

# **Changes in NFPA 72-2002**

***Oregon Fire Code Committee***

***November 25, 2003***

**Michael B. Baker, SET**

**Automatic **Fire Alarm** Association**

**MikeBaker@afaa.org**

# Table of Contents

1. Administration
2. Referenced Publications (mandatory)
3. Definitions
4. Fundamentals of Fire Alarm Systems
5. Initiating Devices
6. Protected Premises Fire Alarm Systems
7. Notification Appliances for Fire Alarm Systems
8. Supervising Station Fire Alarm Systems
9. Public Fire Reporting Systems
10. Testing, Inspection and Maintenance
11. Single- and Multiple-Station Alarms and Household Fire Alarm Systems

# Administrative Changes

- Added three new chapters
- Dash replaced by dot
- Metric <-> English units
- Appendix renamed Annex
- Unenforceable language re-worded or removed
- Exceptions re-worded as requirements

# **Chapter 1**

## **Administration**

### **NEW CHAPTER**

**1.2.4\* ... This Code shall not be interpreted to require a level of fire protection greater than that required by building or fire code ...**

# **Chapter 1**

## **Administration**

### **1.6 Code Adoption Requirements.**

**This Code shall be administered and enforced by the AHJ designated by the governing authority. (See Annex D for sample wording for enabling legislation.)**

# **Chapter 2**

## **Referenced Publications**

**NEW CHAPTER**

# **Chapter 3**

## **Definitions**

### **NEW CHAPTER**

#### **3.3 General Definitions**

##### **3.3.18 Average Ambient Sound Level.**

**... measured over the period of time that any person is present, or a 24-hour period, whichever time period is the lesser.**

# Chapter 4

## Fundamentals of Fire Alarm Systems

### FORMERLY CHAPTER 1

#### 4.4 System Fundamentals

##### 4.4.1.5.3.1

... Secondary power supply sufficient for 24 hours in a nonalarm condition followed by 5 minutes of alarm notification ...

# Chapter 4

## Fundamentals of Fire Alarm Systems

### 4.4.1.5.3.1 (A)

... EVAC secondary power supply sufficient for 24 hours in a nonalarm condition followed by 15 at maximum connected load ...

# Chapter 4

## Fundamentals of Fire Alarm Systems

4.4.1.6.1 ... Secondary power to automatically provide power to protected premises system within 10 seconds, ...

# Chapter 4

## Fundamentals of Fire Alarm Systems

**4.4.1.6.3 Required signals shall not be lost, interrupted, or delayed by more than 10 seconds as a result of the primary power failure.**

**4.4.1.8.1\* Marking. Batteries shall be permanently marked with the month and year of manufacture.**

# Chapter 4

## Fundamentals of Fire Alarm Systems

**4.4.1.9.3.1 (B) Where survivability of circuits is required by Chapter 6, equal protection shall be provided for power supply circuits.**

# Chapter 4

## Fundamentals of Fire Alarm Systems

**4.4.7.3.3\* Supervising station fire alarm systems shall be arranged to delay transmission of primary power failure signals for a period ranging from 60 to 180 minutes.**

# Chapter 4

## Fundamentals of Fire Alarm Systems

### 4.5.2 Completion Documents.

4.5.2.1\* ... The preparation of a record of completion, shall be the responsibility of the qualified and experienced person described in 4.3.3 ...

# Chapter 4

## Fundamentals of Fire Alarm Systems

### 4.5.2.3 Documentation Required.

... Every system shall include, which shall be delivered to the owner ...

- (1) Owner's manual and installation instructions
- (2) Record drawings
- (3) Record copy of the site-specific software for software-based systems

# Chapter 4

## Fundamentals of Fire Alarm Systems

### 4.5.2.4\* Verification of Compliant Installation.

Where required, ... the installation shall be certified by a qualified and impartial third-party organization acceptable to the authority having jurisdiction.

# **Chapter 4**

## **Fundamentals of Fire Alarm Systems**

### **4.6 Impairments - NEW ARTICLE**

**Certification and placarding moved to Chapter 8, Supervising Station Fire Alarm Systems.**

# **Chapter 5**

## **Initiating Devices**

**FORMERLY CHAPTER 2**

**5.3\* Performance-Based Design.**

**Permits an alternative to  
prescriptive requirements.**

# **Chapter 5**

## **Initiating Devices**

**5.6.2.3 ... Heat detectors marked with their listed operating temperature.**

**5.7.3.2.4(A) ... Solid joists considered equivalent to beams for smoke detector spacing ...**

# **Chapter 5**

## **Initiating Devices**

**5.12.5\* ... Manual fire alarm boxes located throughout the protected area, conspicuous, unobstructed, and accessible.**

# **Chapter 6**

## **Protected Premises Fire Alarm Systems**

**FORMERLY CHAPTER 3**

**Software and firmware no longer required to be listed for use with the fire alarm control unit.**

# Chapter 6

## Protected Premises Fire Alarm Systems

**6.4.2.2.2\* ... Class A circuits shall be installed such that the outgoing and return conductors are routed separately ...**

**REMOVED *Exception: 2-hour fire rated cable assembly ...***

# Chapter 6

## Protected Premises Fire Alarm Systems

**6.8.2.3 ... The interconnection method of interconnection of control units ...**

**(2) ... Data communications over SLC(s) dedicated to the fire alarm or shared with other systems ...**

# Chapter 6

## Protected Premises Fire Alarm Systems

**6.8.3.2 ... Status of dwelling unit smoke alarms permitted to be displayed at the annunciator ...**

**6.8.6.4.1\* ... The evacuation signal shall be temporal code three ...**

***Exception: ... Where approved by the AHJ, the existing evacuation signaling scheme is permitted ...***

# Chapter 6

## Protected Premises Fire Alarm Systems

**6.9.4.3 ... All circuits necessary for the operation of the notification appliances shall be protected ...**

**(3)\* ... Performance alternatives ...**

**DELETED The use of stairwells**

**ADDED Alternative methods**

# **Chapter 6**

## **Protected Premises Fire Alarm Systems**

### **6.9.7 Speakers.**

**DELETED** The requirement for a speaker in the elevator car.

**6.9.7.3 ... Speakers in enclosed stairways where required ...**

# Chapter 6

## Protected Premises Fire Alarm Systems

### 6.15 Protected Premises Fire Safety Functions

6.15.2.1 ... The performance of automatic fire safety functions shall not interfere with power for lighting or for operating elevators

...

# Chapter 6

## Protected Premises Fire Alarm Systems

**6.15.4.5 Initiating devices described in 6.15.4.2 and 6.15.4.3 shall be monitored for integrity ...**

# Chapter 6

## Protected Premises Fire Alarm Systems

**6.15.5.5 Where interconnected as a combination system, a Firefighter's Smoke Control Station (FSCS) shall be provided**

...

# **Chapter 7**

## **Notification Appliances**

**FORMERLY CHAPTER 4**

### **7.4 Audible Characteristics**

**DELETED Requirement to provide visible notification in mechanical equipment rooms.**

**DELETED 75dBA – 120dBA equip.**

# **Chapter 7**

## **Notification Appliances**

**7.4.2.2 Where approved by the AHJ, the requirements for audible signaling permitted to be reduced or eliminated when visible signaling is provided ...**

# **Chapter 7**

## **Notification Appliances**

**7.4.5\* Narrow Band Tone Signaling for Exceeding Masked Thresholds.**

**7.4.5.1 ... Audible fire alarm tone signaling permitted to comply with masked threshold requirements in lieu of A-weighted signaling ...**

# **Chapter 7**

## **Notification Appliances**

**7.4.6.4 Appliances that are an integral part of a smoke detector, smoke alarm, or other initiating device shall be located in accordance with the requirements for that device.**

# **Chapter 7**

## **Notification Appliances**

### **7.5 Visible Characteristics - Public Mode**

**DELETED** The requirement to locate sufficient numbers of visible appliances so that the operating effect is seen by the intended viewer.

# Chapter 7

## Notification Appliances

### Table 7.5.4.1.1(a) Room Spacing for Wall-Mounted Visible Appliances

- Added more room sizes.
- 50' X 50' room size error ...

# **Chapter 7**

## **Notification Appliances**

**7.5.4.1.2 Visible notification appliances shall be installed in accordance with Table 7.5.4.1.1(a), using one of the following:**

**REMOVED The option of using more than two appliances in rooms 80' X 80' or larger.**

# **Chapter 7**

## **Notification Appliances**

**7.5.4.2\* Spacing in Corridors.**

**REMOVED Corridor spacing table.**

**7.5.4.2.4 The installation of visible notification appliances in corridors shall be in accordance with the requirements of either 7.5.4.1 or 7.5.4.2.**

# **Chapter 7**

## **Notification Appliances**

### **7.5.4.3\* Performance-Based Alternative.**

**7.5.4.3.1 Any design that provides a minimum of 0.4036 lumens/m<sup>2</sup> (0.0375 lumens/ft<sup>2</sup>) of illumination at any point within the covered area ...**

# **Chapter 8**

## **Supervising Station Fire Alarm Systems**

### **8.2 Fire Alarm Systems for Central Station Service**

**8.2.7.1.2 ... Central station shall ...**

**(2) ... Dispatch a runner or technician to arrive within 2 hours after receipt of a signal ...**

# **Chapter 8**

## **Supervising Station Fire Alarm Systems**

### **8.5 Communications Methods for Supervising Station Fire Alarm Systems**

**8.5.3.3.4\* ... Unless accepted by the AHJ, McCulloh systems shall not be installed after June 30, 2003**

# **Chapter 9**

# **Public Fire Reporting Systems**

**FORMERLY CHAPTER 6**

# Chapter 10

## Inspection, Testing, & Maintenance

### FORMERLY CHAPTER 7

**10.1.2 ... inspection, testing, and maintenance of single- and multiple-station smoke and heat alarms and household fire alarm systems shall comply with the requirements of this chapter ....**

# Chapter 10

## Inspection, Testing, & Maintenance

### 10.4 Testing

#### Table 10.4.2.2 Test Methods

### 11. Conductors — Metallic

(e) Supervision ... One connection shall be opened at not less than 10 percent of the initiating devices, notification appliances and controlled devices on every IDC, NAC, AND SLC ...

# Chapter 10

## Inspection, Testing, & Maintenance

### Table 10.4.3 Testing Frequencies

#### 5. Batteries — Central Station Facilities and Fire Alarm Systems

##### (c) Sealed lead-acid type

1. Charger test (replace battery within 5 years after manufacture or more frequently as needed.)

# Chapter 10

## Inspection, Testing, & Maintenance

**10.4.4 ... Homeowners shall inspect and test smoke alarms and all connected appliances at least monthly ...**

**10.4.5.1 ... Household fire alarm systems shall be tested by a qualified service technician at least every 3 years according to the methods of Table 10.4.2.2.**

# Chapter 10

## Inspection, Testing, & Maintenance

**10.4.6 ... Unless otherwise recommended by the manufacturer, single- and multiple-station smoke alarms installed in one- and two-family dwellings shall be replaced when they fail to respond to operability tests, but shall not remain in service longer than 10 years from the date of manufacture.**

# **Chapter 11**

## **Household Fire Warning**

**FORMERLY CHAPTER 8**

**A return to the prescriptive format of NFPA 72-1996 while retaining the occupancy requirement language of NFPA 101.**

# **Annex A-F**

**A – Explanatory Material**

**B – Engineering Guide for Automatic Fire  
Detector Spacing**

**C – Wiring Diagrams and Guide for Testing  
Fire Alarm Circuits**

**D – Sample Ordinance Adopting NFPA 72**

**E – Informational References**

**F – Cross Reference Tables**

# **Changes in NFPA 72-2002**

***Oregon Fire Code Committee***

***November 25, 2003***

**Michael B. Baker, SET**

**Automatic **Fire Alarm** Association**

**MikeBaker@afaa.org**