WEST VIRGINIA
SECRETARY OF STATE
JOE MANCHIN, III
ADMINISTRATIVE LAW DIVISION

Form #3 ◘

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OFFICE WEST VIRGINIA SECRETARY OF STATE

NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE
AND
FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

AGENCY: Division of Health - DHHR TITLE NUMBER: 64

CITE AUTHORITY: W. Va. Code § 16-1-4

AMENDMENT TO AN EXISTING RULE: YES X NO ____

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 25

TITLE OF RULE BEING AMENDED: Design Standards for Swimming Pools

IF NO, SERIES NUMBER OF RULE BEING PROPOSED: ____

TITLE OF RULE BEING PROPOSED: ____

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE FOR THEIR REVIEW.

Authorized Signature

$11.60

BRIEF SUMMARY

64 CSR 25
DESIGN STANDARDS FOR SWIMMING POOLS

This rule is being repealed and replaced with rule 64 CSR 16, "Recreational Water Facilities."

QUESTIONNAIRE

(Please include a copy of this form with each filing of your rule: Notice of Public Hearing or Comment Period, Proposed Rule, and if needed, Emergency and Modified Rule.)

DATE: July 20, 2001

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: (Agency name, Address & Phone No.) Division of Health
Department of Health and Human Resources
State Capitol Complex, Building 3, Room 201, Charleston, WV 25305
Telephone: (304) 558-5598

LEGISLATIVE RULE TITLE: Design Standards for Swimming Pools, 64CSR25

1. Authorizing statute(s) citation: WV Code Section 16-1-7

2. a. Date filed in State Register with Notice of Hearing or Public Comment Period:
May 24, 2001

b. What other notice, including advertising, did you give of the hearing?

Notice of the proposed rule was sent to Local Health Departments, WV Recreation and Park Association, Kanawha County Parks, City of Bridgeport Parks and Recreation, and Harpers Ferry KOA

c. Date of Public Hearing(s) or Public Comment Period ended:
June 25, 2001

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached_____ No comments received __X__

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing (be exact):

July 20, 2001

f. Name, title, address and phone/fax/e-mail numbers of agency person(s) to receive all written correspondence regarding this rule (please type):

Martha Barnitt

Office of Regulatory Support - DHHR

Building 3, Room 201, Capitol Complex

Charleston, West Virginia 25305

304-558-5598

g. IF DIFFERENT FROM ITEM 'f', please give Name, title, address and phone number(s) of agency person(s) who wrote and/or has responsibility for the contents of this rule (please type):

Ronald Forren, Division Director of Public Health Sanitation

Office of Environmental Health Services

815 Quarrier Street, Suite 418

Charleston, West Virginia 25301-2616

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

a. Give the date upon which you filed in the State Register a notice of the time and place a hearing for the taking of evidence and a general description of the issues to be decided.

N/A

b. Date of hearing or comment period:

N/A

c. On what date did you file in the State Register the findings and determinations required together with the reasons therefore?

N/A

d. Attach findings and determinations and reasons:

Attached N/A

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: 64 CSR 25 Design Standards for Swimming Pools

Type of Rule: X Legislative _____ Interpretive _____ Procedural

Agency: Division of Health, Department of Health and Human Resources

Address: Building 3, Capitol Complex

Charleston, WV 25305

1. Effect of Proposed rule:

	ANNUAL		FISCAL YEAR		
	INCREASE	DECREASE	CURRENT	NEXT	THEREAFTER
ESTIMATED TOTAL COST	$0.00	$0.00	$0.00	$0.00	$0.00
PERSONAL SERVICES	$0.00	$0.00	$0.00	$0.00	$0.00
CURRENT EXPENSE	$0.00	$0.00	$0.00	$0.00	$0.00
REPAIRS & ALTERATIONS	$0.00	$0.00	$0.00	$0.00	$0.00
EQUIPMENT	$0.00	$0.00	$0.00	$0.00	$0.00
OTHER	$0.00	$0.00	$0.00	$0.00	$0.00

2. Explanation of Above Estimates:

See 64 CSR 16

3. Objectives of These Rules:

This rule is being repealed and replaced with 64 CSR 16, Recreational Water Facilities.

Rule Title: 64 CSR 25 Design Standards for Swimming Pools

4. Explanation of Overall Economic Impact of Proposed Rule:

   A. Economic Impact on State Government:

      None

   B. Economic Impact on Political Subdivisions; Specific Industries; Specific Groups of Citizens:

      None

   C. Economic Impact on Citizens/Public at Large.

      None

Date: July 20, 2001

Signature of Agency Head or Authorized Representative:

Paul L. Nuba

TITLE 64

WEST VIRGINIA LEGISLATIVE RULES

DEPARTMENT OF HEALTH

Series 25

Title: Design Standards for Swimming Pools

Section 1. General

1.1. Scope - These legislative rules establishes the design standards for the construction of public swimming pools.

1.2. Authority - These legislative rules are issued under the authority of and are related to Chapter 16, Article 1, Section 7 of the West Virginia Code of 1931, as amended.

1.3. Filing Date - These legislative rules were filed on the 11th day of April, 1980, in the Secretary of State's office.

1.4. Effective Date - These legislative rules became effective on the 5th day of May, 1980.

1.5. Refiling Date - These legislative rules were refiled pursuant to Chapter 29A, Article 2, Section 5 of the West Virginia Code of 1931, as amended on the 30th day of December, 1982, in the Secretary of State's Office.

Section 2. Application and Enforcement

2.1. Application - These legislative rules apply to the owner or operators of public swimming pools or those persons responsible for the construction or installation of public swimming pools.

2.2. Enforcement - The enforcement of these legislative rules is vested with the director of the West Virginia department of health or his lawful designee.

Section 3. Definitions

3.1. Bather - Those persons in bathing suits who are in the pool and decking areas.

3.2. Decking - Those areas surrounding a pool installation which are specifically constructed or installed

~~for use by bathers walking without footwear (bare feet).~~

~~3.3. Deep Areas - Those portions of a pool having water depths in excess of 5'0" (1.52 m).~~

~~3.4. Floor - Shall refer to the interior bottom pool surface and consists of that surface from a horizontal plane up to a maximum of a 45KEYBOARD()¼KEYBOARD() slope.~~

~~3.5. Inground Swimming Pools - Any pool whose sides rest in partial or full contact with the earth.~~

~~3.6. Instructional Area - Those water areas ranging in depth from 2'0"~~

61 cm) to 3" (91 cm) which are used for swimming instruction.

3.7. Ladders, Steps and Stairs - (Combination) It is conceivable that the below defined facilities may be used in conjunction with each other.

3.7.1. Ladders - A series of vertically separated treads or rungs either connected by vertical rail members or independently fastened to an adjacent vertical pool wall.

3.7.2. Steps - A riser/tread or series of risers/treads extending down from the deck and into the pool area.

3.7.3. Stairs - A riser/tread or series of risers/treads extending down into the deck but terminating at the pool wall thus creating a "stairwell."

3.7.4. Recessed Steps - A series of vertically spaced cavities in the pool wall creating tread areas for stepholes.

3.8. Non-Swimming Area - Any portion of a pool where water depth, offset ledges or similar irregularities would prevent normal swimming activities.

3.9. Overflow System - This is a replacement for the traditional term "gutter." This encompasses rim type overflows and collection systems of various design and manufacture.

3.10. Pools

3.10.1. Non-Permanently Installed Swimming Pool - One that is so constructed that it may be readily disassembled for storage and reassembled to its original integrity.

3.10.2. On-Ground Swimming Pool - Any pool whose sides rest fully above the surrounding earth.

3.10.3. Permanently Installed Pool - One that is constructed in the ground, or in a building in such a manner that the pool cannot be readily disassembled for storage.

3.10.4. Public Pool - Shall be defined as any pool, other than a residential pool, which is intended to be used collectively by numbers of persons for swimming or bathing and is operated by any person be he owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is

~~charged for such use. Reference within the standards to various types of public pools are defined by the following categories:~~

~~Class "A" - Competition Pool - Any pool intended for use for accredited competitive aquatic events such as FINA, AAU, NCAA, etc.~~

~~Class "B" - Public Pool - Any pool intended for public recreational use.~~

~~Class "C" - Public Pool - Any pool operated solely for and in conjunction with lodgings such as hotels, motels, apartments, condominiums, etc.~~

~~Class "D" - Special Purpose Pool - Any pool operated as a treatment,~~

water therapy, or non-recreational function.

3.10.5. Wading Pool - A pool that may range in water depth from 2' (61 cm) down to zero for wading by non-swimming children.

3.11. Shallow Areas - Those portions of a pool ranging in water depth from 3' (91 cm) to 5' (1.52 m).

3.12. Toxic - The word "toxic" shall refer to the adverse physiological effect on man.

3.13. Vertical - Throughout these standards, vertical is defined as not exceeding an 11KEYBOARD()¼KEYBOARD() (one foot (1') horizontally for each five feet (5') vertically) slope from plumb.

3.14. Walls - Shall refer to interior pool wall surfaces and consists of surfaces from the vertical to a 45 KEYBOARD()¼KEYBOARD() slope.

3.15. Water Line - The water line shall be established in one of the following ways:

3.15.1. The water line shall be deemed to fall in the midpoint of the operating range of the skimmers.

3.15.2. On pools with overflow systems, the water line shall be deemed to be that established by the height of the overflow rim.

Section 4. Design Requirements

4.1. Plans and specifications with supporting data shall be submitted and approved by the director, prior to construction. In the case of Class A and B pools, such plans and specifications shall bear the seal of a registered architect or professional engineer.

4.2. The swimming pool structure shall be constructed of materials which are nontoxic to man and the environment, impervious and enduring, which can withstand the design stresses, which will provide a watertight structure with a smooth easily cleaned surface without cracks or joints, excluding structural joints, or to which a smooth easily cleaned surface finish is applied or attached.

~~4.3. Sand or earth bottoms shall not be permitted as a finish for interior surfaces in a swimming pool.~~

~~4.4. The floor of all pools shall be white, light colored, or light colored patterns in order to facilitate the identification of any objects within the pool.~~

~~4.5. The surfaces within a swimming pool intended to provide footing for bathers shall be designed to provide a minimum slip-resistant surface equivalent to a coefficient of static friction of .40 when wet. The roughness or irregularity of such surfaces shall be less than that which would produce bruises or cuts to the feet when used during intended use and reasonable forseeable abuse.~~

~~4.6. Instructional areas of pool shall be permanently and visually set apart from the shallow areas with a permanently installed life line, depth numbers, and a 4" (10 cm) minimum width row of floor tile, painted line or similar of a color contrasting with the bottom. Instructional areas shall not adjoin deep areas.~~

~~4.7. Shallow areas of the pool shall be visually set apart from the deep areas with a life line, depth numbers, and a 4" (10 cm) minimum width row of floor tile, painted line or similar of a color contrasting with the bottom.~~

~~4.8. Where a high water table may be encountered, a means of hydrostatic relief from under the pool floor or around the pool walls shall be provided.~~

~~4.9. There shall be a construction tolerance allowed on all dimensions (length, width, depth, etc.) of plus or minus 2" (5 cm) unless otherwise specified (such as in a Class A pool). The designed water level shall have a maximum construction tolerance at the time of completion of the work of plus or minus ¼" (.6 cm) for pools with adjustable weir overflows, of plus or minus 1/8" (.3 cm) for pools with nonadjustable overflow systems.~~

~~4.10. The maximum horizontal distance of the tip of the board from Point A may vary plus or minus 3" (8 cm) to allow for construction tolerances on Class B and C pools. (See Figure I.).~~

~~4.11. Maximum board height over water shall have a plus 3" (8 cm) construction tolerance on Class B and C pools to allow for construction variances only.~~

~~Section 5. Area Requirements~~

~~5.1. No limits are specified for shape of swimming pools except that consideration must be given to shape from the standpoint of safety and the adequate recirculation of the swimming pool water.~~

~~5.2. The size of Class A or D pools shall be governed by the requirements of the activities for which the installation is intended.~~

~~5.3. The maximum designed attendance at Class B or C pools shall be based upon the following:~~

~~5.3.1. One bather for each 15 square feet (1.4 m^2) of shallow, instructional or wading area;~~

~~5.3.2. One bather for each 20 square feet (1.9 m^2) of deep area not counting that area figured as diving area;~~

~~5.3.3. One bather for each 300 square feet (27.9 m^2) of diving area per diving board.~~

~~5.4. When the area of the decking provided within the pool enclosure totals 100% or more of the combined totals of 5.3.1, 5.3.2, and 5.3.3 (see Section 5.3), 5.3.1 and 5.3.2 may be decreased to 12 square feet (1.1 m^2) and 15 square feet (1.4 m^2) respectively.~~

~~5.5. When the decking area provided within the pool enclosure totals 200% or more of the combined total of 5.3.1, 5.3.2, and 5.3.3 (see Section 5.3); 5.3.1 and 5.3.2 may be decreased to 8 square feet (.7 m^2) and 10 square feet (9 m^2) respectively.~~

~~Section 6. Floors~~

~~6.1. The slope of the shallow area floor shall be uniform, shall slope to completely drain and shall not exceed 1 foot (or meter) of fall in 12 feet (or meters) horizontally for Class A and B pools or 1 foot (or meter) of fall in 10 feet (or meters) for Class C pools.~~

~~6.2. The slope of the deep area floor shall be uniform, shall slope to completely drain and shall not exceed 1 foot (or meter) of fall in 3 feet (or meters) horizontally. However, such permitted slopes are not intended to provide any less water depths from those specified if the pool is intended for diving.~~

~~6.3. Where floor slopes are carried up to join walls, such slopes may be increased and the specified depths for diving pools may be reduced in this immediate area by the use of a radius tangent to the wall and the floor. Said radius shall conform to the following:~~

~~6.3.1. The radius shall have its center no less than 2'9" (84 cm) below the water level in deep areas or 2'6" (76 cm) in shallow areas;~~

~~6.3.2. The arc of the radius is tangent to the wall;~~

~~6.3.3. The radius shall be no less in length than the difference between the depth at the center of the radius and the water depth at that point. In the case of the deep end wall where diving equipment is to be located, the water depth referred to above shall be the D2 dimension in the table for diving sections less than 3" (8 cm) to allow for a drainage slope to the main outlet.~~

~~6.4. Any other configuration which meets or exceeds the length, width, and depth or water provided by the foregoing shall be acceptable provided such configuration complies with all other requirements of this standard.~~

~~Section 7. Walls~~

~~7.1. Walls in Class B and C pools shall be vertical for a minimum distance of 2'9" (84 cm) from the water line in deep areas or 2'6" (76 cm) in shallow areas from which point they may be radiused to join the floor, said radius shall conform to the following:~~

~~7.1.1. The radius shall have its center no less than 2'9" (84 cm) below the water level;~~

~~7.1.2. The arc of the radius is tangent to the wall;~~

~~7.1.3. The radius shall be no less in length than the difference between the depth at the center of the radius and the water depth at that point. In the case of the deep end wall where diving equipment is to be located, the~~

~~water depth referred to above shall be the D2 dimension in the table for diving sections less 3" (8 cm) to allow for a drainage slope to the main outlet.~~

~~7.2. Any other configuration which meets or exceeds the length, width, and depth of water provided by the foregoing shall be acceptable provided such configuration complies with all other requirements of this standard.~~

~~7.3. The vertical portion of a pool wall may have up to an 11KEYBOARD()¼ inward or outward slope except for those walls terminating at racing lanes in Class A or B pools which shall have only a construction tolerance of 1KEYBOARD()¼ (1" in 5' or 8.3 centimeters in 5 meters) from vertical.~~

~~Section 8. Depths~~

~~8.1. Class A pools intended for competitive diving shall be designed and constructed so as to provide the water depths specified by the appropriate activity (FINA, AAU, NCAA, etc.).~~

~~8.2. Class B or C swimming pools shall have a minimum depth of water in the shallow end of the main swimming area of between 3' (91 cm) and 3'6" (1.06 m). Exceptions may be made in a recessed area of the main swimming pool, outside of a competitive swimming course, where the pool is of an irregular shape.~~

~~8.3. Class B and C pools intended for diving shall provide the minimum water depths called for in the table and diagram on Table I.~~

~~8.4. Point A is a base reference point for pools designed for diving and shall be considered as being the horizontal location of the tip of the diving equipment.~~

~~8.5. Public pools with diving facilities in excess of 3 meters in height or pools designed for platform diving shall comply with the pool dimensions for such facilities specified by FINA, AAU, NCAA, etc.~~

~~8.6. Diving equipment shall be classified and permanently identified as to type of pool required for its installation; and diving equipment of a greater type, i.e., type VII shall not be installed on a pool of less type, i.e., type VI. However, equipment suitable for installation on a~~

~~lower pool type may be installed on any higher pool type providing no less a water envelope is provided from Point A than called for in the lower type.~~

~~8.7. Diving units shall be permanently anchored to the deck and shall be installed in accordance with the above specifications.~~

~~8.8. There shall be a completely unobstructed clear vertical distance of 13' (3.96 m) above any diving board measured from the center of the front end of the board, and this area shall extend horizontally at least 8' (2.44 m) behind, 8' (2.44 m) to each side and 16' (4.88 m) ahead of Point A.~~

~~8.9. Unless the diving equipment manufacturer specifies other dimensions for his particular equipment, the distances to be used between center line of the rear hold down and the front fulcrum in the installation of all fulcrum actuated diving equipment shall be the following with an allowable construction~~

~~TABLE I~~

~~tolerance variation of plus or minus 6" (15 cm).~~

~~8' board 40" 10' board 52" 12' board 62"~~

~~8.10. Diving equipment contact surfaces shall be of a slip-resistant design.~~

~~8.11. Supports, platforms and steps for diving equipment shall be of sufficient structural strength to safely carry the anticipated loads. Steps shall be of corrosion-resistant material easily cleanable and with treads of slip-resistant design. All diving stands higher than 21" (53 cm) measured from the deck to the top butt end of the board shall be provided with steps.~~

~~8.12. Any pool with a depth of less than 8'6" shall be posted for no diving.~~

~~Section 9. Wading Pools~~

~~9.1. Wading pools shall be separate and physically set apart from instructional or shallow water areas of swimming pools by at least 6' (1.83 m) of deck on Class B pools or 4' (1.22 m) of deck on Class C pools. Where a wading pool adjoins any deep water area, a minimum 4' (1.22 m) high barrier must be installed adequately separating the two pools.~~

~~9.2. A wading pool shall have a maximum water depth not greater than 14" (36 cm) and the water depth at the perimeter shall not exceed 9" (23 cm). Water depths may be reduced from the above maximums and may be brought to zero at the most shallow point.~~

~~9.3. Walls of wading pools shall be vertical except for the lower 6" (15 cm) which may be radiused to the floor. Walls shall not extend more than 6" (15 cm) above the water level at any point.~~

~~9.4. Floors of wading pools shall be uniform, sloped to drain with a slope not to exceed 1 foot (or meter) in 12' (or meters), and shall have a slip-resistant texture equivalent to a coefficient of static friction of .40.~~

~~9.5. Wading pools shall be designed to include:~~

~~9.5.1. An inlet line flow meter;~~

~~9.5.2. To operate continuous with a maximum 4.0 hour turnover rate;~~

~~9.5.3. An emergency drain to waste line;~~

~~9.5.4. An equalizer line to the main pool or separate water recirculation and filtration facilities;~~

~~9.5.5. Surface skimmers and bottom main drain.~~

~~Section 10. Special Features~~

~~10.1. Underwater seat benches, when provided, shall not be over 20" (51 cm) below the water line and shall be:~~

~~10.1.1. Visually set apart from the surrounding pool surfaces by a contrasting color or visual image such as provided by colored tile nosing, etc.;~~

~~10.1.2. Completely recessed in either a separate alcove or wall indentation especially configured to accept same when located in the deep area of a pool;~~

~~10.1.3. Provided with a slip-resistant texture equivalent to a coefficient of static friction of .40* (*this value subject to change) when wet.~~

~~10.2. Off-set ledges, when provided, shall fall within an 11KEYBOARD()¼ line from plumb starting at the junction of the pool wall and water surface. Maximum width shall be 8" (20 cm) and shall have a slip-resistant texture equivalent to a coefficient of static friction of .40* (*this value subject to change) when wet.~~

~~FIGURE I~~

~~Section 11. Ladders, Steps and Stairs~~

~~11.1. All Type A, B, and C pools shall have at least two sets of ladders, stairs, steps, recessed steps or combination thereof located so as to fully serve both ends of the pool for purposes of ingress and egress. Other location and quantity requirements are as follows:~~

~~11.1.1. Where water depths are 24" (61 cm) or less at the pool wall, such areas shall be considered as providing their own natural mode for ingress and egress and therefore shall serve as a suitable substitute for such devices in those areas;~~

~~11.1.2. For pools or water areas over 30' (9.14 m) in width, both sides of each pool or area shall be served by providing additional ladders, stairs, steps or recessed steps;~~

~~11.1.3. In addition to the foregoing, additional such devices shall be provided when necessary to provide an overall minimum of one such device located every 75 lineal feet (22.86 m) of pool wall or fraction thereof;~~

~~11.1.4. Ladders, steps and stairs should be so located so as not to interfere with racing lanes if applicable.~~

~~11.2. The design and construction of pool ladders used shall conform to the following:~~

~~11.2.1. Pool ladders shall be made entirely of corrosion-resistant materials;~~

~~11.2.2. Ladder treads shall have slip-resistant tread surfaces with a minimum coefficient of static friction of .40* (*this value subject to change) when wet;~~

~~11.2.3. Ladder designs must provide two handholds or handrails to fully serve all treads;~~

~~11.2.4. The maximum outside diameter of handrails shall be 1.9" (4.8 cm) and a minimum of 1" (2.5 cm);~~

~~11.2.5. There shall be clearance of not more than 6" (15 cm) nor less than 3" (7.6 cm) between any ladder and the pool wall.~~

~~11.3. The design and construction of pool steps and stairs shall conform to the following:~~

~~11.3.1. Step and stair treads shall have a minimum unobstructed horizontal depth of 10" (25 cm) and a minimum unobstructed surface area of 240 square inches (1548 cm KEYBOARD()^2);~~

~~11.3.2. Risers at the centerline of the treads shall have a maximum uniform height of 12" (30 cm);~~

~~11.3.3. Step and stair treads must have slip-resistant surfaces with a minimum coefficient of static friction of .40* (*this value subject to change)~~

~~when wet;~~

~~11.3.4. Each set of steps or stairs shall be provided with at least one handrail to fully serve all treads and risers;~~

~~11.3.5. Handrails shall be installed in such a way that they can easily be removed with tools;~~

~~11.3.6. The most forward position of the handrail shall be within 6" (15 cm) of the most forward edge of the pool coping but shall not project more than 4" (10 cm) beyond same;~~

~~11.3.7. Seats may be provided as part of the steps or stairs;~~

~~11.3.8. All step or stair treads and seats shall be visually set apart from the surrounding pool surfaces by a contrasting color or visual demarcation such as provided by colored tile nosing, etc.~~

~~11.4. The design and construction of recessed steps in the pool wall shall conform to the following:~~

~~11.4.1. Stepholes at the centerline shall have a maximum vertical spacing of 12" (30 cm);~~

~~11.4.2. Maximum vertical distance between the pool coping edge and the uppermost recessed tread shall be 12" (30 cm);~~

~~11.4.3. Stepholes shall have a minimum tread of 5" (13 cm) and a minimum width of 12" (30 cm);~~

~~11.4.4. Stephole treads shall drain into the pool to prevent the accumulation of dirt thereon;~~

~~11.4.5. Each set of recessed steps shall be provided with two handrails to fully serve all treads and risers.~~

~~Section 12. Decks~~

~~12.1. These requirements are intended to cover those areas surrounding any pool installation which are specifically constructed or installed for use by bathers walking without footwear (bare feet).~~

~~12.2. Decking and similar surfaces including step treads and coping shall be slip-resistant with a minimum coefficient of static friction of .40* (*this value subject to change) when wet.~~

~~12.3. The roughness or irregularity of such surfaces shall not cause bruises or cuts to the feet when subjected to intended use and reasonable forseeable abuse.~~

~~12.4. Special features in or on decks such as depth markings, pool brand insignias or similar shall conform to this section.~~

~~12.5. In the absence of specific local engineering practices, the work~~

~~shall be performed in accordance with the recommended practices of the american concrete institute.~~

~~12.6. Excavation ramp areas must be adequately compacted so as to properly support the decking work in this area.~~

~~12.7. Synthetic deck surfaces such as specified in NSF Standard #39 for "resilient artificial recreational surfaces" may be used.~~

~~12.8. The minimum width of any decks including coping where same forms an unobstructed continuance of walking surface along the edge of the pool shall be as follows:~~

~~Class A - As recommended by the appropriate activity (FINA, AAU, NCAA, etc.)~~
~~Class B - 6' (1.83 m)~~
~~Class C - 4' (1.22 m)~~
~~Class D - 3' (91 cm) if provided~~

~~12.9. A minimum of 4' (1.22 m) walk width shall be provided on the sides and rear of any piece of diving equipment. A deck clearance of 24" (61 cm) shall be provided around any other piece of deck equipment which is 36" (91 cm) or less in height above the deck and a 36" (91 cm) deck clearance around all other pieces of deck equipment.~~

~~12.10. The maximum permissible slope of decking shall be ½" per foot (4 cm per meter) except for ramps and walkways which may be sloped to a greater extent.~~

~~12.11. The maximum open separation between adjoining slabs, such as at expansion joints and similar, shall be 3/16" (.48 cm) of horizontal clearance with a maximum difference in vertical elevation of 1/8" (.32 cm).~~

~~12.12. All joints where pool coping meets concrete decking shall be watertight so as to not allow water passage to the ground beneath.~~

~~12.13. Joints in decking work shall be provided as necessary to prevent cracks from developing which would be hazardous due to a change in elevations, a separation of surfaces or movement of the slab.~~

~~12.14. Where decking work joins concrete work other~~

~~than the pools, such areas of joining shall be protected by a nonrigid material such as soft felt, mastic, or similar type expansion joints.~~

~~12.15. Where decking work joins pool coping, such area of joining shall be designed and installed so as to adequately protect pool coping and its mortar bed from damage as a result of reasonable movement of adjoining deck work.~~

~~12.16. Decks shall be edged, radiused, or otherwise relieved so as to present no exposed sharp corners.~~

~~12.17. Decks shall be sloped to effectively drain either to perimeter areas or to deck drains as may be required to adequately carry off pool splash~~

~~water, deck cleaning water or rain water. Adequacy shall be established by: (1) The removal of water at a rate approximately equal to the rate of its arrival under normal conditions, (2) the absence of any puddles 1/16" in depth or more and exceeding 35 square inches (226 cm^2) ten minutes after the last arrival of any water, (3) the absence of any combination of such puddles exceeding 10% of the area of any deck slab ten minutes after the last arrival of any water. See suggested minimum slopes in Appendix C.~~

~~12.18. Site drainage shall be provided away from all deck work so as to direct all perimeter deck drainage as well as general site drainage away from such work. When required, yard drains shall be installed to prevent the accumulation or puddling of site water in the general area of the decking work and related improvements. Gutters and downspouts shall be provided or relocated as necessary to adequately carry roof water away from pool and decking areas.~~

~~12.19. Pool plumbing lines shall be placed under pressure test before and during the installation of pool decks. One or more gauges shall be provided as ready reference for the existence and continuance of satisfactory test pressures throughout the system during construction.~~

~~12.20. There shall be no valves installed in or under any decking work except for recirculation line valves which may be placed in decking areas provided a minimum 10" (25 cm) diameter access cover and shaft is provided to each such valve to facilitate its servicing.~~

~~12.21. All decking work shall be designed and installed in accordance with the engineering practices required in the area of the installation. This includes the design and quality of subbase when required, concrete mix design, reinforcing, etc.~~

~~Section 13. Safety~~

~~13.1. Class B and C pools with over 1500 square feet (139 m^2) of water surface area shall have at least one elevated lifeguard chair for each 3000 square feet (279 m^2) of pool surface or fraction thereof. Where a pool is provided with more than one lifeguard chair and the pool width is 45' (13.72 m) or more, they shall be located on each side of the pool.~~

~~13.2. Depth of water in feet shall be plainly and conspicuously marked at or above the water surface on the vertical pool wall and on the top of coping or edge of the deck or walk next to the pool, at maximum and minimum points and at the points of break between the deep and shallow portions and at intermediate increments of depth. Such markings shall be spaced at no more than 25' (7.62 m) intervals and shall be arranged to be uniformly located on both sides of the pool as well as both ends. In the case of irregularly shaped pools, such markings shall designate all major deviations in shape as well as conforming to the foregoing where possible.~~

~~13.3. The depth marking numbers shall be 4" (10 cm) minimum height, of a contrasting color with the background and of a reasonably permanent nature. Markings on the vertical pool wall shall be in the uppermost portion of the wall and positioned to be read from the water side. Markings on the deck shall be within 18" (46 cm) of the water's edge and positioned to be read~~

while standing on the deck facing the water. Deck markings shall be slip- resistant with a minimum coefficient of static friction of .40 when wet.

13.4. A life line shall be provided between 1' and 2' (30 cm and 61 cm) on the shallow side of the break in grade between the shallow and deep portions of the swimming pool, with its position marked with visible floats at not greater than 7' (2.13 m) intervals. The life line shall be securely fastened to wall anchors of corrosion-resistant materials and of the type which will be recessed or have no projection which will constitute a hazard when the line is removed. The line shall be of sufficient size and strength to offer a good handhold and support loads normally imposed by bathers.

13.5. There shall not be any protrusions, extensions, means of entanglement or other obstructions which can cause the submerged entrapment or injury to the bather. There shall be no obstruction extending from the pool wall or floor into the clear area of the diving portion of the pool.

13.6. Pools shall be provided with a suitable handhold around their perimeter in areas where depths exceed 3'6" (1.07 m). Handholds shall be provided no further apart than 4' (1.22 m) and may consist of any one or a combination of the following:

13.6.1. Coping, ledge, or deck along the immediate top edge of a pool that provides a slip-resistant surface of at least a 4" (10 cm) minimum horizontal width located at or not over 12" (30 cm) above the water level;

13.6.2. Ladders, steps, or seat ledges;

13.6.3. A rope or railing placed at or not over 12" (30 cm) above the water line fastened to the wall.

13.7. Class A, B, and C swimming pools shall be protected by a fence, wall, building, enclosure or solid wall or durable material of which the pool itself may be constructed or any combination thereof. Artificial barriers shall be constructed so as to afford no external handholds or footholds, of materials which are impenetrable by toddlers, at least 6' (1.83 m) in height, and equipped with a self-closing and positive self-latching closure mechanism at a height of at least 48" (120 cm) above the ground and provided with hardware for permanent locking.

~~13.8. All Class A and B and those Class C swimming pools with over 1500 square feet (139 m^2) of water area shall have at least one unit of life saving equipment conspicuously and conveniently on hand at all times which shall consist of the following:~~

~~13.8.1. A light, but strong pole with blunt ends and not less than 12' (3.66 m) long;~~

~~13.8.2. A ¼" (.6 cm) diameter throwing rope as long as 1½ times the maximum width of the pool or 50' (15.24 m), whichever is less, to which has been firmly attached a ring buoy with an outside diameter of approximately 15" (38 cm), or some other similar flotation device.~~

~~13.9. Emergency information posted at the telephone location shall consist of:~~

~~13.9.1. Name and phone number of nearest available physician;~~

~~13.9.2. Name and phone number of nearest ambulance service;~~

~~13.9.3. Name and phone number of nearest available hospital;~~

~~13.9.4. Name and phone number of nearest available police, fire and/or rescue unit.~~

~~Section 14. Illumination Requirements~~

~~14.1. Where underwater lighting is used, not less than 0.85 watts shall be employed per square foot (.093 m2) of area. Underwater lights for competitive swimming shall not be placed at the end of the racing lanes.~~

~~14.2. Where underwater lighting is used, and night swimming is permitted, area lighting shall be provided for the deck areas and directed toward the deck areas and away from the pool surface insofar as practical in a total capacity of not less than 0.6 watts per square foot (.093 m^2) of deck area. Where underwater lighting is not employed and night swimming is permitted, area and pool lighting combined shall be provided in an amount of not less than 2 watts per square foot (.093 m^2) of deck area.~~

~~Section 15. Electrical Requirements - The requirements of the latest national electrical code, as published by the national fire protection association, shall be followed for the wiring and grounding of all electrical equipment associated with a swimming pool and the bonding and grounding of all metallic appurtenances.~~

~~Section 16. Heater Requirements - The requirements of the latest american national standards institute (ANSI-21.56) standard shall be followed. See pool heater sizing table in Appendix B.~~

~~Section 17. Swimming Pool Slides - Refer to U. S. consumer product safety commission standard for swimming pool slides as published in the federal register, January 19, 1976 (Vol.~~

~~41, No. 12) for standards relating to swimming pool slides.~~

~~Section 18. Circulation Systems~~

~~18.1. Public swimming pools shall have circulation and filtration equipment in accordance with criteria in these standards.~~

~~18.2. The equipment included in these standards shall be of adequate size to turn over the entire pool water capacity at least one every eight (8) hours.~~

~~18.3. A wading pool shall have equipment of adequate size to turn over the pool water capacity at least once every four (4) hours.~~

~~18.4. Equipment shall be designed and fabricated to drain the pool water~~

from the equipment, together with exposed face piping, by removal of drain plugs and manipulating winter drain valves on other methods.

18.5. The circulation system shall be capable of returning the pool water to a turbidity level of 0.5 NTU's at least once during the twenty-four hour period following the peak bather load. In any event, the main drain grate must be clearly visible from the deep end of the pool at all times.

18.6. Every public pool shall be provided with an indicator measuring the rate of flow through the filter system with an appropriate range readable in gallons per minute and accurate within 10% actual flow.

18.7. Equipment furnished shall be provided with a manufacturer's guarantee which shall warrant the equipment free from manufacturing defects in materials and workmanship.

18.8. Equipment furnished shall be provided with installation and operation instructions.

18.9. A pressure gauge or gauges with an appropriate range shall be provided in connection with all filters.

18.10. Materials used in the circulation system components and appurtenances thereto shall comply with the pertinent requirements of the joint national swimming pool institute - national sanitation foundation standards.

18.11. In climates subject to freezing temperatures, the pool shell and appurtenances, piping, filter system, pump and motor, and other components shall be so designed and constructed as to be winterized or protected from damage from freezing.

Section 19. Filters

19.1. Filter requirements - General

19.1.1. All filters shall be of such design as to maintain pool water under anticipated operating conditions in accordance with Section 16.5 of this standard.

19.1.2. All filters shall be so designed that filtration surfaces can be easily restored to the design capacity.

~~19.1.3. All filters shall be so designed that filtration surfaces can be made available for inspection and service.~~

~~19.2. A means shall be provided to permit release of air which enters the filter tank. This may be automatic, manual, or, where upflow design is used, all air must be expelled through the filter tank. Any filters incorporating an automatic internal air release as its principal means for the release of air must have lids which provide a slow and safe release of pressures as a part of its design. Any separation tank used in conjunction with a filter tank must have a manual means of air release or a lid which provides a slow and a safe release of pressures as a part of its design.~~

~~19.3. All separation tanks must have a cautionary statement warning the user not to start up the filter pump without first opening the air release. The statement must be visible and noticeable within the area of the air release.~~

~~19.4. Piping furnished with the filter shall be suitable material capable of withstanding three times the working pressure. The suction piping shall not collapse when there is a complete shut-off of flow on on the suction side of the pump.~~

~~19.5. All filter components which require servicing shall be accessible and available for inspection and repair when installed according to the manufacturer's instructions.~~

~~19.6. All type filters shall meet the safety performance standards in all respects of the joint national swimming pool institute - national sanitation foundation standards covering such filters.~~

~~Section 20. Pumps~~

~~20.1. A pump and motor shall be provided for circulation of the pool water. Performance of all pumps shall meet the conditions of flow required for filtering and cleaning (if applicable) the filters against the total dynamic head developed by the complete system.~~

~~20.2. On Class B pools the pump suction header shall be provided with a gauge(s) which indicates both pressure and vacuum; it shall be installed as close to the pump inlet as possible.~~

~~20.3. With all pressure filter systems a suitable removable strainer or screen shall be provided before all circulation pump(s) to remove solids, debris, hair, lint, etc. All water entering the pump shall pass through the screen.~~

~~20.4. Pumps shall be designed to perform the functions for which they are intended. All units must be accessible for inspection and service. Replacement parts must fit with existing parts in the pump without the need for redrilling mounting holes or otherwise altering the replacement part of the pump.~~

~~20.5. The design and construction of the pump and~~

~~component parts shall be such that they can be operated safely and are not hazardous to the operator or maintenance personnel.~~

~~20.6. Where a mechanical seal is provided, components of the seal must be corrosion resistant and capable of operating under conditions normally encountered in swimming pool operation.~~

~~20.7. Proper direction of rotation for the pump shall be clearly indicated by an arrow on the pump data plate, on a separate plate attached to the pump, or cast into the pump itself.~~

~~20.8. All motors shall have as a minimum an open drip-proof enclosure (as defined by NEMA standards) and constructed electrically and mechanically so they will perform satisfactorily and safely under the conditions of load and~~

~~environment normally encountered in swimming pool installations.~~

~~20.9. Motors shall be capable of operating the pump under full load with a voltage variation of at least 5% from nameplate rating. If the maximum service factor of the motor is exceeded (at full voltage), the manufacturer shall indicate this on the pump curve.~~

~~20.10. All motors shall have thermal overload protection, either built in or in the line starter, to provide locked rotor and running protection.~~

~~20.11. The motor frame shall contain adequate provisions for proper grounding.~~

~~20.12. All pumps used on public swimming pools shall meet the safety performance standards in all respects of the joint national swimming pool institute - national sanitation foundation standards covering such pumps.~~

~~Section 21. Overflow Standards~~

~~21.1. The term "overflow systems" encompasses perimeter type overflows, surface skimmers, and surface water collection systems of various design and manufacture.~~

~~21.2. An overflow system shall be provided on all public swimming pools.~~

~~21.3. The overflow system shall be designed and constructed so that the water level of the pool is maintained at the operating level of the rim or weir device.~~

~~21.4. Perimeter type overflow systems when used as the only overflow system on a pool shall extend around a minimum of 50% of the perimeter of the pool. Recirculating type rim overflow systems shall be capable of continuously removing 50% or more of the recirculated water through the filter system.~~

~~21.5. All perimeter overflow systems shall be connected to the circulation system with a system surge capacity of not less than one gallon for each square foot (41 liters) per square meter of pool surface.~~

~~21.6. The perimeter overflow system in combination with~~

~~the upper rim of the pool shall constitute a handhold, and is subject to the standards as shown in the design section of this standard. The hydraulic capacity of the perimeter overflow system shall be capable of handling 100% of the circulation flow.~~

~~21.7. Nothing in this section shall preclude the use of roll out or deck level type swimming pools, but in the case of competitive pools the ends of the pool must provide a visual barrier that can be seen by swimmers.~~

~~21.8. When surface skimmers are used as the sole overflow system, one surface skimmer shall be provided for each 800 square feet (74.3 m^2) or fraction thereof, of the pool surface area. When two or more skimmers are used in a pool they shall be located to maintain effective skimming action over the entire surface area of the pool.~~

~~21.9. Permanently installed surface skimmers shall comply in all respects with the joint national swimming pool institute - national sanitation foundation performance standards.~~

~~Section 22. Inlets and Outlets~~

~~22.1. Pool inlets and outlets shall be provided and arranged to produce a uniform circulation of water and the maintenance of uniform chlorine or equivalent disinfectant residual throughout the pool.~~

~~22.2. The number of inlets shall be based on either one inlet per 600 square feet (55.7 m^2) of pool area or one inlet per 15,000 gallons (56.780 liters) of pool capacity, whichever is greater.~~

~~22.3. At least one outlet shall be provided at the lowest point of the floor to completely drain the entire floor area. When the main outlets for pool pump suction are installed in the pool floor near one end, the spacing shall not be greater than 20 feet (6.1 m) on centers and an outlet shall be provided not more than 15" (4.57 m) from each side wall. The total velocity through grate openings shall not exceed 2' per second (61 cm/second). The opening area in the grates shall not be larger than one square inch (6.45 cm^2) and shall be of such design as to prevent physical entrapment of fingers, toes, etc.~~

~~22.4. Outlets, except skimmers, on pump suction shall be covered with suitable protective grates that cannot be removed except with tools.~~

~~22.5. An over-the-rim spout, if used, shall be located under a diving board, adjacent to a ladder, or otherwise properly shielded so as not to create a hazard. Its open end shall have no sharp edges and shall not protrude more than 2" (5.1 cm) beyond the edge of the pool.~~

~~22.6. Inlets from the circulation system shall be so designed so as not to constitute a projecting surface hazardous to the bather.~~

~~Section 23. Piping~~

~~23.1. Pool piping shall be sized to permit the rated flows for filtering and cleaning without exceeding the total~~

~~head developed by the pump at the rated flow.~~

~~23.2. The water velocity in the pool piping should not exceed ten feet (10') per second (3.05 m/second) for discharge piping, except for copper pipe where the velocity for piping should not exceed eight feet (8') per second (2.44 m/second). Suction velocity for all piping should not exceed six feet (6') per second (1.83 m/second). Where velocities exceed these rates, summary calculations should be provided to show that rated flows are possible with the pump and piping provided.~~

~~23.3. All piping around the pool shall be sloped for adequate drainage and supported at sufficiently close intervals so that sagging between supports will not trap water. Provisions shall be made for expansion contraction of pipes by means of swing joints or other means, as required.~~

Section 24. Waste Water Disposal

24.1. Overflow water should return to the filter system or may be discharged to a waste system approved by the director. Where perimeter overflow water discharges into a sanitary sewer, a suitable air gap of not less than 2" (5.0 cm) shall be provided which accomplishes a gravity drop into the sewer without direct mechanical connection.

24.2. In lieu of the air gap, as described above, and where this cannot be practicably provided, a relief manhole may be constructed in the perimeter overflow main waste line with a grated cover, the clear area of which shall be twice the area of the main waste piping, and this shall be established at a level such that the waste flow in the line will rise in the manhole and overflow at the surface of the ground not less than 2 inches (5.0 cm) below the level of the perimeter overflow lip.

24.3. The disposition of sanitary sewage from the bathhouse shall be into a sanitary sewer, a septic tank or other waste line which meets with the approval of the director.

24.4. Backwash water may be discharged into a sanitary sewer through an approved air gap or to an approved subsurface disposal system or by other means approved by the director.

Section 25. Water Supply

25.1. The water supply serving the pool shall meet the requirements of the West Virginia state health department for potable water except that the director may approve the use of water from natural sources, including saline water.

25.2. All portions of the potable water supply system serving the swimming pool and auxiliary facilities shall be protected against backflow.

25.3. Potable water introduced into the swimming pool, either directly or to the recirculation system, shall be supplied through an air gap (american national standards association A40.4-1942) or other approved means.

Section 26. Disinfectant and Chemical Feeders

~~26.1. A means of disinfecting the pool water shall be employed which provides a disinfecting residual in the pool water. Chlorine or chlorine compounds are most frequently used for this purpose but other bactericidal agents or apparatus may be acceptable if registered by the U. S. environmental protection agency (refer to chemical operational parameters, Appendix A) and approved in writing by the director.~~

~~26.2. Adequate and appropriate feeding and regulating equipment for introducing a disinfectant into the recirculating system shall be provided. The equipment as means of introducing approved disinfecting agents, shall be of sufficient capacity to maintain consistently a residual in the pool at all times equivalent to .6 to 3.0 ppm of free available chlorine, with a preferred range of 1.0 - 3.0 ppm free available chlorine. The DPD or other suitable free chlorine test method is required as a means of testing for the free chlorine~~

~~residual.~~

~~26.3. Feeding equipment shall be of enduring type which will permanently and precisely feed the required quantity of disinfecting agent to the pool water, and the disinfecting material used shall be subject to field testing procedures which are simple and accurate.~~

~~26.4. Where elemental chlorine is supplied, a water operated gas chlorinator will be used which controls and regulates the flow of the gas. This unit will provide an automatic shut off of gas when water pressure fails and will vent leakage to outside atmosphere.~~

~~26.5. Hypochlorinators or other adjustable output rate chemical feeding equipment shall conform to the joint national swimming pool institute - national sanitation foundation standards relating to adjustable output rate chemical feeding equipment and flow thru chemical feeding equipment for swimming pools and shall bear the seal of an approved testing laboratory. Capacities should be adequate to conform to the requirements of section 26.2.~~

~~26.6. Where gaseous chlorine equipment is provided below grade in a filter room or in any part of a building which provides housing: (a) The mechanical proportioning device and cylinders of chlorine shall be housed in a reasonably gas-tight, corrosion-resistant, and mechanically vented enclosure equipped with a venting window, (b) airtight ducts from the bottom of the enclosure to atmosphere in an unrestricted area and a motor driven exhaust fan capable of producing at least one air change per minute shall be provided, (c) automatic louvers of good design near the top of the enclosure for admitting fresh air are required, (d) electrical switches for the control of artificial lighting and ventilation shall be on the outside of the enclosure adjacent to the door, (e) the floor area of the enclosure shall be of adequate size to house the chlorinator, (f) gas mask approved by the bureau of mines for protection against chlorine gas shall be provided, mounted outside the chlorine compartment, (g) safety chains for holding cylinders upright in order to prevent accidental falling, and (h) it is highly recommended that a chlorine institute approved safety kit be stored outside or be near the room where chlorine cylinders are stored and used.~~

~~Section 27. Bathhouses~~

~~27.1. Adequate dressing and sanitary facilities shall be provided unless these facilities are provided in connection with the general development for other purposes and are of adequate capacity and number and in close proximity to the pool.~~

~~27.2. Dressing and sanitary facilities shall be provided with separations for each sex with no interconnection. The rooms shall be well-lighted, drained, ventilated, and of good construction, with impervious materials. They shall be developed and planned so that good sanitation can be maintained throughout the building at all times.~~

~~27.3. Partitions between portions of the dressing room area, screen partitions, shower, toilet, and dressing room booths shall be of durable material not subject to damage by water and shall be so designed that a water way is provided between partitions and floor to permit thorough cleaning of~~

~~the walls and floor areas with hoses and brooms.~~

~~27.4. Shower and dressing booths shall be provided in female dressing space and dressing booths shall be provided with curtains or other means of seclusion. This condition may be subject to variation for schools and other institutional use where a pool may be open only to one sex at a time.~~

~~27.5. The floors of the bathhouse shall be free of joints or openings and shall be continuous throughout the area with a slip-resistant surface which shall be relatively smooth to ensure complete cleaning. Floor drains shall be provided to ensure positive drainage of all part of the building with an adequate slope (not less than ¼" per foot (2.1 cm per meter) in the floor towards the drains.~~

~~27.6. An adequate number of 3/4" hose bibbs shall be provided for flushing down the dressing rooms and bathhouse interior.~~

~~27.7. Not less than one drinking fountain shall be provided available to bathers at the pool site.~~

~~27.8. Dressing room exits to pool shall be to the nonswimming area of the pool and at least 15 feet (4.57 m) shall be provided between the dressing room door and the pool edge.~~

~~27.9. Access to the pool for Class B pools shall be provided through the bathhouse or dressing room facilities if possible.~~

~~Section 28. Toilets and Showers~~

~~28.1. Minimum sanitary facilities shall be provided as follows. The minimum criteria for bathhouse facilities shall be based upon the anticipated maximum attendance of bathers. Facilities for either sex shall be based upon a ratio of 60% of the total number of bathers being male and 40% being female, excepting where pool is confined to use by one sex only, wherein 100% of plumbing facility requirements shall be provided for that sex.~~

~~28.2. One water closet combination, one lavatory and one urinal shall be presumed to be adequate for the first 100 male bathers. One additional water closet, lavatory and~~

~~urinal shall be provided for each additional 200 male bathers or major fraction thereof.~~

~~28.3. Two shower heads shall be provided for the first 100 males and one shower head shall be provided for each additional 50 male bathers.~~

~~28.4. A minimum of two water closet combinations shall be provided in each bathhouse building for the first 100 females. One additional water closet combination and lavatory shall be provided for each additional 100 female or fraction thereof. In Class "C" pools only one water closet combination is needed.~~

~~28.5. A minimum of two shower heads shall be provided, which shall be presumed to be adequate for the first 100 females and one shower shall be added for each 50 additional females.~~

28.6. Tempered water only will be provided at all shower heads. Water heater and thermostatic mixing valve shall be inaccessible to bathers and will be capable of providing 2 gpm (7.6 liters/per min.) of 90KEYBOARD()¼ water to each shower head.

28.7. Soap dispensers for providing either liquid or powdered soap shall be provided at each labatory and dispensers must be of all-metal or plastic type and no glass permitted in these units.

28.8. Stainless steel mirrors shall be provided over each lavatory. Toilet paper holders shall be provided at each water closet combination.

28.9. All fixtures shall be installed in accordance with local plumbing codes and shall be properly protected against back siphonage.

28.10. All fixtures should be so designed that they may be readily cleaned and that frequent cleaning and disinfecting will not cause damage.

Section 29. Visitor and Spectator Areas

29.1. There shall be absolute separation between the spaces used by visitors and spectators and those spaces used by bathers. Visitors and spectators in street clothes may be allowed within the perimeter enclosure if in a separate area segregated from the space used by the bathers.

29.2. Separate toilets should be provided for spectators.

Section 30. Food Service - All food service areas must be designed in accordance with West Virginia board of health regulation "food service establishment sanitation regulations".

Section 31. Instructions

31.1. Upon the completion of any swimming pool, the manager and his operators shall be given complete written and oral instructions by the builder as well as operational guidance of the pool, all equipment, and the maintenance of the swimming pool water.

~~31.2. Rules and regulations for bathers should be posted in a conspicuous place to inform patrons of the pool.~~

~~31.3. The bathing load limit must be observed by the management. The maximum number of bathers to be allowed in the pool at one time will depend on a number of factors, such as the type of pool, indoor or outdoor, location, surface area, operating characteristics of the water, purification system, quality of the pool water, etc., the significant factors being the pool area and the sanitary and physical condition of the pool water. (Refer to Sections 5.3 thru 5.5).~~