

# **RHODE ISLAND**

## **STATE BUILDING CODE**

### **Plumbing Code Regulation SBC-3 APRIL 1, 1998**

**Re-enactment of SBC-3  
Dated May 1, 1997  
Replaces Regulation SBC-3-92  
Dated January 1, 1992**



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**

**Department of Administration  
BUILDING CODE STANDARDS COMMITTEE  
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**7<sup>th</sup> EDITION**

## **STATEMENT OF NEED**

**Pursuant to the State Building Code Chapter 23, Title 27.3, the Building Code Standards Committee has promulgated Regulation SBC-3, as amended, dated April 1, 1998. In accordance with section 23-27.3-109.1 paragraphs 1-4 of the Code, the Committee has the authority to adopt appropriate rules and regulations when necessary to maintain the State Building Code current with national model codes and standards.**

STATE OF RHODE ISLAND  
BUILDING CODE STANDARDS COMMITTEE

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**PLUMBING CODE  
REGULATION SBC-3  
April 1, 1998**

**The Building Code Standards Committee in accordance with the rule making authority of Title 23, Chapter 27.3, Section 109.1, Paragraph 1 through 4 inclusive have formally adopted and promulgated the provisions of the International Plumbing Code, 1995 edition, as published by the International Code Council (ICC) as the State Code for the design and installation of all plumbing systems, with the amendments thereto hereinafter set forth to the Articles and Sections of said code. Existing State Code amendments shall remain in effect unless modified and shall be renumbered by the Commissioner for coordination purposes only.**

# **CHAPTER 1**

## **ADMINISTRATION**

### **ADMINISTRATION AND ENFORCEMENT**

**The following Rhode Island amendments are added to the Sections of Article 1:**

**Delete sections P-100.1 to P-109.7, except retain the provisions of Sections P-102.2, P-102.3, P-102.4, P-106.2 and P-107.1 through P-107.7 in Chapter 1.**

## **Chapter 2**

### **DEFINITIONS**

**The following Rhode Island amendment is made to the  
Sections of Chapter 2:**

**Delete Article 2, Definitions, Rhode Island Blue Page  
amendments:**

## **CHAPTER 3 GENERAL REGULATIONS**

### **General Regulations**

The following Rhode Island amendment is made to the Sections of Chapter 3:

Add Section 301.4.1 as follows, to the Rhode Island State Plumbing Code.

**301.4.1 Prohibited Connections:** The use of potable water as an open loop, single pass heat exchange fluid for the refrigeration cycle of HVAC equipment is prohibited.

Retain Rhode Island Blue Page Section 303.2 and renumber it as 301.7.

**301.7 Public Systems Available:** A public water system and/or public sewer shall be deemed available to premises used for human occupancy when so determined by the rules and regulations of either the state, regional or local authority having jurisdiction.

Retain Rhode Island Blue Page Section P-303.3, Water Meter and renumber it as 301.8.

**301.8 Water Meter:** Every building connected to a public metered water supply shall have a water meter installed before a Certificate of Occupancy is issued.

Retain Rhode Island Blue Page Section P-308.3, Freezing, and delete I.P.C. Section 306.6. Renumber section as follows:

**306.6 Freezing:** Water service shall be installed below recorded frost penetration but not less than four feet six inches below grade. In climates with freezing temperatures, plumbing piping in exterior building walls or areas subjected to freezing temperatures shall be protected against freezing by insulation or heat or both.

Retain Rhode Island Blue Page section P-308.4, Sewer Depth, and delete I.P.C. section 306.6.1. Renumber section as follows:

**306.1 Sewer Depth:** Building sewers that connect to private sewage disposal systems shall meet the requirements of the Department of Environmental Management's Regulations for Individual Sewage Disposal Systems. Public building sewers shall be a minimum of 36 inches below grade.

Amend I.P.C. Section 309.6, Sway Bracing, as follows:

**309.6 Sway Bracing:** Rigid support sway bracing shall be provided at changes in direction greater than 45 degrees (0.79 rad) for pipe sizes 4 inches (102 mm) and larger, except for Residential R-3 and R-4 use groups.

Amend I.P.C. Section 309.7, Anchorage, as follows:

**309.7 Anchorage:** Anchorage shall be provided to restrain drainage piping from axial movement except for Residential R-3 and R-4 use groups.



## **CHAPTER 4 FIXTURES**

The following Rhode Island amendments are made to the Sections of Chapter 4.

Amend Rhode Island Blue Page Section P-1202.5, Customer Facilities, to read as follows:

**405.5 Customer Facilities:** Customers and patrons shall be provided with public toilet facilities in restaurants, nightclubs, places of public assembly and mercantile buildings. In shopping centers and shopping malls, required facilities shall be based on total square footage and facilities shall be installed in individual stores or in a central toilet area if the distance of travel from the main entrance of any store does not exceed 500 feet (152mm) or more than one flight of stairs.

Exceptions:

1. Customer facilities are not required in buildings with a customer occupant load of less than 150 which do not serve food or beverage.
2. Customer facilities are not required in facilities which serve food or beverage with a customer occupant load of 30 or less.

Delete Rhode Island Blue Page Section P-1203.1, Toilet Room, without substitution.

Delete I.P.C. Section 405, Accessible Plumbing Fixtures and utilize the provisions of Rhode Island Regulations SBC-14, 15 and 16.

Amend Section 425.4, Shower Valves, as follows:

**425.4 Shower Valves:** Shower and tub-shower combination valves shall be balanced pressure, thermostatic or combination mixing valves which conform to the requirements of ASSE 1016 or CSA CAN/CSA-B125. Such valves shall be equipped with handle position stops that are field adjusted in accordance with the manufacturer's instructions to a maximum hot water setting of 120 degrees F (49 degrees C).

Exception: By special exception of the Plumbing Inspector, balanced pressure, thermostatic or combination mixing valves shall not be required for showers and tub-shower combinations in one or two family dwellings and multiple showers supplied with a single tempered water supply provided the hot water supply for such showers is controlled by an approved master thermostatic mixing valve adjusted in accordance with the manufacturer's instructions to a maximum hot water setting of 120 degrees F (49 degrees C).

The Rhode Island amendment to section P-403.4, Existing building, sewers and drains, is deleted without substitution:

Delete Rhode Island section P-1203.2, Water Closet Compartment, without substitution:

Delete Rhode Island section P-1203.3, water closets, without substitution.

Delete Rhode Island Section P-1203.4, Lavatory, without substitution:

Delete Rhode Island Section P-1203.5, Drinking Fountain, without substitution:

Delete Rhode Island Section P-1206.4 without substitution:

Delete Rhode Island Blue Page P-1216.7 without substitution:

## **CHAPTER 5 WATER HEATERS**

The following Rhode Island amendments are made to the Sections of Chapter 5.

Delete I.P.C. Section 501.6, without substitution:

Delete I.P.C. Section 505.8, Required Pan, substitute Rhode Island Blue Page amendment, P-1506.4.3, Safe Waste, as renumbered:

**505.8 Safe Waste:** A safe waste shall be installed under a water heater, 6 gallon capacity or larger, that is elevated above the basement where there is occupancy below and shall be piped indirectly to a proper open fixture or stand pipe properly trapped and vented. The safe waste pan shall be at least 2" deep and shall have a 2" minimum clearance around the tank. The relief valve shall not discharge into the pan but shall discharge into the drain of the safe waste. Minimum size waste pipe shall be 1" for a distance of 1' where the size shall increase to a minimum size of 1 ¼" to accept the relief valve discharge. Where floor drains and other acceptable points of indirect discharge are installed no safe waste shall be required.

Delete Rhode Island amendments P-508.4, Soldered Joints, and P-509.5, Soldered Joints, without substitution.

## **CHAPTER 6 WATER SUPPLY AND DISTRIBUTION**

The following Rhode Island amendments are made to the Sections of Chapter 6:

Amend I.P.C. Section 605.4, as follows:

**605.4 Maximum flow and water consumption:** The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table 605.4.

REVISE SECTION 608.2.1, PIPING INSULATION, OF THE INTERNATIONAL PLUMBING CODE TO READ AS FOLLOWS:

**608.2.1 Piping Insulation:** Piping in required return circulation shall be in accordance with the Energy Code listed in Chapter 14, entitled REFERENCED STANDARDS.

**608.2.1 Piping Insulation:** Piping is required return circulation systems shall be insulated.

ADD SECTION 608.5, PIPE INSULATION, TO THE INTERNATIONAL PLUMBING CODE AS FOLLOWS:

**608.5 Pipe Insulation:** Hot water piping insulation shall be in accordance with the Energy Code listed in Chapter 14, entitled REFERENCED STANDARDS.

Amend Section 609.9 of the Rhode Island State Plumbing Code, to read as follows:

**609.9 Reutilization Prohibited:** Water utilized for non-potable processes shall not be returned to the potable water system. Such water shall be discharged to the drainage system through an air gap or shall be utilized for non-potable purposes.

The following Rhode Island amendment is added to the Sections of Chapter 6:

Replace I.P.C. Table 609.16.1 with Rhode Island Blue Page amendments P-1604.2 and renumber as follows:

**Table 609.16.1**  
**DISTANCE FROM SOURCES OF CONTAMINATION TO**  
**PRIVATE WATER SUPPLIES AND PUMP SUCTION LINES**

Source of Contamination	Distance (feet) b
Sewer	50
Septic Tank	50
Subsurface Pits	50
Fixture	100
Sewer of Cast Iron (leaded or mechanical joints or approved plastic)	10
Subsurface Pits	100c
Seepage Pits	100
Cesspools	100
Barnyard	100
Farm Silo	25
Pump house floor drain of cast iron draining to ground surface	2

Note a. 1 foot = 304.8mm

Note b. These distances constitute minimum separation and shall be increased in areas of creviced rock or limestone, or where the direction of the ground water is from sources of contamination toward the well. These distances shall also be increased as required by the Rhode Island Department of Environmental Management, Division of Land Resources (SDS Regulations or local zoning ordinances).

Note c. When approved by the authority having jurisdiction and under special soil conditions, this distance may be reduced. However, a minimum separation of not less than 50 feet shall be maintained.

Delete Rhode Island Blue Page Section P-503.8, Maximum Flow, without substitution.

## **CHAPTER 7 SANITARY DRAINAGE**

The following Rhode Island amendments are made to the Sections of Chapter 7:

Amend I.P.C. Section, Scope, as follows:

### **SECTION 701 GENERAL**

**701.1 Scope:** The provisions of this chapter shall govern the materials, design construction, and installation of sanitary drainage systems in accordance with the authority having jurisdiction.

Delete I.P.C. Section 701.4, Sewage Backflow, without substitution:

Amend I.P.C. Section 701.4.1, Location of Backwater Valves, as follows:

**701.4.1 Location of Backwater Valves:** Backwater valves shall be installed so that access is provided to the working parts for service and repair in accordance with the authority having jurisdiction.

Amend I.P.C. Section 701.6, as follows:

**701.6 Damage to drainage system or public sewer:** Wastes detrimental to the public sewer system or detrimental to the functioning of the sewage-treatment plant shall be treated and disposed of in accordance with Section 1004 as directed by the code official authority having jurisdiction.

## **CHAPTER 8**

### **INDIRECT/SPECIAL WASTE**

The following Rhode Island amendment is added to the Sections of Chapter 8:

Amend Rhode Island Section P-702, Special Wastes, by renumbering as following:

**804.4 Reverse Osmosis Waste:** Discharge piping from reverse osmosis water shall be with PB or PE pipe and fittings in accordance with the manufacturers' installation standards.

## CHAPTER 9 VENTS

The following Rhode Island amendments are made to the Sections of Chapter 9:

Delete I.P.C. Table 911.4 and substitute Rhode Island Table P-913.4, amended to read as follows:

**TABLE 911.4  
WASTE STACK VENT SIZE**

Stack Size (inches)	Total Discharge into one branch interval (dfu)	Total Discharge for stack (dfu)
2	2	4
2 ½	NL	8
3	NL	24
4	NL	50
5	NL	75
6	NL	100

**Note a,** NL means no limit

Amend I.P.C. Section 905.2, Frost Closure, to read as follows:

Change Rhode Island amendment P-914.1, General to read:

**905.2 General:** Each vent extension through a roof shall have a minimum size of 2". Where this results in an increase in size of the vent extension, the change in diameter shall be made inside the building a minimum of 6" below the roof with an approved fitting.



## **CHAPTER 10**

### **TRAPS**

The following Rhode Island amendments are made to the Sections of Chapter 10:

Amend I.P.C. Section 1004.1, Interceptors Required, as follows:

#### **SECTION 1004**

##### **INTERCEPTORS AND SEPARATORS**

**1004.1 Interceptors Required:** Interceptors for oil, grease, sand and other substances harmful or hazardous to the building drainage system, the public sewer or sewage treatment plant or processes shall be provided as required in this chapter. Where food waste grinders connect to grease interceptors, the grease interceptor shall be sized and rated for the discharge of the food waste grinder. All interceptors shall be installed in accordance with the authority having jurisdiction.

Amend I.P.C. Section 1004.6, Separators Required, as follows:

**1004.6 Separators Required:** At repair garages; gasoline stations with grease racks, grease pits or work racks; and at factories where oily and flammable liquid wastes are produced, separators shall be installed into which all oil-bearing, grease-bearing or flammable wastes shall be discharged before emptying in the building drainage system or other point of disposal. All separators shall be installed in accordance with the authority having jurisdiction.

## CHAPTER 11 STORM DRAINAGE

The following Rhode Island amendments are made to the Sections of Chapter 11:

Amend Rhode Island Table 803.1 by renumbering to 1107.1 and delete I.P.C.  
Table 1107.1.

**TABLE 1107.1  
SIZE OF HORIZONTAL BUILDING STORM DRAINS  
AND BUILDING STORM SEWERS**

<b>Maximum projected area in square feet<sup>b</sup> gallons per minute flow for various slopes</b>						
Diameter of drain inches	1/8 in. per ft. slope		1/4 in. per ft. slope		1/2 in. per ft. slope	
	sq. ft. <sup>a</sup>	gpm	sq.ft. <sup>a</sup>	gpm	sq. ft. <sup>a</sup>	gpm
3	1265	34	1785	48	2529	68
4	2892	78	4077	110	5785	156
5	5138	139	7262	195	10277	278
6	8231	222	11615	314	16462	445
8	12692	478	25077	677	35385	956
10	31846	800	44923	1214	63692	1721
12	51231	1384	72308	1953	102462	2768
15	91538	2473	129231	3491	183077	4946

Note a: Table 1706.1 based upon Rhode Island rainfall at 2.6 inches per hour.

Note b: 1 inch per foot = 0.0833mm/m; 1 sq. ft. = 0.993m<sup>2</sup> : 1 gallon per minute = 3.781/m.

Amend Rhode Island Blue Page Table P-803.3 by renumbering to 1107.3

**TABLE P-1107.3  
SIZE OF SEMICIRCULAR ROOF GUTTERS**

<b>Maximum of projected roof area for gutters of various slopes<sup>c</sup></b>								
Diameter of gutter <sup>b</sup> inches	1/16 in. per ft. slope		1/8 in. per ft. slope		1/4 in. per ft. slope		1/2 in. per ft. slope	
	sq.ft. <sup>a</sup>	gpm	sq.ft. <sup>a</sup>	gpm	sq.ft. <sup>a</sup>	gpm	sq.ft. <sup>a</sup>	gpm
3	680	262	960	369	1360	523	1920	738
4	1440	554	2040	785	2880	1108	4000	1569
5	2500	962	3520	1354	5000	1923	7000	2723
6	3810	1477	5440	2092	7000	2954	11000	4262
7	5520	2123	7000	3000	11010	4246	15600	6000
8	7960	3062	11200	4308	14400	5538	22400	8615
10	14000	5538	20400	7845	28800	11077	40000	15385

Note a: Table 1107.3 is based upon Rhode Island rainfall at 2.6 inches per hour.

Note b: 1 inch per foot = 0.0833mm/m: 1 sq.ft. = 0.993m<sup>2</sup> :  
1 gallon per minute = 3.78 l/m.

Delete I.P.C. Section 1108, Secondary (Emergency) Roof Drains, without substitution.

## **APPENDIX B**

Add the inch/hour rainfall amount of 2.6 to Appendix B, as follows and provide blue page 100a.

### **Rhode Island:**

Providence.....2.6

## STATE BUILDING CODE REGULATION – 1998

The following list includes all regulations promulgated by the State Building Code Standards Committee.  
All regulations are available for a fee at the State Building Commission.

1.	Building Code.....	SBC-1
2.	One and Two Dwelling Family Dwelling Code.....	.SBC-2
3.	Plumbing Code.....	SBC-3
4.	Mechanical Code.....	SBC-4
5.	Electrical Code.....	SBC-5
6.	Manufactured Buildings and Building Components....	SBC-6
7.	ANSI A225.1 Manufactured Home Installation Standard.....	SBC-7
8.	State Energy Code.....	SBC-8
9.	Enforcement and Implementation Procedures for Projects Under the Jurisdiction of the State of Rhode Island.....	SBC-9
10.	Code Interpretations.....	SBC-10
11.	Certification of Building Officials, Building, Electrical, Plumbing and Mechanical Inspectors.....	SBC-11
12.	New Materials and Methods of Construction.....	SBC-12
13.	State Building Code For Existing Schools.....	SBC-13
14.	Accessibility for Individuals with Disabilities for Residential Use Groups R-2 and R-3.....	SBC-14
15.	Accessibility for Individuals with Disabilities in State and Local Government Facilities.....	SBC-15
16.	Accessibility for Individuals with Disabilities.....	SBC-16
17.	Public Buildings Accessibility Meeting Standards.....	SBC-17
18.	Native Lumber.....	SBC-18