PREFACE

Introduction

The Virginia Uniform Statewide Building Code (USBC) is a state regulation promulgated by the Virginia Board of Housing and Community Development, a Governor-appointed board, for the purpose of establishing minimum regulations to govern the construction and maintenance of buildings and structures.

The provisions of the USBC are based on nationally recognized model building and fire codes published by the International Code Council, Inc. The model codes are made part of the USBC through a regulatory process known as incorporation by reference. The USBC also contains administrative provisions governing the use of the model codes and establishing requirements for the enforcement of the code by the local building departments and other code enforcement agencies.

In keeping with the designations of the USBC used previously, since the 2015 editions of the International Codes are incorporated by reference into this version of the USBC, it is known as the 2015 edition of the USBC.

Arrangement

The USBC is part of the Virginia Administrative Code (VAC), the official compilation of state regulations published under the authority and guidance of the Virginia Code Commission. Due to the difference in the section numbering system between the VAC and the model codes incorporated by reference into the USBC, the USBC utilizes a dual section numbering system. In the USBC, the VAC section numbers are listed first, followed by a section number matching the model code system. In this printing of the USBC, the VAC section numbers are omitted and only the model code numbering system is utilized. The version of the USBC containing both the VAC section numbers and the model code numbering is available from the Virginia Department of Housing and Community Development (DHCD) and may also be accessed through the website of the Virginia Code Commission or by subscription to the VAC.

Overview

The USBC is divided into three stand-alone parts. Part I contains regulations specific to the construction of new buildings and structures and is known as the Virginia Construction Code. Part II contains regulations specific to the rehabilitation of existing buildings, including repair, alterations, additions and change of occupancy in existing buildings and structures, and is known as the Virginia Existing Building Code. Part III of the USBC contains the regulations for the maintenance of existing structures which is enforced at the option of the local governments. It is known as the Virginia Maintenance Code.

Codes Purchased from ICC

The 2015 edition of the USBC is being made available in pamphlet form as in past editions of the USBC. In addition to the pamphlet form of the USBC published by DHCD, the International Code Council (ICC) publishes versions of the Virginia Construction Code, Virginia Existing Building Code, Virginia Maintenance Code and a series of Virginia-specific trade codes. In the ICC published versions, marginal markings are provided to distinguish between text which is part of the International Codes and text which is part of the state regulations. Double vertical lines in the margins within the body of the codes indicate state amendments to the International Codes. As in the standard print-
PREFACE

ings of the International Codes, a single vertical line in the margins within the body of the code indicates a technical change from the previous edition of the International Codes. Deletions from the previous editions of the International Codes are indicated in the form of an arrow (↑) in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.

Technical Assistance

The local building departments and enforcing agencies may be contacted for further information concerning the USBC. Contact information for DHCD is below.

DHCD, Division of Building and Fire Regulation
State Building Codes Office
600 East Main Street, Suite 300
Richmond, Virginia 23219
Phone: (804) 371-7150—Email: sbco@dhcd.virginia.gov
Website: www.dhcd.virginia.gov
TABLE OF CONTENTS

CHAPTER 1 ADMINISTRATION ............. 1-1
Section
101 General .................................... 1-1
102 Purpose and Scope ....................... 1-1
103 Application of Code ...................... 1-1
104 Enforcement, Generally ................. 1-3
105 Local Building Department .............. 1-3
106 Powers and Duties of the Building Official . 1-4
107 Fees ....................................... 1-5
108 Application for Permit .................... 1-5
109 Construction Documents ................. 1-7
110 Permits .................................... 1-8
111 RDP Services ............................... 1-9
112 Workmanship, Materials and Equipment .. 1-9
113 Inspections ................................ 1-12
114 Stop Work Orders ........................... 1-13
115 Violations .................................. 1-13
116 Certificates of Occupancy ............... 1-14
117 Temporary and Moved Buildings and Structures; Demolition . 1-15
118 Unsafe Buildings or Structures .......... 1-15
119 Appeals ................................... 1-16

CHAPTER 2 DEFINITIONS ................. 2-1
Section
201 General .................................... 2-1
202 General Definitions ........................ 2-1

CHAPTER 3 GENERAL REGULATIONS ...... 3-1
Section
301 General .................................... 3-1
302 Structural Safety ........................... 3-2
303 Appliance Location ........................ 3-3
304 Combustion, Ventilation and Dilution Air . 3-3
305 Installation .................................. 3-6
306 Access and Service Space ............... 3-7
307 Condensate Disposal ...................... 3-9
308 Clearance Reduction ...................... 3-10
309 Electrical .................................. 3-12
310 Electrical Bonding ......................... 3-12

CHAPTER 4 GAS PIPING INSTALLATIONS ...... 4-1
Section
401 General .................................... 4-1
402 Pipe Sizing .................................. 4-1
403 Piping Materials ............................. 4-39
404 Piping System Installation ............... 4-41
405 Piping Bends and Changes In Direction . 4-43
406 Inspection, Testing and Purging .......... 4-44
407 Piping Support ............................... 4-46
408 Drips and Sloped Piping ................... 4-46
409 Shutoff Valves ............................... 4-46
410 Flow Controls ............................... 4-47
411 Appliance and Manufactured Home Connections . 4-48
412 Liquefied Petroleum Gas Motor Vehicle Fuel-dispensing Facilities . 4-49
413 Compressed Natural Gas Motor Vehicle Fuel-dispensing Facilities . 4-50
414 Supplemental And Standby Gas Supply . 4-52
415 Piping Support Intervals .................... 4-52
416 Overpressure Protection Devices .......... 4-52

CHAPTER 5 CHIMNEYS AND VENTS .......... 5-1
Section
501 General .................................... 5-1
502 Vents ....................................... 5-2
503 Venting Of Appliances ..................... 5-3
504 Sizing of Category I Appliance Venting Systems ......................... 5-12
505 Direct Vent, Integral Vent, Mechanical Vent and Ventilation/exhaust Hood Venting .......... 5-16
506 Factory-built Chimneys .................... 5-16

CHAPTER 6 SPECIFIC APPLIANCES .......... 6-1
Section
601 General .................................... 6-1
602 Decorative Appliances for Installation In Fireplaces ......................... 6-1
603 Log Lighters ............................... 6-1
604 Vented Gas Fireplaces (Decorative Appliances) ......................... 6-1
TABLE OF CONTENTS

| 605 | Vented Gas Fireplace Heaters | 6-1 |
| 606 | Incinerators and Crematories | 6-1 |
| 607 | Commercial-industrial Incinerators | 6-1 |
| 608 | Vented Wall Furnaces | 6-1 |
| 609 | Floor Furnaces | 6-2 |
| 610 | Duct Furnaces | 6-2 |
| 611 | Nonrecirculating Direct-fired Industrial Air Heaters | 6-2 |
| 612 | Recirculating Direct-fired Industrial Air Heaters | 6-3 |
| 613 | Clothes Dryer | 6-3 |
| 614 | Clothes Dryer Exhaust | 6-3 |
| 615 | Sauna Heaters | 6-5 |
| 616 | Engine and Gas Turbine-powered Equipment | 6-5 |
| 617 | Pool and Spa Heaters | 6-6 |
| 618 | Forced-air Warm-air Furnaces | 6-6 |
| 619 | Conversion Burners | 6-7 |
| 620 | Unit Heaters | 6-7 |
| 621 | Unvented Room Heaters | 6-7 |
| 622 | Vented Room Heaters | 6-7 |
| 623 | Cooking Appliances | 6-7 |
| 624 | Water Heaters | 6-8 |
| 625 | Refrigerators | 6-8 |
| 626 | Gas-fired Toilets | 6-8 |
| 627 | Air-conditioning Appliances | 6-8 |
| 628 | Illuminating Appliances | 6-9 |
| 629 | Small Ceramic Kilns | 6-9 |
| 630 | Infrared Radiant Heaters | 6-10 |
| 631 | Boilers | 6-10 |
| 632 | Equipment Installed In Existing Unlisted Boilers | 6-10 |
| 633 | Stationary Fuel-cell Power Systems | 6-10 |
| 634 | Chimney Damper Opening Area | 6-10 |
| 635 | Gaseous Hydrogen Systems | 6-10 |
| 636 | Outdoor Decorative Appliances | 6-10 |

CHAPTER 7 GASEOUS HYDROGEN SYSTEMS 7-1

Section
701 | General | 7-1 |
702 | General Definitions | 7-1 |
703 | General Requirements | 7-1 |
704 | Piping, Use and Handling | 7-2 |
705 | Testing of Hydrogen Piping Systems | 7-3 |
706 | Location of Gaseous Hydrogen Systems | 7-4 |
707 | Operation and Maintenance of Gaseous Hydrogen Systems | 7-5 |
708 | Design of Liquefied Hydrogen Systems Associated with Hydrogen Vaporization Operations | 7-5 |

CHAPTER 8 REFERENCED STANDARDS 8-1

APPENDIX A SIZING AND CAPACITIES OF GAS PIPING A-1

APPENDIX B SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES AND APPLIANCES LISTED FOR USE WITH TYPE B VENTS B-1

APPENDIX C EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS C-1

APPENDIX D RECOMMENDED PROCEDURE FOR SAFETY INSPECTION OF AN EXISTING APPLIANCE INSTALLATION D-1

INDEX INDEX-1