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## NFPA® 1

## **Fire Code**

## 2021 Edition

This edition of NFPA 1, *Fire Code*, was prepared by the Technical Committee on Fire Code and acted on by the NFPA membership during the 2020 NFPA Technical Meeting held June 8–29. It was issued by the Standards Council on August 11, 2020, with an effective date of August 31, 2020, and supersedes all previous editions.

This document has been amended by one or more Tentative Interim Amendments (TIAs) and/or Errata. See "Codes & Standards" at www.nfpa.org for more information.

This edition of NFPA 1 was approved as an American National Standard on August 31, 2020.

### **Origin and Development of NFPA 1**

This *Code* was originally developed as a result of the requests of many members of the National Fire Protection Association for a document covering all aspects of fire protection and prevention that used the other developed NFPA codes and standards. NFPA staff initiated this work in 1971 upon a directive from the NFPA Board of Directors. The original code was written around a format that served as a guide for the development of a local fire prevention code. Prerogatives of local officials were excluded from the main text of the document but were included within appendices as guidance for exercising desired prerogatives.

In the late 1980s, the Fire Marshals Association of North America (now the International Fire Marshals Association [IFMA]) undertook the task of developing a code that was more self-contained, adding administrative sections and extracting heavily from other NFPA codes and standards. The draft was submitted to the Fire Prevention Code Committee. The committee examined changes in the built environment as it is affected by fire and incorporated significant portions of the *Life Safety Code*<sup>®</sup>. A special task group on hazardous materials examined technological changes in the handling, storage, and use of flammable and combustible materials. Chapters extracting hazardous material requirements placed a greater emphasis on protection of life and property from chemical products made and used in the environment. A major rewrite resulted in the 1992 edition of the *Fire Prevention Code*.

The 1997 edition updated the text extracted from other NFPA codes and standards and added compliance with additional NFPA codes and standards as part of the requirements of NFPA 1.

The 2000 edition of NFPA 1 was a complete revision that updated the text extracted from other NFPA codes and standards. Additional direct references from NFPA codes and standards that are essential to a code official's use of the document were added. The committee also added a new section on performance-based design as a tool for code officials and design professionals. NFPA 1 was restructured to be more functional with respect to administration, code enforcement, and regulatory adoption processes.

The 2003 edition of NFPA 1, Uniform Fire Code<sup>TM</sup>, was a complete revision. It incorporated provisions from the Western Fire Chiefs, Uniform Fire Code<sup>TM</sup>, under a partnership between NFPA and Western Fire Chiefs, while it updated and expanded the provisions extracted from other key NFPA codes and standards. To emphasize the partnership, the document was renamed NFPA 1, Uniform Fire Code<sup>TM</sup>. The Uniform Fire Code is a trademark of the Western Fire Chiefs Association. NFPA 1, Uniform Fire Code<sup>TM</sup>, was restructured into parts to be more compatible with the regulatory adoption procedures, including administration and code enforcement, occupancies, processes, equipment, and hazardous materials provisions. The Committee included a newly expanded chapter on performance-based design as an enhanced tool for code officials and design professionals. Additional extracts and references from NFPA codes and standards that are essential to a code official's use of the document were added, bringing the number of referenced NFPA codes and standards to over 125. Additional chapters on hazardous materials were included that incorporate the provisions covered in the Uniform Fire Code<sup>TM</sup>.

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The 2006 edition of NFPA 1, *Uniform Fire Code*, was a complete revision of the code that incorporated the provisions from NFPA 230, *Standard for the Fire Protection of Storage*. The Technical Committee on Uniform Fire Code had been given responsibility for NFPA 230 by the NFPA Standards Council, so they incorporated the requirements into NFPA 1 rather than maintain a separate standard.

The 2006 edition of NFPA 1 also included new chapters on classification of occupancy, motion picture studios, outdoor tire storage, and general storage, along with other extracted provisions updated and expanded the from other key NFPA codes and standards that were essential to a code official's use of the document. The number of NFPA codes and standards referenced in this edition was 117.

With the 2009 edition of NFPA 1, the title of the document was changed from *Uniform Fire Code* to *Fire Code*. The revision updated all the extracted provisions from the 117 codes and standards that were included as mandatory reference publications in the 2006 edition. The revisions also included an expansion of Section 12.5 on interior finish to contain extracted provisions from NFPA *101*; an expansion of Section 12.6 on furnishings, contents, decorations, and treated fabrics to contain extracted provisions from NFPA *101*; a new Section 18.4, which moved fire flow requirements for buildings from Annex H; a new Section 32.5 for regulating locations for motion picture and television production studios, soundstages, and approved production facilities with extracted provisions from NFPA 140; and new Sections 40.3 through 40.7 on combustible dust explosion protection and fire prevention with extracted provisions from NFPA 654. Additional information on hazardous materials classifications was added to Annex B. This revision also added three annexes to the 2009 edition, including Annex O, In-Building Public Safety Radio Enhancement Systems; Annex P, Fire Department Service Delivery Concurrency Evaluation; and Annex Q, Fire Fighter Safety Building Marking System. The number of NFPA codes and standards referenced in this edition was 119.

Six annexes published in the 2006 edition were deleted from the 2009 edition, including Annex E, Model Citation Program; Annex F, Model Fees and Charges Program; Annex H, Fire Flow Requirements for Buildings; Annex J, Protection of Outdoor Storage; Annex M, Recommendations for Fighting Rubber Tire Fires in Sprinklered Buildings; and Annex N, AHJ Minimum Qualifications and Job Descriptions for Code Enforcement Personnel.

The 2012 edition of NFPA 1 included revisions to requirements for the fire code board of appeals (Section 1.10); certificates of fitness (Section 1.13); application limits of referenced standards (Section 2.1); emergency plan provisions (Section 10.9); prohibited storage of grills on balconies (10.11.6.2); new requirements for standardized elevator keys (11.3.6); new requirements for determination of fire department communication capabilities in buildings and two-way radio communication enhancement systems and deleted former Annex O (Section 11.10); medical gas and vacuum systems (Section 11.11); photovoltaic systems (Section 11.12); quality assurance of fire barrier penetrations and joints (12.3.2); and automatic sprinkler system requirement for new buildings three or more stories in height above grade (13.3.2.4). The 2012 edition also relocated former Annex P to the new Chapter 15, Fire Department Service Delivery Concurrency Evaluation; expanded Chapter 17, Wildland Urban Interface; added a new Chapter 36, Telecommunication Facilities and Information Technology Equipment; added a new Chapter 37, Fixed Guideway Transit and Passenger Rail Systems; added requirements for carbon monoxide detection in residential occupancies; relocated former Annex G to the new Chapter 54, Ozone Gas-Generating Equipment; extensively revised Chapter 60, Hazardous Materials, to extract from NFPA 400, Hazardous Materials Code, updated Chapter 66, Flammable and Combustible Liquids, per the current edition of NFPA 30, Flammable and Combustible Liquids Code, revised Chapter 67, Flammable Solids, to reference NFPA 400; revised Chapter 68, Highly Toxic and Toxic Solids and Liquids, to reference NFPA 400; completely revised Chapter 70, Oxidizer Solids and Liquids; revised Chapter 71, Pyrophoric Solids and Liquids, to reference NFPA 400; revised Chapter 72, Unstable (Reactive) Solids and Liquids, to reference NFPA 400; added a new Chapter 74, Ammonium Nitrate; added a new Chapter 75, Organic Peroxide Solids and Liquids; deleted Annex K, Explanation of Rack Storage Test Data and Procedures; deleted Annex L, Protection of Baled Cotton: History of Guidelines; and updated all extracts through the Annual 2011 revision cycle.

Key revisions for the 2015 edition of NFPA 1 included the prohibition of the use of sky lanterns (10.10.9.3); expanded application of photovoltaic system requirements to existing installations (Section 11.12); AHJ authorization to permit the removal of nonrequired, existing occupant-use hose (13.2.2.6); mandatory automatic sprinkler requirement for all new hotels without exception (13.3.2.15); enhanced attic protection for residential board and care occupancies with residential sprinkler systems (13.3.2.21.2.7); expanded occupancy-based fire alarm system provisions to correlate with NFPA *101* (Section 13.7); new occupant load factor for concentrated business use (14.8.1.2); completely revised fire hydrant location and distribution requirements and deleted former Annex E (Section 18.5); revisions to NFPA 654 extracts for dust explosion prevention (Chapter 40); new hot work permit limits from NFPA 51B (41.3.4.4); expanded existing commercial cooking equipment extinguishing system requirements from NFPA 96 (50.4.4.3.2); expanded ammonia refrigeration system maintenance and testing requirements (Section 53.3); updated hazardous materials maximum allowable quantities from NFPA 400 (60.4.2); new provisions for alcohol-based hand rub dispensers from NFPA *101* (60.5.2); revisions to aerosol product classifications from NFPA 30B (61.1.3); new requirements for cleaning and purging gas piping systems from NFPA 55 (63.3.1.19); new provisions for cooking oil storage tank systems in commercial kitchens from NFPA 30 (66.19.7); and updates of all extracts through the Annual 2014 revision cycle.

The 2018 edition of NFPA 1 included revisions to requirements for the application of referenced publications (1.4.1.1 and 2.1.1); references for the professional qualifications for fire inspectors, plan examiners, and fire marshals (1.7.2); new

minimum fire prevention inspection frequencies for existing occupancies (10.2.7); updates to premises identification (10.11.1); new and updated marking and access criteria for photovoltaic systems (Section 11.12); new provisions for rubberized asphalt melters (Section 16.7); listing requirements for electric gates used on fire department access roads (18.2.4.2.6); new provisions on the outside storage of biomass feedstock (31.3.10); new requirements for the outdoor storage of wood and wood composite pallets or listed pallets equivalent to wood (34.10.3); a new chapter on marijuana growing, processing, or extraction facilities (Chapter 38); a revision of Chapter 40 to replace extracts from NFPA 654 with extracted provisions from NFPA 652 (Chapter 40); complete reorganization of aircraft fuel servicing provisions in accordance with NFPA 407 (Section 42.10); a new section on mobile and temporary cooking operations (Section 50.7); extensive revisions of Chapter 52 on energy storage systems (Chapter 52); a new Chapter 55 on cleaning and purging of flammable gas piping systems with reference to NFPA 56 (Chapter 55); new provisions for insulated liquid carbon dioxide systems extracted from NFPA 55 (Section 63.9); a new annex on fire-fighter breathing-air replenishment systems (Annex E); and updates of all extracts through the Annual 2017 revision cycle.

Key revisions for the 2021 edition include updates to in-building emergency responder communication enhancement system requirements for better alignment with NFPA 1221 (Section 11.10); new signage requirements for nonsprinklered highrise buildings (13.3.2.25.2.4); new provisions for carbon dioxide enrichment equipment, indoor horticultural grow structures, and listing requirements for extraction equipment as they relate to cannabis facilities (Chapter 38); a new chapter on wastewater treatment and collection facilities (Chapter 39); a new chapter on additive manufacturing (3D printing, Chapter 46); energy storage system requirements extracted from NFPA 855 (Chapter 52); and updates of all extracts through the Annual 2020 revision cycle.

NFPA 1 reflects the technical knowledge of the committees responsible for the codes and standards referenced in, and from which text is extracted and incorporated into, the technical provisions of NFPA 1. This *Code* is intended to provide state, county, and local jurisdictions with an effective fire code.

# **Technical Committee on Fire Code** Kenneth E. Bush, Chair

Maryland State Fire Marshal's Office, MD [E] Anthony C. Apfelbeck, Altamonte Springs Building/Fire Safety Division, FL [E] Rep. NFPA Architects, Engineers, & Building Officials Section Carl F. Baldassarra, Wiss Janney Elstner Associates, Inc., IL [SE] H. "Butch" Browning, Jr., Louisiana Office of State Fire Marshal, LA [E] Rep. International Association of Fire Chiefs Scott M. Bryant, Fire & Risk Alliance LLC, MD [U] Rep. Edison Electric Institute Daniel Buuck, National Association of Home Builders (NAHB), DC [U]Rep. National Association of Home Builders Shane M. Clary, Bay Alarm Company, CA [M] Rep. Automatic Fire Alarm Association, Inc. Robert J. Davidson, Davidson Code Concepts, LLC, SC [SE] Richard L. Day, Michigan State Fire Marshal's Office, MI [E] F. Tom Fangmann, SunCoke Energy, IL [U] Rep. NFPA Industrial Fire Protection Section Andrew Fukuda, Honolulu Fire Department, HI [L] Rep. International Association of Fire Fighters Marvin Dwayne Garriss, Synergy Consortium Group, LLC, GA [M] Rep. Fire Equipment Manufacturers' Association Reinhard Hanselka, aidi, Inc., FL [SE] Sarina L. Hart, Koffel Associates, Inc., MD [SE]

Brent L. Christopherson, Missoula Rural Fire District, MT [E] (Voting Alt.)

Ty Darby, Tualatin Valley Fire & Rescue, OR [L] (Alt. to Andrew Fukuda)

Daniel P. Finnegan, Siemens Industry, Inc., IL [M] (Alt. to Shane M. Clary)

Donald G. Goosman, Wiss Janney Elstner Associates, Inc., IL [SE] (Alt. to Carl F. Baldassarra)

Edward M. Hawthorne, DFW Dynamics, TX [U] (Alt. to Brian L. Olsen)

Jeffrey M. Hugo, National Fire Sprinkler Association, Inc., MI [M] (Alt. to Terin Hopkins)

Bruce E. Johnson, UL LLC, NY [RT] (Alt. to Kelly T. Nicolello)

Roy C. Kimball, Brooks Equipment Company, Inc., NC [M] (Alt. to Marvin Dwayne Garriss)

Mohd Moeed Al Arim Al Qahatni, Dar Alkawashif Company (DACO), Saudi Arabia [SE]

Terin Hopkins, National Fire Sprinkler Association (NFSA), MD [M]Richard G. Kluge, Ericsson, NJ [U] Rep. Institute of Electrical & Electronics Engineers, Inc. Scott T. Laramee, AON Property Risk, CA [I] Philip Myers, Pemy Consulting LLC, CA [SE] Kelly T. Nicolello, UL LLC, TX [RT] Raymond C. O'Brocki, American Wood Council, MD [U] Brian L. Olsen, Phillips 66, OK [U] Rep. American Petroleum Institute Wade Palazini, JENSEN HUGHES, RI [SE] James S. Peterkin, TLC Engineering, PA [U] Rep. NFPA Health Care Section Richard Jay Roberts, Honeywell Fire Safety, IL [M] John A. Sharry, Lawrence Livermore National Laboratory, CA [U] Catherine L. Stashak, Office of the Illinois State Fire Marshal, IL [E] Steven Taulbee, Las Vegas Fire Department, NV [E] Kenneth Earl Tyree, Jr., West Virginia State Fire Marshal's Office, WV [E] Peter J. Willse, AXA XL/Global Asset Protection Services, LLC, CT 

### Alternates

James K. Lathrop, Koffel Associates, Inc., CT [SE] (Alt. to Sarina L. Hart) Cesar Lujan, National Association of Home Builders (NAHB), DC [U] (Alt. to Daniel Buuck) Joshua Joseph Miksch, Clark, Richardson, Biskup (CRB), MA [SE] (Alt. to Reinhard Hanselka) Joseph L. Navarra, Exelon Corporation/Pepco, DC [U] (Alt. to Scott M. Bryant) Michael O'Brian, Code Savvy Consultants, MI [SE] (Alt. to Robert J. Davidson) Dennis A. Richardson, American Wood Council, CA [U] (Alt. to Raymond C. O'Brocki) Jennifer Zaworski, JENSEN HUGHES, MD [SE] (Alt. to Wade Palazini)

#### Nonvoting

Ronald R. Farr, Plainwell Fire Department, MI [RT] (Member Emeritus)

### Valerie Ziavras, NFPA Staff Liaison

This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

**Committee Scope:** This Committee shall have primary responsibility for documents on a Fire Prevention Code that includes appropriate administrative provisions, to be used with the National Fire Codes for the installation, operation, and maintenance of buildings, structures, and premises for the purpose of providing safety to life and property from fire and explosion. This includes development of requirements for, and maintenance of, systems and equipment for fire control and extinguishment. Safety to life of occupants of buildings and structures is under the primary jurisdiction of the Committee on Safety to Life.

# Contents

Chapter	1 Administration	<b>1–</b> 11					
$1.\hat{1}$	Scope						
1.2	Purpose.	<b>1–</b> 11					
1.3	Application.						
1.4	Equivalencies, Alternatives, and Modifications						
1.5	Units	<b>1–</b> 12					
1.6	Enforcement	<b>1–</b> 13					
1.7	Authority	<b>1–</b> 13					
1.8	Duties and Powers of the Incident Commander	<b>1–</b> 14					
1.9	Liability	<b>1–</b> 15					
1.10	Fire Code Board of Appeals	<b>1–</b> 15					
1.11	Records and Reports	<b>1–</b> 16					
1.12	Permits and Approvals	<b>1</b> – 16					
1.13	Certificates of Fitness.	1-22					
1.14	Plan Review	<b>1–</b> 23					
1.15	Technical Assistance.	<b>1–</b> 23					
1.16	Notice of Violations and Penalties	<b>1–</b> 24					
1.17	Permit Fees	<b>1–</b> 24					
~							
Chapter	2 Referenced Publications	1-24					
2.1	General.	1-24					
2.2	NFPA Publications.	1-24					
2.3	Other Publications.	1-27					
2.4	References for Extracts in Mandatory Sections	1-31					
Chanter	3 Definitions	1_ 39					
8 1	General	1-32					
3.9	NFPA Official Definitions	1-32					
3.2	Ceneral Definitions	1-32					
3.3	Special Performance-Based Definitions	1-59					
5.4	Special renormance-based Demindons.	1-52					
Chapter	4 General Requirements	1-53					
4.1	Goals and Objectives.	1-53					
4.2	Assumptions.	<b>1–</b> 54					
4.3	Compliance Options.	<b>1–</b> 54					
4.4	Fundamental Requirements.	<b>1–</b> 54					
4.5	General Requirements.	1-55					
Chapter	5 Performance-Based Option	1–57					
5.1	General.	1–57					
5.2	Performance Criteria.	<b>1–</b> 58					
5.3	Retained Prescriptive Requirements	1–58					
5.4	Design Scenarios.	<b>1–</b> 59					
5.5	Evaluation of Proposed Designs.	<b>1–</b> 60					
5.6	Safety Factors	<b>1–</b> 60					
5.7	Documentation Requirements.	<b>1–</b> 60					
Classic		1 (1					
Chapter	6 Classification of Occupancy	1-01					
0.1	Classification of Occupancy.	1-01					
Chapter	7 Reserved	1-66					
F							
Chapter	8 Reserved	1-66					
~							
Chapter	9 Reserved	<b>I</b> - 66					
Chapter	10 General Safety Requirements	1- 66					
10.1	Fundamental Requirements	1- 66					
10.1	Owner/Occupant Responsibilities	1-66					
10.2	Owner/Occupant Responsibilities I– 6						
10.5	Uccupancy I-6						
10.4	Fire Drills						
10.5	Fire Drins I- b Penerting of Fires and Other Encourse size						
10.0	Tampering with Fire Safety Fauinment						
10.7	Fmergency Action Plans						
10.0	Smoking	1 69					
10.9	omoking.	1-00					

10.10	Open Flames, Candles, Open Fires, and	
	Incinerators	1-68
10.11	Fire Protection Markings	1-68
10.12	Seasonal and Vacant Buildings and Premises	<b>1–</b> 70
10.13	Combustible Vegetation.	<b>1–</b> 70
10.14	Special Outdoor Events, Carnivals, and Fairs	<b>1–</b> 70
10.15	Portable and Vehicle-Mounted Generators	1-73
10.16	Outside Storage.	<b>1–</b> 74
10.17	Parade Floats	<b>1–</b> 74
10.18	Powered Industrial Trucks.	<b>1–</b> 74
10.19	Storage of Combustible Materials.	<b>1–</b> 74
10.20	Indoor Play Structures	<b>1–</b> 74
Chaptor	11 Building Sorvices	1 75
11 1	Flectrical Fire Safety	1-75
11.1	Heating Ventilation and Air Conditioning	1-75
11.2	Flevators Escalators and Conveyors	1-76
11.5	Utilities	1-70
11.4	Heating Appliances	1 77
11.5	Waste Chutes Incinerators and Laundry	1-77
11.0	Chutes	1 70
11.7	Stationary Concrators and Standby Power	1-75
11.7	Sustems	1 70
11.0	Systems	1-79
11.0	Emergency Command Center	1-79
11.9	In Puilding Emorgongy Despender	1-79
11.10	Communication Enhancement Sustance	1 00
11 11	Modical Cas and Vacuum Systems.	1-00
11.11	Dh e terre lte i e Systeme	1-01
11.12	r notovoltaic Systems.	1-01
Chapter	12 Features of Fire Protection	1-84
12.1	General.	1-84
12.2	Construction.	1-84
12.3	Fire-Resistive Materials and Construction.	1-84
12.4	Fire Doors and Other Opening Protectives	1-84
12.5	Interior Finish.	1-87
12.6	Contents and Furnishings.	1-91
12.7	Fire Barriers.	1-93
12.8	Smoke Partitions.	1-98
12.9	Smoke Barriers.	1-99
Chapter	13 Fire Protection Systems	<b>1</b> – 101
13.1	General.	<b>1</b> – 101
13.2	Standpipe Systems.	<b>1</b> – 101
13.3	Automatic Sprinklers	<b>1</b> – 102
13.4	Fire Pumps	<b>1–</b> 115
13.5	Water Supply	<b>1–</b> 116
13.6	Portable Fire Extinguishers	<b>1</b> – 116
13.7	Detection, Alarm, and Communications Systems.	<b>1</b> – 125
13.8	Other Fire Protection Systems.	<b>1–</b> 156
13.9	Non-Listed Fire Protection or Suppression	
	Devices and Equipment	<b>1–</b> 156
Chanter	14 Means of Foress	1_156
14.1	Application	1-156
14.9	Figure Access Corridors	1-156
14.3	Fyite	1-156
14.4	Means of Egress Reliability	1-157
14.5	Door Openings	1_158
14.6	Enclosure and Protection of Stairs	<b>1</b> _ 166
14 7	Fxit Passageways	1_166
14.8	Capacity of Means of Foress	1_167
14.0	Number of Means of Egress	1_170
14 10	Arrangement of Means of Egress	1_170
14 11	Discharge from Fyits	1_170
14 19	Illumination of Means of Foress	1-172
		- 115

1410	P. 1.1.1	1 1 7 4			
14.13	Emergency Lighting.				
14.14	Marking of Means of Egress				
14.15	Secondary Means of Escape	<b>1</b> – 177			
<b>C1</b>					
Chapter	15 Fire Department Service Delivery	1 1 5 5			
	Concurrency Evaluation	1-177			
15.1	Application.	<b>I</b> - 1777			
15.2	Level of Service Objectives	<b>1</b> – 177			
15.3	Evaluator Qualifications.	<b>1</b> – 177			
15.4	Fire Department Service Delivery Concurrency				
	Evaluation Documentation.	<b>1</b> – 177			
15.5	Independent Review.	<b>1</b> – 177			
15.6	Approval.	<b>1</b> – 177			
Chapter	16 Safeguarding Construction, Alteration, and				
	Demolition Operations	<b>1</b> – 177			
16.1	General Requirements.	<b>1</b> – 177			
16.2	Processes and Hazards				
16.3	Utilities				
16.4	Fire Protection.	<b>1</b> – 179			
16.5	Safeguarding Construction and Alteration				
	Operations.	<b>1</b> – 180			
16.6	Fire Safety During Demolition	1_189			
16.7	Torch Applied Poofing Systems	1 189			
10.7	Ten Kettler en 1 Delte en et Andert Meltene	1 102			
10.8	far Kettles and Rubberized Asphalt Melters.	1-182			
16.9	Asbestos Removal.	<b>I</b> - 184			
Chanter	17 Wildland Urban Interface	<b>1</b> _ 184			
17.1	Companyal	1 104			
17.1		1-104			
17.2	Plans.	1-186			
17.3	Wildland Fire–Prone Areas.	<b>I</b> - 186			
Chantor	18 Fire Donartmont Access and Water Supply	1 188			
101	Conorol	1 100			
10.1	Fire Department Access	1 100			
10.2	Fire Department Access.	1-188			
18.3	water Supplies.	1-190			
18.4	Fire Flow Requirements for Buildings.	<b>I</b> - 190			
18.5	Fire Hydrants.	<b>I</b> – 191			
Chanter	10 Combustible Waste and Refuse	<b>1</b> _ 103			
	Computible waste and Keruse	1 109			
19.1		1-195			
19.2	Combustible Waste and Refuse.	<b>I</b> - 194			
Chanter	20 Occupancy Fire Safety	<b>1_</b> 194			
90.1	Assombly Occupancy file barety	1 104			
20.1	Educational Occupancies	1 900			
20.2	Educational Occupancies.	1-200			
20.5	Day-Care Occupancies.	1-202			
20.4	Health Care Occupancies.	1-204			
20.5	Residential Board and Care Occupancies	1-206			
20.6	Ambulatory Health Care Centers	1-208			
20.7	Detention and Correctional Occupancies	<b>1</b> – 210			
20.8	Hotels and Dormitories.	<b>1–</b> 211			
20.9	Apartment Buildings.	<b>1–</b> 212			
20.10	Lodging or Rooming Houses.	<b>1</b> – 213			
20.11	One- and Two-Family Dwellings and				
	Manufactured Housing	1-913			
20.12	Mercantile Occupancies	<b>1</b> _ 914			
20.12	Business Occupancies	1_914			
90.14	Industrial Occupancies	1 - 41 + 1 - 91 /			
40.14 90.15	Storage Occupancies	1 015			
20.15	Storage Occupancies.	1-215			
20.16	Special Structures and High-Rise Buildings	1-215			
20.17	Historic Buildings and Cultural Resources	1-215			
Chantor	91 Airports and Haliports	1. 916			
91 1	Hangars	1 916			
41.1	mangais.	1-210			
21.2	P G H I' G I D	1-210			
21.3	Roottop Heliport Construction and Protection	1-218			

Chapter	22	Automobile Wrecking Yards	1-220				
22.1	General						
99.9	Permits						
99.3	Fire Apparatus Access Dodds						
99.4	FILE Apparatus Access Koads						
22.4 00 F	Weiting and Gutting.						
22.9	nousekeeping.						
22.6	Fire I	Extinguishers.	1-220				
22.7	Irre	Storage	1-220				
22.8	Burning Operations.						
22.9	Mote	or Vehicle Fluids and Hazardous Materials	<b>1</b> – 220				
Chapter	23	Cleanrooms	<b>1–</b> 221				
23.1	General						
23.2	Appl	icability	<b>1–</b> 221				
23.3	Perm	iits	<b>1</b> – 221				
Chapter	24	Drycleaning	<b>1</b> – 221				
24.1	Gene	eral	<b>1–</b> 221				
24.2	Perm	nits	<b>1–</b> 221				
Chapter	25	Grandstands and Bleachers, Folding and					
-		Telescopic Seating, Tents, and Membrane					
		Structures	1-221				
25.1	Gene	eral	<b>1–</b> 221				
25.2	Tents	5	<b>1–</b> 222				
25.3	Gran	dstands	<b>1–</b> 223				
25.4	Foldi	ing and Telescopic Seating	1-225				
25.5	Perm	anent Membrane Structures	1-225				
25.6	Temp	porary Membrane Structures	<b>1–</b> 226				
Chapter	26	Laboratories Using Chemicals	<b>1</b> – 227				
26.1	Gene	eral	1-227				
26.2	Perm	iits	<b>1–</b> 228				
Chapter	27	Manufactured Home and Recreational					
1		Vehicle Sites	1-228				
27.1	Gene	ral.	1-228				
97.9	Mani	ufactured Home Sites	1-228				
27.3	Recr	eational Vehicle Parks and Campgrounds	<b>1</b> – 228				
Chapter	28	Marinas, Boatvards, Marine Terminals,					
1		Piers, and Wharves	<b>1–</b> 228				
28.1	Mari	nas, Boatyards, and Other Recreational	1 000				
	Mari	ne Facilities.	1-228				
28.2	Mari	ne Terminals, Piers, and Wharves	1-232				
28.3	Cons	truction, Conversion, Repair, and Lay-Up of					
	Vesse	els	<b>1</b> – 232				
Chapter	29	Parking Garages	1-232				
29.1	Gene	eral	1-232				
Chapter	30	Motor Fuel Dispensing Facilities and Repair					
		Garages	<b>1–</b> 232				
30.1	Mote	or Fuel Dispensing Facilities	<b>1–</b> 232				
30.2	Repa	ir Garages for Vehicles Powered by					
	Flam	mable and Combustible Liquids	<b>1–</b> 233				
30.3	Repa	ir Garages for Vehicles Powered by Alternate					
00.4	Fuels		1-235				
30.4	Oper	rational Requirements.	1-240				
Chapter	31	Forest Products and Biomass Feedstocks	<b>1–</b> 240				
31.1	Gene	eral	<b>1–</b> 240				
31.2	Perm	nits	<b>1–</b> 240				
31.3	Prote	ection of Storage of Forest Products	<b>1–</b> 240				
Chapter	32	Motion Picture and Television Production					
-		Studio Soundstages and Approved					
		Production Facilities	<b>1–</b> 245				
32.1	Gene	eral	<b>1–</b> 245				
32.2	Perm	nits	1-245				
32.1 32.2	Gene Perm	eral iits.	1-2 1-2				

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