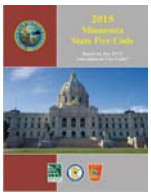
2015 MN State Fire Code

Welcome!



Announcement of Exits

MSFC 408.2.2 requires that theaters, motion picture theaters, auditoriums and similar assembly occupancies in Group A used for noncontinuous programs, make an audible announcement at least 10 minutes prior to the start of each program to notify the occupants of the location of the exits to be used in the event of a fire or other emergency.

2015 MN State Fire Code

Special Thanks to our Hosts !

Facility Information:
Parking,
Restrooms,
Fire Protection,
Breaks/Meals.

Expectation

[redacted]

2015 MN State Fire Code

Presenters

- Tom Jenson
- Kevin McGinty
- Jon Nisja
- John Swanson
- Forrest Williams

Presenter

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Presenter

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Thanks & Recognition

Lots of people were involved in the adoption of this code and development of this training.

Contributors to this class

Jon Nisja
Tom Jenson
Kevin McGinty
DLI/CCLD
Forrest Williams
John Swanson
SFMD Staff
ICC

Some Housekeeping

- **SFMD sign in sheet**
- **BO CEU's and sign in**
- **Evaluations**
- **Certificates**
- **Products/pictures**

Topics to be Covered

- Review how we got here
- Why we do this
- What is the intent of the code
- Identify significant changes
- Review some code "basics"
- Work on some examples together

Topics to be covered

- Identify significant changes between the:
  - 2006, 2009, and 2012 editions of the International Fire Code,
  - 2007 and 2015 MSFC (amendments).

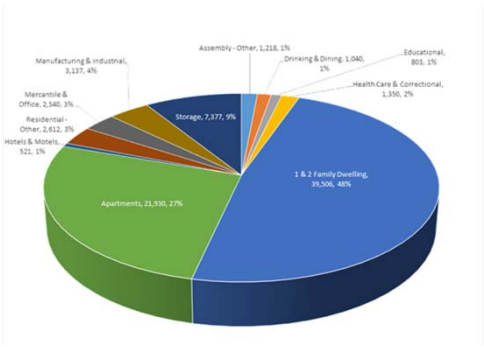
Learning Objectives

- Understand legal basis for state fire code
- Basic understanding of fire code adoption process
- Understand basic application of MSFC
- Identify significant changes in MSFC
- Ability to apply new fire code requirements
- Ability to research MSFC for code application and intent.

Schedule

DAY ONE		DAY TWO	
0800	Welcome, Code Process & History, Chapter 2 Chapters 3-4	**0800**	Chapter 9 Chapter 10
1115	***Break for Lunch 1 hour***	**1115**	**Break for Lunch 1 hour**
	Chapters 5 Chapter 6 Chapter 7 – 8		Chapter 11 Special Hazards and exercises
1630	End of day one	**1630**	End of day two

Building Fires by Occupancy



Format of Presentation

- Goal is to be informative.
- Prefer to keep it informal.
- Please, ask questions.
- No “war stories” (not enough time).
- Add a little bit of humor.

You may not agree with all we say BUT…

Abbreviations/Acronyms

- **AIA:** American Institute of Architects
- **CCLD:** Construction, Codes and Licensing Division
- **DOLI:** Dept. of Labor and Industry
- **FD:** Fire Department
- **FMAM:** Fire Marshal’s Association of Minnesota

Abbreviations/Acronyms

- **IBC:** International Building Code
- **ICC:** International Code Council
- **IFC:** International Fire Code
- **IRC:** International Residential Code

Abbreviations/Acronyms

- **MSBC:** MN State Building Code
- **MSFC:** MN State Fire Code
- **MSFCA:** MN State Fire Chief's Assc.
- **NFPA:** National Fire Protection Ass'n
- **SFMD:** State Fire Marshal Division
- **SFPE:** Society of Fire Protection Engineers

Code Language

- New material

- Changes

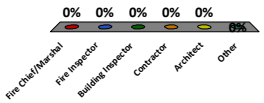
- Easily misinterpreted or misunderstood materials will be highlighted

2015 MN State Fire Code

Let's Get to Know You

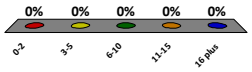
What's Your Position

A. Fire Chief/Marshal
B. Fire Inspector
C. Building Inspector
D. Contractor
E. Architect
F. Other



Years in Position

A. 0-2
B. 3-5
C. 6-10
D. 11-15
E. 16 plus



Code Process, Laws, Statutes, Rules

If you like laws and sausage,
you should never
watch either being made

Otto von Bismarck

Some History

Where Do Codes Come From?

Legislation via Devastation

1947 "The President's Conference"

President Truman called a conference known as The Presidents Conference on Fire Prevention

"The serious losses in life and property resulting annually from fires cause me deep concern. I am sure that such unnecessary waste can be reduced. The substantial progress made in the science of fire prevention and fire protection in this country during the past forty years convinces me that the means are available for limiting this unnecessary destruction."

1947 "The President's Conference"

President Truman's Fire Prevention Conference

- Washington DC, May of 1947
- 34 new committees on fire prevention
  - Draft model statute permitting adoption of model codes
- Conferences by 18 states to build on work begun in Washington

1973 "America Burning"

- **President Nixon's effort**
  - Fire safety and public education
  - Technology – smoke alarms
  - Recommended more sprinklers
  - Better firefighter training
  - Lead to creation of NFA
  - Development of residential sprinklers

1973 "America Burning"

- **1987 "America Burning Revisited"**
  - Combined strategies
- **2002 "America at Risk – America Burning Recommissioned"**

1973 "America Burning"

- **Last in the series concluded:**
  - *Failure to apply and fund known loss reduction strategies*
  - *Need same dedication to prevention as emergency response.*

Lessons Learned

Lessons Learned ?

Same code issues throughout history

- **The "Big Six" in fire tragedies**
  - Interior finishes
  - Vertical openings
  - Fire suppression systems
  - Fire alarms
  - Exits
  - Storage

How does this work in Minnesota?

Legal Issues

Order of Authority
"Waterfall" of Regulations

- Federal Laws
- State Statutes
- Local Ordinances
- MN Rules (State Amendments)
- Minnesota State Fire Code
- Minnesota State Fire Code Standards

Background

- Laws in Minnesota are developed in one of two processes:
  - **Statutory (i.e. Minnesota Statutes),**
  - **Rule-making (i.e. Minnesota Rules).**
- Both have the force of "law" once adopted.

Minnesota Statutes

- Laws that are passed by the Minnesota Legislature.
- Must pass both "houses" of the Legislature.

Minnesota Rules

- Legislature gives authority to a state agency to promulgate or develop rules.
- Rules are adopted pursuant to the Administrative Procedures Act (APA).
- The APA is a lengthy and cumbersome process (by design).
- The APA is intended to allow and requires extensive public input.

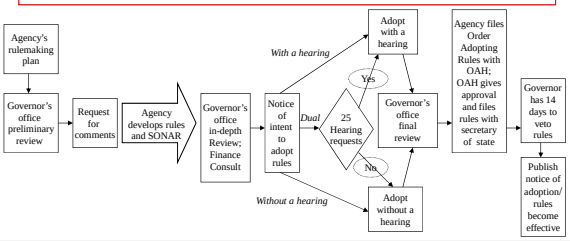
Minnesota Rules

- The APA is frequently modified by the Legislature.
- Virtually all of the recent modifications (past 10-20 years) have made the process more difficult for the agency.

Fire & Building Code Rules

- Unlike most agency rules that are written “from scratch”, the statutes authorizing the building and fire codes require the adoption of a nationally-recognized model code.
- On average it takes a minimum of 18 months to adopt or revise a rule.

Overview of the Rule-Making Process



Timeline Note 1. We have to wait at least 60 days after the Request for Comments before we can publish a Notice of Intent to Adopt Rules, but it often takes a year or more to develop rules and write the Statement of Need and Reasonableness (SONAR).

Timeline Note 2. The most important part of the rulemaking process is developing and writing the rules and justifying the rules in your SONAR. Often this is done with the input of an advisory committee. This part of the process takes from 6 to 18 months, depending on the complexity and level of controversy of the rules.

Timeline Note 3. The formal part of the process (from the Notice of Intent to Adopt Rules until the rules become effective) takes 4 to 8 months depending on whether you have a hearing or not, and the level of controversy.

Timeline Note 4. If the rules are adopted without a hearing, the agency files the Order Adopting Rules and the rulemaking record with the OAH. If the rules are adopted with a hearing, only the Order is filed with the OAH.

Timeline Note 5. The purpose of the Minnesota Rulemaking Manual is to cover all the rulemaking procedures so you can focus on the quality of your rules and SONAR.

9/7/05

Rule-Making Procedures

- **Rules –**
  - Office of the Revisor
- **Statement of Need and Reasonableness (SONAR) -**
  - Administrative Law Judge

Sometimes a comma matters!

I like cooking, my family and my pets

I like cooking my family and my pets

326B.02 Subd. 6 (DOLI)
State Fire Code rulemaking authority

REVIEW

The commissioner of labor and industry, consistent with the recommendations of the state fire marshal, shall adopt a State Fire Code and make amendments thereto in accordance with the Administrative Procedure Act in chapter 14.

Continued-

326B.02 Subd. 6 (DOLI)
State Fire Code rulemaking authority

REVIEW

Continued-

The code and its amendments shall conform insofar as practicable to model fire codes generally accepted and in use throughout the United States, with consideration given to existing statewide specialty codes presently in use in the state of Minnesota.

Legislation vs APA

Generally prefer APA

However-

Other Statutes

299F.011 Day Care Home Regulations

- Prohibits fire marshal from adopting rules that:
  - Establish staff ratios etc.
  - Means of egress rules more than single family dwellings
  - Restricting care to level of exit discharge
  - Still allows DHS to adopt some rules.

Other Statutes

299F.013 Fuel Dispensing

- For operations not open to the public
- Exterior above ground tanks
- Fire Code must allow dispenser on or near AST of:
  - Class I liquid – one 560 gallon tank
  - Class II liquid – two 1000 gallon tanks
- All other separations still apply

Other Statutes

299F.014 Tank Vehicle Parking

2015 MSFC prohibits parking of tank vehicles within 500' of residential areas, apartments, hotels, schools, hospitals and nursing homes. ---HOWEVER

Statute allows for residential if parked at aboveground tank facility

Other Statutes

- **299F.30 Fire Drills in Schools**
  - Also exit doors unlocked
- **299F.362 Smoke Detectors**
  - Single family, Apartments and hotels
- **299F.50 Carbon Monoxide**
  - Single family and apartments

ICC Model Codes

ICC
INTERNATIONAL CODE COUNCIL®

National Model Codes

Prior to 2000:

Uniform Codes
BOCA
Southern Standard
NFPA 1 and 101

National Model Codes

After 2000

IFC (ICC)

NFPA 1 and 101

Code Adoption History

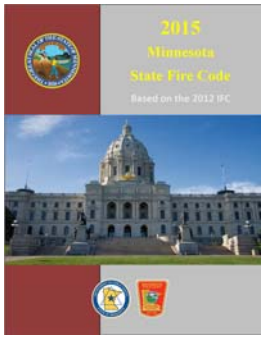
Effective Date:	Code Name:	Code Year:	Code Publication Date:	Time from Publication to Adoption:	Adoption Responsibility:
October 3, 1975	Uniform Fire Code	1973	1973 (no month given)	15 months	DPS / SFM
April 11, 1983	Uniform Fire Code	1982	1982 (no month given)	18 months	DPS / SFM
October 2, 1989	Uniform Fire Code	1988	May, 1988	17 months	DPS / SFM
August 23, 1993	Uniform Fire Code	1991	May, 1991	27 months	DPS / SFM
June 29, 1998	Uniform Fire Code	1997	March, 1997	15 months	DPS / SFM
March 31, 2003	International Fire Code	2000	December, 1999	39 months	Admin
July 10, 2007	International Fire Code	2006	January, 2006	18 months	DOLI
May 2, 2016	International Fire Code	2012	May, 2011	60 months	DOLI

EFFECTIVE DATES OF MINNESOTA BUILDING AND FIRE CODES

July 1, 1972	State Building Code (SBC) made to apply statewide and supersede and take the place of the building code of any municipality. The State Building Code adopts by reference the 1970 *Uniform Building Code*
October 1972	Supplements to the 1972 State Building Code.
June/July 1973	Amendments to 1972 State Building Code.
January 14, 1974	Adoption by reference of the 1973 *Uniform Building Code*.
October 3, 1975	Minnesota Uniform Fire Code which adopts by reference the 1973 *Uniform Fire Code*.
November 18, 1975	Adoption of Handicapped Code, Chapter 55, and new Uniform Building Code Section 1717, Foam Plastics
January 14, 1976	1976 State Building Code
September 19, 1978	1978 State Building Code which adopts by reference the 1976 *Uniform Building Code*.
September 9, 1980	1980 State Building Code which adopts by reference the 1979 *Uniform Building Code*.
March 1, 1983	Amended 1980 State Building Code which adopts by reference the 1982 *Uniform Building Code*.
April 11, 1983	Minnesota Uniform Fire Code which adopts by reference the 1982 *Uniform Fire Code*.
April 25, 1983	Optional Appendix "E", Automatic Fire Suppression Systems.
January 14, 1985	Adopted Rules updating the State Building Code and governing handicapped accessibility.
February 17, 1987	Amended 1985 State Building Code which adopts by reference the 1985 *Uniform Building Code*.
October 2, 1989	Minnesota Uniform Fire Code which adopts by reference the 1988 *Uniform Fire Code*.
July 16, 1990	Amended 1990 State Building Code which adopts by reference the 1988 *Uniform Building Code*.
August 23, 1993	Minnesota Uniform Fire Code which adopts by reference the 1991 *Uniform Fire Code*.
March 20, 1997	1997 State Building Code which adopts by reference the 1994 *Uniform Building Code*.
June 29, 1998	Minnesota Uniform Fire Code which adopts by reference the 1997 *Uniform Fire Code*.
October 5, 1998	1998 State Building Code which adopts by reference the 1997 *Uniform Building Code*.
March 31, 2003	2003 State Building Code which adopts by reference the 2000 *International Building Code* with state amendments.
March 31, 2003	2003 Minnesota State Fire Code which adopts by reference the 2000 *International Fire Code* with state amendments.
July 10, 2007	2007 State Building Code which adopts by reference the 2006 *International Building Code* with state amendments.
July 10, 2007	2007 Minnesota State Fire Code which adopts by reference the 2006 *International Fire Code* with state amendments.
June 2, 2015	2015 Minnesota State Building Code which adopts by reference the 2012 *International Building Code* with state amendments.
May 2, 2016	2015 Minnesota State Fire Code which adopts by reference the 2012 *International Fire Code* with state amendments.

2015 Minnesota State Fire Code

- Even though the effective date was Monday, May 2, 2016, it is known as the ***2015 Minnesota State Fire Code (MSFC)***



2015 Minnesota State Fire Code

- **The SFM worked with ICC to produce a Minnesota version of the 2015 MSFC:**
  - Contains state amendments
  - Contains applicable code language
  - Contains "information boxes" (code commentary or intent)
- Available from various sources

2015 Minnesota State Fire Code*

- Available from various formats:
  - **Print (book) version**
  - **Electronic (PDF) version**
  - **On-line (web-based) version**

Code Adoption Process

MSFCA Code Committee

- Advisory board for SFMD
- Recommends code amendments
- Committee members
  - ✓ **10 from MSFCA**
  - ✓ **3 from FMAM**
  - ✓ **3 from SFMD**
  - ✓ **2 from Local BO's**
  - ✓ **1 from AIA**
  - ✓ **1 from SFPE**
  - ✓ **1 from CCLD**

Can I Have Input?

Can I Have Input?

- **ICC Process**
  - Propose changes to IFC
  - Open to all
- **MN Amendments**
  - Contact MSFCA committee member
  - Solid rationale and evidence
  - Present to committee

Future Adoption Cycles ?

MN Statute 326B.106

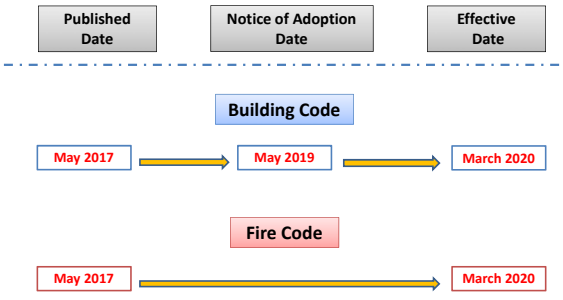
(c) Beginning with the 2018 edition of the model building codes and every six years thereafter, the commissioner shall review the new model building codes and adopt the model codes as amended for use in Minnesota, within two years of the published edition date. The commissioner may adopt amendments to the building codes prior to the adoption of the new building codes to advance construction methods, technology, or materials, or, where necessary to protect the health, safety, and welfare of the public, or to improve the efficiency or the use of a building.

MN Statute 326B.14

Subd. 8.Effective date of rules.

A rule to adopt or amend the State Building Code is effective 270 days after publication of the rule's notice of adoption in the State Register. The rule may provide for a later effective date. The rule may provide for an earlier effective date if the commissioner proposing the rule finds that an earlier effective date is necessary to protect public health and safety after considering, among other things, the need for time for training of individuals to comply with and enforce the rule. The commissioner must publish an electronic version of the entire adopted rule chapter on the department's Web site within ten days of receipt from the revisor of statutes. The commissioner shall clearly indicate the effective date of the rule on the department's Web site.

2018 Code Cycle



2018 Code Cycle

- Concurrent effective dates
- Limited changes in current amendments
- High standard for new amendments:
  - **Statewide implications**
  - **Solid justifications**
  - **"Must haves" only**

Code Adoption Process

- *Most of the MN fire code amendments are less restrictive*
- *Code adoption process can be a compromise and political*
- *Don't shoot the messengers*

Good Ideas ?

299F.011 State Fire Code

Subd. 3. **Rules for code administration and enforcement.**
The commissioner of public safety shall adopt rules as may be necessary to administer and enforce the code, specifically including but not limited to rules for inspection of buildings and other structures covered by the code and conforming the code to the governmental organization of Minnesota state agencies, political subdivisions and local governments.

Fire Code Statute

REVIEW

299F.011 Subd. 4. **Applicability; local authority.**

The State Fire Code shall be applicable throughout the state and in all political subdivisions and municipalities therein..

Fire Code Applicability

You Make The Call

- **"**They have not adopted a fire code in East Overshoe, Minnesota so I don't have to follow any requirements – **right?**"

Fire Code Applicability

You Make The Call

- "There is no fire marshal in Resume Speed, Minnesota so the code doesn't apply – **correct?"**

Fire Code Statute

REVIEW

- **299F.011 subd. 4 Applicability**
- Is enforceable throughout the state.
- Not necessary to adopt
- Local ordinance for:
  - Ease of enforcement.
  - Modify code

Local Amendments

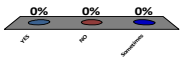
REVIEW

- **299F.011 subd. 4 - Local Authority**
- Local jurisdiction can modify provided:
  - Equal or more restrictive
  - Fire protection principles
  - By ordinance
  - Not more restrictive then building code

A local ordinance to increase the minimum width of a fire access road from 20' to 25'. Is this allowed?

You Make The Call

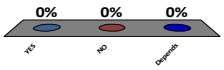
A. YES
B. NO
C. Sometimes



Local amendment to MSFC that all buildings are to be of masonry construction. Is this allowed?

You Make The Call

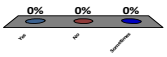
A. YES
B. NO
C. Depends



A local ordinance to increase the distance to a property line from an unprotected AST used for motor vehicle fuel dispensing to 200'
Is this allowed?

You Make The Call

A. Yes
B. No
C. Sometimes



Follow State Law/Rules/Fire Code

- Solid code path for orders
- Amendments/ordinances based on sound fire prevention concepts

- Orders in writing
- "Grandfather" not in code
- **No – "Cause I said so"**

Appeal process

REVIEW

299F.011 Subd. 5

- All fire code orders appealable
- Local orders – local action first
  - Can't just waive requirements
- State Fire Marshal Appeal
  - Substantial compliance
  - Life safety
  - Undue hardship
  - Affordable housing

Code Intent & Philosophy

Purpose of the Fire Code

REVIEW

- **Establishes minimum requirements consistent with nationally recognized good practice,**
- **Providing a *reasonable* level of life safety and property protection from**
  - The hazards of fire, explosion or dangerous conditions,
  - New or existing buildings, structures or premises.

Intent
MSFC 101.3

REVIEW

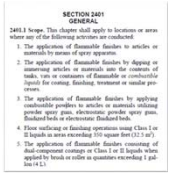
- Added firefighter and emergency responder safety in the intent statement in the 2003 edition of the IFC.

Intent

REVIEW

Does this apply?

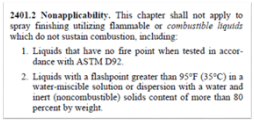
- ✓ Check definitions
- ✓ Review chapter and section scope



SECTION 2401
GENERAL

2401.1 Scope. This chapter shall apply to locations or areas where any of the following activities are conducted:

1. The application of flammable finishes to articles or materials by means of spray apparatus.
2. The application of flammable finishes by dipping or immersing articles or materials into the contents of tanks, vats or containers of flammable or *combustible liquids* for coating, finishing, treatment or similar processes.
3. The application of flammable finishes by applying combustible powders to articles or materials utilizing powder spray guns, electrostatic powder spray guns, fluidized beds or electrostatic fluidized beds.
4. Floor surfacing or finishing operations using Class I or II liquids in areas exceeding 350 square feet (32.5 m²).
5. The application of flammable finishes consisting of dual-component coatings or Class I or II liquids when applied by brush or roller in quantities exceeding 1 gallon (4 L).



2401.2 Nonapplicability. This chapter shall not apply to spray finishing utilizing flammable or *combustible liquids* which do not sustain combustion, including:

1. Liquids that have no fire point when tested in accordance with ASTM D92.
2. Liquids with a flashpoint greater than 95°F (35°C) in a water-miscible solution or dispersion with a water and inert (noncombustible) solids content of more than 80 percent by weight.

Intent

REVIEW

It is important to know what counts!

If a side wall head is a foot too low?

If the travel distance is one foot too long?

Code Intent & Philosophy

How can I find what was the intent?

- For state amendments:
  - Statement of Need and Reasonableness (SONAR) SFMD WEB site
- For International Fire Code:
  - Code Commentary
- NFPA Standards:
  - Appendices

Warning: Commentary is not code!

Information Boxes

NEW

State Fire Marshal staff have added **Information Boxes,** such as this one, after some code sections to further explain the intent of a section or to direct you to further information.
It is important to note that any interpretation is not code and meant only for information and clarification.

401.7 Unplanned evacuation. Deleted.

This section is deleted so schools and other occupancies required to have a certain number of evacuation drills per year may count the unplanned evacuation providing all documentation is completed. Some of the better drills are the unplanned ones such as at lunch time.

Intent Exercise

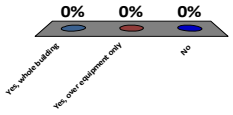
- Turn to Section 903.2.4.1.

- 4000 sq. ft. sign shop, no separations
- Contains table saw, band saw and belt/drum sander
- Dust control to all equipment
- Utilizes approximately 700 sq. ft.

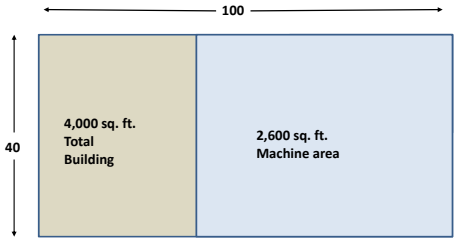
Is a sprinkler system required?

You Make The Call

A. Yes, whole building
B. Yes, over equipment only
C. No



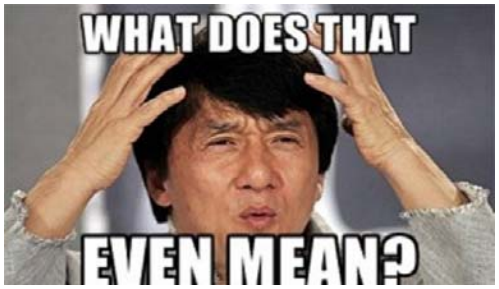
Sign Shop



Sign Shop

903.2.4.1 Woodworking operations. An *automatic sprinkler system* shall be provided throughout all Group F-1 occupancy *fire areas* that **contain** woodworking operations in excess of 2,500 square feet in area which generate finely divided combustible waste or which use finely divided combustible materials.

Intent



Section 1030.2 Reliability

- Exit accesses, exits or discharges
- Free of obstructions or impediments
  - **Full instant use**
  - **In case of fire or other emergency**
- Impediment defined by Webster
  - **Something that interferes with movement or progress**

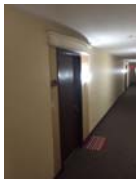
Section 1030.3 Obstructions

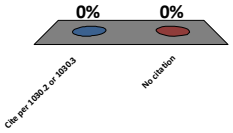
- Free of obstructions
  - **Prevent its use**
  - **Including Snow and Ice**
- Any material or matter
  - **Presence would obstruct**
  - **Render hazardous**
- No combustible storage
  - **Corridors or exit stairs**

Door Mats in Hallway

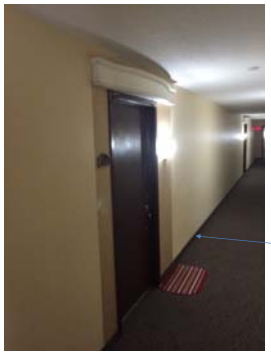
You Make the Call

A. Cite per 1030.2 or 1030.3
B. No citation





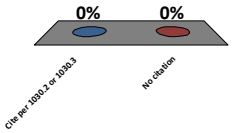
You Make The Call



Boot Caddy

You Make the Call

A. Cite per 1030.2 or 1030.3
B. No citation

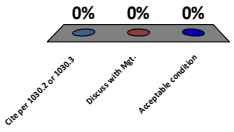


What about hotel maid service?

Can someone move this?

What do you do?

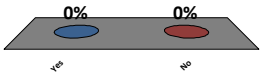
A. Cite per 1030.2 or 1030.3
B. Discuss with Mgt.
C. Acceptable condition



Decorative Natural Wreath

Is this allowed in R-2 hallways?

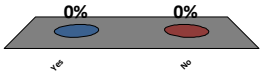
A. Yes
B. No



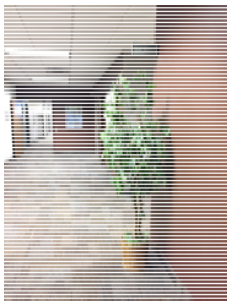
Untreated Artificial Decorative Wreath

Is this untreated allowed in hallways?

A. Yes
B. No



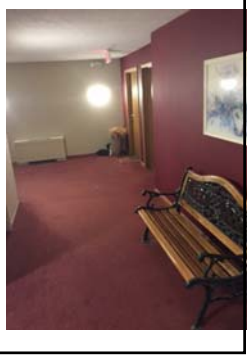
What about this in office location?



What about this assembly location?

Furniture

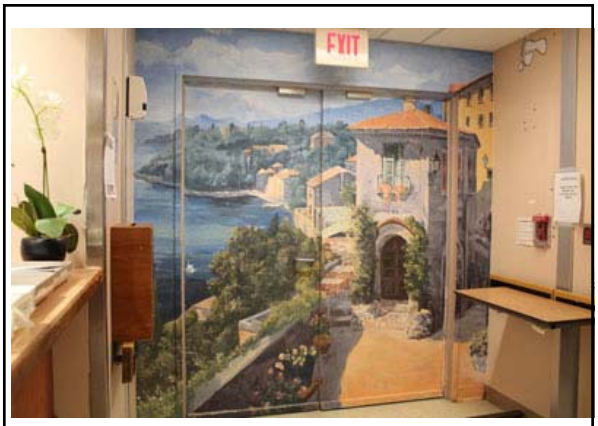
- Allowed, but need to look at egress width
- Consider why it is there, age of the residents



Sec 1030.6 Finishes & Decorations

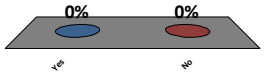
- Egress Doors distinguishable
  - **Easily recognizable**
- Murals on doors
  - **Nursing homes**
  - **Assisted Living**
  - **Memory Care**
  - **Dementia Patients**

EXIT
FRESH FLOWERS
Sale


EXIT

Would you allow this mural on a non-required door?

A. Yes
B. No



Purpose of the Fire Code

- Separate combustibles from ignition sources – *Fire Hazards*

Purpose of the Fire Code

- **Keep an event small**
  - Limits on hazards
  - Separations
  - Fire suppression systems

Purpose of the Fire Code

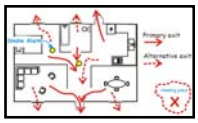
- **Provide life safety opportunities**
  - Early warning – fire alarms
  - Exit systems
  - Fire suppression systems

Purpose of the Fire Code

- **Control special hazards**
  - Flammable/combustible liquids
  - Hazardous materials
  - Hazardous processes/situations
    - Spray finishing

Purpose of the Fire Code

- **Provide response assistance and planning**
  - Emergency plans and drills
  - Fire dept. access
  - Water supplies
  - Hazards to firefighters



Fire Prevention

! Reduce number of incidents
! Reduce severity of incidents
! Assist emergency response

Focus On

Life Safety - Property Conservation

Navigating the 2012 IFC

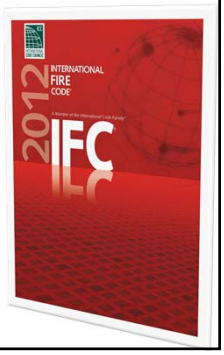
- Chapters reorganized
- 1st ten chapters same as 2006
- Balance of chapters reorganized
- "7' general parts
- 33 chapters reserved for future use

Navigating the IFC

- **Each chapter has:**
  - General section (scope, permits)
  - Definitions (moved to Chapter 2)
- **Numbering system**
  - Chapter # 6
  - Section # 605
  - Subsection 605.4.3 (maximum of 5 decimal places)

Navigating the IFC

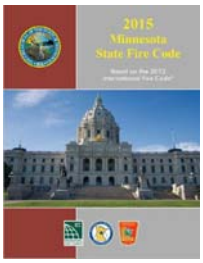
Chapters	Part
1-2	Administration & Definitions
3-4	General safety requirements
5-11	Building & site requirements
20-36, 81	Special occupancies and operations
50-67	Hazardous materials
80	Reference standards
A-J	Appendices



Navigating the IFC

- **Numbering of Chapters 7 to 10 correlates with IBC:**
  - Chapter 7 – Fire-resistant construction
  - Chapter 8 – Interior finish & materials
  - Chapter 9 – Fire protection systems
  - Chapter 10 – Means of egress

Navigating the 2015 MSFC

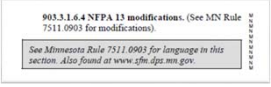


Fire Code Amendments MN Rule 7511 rules

- MN Rule 7511.0010 through 7511.8400
- Can be found on Revisor WEB site
- Rule part numbering follows IFC numbering (i.e. amendments to IFC Section 903 are found in rule part 7511.0903).

Fire Code Amendments MN Rule 7511 rules

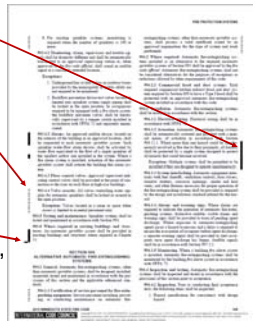
- **Modifications to NFPA Standards**
  - Not in MSFC book
  - Copyright issues
  - Can be found in rule
  - Info boxes as a reminder


903.3.1.6.4 NFPA 13 modifications. (See MN Rule 7511.0903 for modifications).

See Minnesota Rule 7511.0903 for language in this section. Also found at www.sfm.dps.mn.gov.

How to Identify What's Changed

- Vertical lines (|) in the margin indicate new or revised text.
- In the Minnesota State Fire Code, M N indicate a state amendment.
- Arrows in the margin (⬅ or >) indicate that a section, paragraph, exception, or table has been deleted.



How to Identify What's Changed

- There are many changes between the 2009 and 2012 editions of the IFC identified in this manner.
- This edition, however, only shows changes between 2009 and 2012 editions.

MN State Fire Code

Chapter 1
Administration

Chapter 1 Administration

- 101 – General
- 102 – Applicability
- 103 – Department of Fire Prevention
- 104 – General Authority & Responsibilities
- 105 – Permits

Chapter 1 Administration

- 106 – Inspections
- 107 – Maintenance
- 108 – Board of Appeals
- 109 – Violations
- 110 – Unsafe Buildings
- 111 – Stop Work Order

Fire Code Scope – MSFC 101.2

REVIEW

- **Structures, processes, premises and safeguards regarding:**
  - Fire and explosion from storage, handling, or use of structures, materials or devices
  - Conditions hazardous to life, property, or public welfare

Fire Code Scope – MSFC 101.2

REVIEW

- **Structures, processes, premises and safeguards regarding:**
  - Fire hazards from occupancy or operations
  - Construction, extension, repair, alteration or removal of fire protection equipment
  - Firefighter and emergency responder safety

Applicability MSFC 102.1

REVIEW

- **Construction & design provisions apply to:**
  - Buildings, facilities & conditions arising after code adoption,
  - Buildings, facilities & conditions specifically identified in the code,
  - Existing buildings, facilities & conditions determined to constitute a distinct hazard to life or property.

Applicability MSFC 102.1

REVISED

- Intended to simplify code application,
- First appeared in 2007 MSFC
- In 2015 MSFC, the condition is either:
  - **New (on or after 5/02/2016), or**
  - **Existing (before 5/02/2016).**
- New Chapter 11 for construction requirements in existing buildings

Applicability
MSFC 102.1

REVIEW

- The existing provisions provide a reasonable level of fire and life safety.
- All buildings and facilities should comply with the existing provisions.
- This applies to construction and design features.
- Operational and maintenance features are retroactive (MSFC 102.2).

Applicability – Existing
MSFC 102.1.1

REVIEW

- "Existing construction and design features that **exceed** the requirements for existing structures or facilities but are **less than** the requirements for new structures or facilities shall not be further diminished."

Applicability – Existing
MSFC 102.1.1

REVIEW

- "Existing construction and design features that *exceed* the requirements for new structures or facilities are allowed to be removed."
- Note: the above means removed, not simply disconnected.
- *Verify feature is not required for another reason!*

You Make the Call
MSFC 102.1.1

REVIEW

- R-1 hotel built in 1999, 2 story, 18 rooms, common egress corridor
- Not sprinklered
- Fire alarm panel needs replacing
- Owner wants to abandon FA system
- Not required for existing per 1103.7.4
- Can the system be removed?

- **No – required for new per 907.2.8**

Applicability
MSFC 102.2

REVIEW

- **Administrative, operational and maintenance provisions apply to:**
  - Conditions & operations arising after adoption of code,
  - Existing conditions & operations,
  - Defines "operational" (MSFC 102.2.1) by referring to operational permits in Section 105.6.

Change of Use or Occupancy
MSFC 102.3

REVIEW

- Compliance with the currently adopted IBC is required unless the code official determines that the new use is less hazardous than the old use from a fire- and life-safety perspective.

Application of Building Code MSFC 102.4

REVIEW

- New structures shall comply with the building code,
- Work performed in existing buildings to comply with the building code (if within it's scope):
  - Alterations,
  - Additions,
  - Changes in use,
  - Changes dictated by the fire code.

Application of Residential Code MSFC 102.5

NEW

When designed and built to MRC

- Construction:
  - **Exterior provisions**
  - **Interior provisions requiring a permit**
- All administrative, operational and maintenance provisions apply

Historic Buildings MSFC 102.6

REVIEW

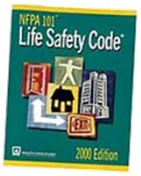
- MN Conservation Code for Existing Buildings may apply when renovating
- May not constitute a distinct hazard to life or property
- An approved fire protection plan is required.

Conflicting Provisions

- **102.7.1 -** With reference standards:
  - Fire code applies
- **102.10 -** between general and specific requirements:
  - The specific provision applies.

Existing Group I Occupancies – MSFC 102.13

- **Adopts NFPA 101 – 2000 edition for:**
  - Existing Group I-2 (Health Care Facilities),
  - Existing Group I-3 (Detention & Correctional Facilities).



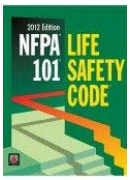
Group I-3 Amendment – MSFC 102.10.1

- **Modifies NFPA 101 by deleting sections 23.3.7 – 23.3.7.3:**
  - This section requires subdivision of inmate housing areas by smoke barriers.
  - Smoke compartments can have a maximum of 200 inmates.
  - Provisions are considered to be overly restrictive for existing detention facilities.

Existing Group I Occupancies – MSFC 102.13

CMS has adopted the 2012 Life Safety Code
So now what ?

- Federal Laws
- State Statutes
- Local Ordinances
- MN Rules (State Amendments)
- Minnesota State Fire Code
- Minnesota State Fire Code Standards



Technical Assistance
MSFC 104.7.2

- Fire Code Official (FCO) can require
- Items subject to FCO authority
- Owner/agent to provide
- Person/company acceptable to FCO
- FCO can require licensed/certifications

Alternate Materials/Methods
MSFC 104.9

- IFC is not intended to prevent or limit materials or methods not specifically addressed in code,
- Code Official can accept alternates,
- Alternates must comply with intent of code,
- Alternates must be equal or greater protection than code prescribes.

Chapter 1 Administration

NEW

Two New Sections

112 - Service Utilities

Authorizes code official to disconnect utilities under certain conditions and emergencies

113 – Fees

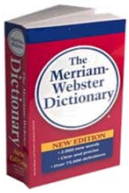
Process for permit fees

Chapter 2 - Definitions

REVISED

Definitions

- *All definitions have been moved from individual chapters to Chapter 2*
- *Terms not defined*
  - Other reference code
  - Merriam-Webster



Definitions

NEW

Aerial Luminaries

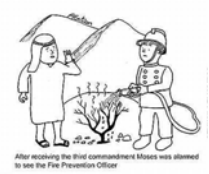
- Also know as Sky Lanterns
- Used open flame for lift
- No way to control once released

Definitions

APPROVED

Acceptable to the fire code official.

Definition from Chapter 2 MSFC 2007



Definitions

REVISED

Approved. Approval by Fire Code Official by means of;

- Inspection, investigation or testing
- Accepted principles
- Computer simulations
- Research reports
- Testing by licensed engineer or recognized lab.

(2015 MSFC)

Definitions

REVISED

Authority Having Jurisdiction (AHJ)

- Fire Code Official serving within their appointed jurisdiction
- State Fire Marshal or authorized representative

Definitions

REVISED

- **Fire Chief**
  - ***The chief officer of the fire department serving the jurisdiction or the chief's authorized representatives.***
    - *Vacant buildings*
    - *Vegetation fire breaks*
    - *Access road security gates*
    - *Fire command center locations*
    - *Outside hose stream requirement waived*
    - *Many others*

Definitions

REVISED

Fire Code Official:

- State Fire Marshal or Deputies
- Fire Chief or authorized FD representative
- Other specifically designated by ordinance or regulation

Definitions

REVISED

Fire Code Official:

Appointing authority must ensure competency.

- –Certification
- –Training
- –Experience

Definitions

NEW

Ambulatory Care Facility

- – Medical, Surgical, Psychiatric, Nursing
- – Less than 24hrs
- – Rendered incapable of self-preservation
- – *Not dialysis centers on level of exit discharge*

Definitions

REVISED

Outpatient Clinic

- – Medical care
- – Less than 24 hours
- – NOT rendered incapable of self-preservation
- – Includes dialysis centers that are not ambulatory care

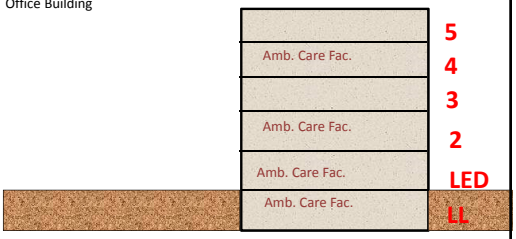
Ambulatory Care Facility

When 4 or more incapable **or**
1 or more not at level of exit discharge

Fire sprinkler system on entire floor and all floors to level of exit discharge

Ambulatory Care Facility

Kevin's Pretty Good Office Building



Care Facility Classification

NEW

TYPE OF LICENSED FACILITY		NUMBER OR TYPE OF RESIDENTS	IBC OCCUPANCY CLASSIFICATION
Child care (Day care)	Family child care home	10 occupants maximum with ≤ 6 below school age	R-3 Dwelling unit
	Group child care home < 24 hours per day	11-14 occupants maximum	R-3 Dwelling unit
	Child care center < 24 hours per day	> 5 but ≤ 100 children ≤ 2.5 years of age and each room at, and with, an exit at the level of exit discharge	E
	Child care center < 24 hours per day	More than 5 children > 2.5 years of age	E
	Child care center < 24 hours per day	More than 5 children ≤ 2.5 years of age	I-4
Adult day care	Family adult day services	≤ 8 impaired adults	R-3 Dwelling unit
	Adult day care center < 24 hours per day	6 or more occupants, all may or may not be capable of self-preservation	I-4
	Adult day care center < 24 hours per day	6 or more occupants, but having no more than 50 percent of the occupants who are not capable of self-preservation	E

Care Facility Classification

NEW

Supervised living facilities	Class A-1	6 or fewer residents; all of whom are capable of self-preservation	R-3 Dwelling unit
	Class A-2	7 to 16 residents; all of whom are capable of self-preservation	R-4
	Class A-2	More than 16 residents; all of whom are capable of self-preservation	I-1
	Class B-1	6 or fewer residents; all of whom may not be capable of self-preservation	R-3
	Class B-2	7 to 16 residents; all of whom may not be capable of self-preservation	R-4
	Class B-3	More than 16 residents; all of whom may not be capable of self-preservation	I-2
Hospice	Residential hospice facility	1-5 terminally ill persons	R-3
	Residential hospice facility	6-12 terminally ill persons	R-4
Adult foster care	Adult foster care home	1-5 impaired adults	R-3 Dwelling unit
Child foster care	Foster care	1-6 foster children without severe disability or assisted medical technology	R-3 Dwelling unit
	Foster care	1-4 foster children with medical or special care services	R-3 Dwelling unit

Care Facility Classification

NEW

TYPE OF LICENSED FACILITY		NUMBER OR TYPE OF RESIDENTS	IBC OCCUPANCY CLASSIFICATION
Housing with services facility	Housing with services establishment. Housing with services establishment providing assisted living services	1-5 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, Section 144D.025	R-3 Dwelling unit
	Housing with services establishment. Housing with services establishment providing assisted living services	6-16 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, Section 144D.025	R-4
	Housing with services establishment. Housing with services establishment providing assisted living services	> 16 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, Section 144D.025	I-1

Care Facility Classification

NEW

Boarding care	Boarding care home	< 5 residents	R-3 Dwelling unit
	Boarding care home	6-16 residents	R-4
	Boarding care home	> 16 residents	I-1
Boarding and lodging	Boarding and lodging	≤ 16 residents in sleeping rooms or ≤ 2 dwelling units	R-3
	Boarding and lodging	> 16 residents in sleeping rooms or > 2 dwelling units	R-2
	Boarding and lodging < 30 days	Bed and breakfast with 6 or more sleeping units. Boarding houses with > 10 occupants	R-1
	Boarding and lodging < 30 days	Bed and breakfast with 5 or fewer sleeping units. Boarding houses with ≤ 10 occupants	R-3 Dwelling unit
Senior housing	Senior housing (See IBC 310)	More than 2 dwelling units in one building	R-2
	Senior housing (See IBC 310)	2 family dwelling units in one building	R-3
	Senior housing (See IBC 310)	1 dwelling unit	R-3 Dwelling unit

Care Facility Classification

NEW

Congregate residence	Congregate residence	≤ 16 residents	R-3
	Congregate residence	17 or more residents	R-2
Day services	Day services facility	Adult (over 18)	I-4
	Day services facility	Ages 13-18	I-4
Chemical dependency treatment programs	Chemical dependency treatment program outpatient (< 24 hrs)	Not regulated	B
	Chemical dependency treatment program-residential	< 5 residents	R-3 Dwelling unit
	Chemical dependency treatment program-residential	6-16 residents	R-4
	Chemical dependency treatment program-residential	> 16 residents	I-1

Portable Outdoor Fireplace

NEW

- Solid-fuel burning
- Steel, concrete, clay or other non-combustible
- May be open design or;
- Have a small hearth and chimney

Traffic Calming Device

NEW

On fire access roads –physical measures that:

- **Reduces traffic**
- **Reduce cut-through**
- **Reduce vehicle speed**

Traffic Calming Device

Traffic Calming Device

Townhouse

2015 MSFC Definition

[B] TOWNHOUSE. A single-family *dwelling unit* constructed in a **group of three or more** attached units in which each unit extends from the foundation to roof and with open space on at least two sides.

2015 MN Residential Code

TOWNHOUSE. A single-family dwelling unit constructed in a **group of two or more** attached units in which each unit extends from the foundation to the roof and having open space on at least two sides of each unit. Each single-family dwelling unit shall be considered to be a separate building. Separate building service utilities shall be provided to each single-family dwelling unit when required by other chapters of the *State Building Code.*

General Safety
Chapter 3

General Safety
Chapter 3

A few changes, clarifications, additions and deletions

Combustible Waste
Section 304

NEW

Deletions:

Requirements for waste containers over 5.33 cubic feet (not new)

Over 1 Cubic Yard (new)

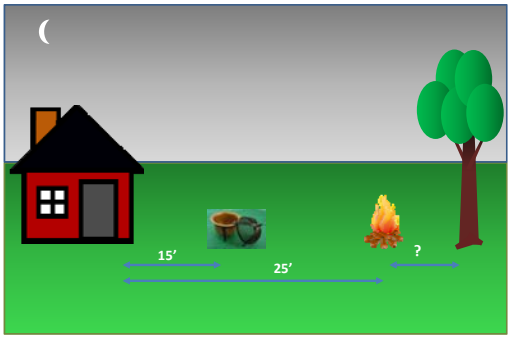
Open Burning
Section 307

NEW

Portable Outdoor Fireplaces (307.4.3)

- 15' from structure and combustibles
- Per manufacturer's instruction

Open Burning



Aerial Luminaires
Section 308.1.9

NEW

Prohibited

Aerial Luminaires

Sky lantern causes fire at McCarthy Park

Story Comments

Recommend 7 Tweet G+1 0 Pinit 0 Share 2

Posted: Sunday, February 28, 2016 12:23 pm

0 comments

Posted on Feb 26, 2016 by Chris Merlos

The Sun Prairie Fire Department was alerted at 6:54 pm on Saturday, Feb. 27, 2016 to McCarthy Park on County Highway TT for a small outside fire.

Upon the first Engine's arrival, more than three acres of grass land was on fire, located between ¼ mile and 1-mile off of the roadway with difficult access.

Sun Prairie Fire Chief Chris Garrison said strong winds caused the fire to rapidly spread, burning more than 15 acres of park land.

Due to limited access, mutual aid was requested for brush trucks and ATV's for fire suppression. Fortunately, fire crews were able to get ahead of the fire and stop the spread to reduce further loss.

Fire departments from Cottage Grove, Marshall, Waunakee, and DeForest provided mutual aid.

The cause of the fire was due to a sky lantern being released during an organized Candlelight Ski, mile, and Snowshoe event. No injuries were reported during this incident.

by Chris Merlos | Managing Editor, The Star

Sky lantern at McCarthy Park (2015)

The file photo from the 2015 Candlelight Ski at McCarthy Park shows the release of a sky lantern similar to the one that started a edge grass fire in the park following Saturday night's candlelight ski at the park.

Buy this photo

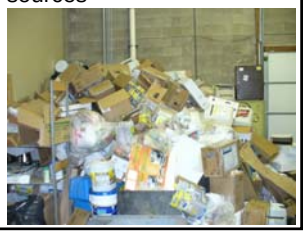
General Storage
Section 315

REVIEW

Neat and orderly

Stable

Separated from ignition sources



Section 315.2

Equipment Rooms
MSFC 315.3.3

REVISED

Mechanical and boiler rooms

- 2007 MSFC-no storage unless sprinklered
- 2015 MSFC – simpler (315.3.3.1)
  - Neat and orderly
  - Immediate access to any equipment
  - 36" clearance or as required by manufacturer
  - Code official may order removal

Equipment Rooms

REVISED

Electrical vaults & equipment rooms (315.3.3.2)

- Vaults, rooms or areas
- Solely dedicated to main electrical distribution
- No Storage Allowed

Does not include a room just because it has a couple circuit panels

Electrical Distribution Rooms

Electrical Distribution Rooms

-Not The Intent-

Electrical Distribution Rooms

You Make The Call

Electrical Distribution Rooms

Monticello Middle School Fire May, 2006

Monticello Middle School Fire
May, 2006

Monticello Middle School Fire
May, 2006

Elevator Equipment Rooms
MSFC 315.3.3.3

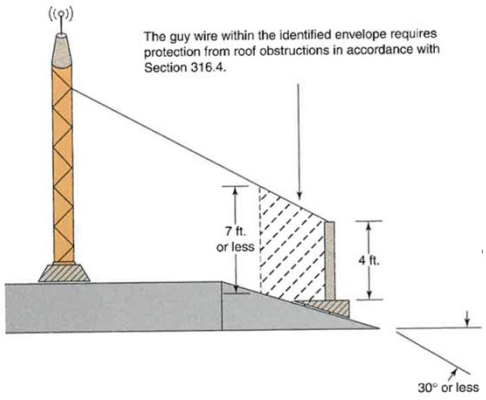
REVIEW

- No storage is allowed in elevator equipment or machine rooms.

Roof Obstructions
Section 316.4

NEW

- Wires, cables, ropes, antennas etc.
- Firefighter safety
- 7' or less – less than 30° roof pitch
- Prohibited unless:
  - Encased in 2" PVC or equivalent
  - Barrier below obstruction



Roof Obstructions
Section 316.4

NEW

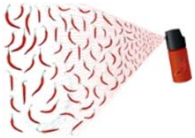
Roof Obstructions
Section 316.4

Hazards to Firefighters
Section 316

REVISED

Security Devices (316.5)

- Moved from Chapter 4
- Identical Language
- Prohibits devices that emit product that obscures a means of egress.



Roof Gardens
Section 317

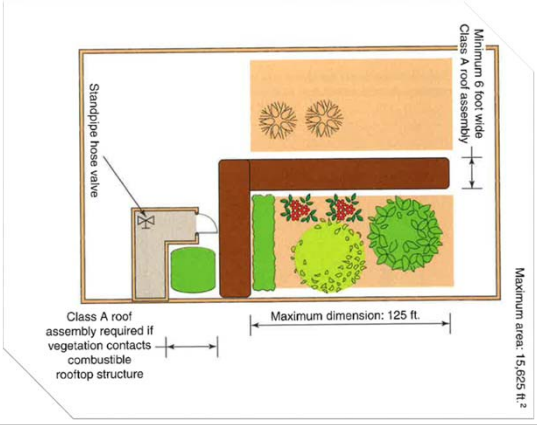
NEW

Roof Gardens
Section 317

- Intended for large green spaces not small garden/box garden or pots
- Comply with MSBC Section 1505, 1507.16 and 1607.12.3:
  - Roof coverings fire rating
  - Structural fire rating
  - Dead loads – 20 psf min. design

Roof Gardens
Section 317

- Maximum size 15,625 Sq. Ft.
- Maximum dimension of 125'
- 6' wide clearance between areas
  - class A roof
- 6' clearance from combustible vertical surfaces
  - class A roof
- 6' clearance around rooftop equipment
  - class A roof



Roof Gardens
Vegetation - Section 317.4

- Irrigation – *provided?*
- Dead foliage – *removed twice a year?*
- Maintenance plan – *when required*
- Standpipes per section 905.3.8
  - If provided – extended to roof

Roof Gardens

Deletions

REVISED

Laundry cart restrictions deleted

IFC section 318

Emergency Planning
Chapter 4

Unplanned Evacuations
Section 401.7

REVISED

- IFC does not count these
- Section deleted in MSFC
- Long history in MN
- Sometimes they are the best drills

Crowd Managers
Section 403.3

Crowd Managers

Crowd Managers

NEW

- ***Trained*** **crowd managers required for events where more than 1000 occupants congregate**
  - One crowd manager per 250 occupants
  - Ratio may be reduced by code official in fully sprinklered building or due to nature of event
  - Training and qualifications approved by the code official

MSFC 403.3

Crowd Managers

- **May already be employed by facility**
  - Not intended that facilities hire an outside contractor
- **May serve other crowd related functions**
  - Usher, tour guides, table service supervisor, etc.
- **Training must be appropriate to the facility and activity**

MSFC 403.3

Crowd Managers

Example

Indoor arena with occupancy of 9500

9500 divided by 250 = 38

38 trained crowd managers required

MSFC 403.3

Crowd Managers

- **Crowd Managers are not Fire Watch Personnel**
  - **Primary duty is to move people to safe locations**
- **Fire watch only duty is fire safety and taking appropriate action**

MSFC 403.1.1

Crowd Manager Training

- **Online 2 hour course provided by Fire Marshal Support Services**
  - Endorsed and/or supported by ICC, NASFM, IAFC, NFPA, etc.
  - Cost $19.95
  - CrowdManagers.com

Crowd Manager Training

➢**Course Content & Objectives**

- Conduct pre-event inspections to identify problems with exits and egress paths, and assure required fire systems are operational
- Guide the crowd in an emergency

Crowd Manager Training

➢**Course Content & Objectives**

- Recognize when to use protection strategies, including defend-in-place, evacuation or partial evacuation
- React to deteriorating weather conditions
- Identify problem attendees, and what to do once identified
- Coordinate with emergency responders

Lockdown Planning

Section 404.3.3

NEW

Lockdown Planning
Section 404.3.3.1

Lockdown plan to include:

1. **Initiation**
2. **Accountability**
3. **Recall**
4. **Communication and coordination**

Lockdown Planning
Section 404.3.3.1

Lockdown plan to include:

Initiation – reporting an emergency

Lockdown Planning
Section 404.3.3.1

Lockdown plan to include:

Accountability – staff reports

Lockdown Planning
Section 404.3.3

Lockdown plan to include:

Communication and coordination – two way communications

Lockdown Planning
Section 404.3.3.1

Lockdown plan to include:

Recall – signal to return to normal

Lockdown Planning
Section 404.3.3.2

Training Frequency:

- Specified in plan – Schools require 5
- Not substitute for fire drills

Lockdown Planning
Section 404.3.3.3

Lockdown notification:

- **Method to notify occupants**
- **Separate and distinct from Fire Alarm**

Questions