width or fraction thereof.</p> <p>7. Bottom return inlets shall be flush with the basin floor.</p> <p>9. Wall return inlets may not extend more than one inch into a basin.</p> <p>10. Except for leisure rivers, there shall be a wall return inlet within 5 feet of each corner of a basin wall.</p>
57	390.14(13)(c)	<p>SUCTION OUTLETS.</p> <p>1.a. All basins shall be provided with a suction outlet in the lowest point of the basin in the floor or the wall. Note: For main drains installed in diving wells, see Table 390.06-1</p> <p>b. Where 2 or more drains connect within the circulation system, all drains minus anyone in the set shall be designed to collectively convey 100 percent of the circulation flow rate.</p> <p>c. The distance between the bottom of the suction outlet grate and the opening of the suction pipe shall equal or exceed at least 1.5 times the inside diameter of the suction pipe.</p> <p>2. Suction outlet grates shall comply with at least one of the following requirements:</p> <p>a. A single grate having at least one dimension of length, width, diagonal or diameter that is at least 36 inches.</p> <p>b. Two or more grates of any size separated from other suction outlets by at least 3 feet.</p> <p>3. Suction systems shall be designed so that the maximum flow rates are not exceeded under operating conditions.</p> <p>4. Suction grates and covers shall be listed as conforming to ASME/ANSI A112.19.8.</p> <p>5. The maximum opening of any suction grate shall prevent the passage of a 1/2-inch sphere.</p> <p>6. a. Barriers shall be provided on all wave pool caisson walls.</p> <p>b. Openings in caisson barriers shall prevent the passage of a 4-inch sphere.</p> <p>7. Vacuum fittings are not permitted within public swimming pools or water attractions.</p>
58	390.14(13)(d)	<p>SURFACE SKIMMING SYSTEMS.</p> <p>4. b. The skimmer cover shall be slip resistant.</p> <p>4.d. The skimmer cover may not create a tripping hazard.</p> <p>5. Equalizer lines shall have an anti-entrapment cover or other entrapment protection in accordance with ASME/ANSI A112.19 when suction fittings are located in the wall of a basin.</p> <p>11. a. Except as provided in subd. 11. b., a zero-depth trench shall extend continuously from within 3 feet of one wall of the basin to within 3 feet of the opposite wall of the basin.</p> <p>b. Where the entire perimeter of the basin consists of a zero-depth entry, 50 percent shall be evenly-distributed zero-depth trench.</p>

59	390.16(2)	<p>MECHANICAL SYSTEMS. Water Heater per approved plan. (b) A thermometer accurate to within plus or minus 2° F of the operating range shall be installed in the circulation piping. (c) The thermometer required in par. (b) shall be accessible for reading. (d) The use of a toxic solution, such as, but not limited to, heat transfer fluid in a single-wall heat exchanger, is prohibited. (e) Water heaters and hot water storage tanks shall be equipped with temperature and pressure relief valves in accordance with ch. SPS 384.</p>
60	390.16(3)	<p>ILLUMINATION. (a) Artificial lighting shall be provided so that all areas of the pool, including the bottom, shall be visible when the pool or water attraction is used during periods of low illumination. (b) outdoor facilities, overhead lighting provided at the water surface and on the deck. (c) indoor facilities, overhead lighting provided at the water surface and on the deck. (d) underwater lighting provided per plan.</p>
61	390.16(4)	<p>WATER SUPPLY. (a) <i>Water quality.</i> The water supply for all public swimming pools and water attractions shall meet the water quality requirements as listed in ch. SPS 382, Table 382.70-1. (b) <i>Cross connection control.</i> Protection of the potable water supply shall comply with s. SPS 382.41. (c) <i>Makeup water quality.</i> Makeup water meet the requirements listed in Table 382.70-1. (d) <i>Spray feature water.</i> Water used for spray features or water falling onto patrons shall be disinfected if supplied from a whirlpool or wading pool basin.</p>
62	390.16(5)	<p>WASTEWATER DISPOSAL. Wastewater discharges shall be in accordance with ch. SPS 382.38 Table 382.38-1 and 382.33.</p>
63	390.16(6)	<p>EQUIPMENT ROOM. (a) An equipment room or equipment enclosure shall be provided to serve all public swimming pools and water attractions. 1. An equipment room shall be ventilated. 2. An equipment room shall be drained. 3. An equipment room shall be accessible for operation and maintenance of equipment. (b) The doors to all rooms in which a chlorine gas feeder is located or a cylinder of compressed chlorine gas is located or stored shall be labeled "DANGER-CHLORINE GAS" in clearly readable letters.</p>
64	390.17	<p>SANITIZING EQUIPMENT. (1) Equipment Standards. (1)(a) Sanitizing equipment per approved plan. (d) Sanitizing equipment shall be certified by a nationally recognized testing laboratory. (2)(b) An automatic controller for sanitizing equipment shall be installed. Per approved plan (c) The automatic controller shall include a flow sensor installed so that the chemical feed pump will not operate without a return flow to disburse the chemical. (d) The automatic controller shall be electrically interlocked with the circulation pump control circuit. (e) The automatic controller and circulation pump shall have separate disconnect switches.</p>

65	390.18(1) & 390.10(1)	<p>SAFETY FEATURES.</p> <p>Rope and Float Lines. A rope and float line shall be provided in all basins:</p> <ol style="list-style-type: none"> a. To separate activity areas, such as plunge areas, climbing walls, pad walks and other areas where patron activity may harm others. b. To restrict access to the caisson wall in wave pools. c. To identify water depth greater than 5.5 feet in combination pools and activity pools. <ol style="list-style-type: none"> (b) For water depth, the rope and float line shall be located one foot toward the shallow end for each location where the purpose of the rope and float line is to mark a depth change. (c) A 4–inch–wide boundary line of contrasting color shall be installed on the basin walls and floor corresponding to the location of the rope and float line. (d) For wave generators, the rope and float line shall be located a minimum of 5 feet from the caisson wall. (e) The rope and float lines shall be securely fastened to wall anchors. (f) Rope and float lines shall be of sufficient size and strength so as to provide temporary support for a pool patron in the water. (g) Rope and float lines shall be installed with limited slack so as to provide temporary support for a pool patron in the water. (b) The design of pools and water attractions shall be based on generally accepted engineering practices. Some of the details of design, construction and installation may vary from the specifications of this code, but the basic engineering principles desirable and necessary to protect the health and safety of pool users and patrons shall be used by the department for situations not addressed in this subchapter. (The design of pools and water attractions shall be designed, constructed and installed to protect the health and safety of pool users and patrons)
66	390.18(2)	<p>DEPTH MARKERS.</p> <ol style="list-style-type: none"> (a) Depth markers shall be installed on all public swimming pools and water attractions that incorporate a water depth over 6 inches. (b) Depth markers shall be installed at the maximum and minimum water depths and at all points of slope change. (c) 1. water depth markers shall be installed around the perimeter of the basin at intervals no greater than 25 feet and at lesser intervals when indicating a change in water depth not to exceed 2 feet. 2. Water depth markers for leisure rivers shall be located every 25 feet on alternate side walls and at all entry points. (d) 1. Depth markers shall be indicated in feet, inches or feet and inches and when abbreviated so indicated as “FT” or “IN.” 2. Depth markers shall be plainly and conspicuously installed at all of the following locations: <ol style="list-style-type: none"> a. On the vertical basin wall except where no portion of the basin wall is visible and above the waterline. b. On the top of the coping or edge of the deck next to the basin. (e) When additional depth markers are indicated in metric, “meters” shall be abbreviated as “M.” (f) All water depths indicated on depth markers shall be the depth at the location of the depth marker. (g) All depth markers installed on vertical basin walls shall be located so as to be read from the waterside. (h) Depth markers installed on decks shall be located no greater than 18 inches from the basin edge and positioned so as to be read while standing on the deck facing the water along the affected perimeter. (i) All depth markers installed on decks shall be of slip resistant materials. (j) The minimum height of depth marker characters shall be 4 inches. Characters shall be clearly visible and of permanent contrasting color to the background on which applied. (k) Depth markers for water deeper than 5 feet shall indicate the maximum basin depth.
67	390.18(3)	<p>WARNING MARKERS.</p> <ol style="list-style-type: none"> (a) Pools or water attractions having water depths of 5 feet or less shall be provided with diving prohibition markers located on the deck at intervals of no more than 25 feet. (b) Diving prohibition markers shall be printed with the text, “No Diving.” (c) The “No Diving” text shall be at least 4 inches in height. (d) Diving prohibition markers shall include the international “No Diving” symbol. (e) “No Diving” text and the “No Diving” symbol shall be clearly visible and of a contrasting color to that of the marker background.

68	390.18(4)	<p>BARRIERS.</p> <p>(a) Except as provided in par. (b), public swimming pools, water attractions and water attraction complexes shall be separated from surrounding property by a barrier consisting of a fence, wall or building.</p> <p>(b) Independent interactive play attractions are not required to be surrounded by a barrier.</p> <p>(c) A fence or wall shall be constructed so as to afford no external handholds or footholds.</p> <p>(d) The barrier shall be at least 5 feet in height.</p> <p>(e) Gates in the barrier shall be equipped with a self-closing, lockable closure mechanism at a height of at least 54 inches from the bottom of the gate.</p> <p>(f) Fences serving as barriers shall have no opening greater than 4 inches in width or diameter or</p> <p>(g) 4 inches from grade.</p> <p>(h) Doors in fences and walls shall be self-closing and lockable.</p>
69	390.18(5)	<p>EMERGENCY STOP BUTTONS. Wave action pools, vortex pools, water slides and leisure rivers shall have emergency stop buttons accessible to designated staff as outlined in a staffing plan for the purpose of stopping the propulsion system.</p>
70	390.19(1)	<p>TOILET ROOMS AND SANITARY FACILITIES.</p> <p>(a) Toilet and hand wash facilities, and public drinking fountains shall be located so to be accessible by a length of paved walking surface no greater than 300 feet from the nearest rim of the most distant public swimming pool or water attraction.</p> <p>(b) Showers and dressing facilities shall be provided and located on the premises and accessible by a length of paved walking surface.</p> <p>(c) 1. The floors of toilet rooms and dressing areas serving public swimming pools or water attractions shall have a smooth, hard, nonabsorbent, slip-resistant surface.</p> <p>2. A smooth, hard, nonabsorbent surface shall extend upward on the walls at least 6 inches.</p> <p>3. Junctions between walls and floors shall be coved.</p> <p>4. When floor drains are installed, drain openings shall be 1/4 inch or less in width or diameter.</p>
71	390.19(2)	<p>DRAINAGE OF COVERED AREAS.</p> <p>(a) Floor drains shall be installed in toilet rooms and locker rooms where sanitary fixtures are located and where the room door is adjacent to the deck or adjacent to the impervious walkway draining to the deck.</p> <p>(b) Floor drain openings shall be 1/4 inch or less in width or diameter.</p> <p>(c) Floors shall be pitched to drain.</p>
72	390.19(3)	<p>WALLS.</p> <p>Toilet room and locker room walls shall have a smooth, hard, nonabsorbent surface to a height of at least 4 feet above the floor.</p>
73	390.19(4)	<p>LOCKERS.</p> <p>Lockers shall be set either on solid masonry bases at least 4 inches high or on legs extending at least 10 inches above the floor.</p>
74	390.19(5)	<p>REQUIRED NUMBER OF SANITARY FIXTURES.</p> <p>(a) The required minimum number of fixtures per plan</p> <p>(b) the minimum number of drinking fountains per approved plan</p> <p>2. For bed and breakfast establishments, tourist rooming houses or private guest rooms, a source of potable drinking water shall be provided.</p>
75	390.19(6)	<p>DIAPER CHANGING STATION.</p> <p>(a) all toilet rooms providing the required sanitary fixtures shall be equipped with a diaper changing station.</p> <p>(b) Diaper changing stations are not required in toilet rooms exclusively serving therapy pools.</p>
76	390.19(7)	<p>SPECTATOR ACCESS.</p> <p>Spectator walkways, restrooms, dressing rooms and seating areas shall be separated from pool patron required deck.</p>
77	390.20	<p>WADING POOLS.</p> <p>(1) The maximum depth of water in a wading pool may not exceed 24 inches.</p> <p>(2) The maximum depth of water at the accessible perimeter of a wading pool may not exceed 18 inches.</p> <p>(3) A piping system may be used to allow a wading pool to be filled using pool water from an adjacent basin, other than a whirlpool.</p> <p>(4) Obstructions extending from the walls or bottom of the wading pool are not permitted except with the approval of the department based on design safety.</p>

78	390.21	<p>WHIRLPOOLS AND COLD SOAK POOLS.</p> <p>(1) All walls within 5 feet of the whirlpool or cold soak pool shall be constructed of impervious material to a height of at least 3 feet above the deck.</p> <p>(2) (a) 1. Except as provided in subd. 2. or 3., an observation window shall be provided if a whirlpool is located in a separate, enclosed room.</p> <p>2. A private guest room equipped with a telephone.</p> <p>3. A whirlpool or cold soak pool room where a camera and remote observed monitor is provided.</p> <p>(b) Where a camera is provided as in par. (a) 3., signage shall be installed to notify patrons of the camera's use.</p> <p>(3) (a) Except as provided in par. (b), whirlpools or cold soak pools may not be located:</p> <p>1. Within 11 feet of a basin where the water exceeds 5 feet in depth.</p> <p>2. Within 11 feet of a basin whose water depth is 6 inches deeper than that of the whirlpool or cold soak pool.</p> <p>(b) Whirlpools or cold soak pools may be located adjacent to a pool or water attraction basin if a common wall constructed in accordance with s. SPS 390.11 (5) separates the two basins.</p> <p>(4) The maximum water depth of a whirlpool or cold soak pool shall be 4 feet measured from the water line.</p>
79	390.21(5)	<p>(5) If the water depth exceeds 24 inches in a whirlpool or cold soak pool, stairs shall be provided.</p> <p>(a) Stairways shall be recessed and may not extend past a bench installed in the basin.</p> <p>(b) Recessed stairways shall have a minimum unobstructed horizontal tread depth of 10 inches, with a riser height no greater than 12 inches, and shall be uniform except that when the bottom tread is used for a seat, the bottom riser may be a maximum of 14 inches above the whirlpool floor.</p> <p>(c) The minimum width of the stairways shall be 15 inches.</p> <p>(d) Handrails shall be securely mounted on each side of stairways.</p> <p>(e) The leading edge of deck-mounted handrails shall be located within 3 inches horizontally measured from the vertical plan of the bottom riser.</p> <p>(f) The two handrails shall be separated a maximum of 3 feet.</p>
80	390.21	<p>(6) A whirlpool water agitation system shall be separate from the water circulation system.</p> <p>(7) A manually controlled, 15-minute maximum, agitation system timer shall be provided within the pool enclosure.</p> <p>(8) An emergency stop shall be provided that is tied to the agitation system and circulation system.</p> <p>(9) (a) Except as provided in par. (b), the coping around the perimeter of the whirlpool or cold soak pool may extend vertically a maximum height of 3 inches.</p> <p>(b) 1. Transfer walls may extend 16 to 19 inches above the deck.</p> <p>2. Transfer wall widths shall be 12 to 16 inches measured at the top of the wall.</p> <p>(10) A piping system may be used to allow a whirlpool or cold soak pool to be filled using pool water from an adjacent basin, other than a whirlpool.</p>
81	390.22	<p>INTERACTIVE PLAY ATTRACTIONS.</p> <p>(1) Design and Materials. (a) All materials for walking surfaces on an interactive play attraction shall be slip-resistant.</p> <p>(b) 1. A splash zone of an interactive play attraction shall be sloped to drain to the surge tank or pool within the same basin. 2. All exterior walking surfaces shall be sloped to drain away from the splash zone.</p> <p>(2) Water supply, Piping, Circulation and Filtration. (a) The circulation system of an interactive play attraction may not be connected with the feature pump system unless otherwise approved by the department.</p> <p>(b) All nozzles that spray from the ground shall be flush with the floor so as to not create a tripping hazard.</p> <p>(d) All aboveground piping shall automatically drain.</p> <p>(e) The suction intake of the circulation pump shall be located in the lowest point of the balance tank.</p> <p>(3) Vegetation. Plants or vegetation may not be located in the splash zone area.</p>

82	390.30(2)	<p>PLAY FEATURES.</p> <p>IN-WATER PLAY FEATURES.</p> <p>(a) In-water play features installed shall be subject to this subsection.</p> <p>Note: Examples of in-water play features include, but are not limited to, floating boats and trucks, floatable walks, floatables, spray pad features not in conjunction with a pool or water attraction with a circulation system and other permanently installed features.</p> <p>(b) 1. Floating play features may not be installed in pools with water depths of less than 36 inches.</p> <p>2. a. Except as provided in subd. 2. b., a minimum 3 feet of water depth shall be maintained at least 6 feet in every direction from any tethered play feature.</p> <p>b. A tethered play feature may be located within 6 feet of a wall when that portion of the wall is padded to a point 6 feet from the play feature. Note: Padding need only cover the wall above the waterline.</p> <p>(c) The means of anchoring of tethered play features shall be configured in such a manner as to minimize circumstances of possible entrapment of patrons, bodies, hair, limbs or appendages when in contact with any element of the play feature or its anchors. Note: The use of jacketed chains or cables meets this requirement.</p> <p>(d) All in-water play features shall be designed and installed to prevent injury to the user and constructed so as not to create a safety hazard.</p> <p>(e) 1. Except as permitted in subd. 2., the length and width of a tethered, in-water play feature shall not exceed 42 inches.</p> <p>2. A tethered, in-water play feature may exceed 42 inches in length when the width, excluding appendages, does not exceed 24 inches.</p> <p>3. The height of a tethered, in-water play feature shall not exceed 20 inches.</p> <p>(f) 1. When more than one pad walk is located in the same pool basin, a minimum separation of 10 feet between pad walks shall be provided.</p> <p>2. All deck or basin obstructions within 6 feet of a pad walk shall be padded or encased so as to protect users from abrasion, laceration or contusion.</p> <p>(g) Two floatables, other than two pads within a pad walk, shall be separated by a minimum of 10 feet.</p>
83	390.30(3)	<p>ON-DECK PLAY FEATURES.</p> <p>(a) Play features permanently installed on decks shall be designed and installed to minimize injury to the user and constructed so as not to create a safety hazard.</p> <p>Note: Examples of on-deck play features include basketball hoops, volleyball nets and other water games.</p> <p>(b) Spray features may not be located so as to spray on the required deck area of a basin.</p>
84	390.31	<p>SLIDES.</p> <p>(1) General. All slides installed as an appurtenance to a public swimming pool or water attraction shall be designed, manufactured and permanently installed so as to provide a safe and healthy environment for the rider and other occupants of the facility.</p> <p>(2)(b) Pool slides, drop slides and waterslides shall be so designed that parts with external surfaces that may come in contact with a person using the slide are assembled, arranged and finished so that they are smooth and continuous with and will not cut, pinch, puncture or cause an abrasion to any person.</p> <p>2. Slide structures shall have a maximum individual obstruction width of 20 feet.</p> <p>(h) For waterslides and runout slides, all closed curved flumes shall be a minimum of 32 inches in diameter.</p> <p>(i) For all other slides listed in Table 390.31-1, the slide terminus shall be designed to not allow riders to cross into the path of another rider.</p>
85	390.31	<p>(3) Installation. (a) All slide installations shall comply with the parameters as specified in Table 390.31-1.</p> <p>(b) Except where a lifeguard staffing plan has been approved by the department of health services, children's slide obstructions shall comply with all of the following requirements:</p> <ol style="list-style-type: none"> 1. The side view of the obstruction, as viewed from any point, shall be less than 50 square feet. 2. The square footage of the obstruction shall be measured to a height of 6 feet above the water line. 3. Individual obstructions shall have at least a 10-foot horizontal separation. 4. No more than 20 percent of the pool basin shall be occupied by obstructions.

**Table 390.31-1
Installation Parameters by Slide Type^a**

Slide Type	Maximum Slide Height Measured Vertically From the Slide Entrance (in feet)	Slide Terminus Drop to Water Level (in inches)	Water Depth Allowed for Slide Installation (in feet)	Minimum Clear Space In Front of Slide Terminus and Pool Wall (in feet)	Minimum Distance from Slide Flume or Entry to Side Obstructions, unless protected (in feet)	Minimum Separation Distance Between Slides in Same Structure Measured from Side of Sliding Surface, unless protected (in feet)	Maximum Overhang Distance for Deck-mounted Slides (Slide terminus extension into pool) (in feet)
Children's slide	≤ 4 to slide terminus	≤ 6	≤ 2	≥ 7.5	≥ 4	As per manufacturer's recommendation	N/A
Pool slide	≤ 4 to deck	≤ 6	≤ 2	≥ 7.5	≥ 4	As per manufacturer's recommendation	N/A
Pool slide, discharging into water ≤ 2 feet deep	> 4 and ≤ 6 to deck	≤ 6	≤ 2	≥ 10	≥ 5	As per manufacturer's recommendation	2
Pool slide, discharging into water ≤ 2 feet deep	> 6 to deck	Not permitted.					
Pool slide, installed in water ≥ 3 feet deep	≤ 6	≤ 6	≥ 3	≥ 15	≥ 5	≥ 5	≤ 2
Pool slide, installed in water ≥ 3 feet deep	> 6	≤ 6	≥ 3	≥ 20	≥ 5	≥ 5	No maximum
Drop slide, short drop	No limitation	20 to < 30 ^b	3.5 to 6 ^b	≥ 15	≥ 5	≥ 5	No maximum
Drop slide, long drop	No limitation	30 to 60	6 to 12 ^b	≥ 15	≥ 5	≥ 5	No maximum
Waterslide ^c	No limitation	≤ 6 or as per manufacturer's recommendation	≥ 3	≥ 20	≥ 5 ^e	≥ 5	No maximum
Runout slide	No limitation	N/A	N/A	For deceleration area, as per manufacturer's recommendation	≥ 5 ^e	≥ 3	—

N/A = not applicable; ≥ = greater than or equal to; ≤ = less than or equal to.

^a Slide installation as per manufacturer's requirements if more stringent. For slide types not specifically listed in this table, contact the department.

^b Interpolation would be used for increasing drop and increasing depth proportionally.

^c Water slides with a drop shall comply with drop slide requirements in this table.

^d No minimum separation distance where slide exit prevents exiting over adjacent slide path

^e Minimum distance may be reduced if slide terminus is designed and installed to restrict patron exit angle.

CERTIFICATION OF COMPLETENESS AND READINESS FOR FINAL INSPECTION

CONTRACTOR:	SITE ADDRESS IF DIFFERENT THAN APPROVED PLAN:	
SITE CONTACT:		
MOBILE PHONE #:	TI #	# OF REGULATED OBJECT INSPECTIONS
SITE CONTACT E:MAIL:		
SIGNATURE OF COMPLETENESS:	REQUESTED FINAL INSPECTION DATE	
DATE:	TIME REQUESTED	