

HAWAII ADMINISTRATIVE RULES

TITLE 12

DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

SUBTITLE 7

BOARDS

CHAPTER 45.1

STATE FIRE COUNCIL

STATE FIRE CODE

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Historical Note: Chapter 12-45.1 is based substantially upon chapter 12-45, subchapter 1. [Eff 6/6/86; am and comp 8/13/87; am and comp 4/18/92;R]

SUBCHAPTER 1
RULES OF GENERAL APPLICABILITY

§12-45.1-1 **Purpose.** The purpose of this chapter is to adopt the state fire code as required by section 132-3, Hawaii Revised Statutes (HRS). [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-2 **Scope.** This chapter sets forth minimum requirements relative to the protection of persons and property from fire loss. [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-3 **Definitions.** In this chapter, unless the context otherwise requires:

“Annex” means the annex attached to the NFPA 1, Uniform Fire Code.

“Chapter” means chapter of the NFPA 1, UFC.

“Building code” means the currently adopted, respective county building code.

“NFPA” means the National Fire Protection Association.

“Section” means a section of a chapter of the NFPA 1, UFC.

“NFPA 1, UFC” means the NFPA 1, *Uniform Fire Code*, 2006 edition, as copyrighted by the National Fire Protection Association. [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

§12-45.1-4 **Adoption of the NFPA 1, Uniform Fire Code.** The NFPA 1, Uniform Fire Code, 2006 edition is made a part of this chapter, subject to the amendments provided in this chapter. The annexes to the NFPA 1, UFC are not adopted except as provided in this chapter. [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)]

§12-45.1-5 **Permit authorization.** Each county may, by ordinance, require that a permit be obtained from the AHJ for any area regulated by this chapter. [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-5 Permit authorization: This was 12-45.1-9 in the previous State Fire Code. “Chief” was changed to “AHJ” to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, “Chief” is not defined in this code, whereas “AHJ” is defined.)

SUBCHAPTER 2
AMENDMENTS TO THE NFPA 1, UFC

§12-45.1-6 **Title.** Section 1.1.2 is amended to read: "This code shall be known as the State Fire Code, may be cited as such, and will be referred to in this chapter as this code." [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-6 Title: This was §12-45.1-10 in the previous State Fire Code. This gives the title to the state amendments to the 2006 edition of the NFPA 1, Uniform Fire Code.)

§12-45.1-7 **Conflicts with Building Code.** Add a Section 1.3.3.3 to read: "1.3.3.3 When a conflict occurs in the requirements for design and construction for new construction of buildings between this code and the building code, the building code shall apply."

(§12-45.1-7 Conflicts with Building Code: This new amendment is added to show that the County building codes take precedence for design and construction of new buildings. "Of buildings" was added to make sure that this Fire Code still applies to the site of new construction.)

§12-45.1-8 **Building Code.** Section 1.3.6.3 is amended to read: "1.3.6.3 Repairs, renovations, alterations, reconstruction, change of occupancy, and additions to buildings shall conform with the building code.

(§12-45.1-8 Building Code: This new amendment is added to delete the general adoption by reference of NFPA 101 because it is not currently adopted by the building departments for new construction.)

§12-45.1-9 **General.** Section 1.6 is amended to read: "The general powers and duties of the AHJ are set forth in chapter 132, HRS." [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-9 General: This was §12-45.1-12 in the previous State Fire Code. Powers and duties are authorized by HRS 132. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-10 **Inspection.** Section 1.7.6 is amended to read: "Inspections are authorized by and shall be made in accordance with sections 132-5 and 132-6, HRS." [Eff] (Auth: HRS §§132-3, 132-5, 132-6) (Imp: HRS §§132-3, 132-5, 132-6)

(§12-45.1-10 Inspection: This was §12-45.1-14 in the previous State Fire Code. Authority comes from the HRS 132.)

§12-45.1-11 **Investigations.** Section 1.7.10 is amended to read: "Investigations are authorized by and shall be made in accordance with section 132-3, HRS." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-11 Investigations: This was §12-45.1-16 in the previous State Fire Code. This refers to the authority provided by HRS 132, which authorizes the fire department to take charge of all physical evidence, if needed, relating to fire origin & cause investigations. Original code authorizes the taking of evidence for fires of a suspicious nature only. The Fire Prevention Committee opted for a reference to the HRS, rather than spelling out what the HRS says.)

§12-45.1-12 **Appeals.** Section 1.10 is amended to read: "Each county shall establish, by ordinance, a county fire appeals board, hereinafter called the board, as required by section 132-6(f), HRS." [Eff] (Auth: HRS §132-6) (Imp: HRS §132-3)

(§12-45.1-12 Appeals: This was §12-45.1-11 Appeals in the previous State Fire Code. The appeals board is established by county ordinance as authorized by HRS 132.)

§12-45.1-13 **Adjuster's report.** Section 1.11.5 is added to read: "Upon the AHJ's request, every company or agent transacting the business of fire insurance in this State shall be required to file with the AHJ in each county a monthly record of fire losses paid or incurred on forms prescribed, permitted, or furnished by the AHJ. These forms shall contain information on each fire loss such as the name of the insured, name of the adjuster, date and time of fire, construction of building or structure burned, amount of insurance paid, and apportionment of the loss where more than one company insured the risk.

The current National Fire Incident Reporting System (NFIRS) report forms may be used." [Eff] (Auth: HRS 132-3) (Imp: HRS §132-3)

(§12-45.1-13 Adjuster's report: This was §12-45.1-17 in the previous State Fire Code. Added section requires insurance companies to submit information of fire losses, name of insured, amounts paid, etc. This information may be useful in a criminal investigation for fires that may have been deliberately set. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-14 **Permit required.** Section 1.12.20 and Tables 1.12.20(a)-(d) are deleted. [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-14 Permit required: This was §12-45.1-18 in the previous State Fire Code. This section of the code is deleted. Under the fire code no permits are issued by the state. All permits are issued by the county and will be addressed in the fire code county amendments. This section and these Tables establish required permits. All the other sections in the code refer to “when permits are required”. By deleting this section and these tables, no permits are ever required by this amended code.)

§12-45.1-15 Certificate of Fitness. Section 1.13 is deleted.

(§12-45.1-15 Certificate of Fitness: This section is deleted because the State already establishes a Certificate of Fitness for certain issues, such as explosives and fireworks. Each County may add a similar section to be more restrictive if determined necessary for non-state regulated certifications)

§12-45.1-16 Plan Review. Section 1.14 is deleted.

(§12-45.1-16 Plan Review: HRS 132-3 allows each County to conduct plan review, thus this provision is not needed.. If desired, Counties may add administrative requirements for plan review).

§12-45.1-17 Building Code. Section 3.3.45.1 is amended to read:
“3.3.45.1 Building Code. The building code is the building code adopted by the county.”

(§12-45.1-17 Building Code: Each County adopts its own building code, and the County Building Code takes precedence for new construction of buildings.)

§12-45.1-18 Electrical Code. Section 3.3.45.2 is amended to read:
“3.3.45.2 Electrical Code. The electrical code is the electrical code adopted by the county.”

(§12-45.1-18 Electrical Code: Each County adopts its own electrical code and it takes precedence for new construction.)

§12-45.1-19 Mechanical Code. Section 3.3.45.3 is amended to read:
“3.3.45.3 Mechanical Code. The mechanical code is the mechanical code adopted by the county.”

(§12-45.1-19 Mechanical Code: Each County adopts its own mechanical code and it takes precedence for new construction.)

§12-45.1-20 Plumbing Code. Section 3.3.45.4 is amended to read:
“3.3.45.4 Plumbing Code. The plumbing code is the plumbing code adopted by the county.”

(§12-45.1-20 Plumbing Code: Each County adopts its own plumbing code and it takes precedence for new construction.)

§12-45.1-21 **Definitions and abbreviations.** Add a new section to 3.3.208.4 by adding the following definition to read as follows: **“modified positive alarm sequence** is an automatic sequence that results in an alarm signal in designated portions of the building or facility.” [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-21 Definitions and abbreviations: This was §12-45.1-19 in the previous State Fire Code. This definition is needed for the modified positive alarm sequence provisions added to code section 13.7.1.4.9.4.1. It is taken from the 1997 UFC Standard 10-2, which was a referenced standard to the UFC at the time of the previous adoption when this was added to the Hawaii State Fire Code.)

§12-45.1-22 **Maintenance.** Section 4.5.8.1 is amended to read as follows: “4.5.8.1 Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this Code, such device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be continuously maintained in accordance with applicable NFPA requirements and the building code or requirements developed as part of a performance-based design, or as directed by the AHJ. 4.6.12.1]”

(§12-45.1-22 Maintenance: The term “and the building code” was added to this paragraph because Fire Departments maintain the building to the building code requirements.)

§12-45.1-23 **Means of Egress.** Section 5.3.4 is amended to read as follows: “5.3.4 Means of Egress. The design shall comply with the following building code requirements in addition to the performance criteria of Section 5.2 and the methods of Section 5.4 through Section 5.7:

- (1) Changes in level in means of egress: Building Code
- (2) Guards: Building Code
- (3) Doors: Building Code
- (4) Stairs: Building Code
- (5) Ramps: Building Code
- (6) Fire escape ladders: Building Code
- (7) Alternating tread devices: Building Code
- (8) Capacity of means of egress: Building Code
- (9) Impediments to egress: Building Code

- (10) Illumination of means of egress: Building Code
- (11) Emergency lighting: Building Code
- (12) Marking of means of egress: Building Code

(§12-45.1-23 Means of Egress: The reference to NFPA 101 in the body of the first paragraph and the listed items has been changed to building code. The county building code will apply to these rather than 101 as a minimum.)

§12-45.1-24 **Occupancy Classification.** Section 6.1.1.1 is amended to read: "6.1.1.1 Occupancy Classification. For the purposes of enforcing this code, the occupancy of a building or structure, or portion of a building or structure, shall be classified in accordance with 6.1.2 through 6.1.13. Occupancy classification shall be subject to the ruling of the AHJ where there is a question of proper classification in any individual case."

(§12-45.1-24 Occupancy Classification: The term "for the purposes of enforcing this code" was added because the occupancy classifications in this code, apply only to the requirements in this code. Occupancy classifications in this code do not have any bearing on the enforcement of the County Building Code. It should be pointed out that the occupancy classifications between this code and the IBC are very similar.)

§12-45.1-25 **Separated Occupancies.** Section 6.1.14.4.1 is amended to read: "6.1.14.4.1 Where separated occupancies are provided, each part of the building comprising a distinct occupancy, as described in this chapter, shall be completely separated from other occupancies by fire-resistive assemblies as specified in the building code."

(§12-45.1-25 Separated Occupancies: This section is revised to make it clear that for new construction, the building code applies. Buildings should be inspected to the building code.)

§12-45.1-26 **Required Separation of Occupancies.** Tables 6.1.14.4.1 (a) and 6.1.14.4.1 (b) are deleted.

(§12-45.1-26 Required Separation of Occupancies: These tables are deleted to make it clear that for new construction, the building code applies. Buildings should be inspected to the building code.)

§12-45.1-27 **Occupancy Separations.** Section 6.1.14.4.2 is amended to read: "6.1.14.4.2 Occupancy separations shall be classified in accordance with the building code and comply with all the requirements for walls separating occupancies in accordance with the building code."

(§12-45.1-27 Occupancy Separations: This section is revised to make it clear that for new construction, the building code applies. Buildings should be inspected to the building code.)

§12-45.1-28 **Fire Resistance Ratings.** Section 6.1.14.4.3 is deleted.

(§12-45.1-28 Fire Resistance Ratings: This section is deleted to make it clear that for new construction, the building code applies. Buildings should be inspected to the building code.)

§12-45.1-29 **Occupancy Separations.** Section 6.1.14.4.4 is deleted.

(§12-45.1-29 Occupancy Separations: This section is deleted to make it clear that for new construction, the building code applies. Buildings should be inspected to the building code.)

§12-45.1-30 **Fundamental Requirements.** Section 10.1.1 is amended to read: "10.1.1 Every building or structure shall be arranged, equipped, maintained, and operated in accordance with this *Code* so as to provide a reasonable level of life safety, property protection, and public welfare from the actual and potential hazards created by fire, explosion, and other hazardous conditions."

(§12-45.1-30 Fundamental Requirements: Reference to "new" construction have been deleted since the building code applies to new construction.)

§12-45.1-31 **Life Safety Code.** Section 10.1.2 is deleted.

(§12-45.1-31 Life Safety Code: This section is deleted for several reasons. First, the building departments do not adopt or enforce the Life Safety Code for new construction. Second, this NFPA 1 extracts many of the provisions from the Life Safety Code for existing facilities. Last, it is questioned whether the State Fire Council has the authority to adopt a Life Safety Code.)

§12-45.1-32 **Building Code.** Section 10.1.3 is deleted.

(§12-45.1-32 Building Code: This code does not apply to new construction.)

§12-45.1-33 **Unsafe buildings.** Add a sentence to Section 10.2.3 to read: "For abatement of unsafe buildings, see the building code. [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-33 Unsafe buildings: This was §12-45.1-15 in the previous State Fire Code. This delegates the authority for repair, rehabilitation,

demolition or removal to county ordinance and the building code, not the fire code.)

§12-45.1-34 **On-premise Firefighting.** Section 10.7.1.2 is amended to read: "10.7.1.2 Facilities that have established on-premises fire-fighting organizations and have coordinated and arranged procedures approved by the AHJ shall notify the fire department in accordance with the approved plan."

(§12-45.1-34 On-premise Firefighting: This section is revised to change the notification requirements at facilities with on-premise firefighting. If a facility has an on-premises firefighting organization, they shall work with the county fire department prior to implementation. The approved plan shall identify when the fire department is to be notified.)

§12-45.1-35 **Fire Watch.** Section 10.8.1.1 is amended by adding a sentence to read: "A fire watch shall be required as specified in Sections 13.3.4.3.5.2(3), 13.7.1.4.4, 16.5.4, 41.2.2.5, 41.2.2.6, 41.2.4, 41.3.4, 41.4.1, 34.5.4.3 and 25.1.8 at no cost to the AHJ."

(§12-45.1-35 Fire Watch: Adding references and a statement that a fire watch is not at the expense of the fire department.)

§12-45.1-36 **Open Fires.** Section 10.11.1 is amended to read as follows: "Section 10.11.1 Open Fires in Counties. Control of the following fires shall be established by each county:

1. Fires for cooking of food.
2. Fires for recreational, decorative, or ceremonial purposes.
3. Fires to abate a fire hazard.
4. Fires for prevention or control of disease or pests.
5. Fires for training of fire fighting personnel.
6. Fires for disposal of dangerous materials.
7. Fires for residential bathing purposes.

Except for closed incinerators approved by the state health department, private incineration is prohibited by state health laws. Clearance by the state health department for and notification of all agricultural fires either by telephone or written notice shall be on file with the AHJ before these fires are permitted." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-36 Open Fires: This was §12-45.1-56 in the previous State Fire Code. These are open fires that are under the control of the county and not subject to state air pollution laws. Note that §12-45.1-55 from the previous State Fire Code is included in this, and thus "incinerators" are not mentioned. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief.

However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.) to coincide with the new code.)

§12-45.1-37 **Open Fires.** Section 10.11.2.1 is amended to read: "10.11.2.1 Open fires shall be located not less than 50 ft (15 m) from any structure."

(§12-45.1-37 Open Fires: The word "permitted" is deleted because no permits are required in the State Fire Code.)

§12-45.1-38 **Special Outdoor Events.** Section 10.15.2 is amended to read as follows: "10.15.2 The AHJ shall be authorized to regulate all outdoor events such as carnivals and fairs as it pertains to access for emergency vehicles; access to fire protection equipment; placement of stands, concession booths, and exhibits; and the control of hazardous conditions dangerous to life and property."

(§12-45.1-38 Special Outdoor Events: The word "permitted" is replaced with the word "authorized" to clarify that a permit is not required to regulate this specific section, rather the AHJ is authorized to regulate this specific section.)

§12-45.1-39 **Commercial Cooking Equipment.** Section 11.2 is amended to read: "11.2 Commercial Cooking Equipment. Commercial cooking equipment shall be in accordance with Chapter 50, unless such installations are approved existing installations, which shall be permitted to be continued in service."

(§12-45.1-39 Commercial Cooking Equipment: Section 11.2 is deleted except for the remaining paragraph, which references to chapter 50. The county building codes regulate new construction of these systems.)

§12-45.1-40 **Elevators, Escalators, and Conveyors.** Section 11.3 is amended to read: "11.3. Elevators, Escalators, and Conveyors.

11.3.1 Elevator Testing. Elevators shall be subject to periodic inspections and tests as specified in ASME A17.1, Safety Code for Elevators and Escalators. All elevators equipped with fire fighters' emergency operations shall be subject to a monthly operation with a written record of the findings made and kept on the premises as required by ASME A17.1.

11.3.2 Openings. Conveyors, elevators, dumbwaiters, and pneumatic conveyors serving various stories of a building shall not open to an exit."

(§12-45.1-40 Elevators, Escalators, and Conveyors: This section is deleted since it applies to new construction. However the section on elevator testing was retained and amended to eliminate the reference to the deleted portion of the section and the section on openings was retained.)

§12-45.1-41 **Maintenance.** Section 11.6.2 is amended to read: "11.6.2 Maintenance. Rubbish chutes, laundry chutes, and incinerators shall be maintained in accordance with NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment*, unless such installations are approved existing installations, which shall be permitted to be continued in service."

(§12-45.1-41 Maintenance: The paragraph was revised to eliminate requirements for installation because installations are regulated by the building code.)

§12-45.1-42 Emergency Command Center. Section 11.9 is amended to read: "11.9 Emergency Command Center. Where required by the building code, emergency command centers shall comply with Section 11.9."

(§12-45.1-42 Emergency Command Center: This adds the term "by the building code." IBC sect 403.8 requires fire department approval for the emergency command center, and these provisions indicate what the fire dept wants.)

§12-45.1-43 **General.** Section 12.1 is amended to read: "12.1 General. This chapter shall apply to existing, permanent, or temporary buildings. The provisions of this chapter for new construction do not apply. For new construction see the building code. Existing buildings shall be maintained to the building code to which it was built."

(§12-45.1-43 General: This code is not intended to apply to new construction because the building code regulates new construction. Each County will be able to adopt the state fire code with provisions for new construction if they so choose because they have the authority to be more restrictive. Existing buildings do not need to be brought up to newer editions of the building code if no work is being done to the building.)

§12-45.1-44 **Identification.** Section 12.4.6 is added to read: "12.4.6 **Identification.** When required by the AHJ, a sign shall be displayed permanently near or on each required fire door in letters not less than 1 inch (25.4 mm) high to read as follows:

**FIRE DOOR
DO NOT OBSTRUCT
or
FIRE DOOR
KEEP CLOSED**

[Eff 3] (Auth: HRS §132-3)(Imp: HRS §132)

(§12-45.1-44 Identification: This was §12-45.1-65 in the previous State Fire Code. This provides an option to required fire door signage to be displayed on or near each required fire door. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-45 **General.** Section 13.1 is amended to add a first paragraph and exception to read: "13.1 General. The provisions of this chapter for new construction do not apply. For new construction see the building code. Existing buildings shall be maintained to the building code to which it was built unless specifically indicated it applies to existing facilities.

Exception: When the building code does not require fire alarm systems, fire alarm systems shall be required according to Section 13.7. When the building code does require a fire alarm system, the requirements of the building code shall apply."

(§12-45.1-45 General: This code is not intended to apply to new construction because the building code regulates new construction. Each County will be able to adopt the state fire code with provisions for new construction if they so choose because they have the authority to be more restrictive. Existing buildings do not need to be brought up to newer editions of the building code if no work is being done to the building.)

§12-45.1-46 **Installation acceptance testing.** Add a second paragraph to section 13.1.1 to read: "Fire alarm systems; fire hydrant systems; fire-extinguishing systems; standpipes; and other fire-protection systems and appurtenances required by this code shall be approved by the AHJ as to installation and location and shall be subject to acceptance tests required by the appropriate county agency." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-46 Installation acceptance testing: This was §12-45.1-29 in the previous State Fire Code. This authorizes the appropriate county agency i.e. fire hydrants (Board of Water Supply), fire sprinklers and standpipes installation (Building Department), to meet its respective requirements. The fire department does acceptance testing for fire alarm systems and cooking range hoods. This specifies that installation and location must be approved by the AHJ on these specific items. This is currently required in the State Fire Code. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-47 **Inspection and testing.** Add a third paragraph to section 13.1.1 to read: "A copy of a system's unsatisfactory inspection and maintenance test report shall be submitted to the AHJ within five (5) working days after the completion of the test."

(§12-45.1-47 Inspection and testing. This was §12-45.1-30 in the previous State Fire Code. This specifically will require only unsatisfactory inspection and maintenance test reports to be submitted to the Department, rather than all reports. It is important that the Department be notified of unacceptable tests and inspections so that the department may follow up. This makes an additional specific requirement that the test report is submitted to the AHJ within 5 working days after the test completion. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-48 **Responsibility.** Section 13.1.2 is deleted and replaced to read: "The building or facility owner shall be responsible for the maintenance of fire sprinkler systems, private fire hydrant systems, standpipe systems, fire alarm systems, portable fire extinguishers, smoke and heat ventilators, smoke-removal systems and other fire-protection or fire-extinguishing systems."

The owner of a high-rise building shall be responsible for assuring that the fire- and life-safety systems required by the building code are maintained in an operable condition at all times. A written record of the test reports verifying the operational status of these types of systems shall be maintained and shall be made available to the AHJ, upon request." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-48 Responsibility: This first paragraph in Section 13.1.2 comes from §12-45.1-30 in the previous State Fire Code and replaced the NFPA 1 provision with more specific language already used in the State Fire Code. The last paragraph is added to section 13.1.2 to highlight the responsibility of high-rise building owners. The amendment is currently required by the State Fire Code.

The second paragraph comes from 12-45.1-31 of the previous State Fire Code. This eliminates the requirement of a quarterly test as different systems have different requirements (i.e. dry standpipe (5 years), sprinkler systems (1 year). Records are also made available for inspections.

"Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-49 **Records.** Revise section 13.1.5 as follows: "Detailed records documenting all systems and equipment testing, inspections and maintenance shall be kept by the property owner and shall be made available upon request for review by the AHJ."

(§12-45.1-49 Records: This was §12-45.1-30 in the previous State Fire Code. This comes from the 1997 State Fire Code. This coincides with amendments to Section 13.1.2.)

§12-45.1-50 **Smoke-control systems.** Section 13.1.12 is added to read: "Mechanical smoke-control systems, such as those in high-rise buildings, buildings containing atria, covered mall buildings and mechanical ventilation systems utilized in smokeproof enclosures and for smoke-removal systems utilized in high-piled combustible storage occupancies, shall be maintained in an operable condition at all times. A written record of the test reports verifying the operational status of these types of systems shall be maintained and shall be made available to the AHJ, upon request." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-50 Smoke-control systems: This was §12-45.1-32 in the previous State Fire Code. This provision in current state code 12-45.1-32 is added as section 13.1.12 in this code. This eliminates the requirement of quarterly tests and requires the system to be operable at all times. Records are also made available for inspections. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-51 **Required installations.** Sections 13.2.2.1 and 13.2.2.2 are amended to read: "Standpipe systems shall be provided as set forth in the building code." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-51 Required installations: This was §12-45.1-40 in the previous State Fire Code. This sends the reader to the building code for the appropriate requirement.)

§12-45.1-52 **General.** Add a paragraph to section 18.2.3.1 to read: "Fire department hose connections shall be located within 20 feet of a fire apparatus access road, not less than 18 inches and not more than 4 feet above grade, or as approved by the AHJ. Appropriate identification signs shall be provided as required by the AHJ." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-52 General: This was §12-45.1-39 in the previous State Fire Code. This adds specific dimension and identification sign requirements for fire department hose connections. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the

authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-53 **General.** Add a new section 18.3.4 to read: "Fire department hose connections shall be located within 20 feet of a fire apparatus access road, not less than 18 inches and not more than 4 feet above grade, or as approved by the AHJ. Appropriate identification signs shall be provided in a location(s) approved by the AHJ."

(§12-45.1-53 General: This was 12-45.1-34 in the previous State Fire Code. This paragraph gives specific dimensions and identification signs for fire department connections. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-54 **All occupancies except Dwellings and lodging occupancies.** Section 13.3.2.2 is amended to read:

"In every story or basement of all buildings when the floor area exceeds 1,500 square feet and there is not provided at least 20 square feet of opening entirely above the adjoining ground level in each 50 lineal feet or fraction thereof of exterior wall in the story or basement on at least one side of the building. Each of the required 20 square feet of opening shall have at least one opening with minimum dimensions of 3 feet by 4 feet. Such required openings shall be unobstructed by sunshades, louvers, grillwork, or other construction on the exterior wall which will prevent or hinder access to the openings by the fire department personnel." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-54 All Occupancies except Dwellings and Lodging Occupancies: This was §12-45.1-35 in the previous State Fire Code. This provision comes from the previous State Fire Code and conforms to the 1997 Uniform Building Code, Section 904.2.2 as amended.)

§12-45.1-55 **Existing Educational Occupancies.** Section 13.3.2.8 is deleted.

(§12-45.1-55 Existing Educational Occupancies: This was determined by the State Fire Council to be not necessary since most of the schools complied with the requirement.)

§12-45.1-56 **Hotels and apartment occupancies.** Sections 13.3.2.13.1 and 13.3.2.15.1 are amended to read: "An automatic sprinkler system shall be installed throughout every apartment house over one story and containing 17 or more dwelling units, every congregate residence over one story and having an

occupant load of 50 or more, and every hotel over one story and containing 20 or more guest rooms. Residential or quick-response standard sprinkler heads shall be used in the dwelling unit and guest room portions of the building." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-56 Hotels and apartment occupancies: This was §12-45.1-38 in the previous State Fire Code. This comes from the previous State Fire Code and conforms to the 1997 Uniform Building Code Section 904.2.9 as amended.)

§12-45.1-57 Existing Hotels and Dormitories. Section 13.3.2.14 is deleted.

(§12-45.1-57 Existing Hotels and Dormitories: This was determined by the State Fire Council to be not necessary since most of the hotels and dormitories have been provided with fire sprinklers. High-rise buildings are addressed by legislation each year.)

§12-45.1-58 Existing Residential Board and Care Facilities. Section 13.3.2.20 is deleted.

(§12-45.1-58 Existing Residential Board and Care Facilities: This was determined by the State Fire Council to be unnecessary since most of these facilities have already been provided with sprinklers.)

§12-45.1-59 Mercantile occupancies. Sections 13.3.2.21.1, 13.3.2.22.1, and 13.3.2.25.1 are amended by adding a second paragraph to read: "In a one-story building for Mercantile or Storage occupancies requiring an automatic sprinkler system, a metal plate sign stating the maximum storage height allowable for the installed sprinkler system shall be placed next to the main shutoff valve of the automatic sprinkler riser." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-59 Mercantile occupancies: This was §12-45.1-37 in the previous State Fire Code. This comes from the previous State Fire Code and conforms to the 1997 Uniform Building Code Section 904.2.10 as amended.)

§12-45.1-60 Existing Mercantile Occupancies. Section 13.3.2.22 is deleted.

(§12-45.1-60 Existing Mercantile Occupancies: This was determined by the State Fire Council to be unnecessary since most of these facilities have already been provided with sprinklers.)

§12-45.1-61 Existing High-Rise Buildings. Section 13.3.2.24.2 is deleted.

(§12-45.1-61 Existing High-rise Buildings: This is a hot topic in the State. Each year the Council addresses this issue with legislation on the county level, which is the best place to address this hot topic.)

§12-45.1-62 **General.** Section 13.7.1.4.9.4 is amended to read:

"13.7.1.4.9.4. When approved by the AHJ and where permitted by Chapter 11 through Chapter 42 of NFPA 101, a positive alarm sequence shall be permitted, provided that it is in accordance with NFPA 72." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-62 General: This was §12-45.1-51 in the previous State Fire Code. This adds an exception to the requirement that the fire alarm initiating device produce an audible signal throughout the building. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-63 **Fire alarm system modified positive alarm sequence.**

Section 13.7.1.4.9.4.1 is added to read: "Buildings or facilities shall meet all of the following requirements for a positive alarm sequence:

1. An automatic fire sprinkler system installed in conformance with the building code shall be provided throughout the building or facility.
2. Written fire emergency procedures and an evacuation plan for the building or facility shall be reviewed by the AHJ prior to approval testing. The procedures and plan shall include, but not be limited to, immediate notification to the fire department, use of primary and secondary exits, use of fire protection appliances for the building(s) or facility(ies)
3. Trained personnel shall respond to emergencies on a 24-hour basis. The staff shall be instructed in fire emergency procedures and the use and operation of in-house fire appliances. Documentation of such training shall be maintained and filed on the premises.
4. Immediate notification of the fire department shall take place upon activation of any fire alarm initiating device.
5. If an initiating device of the fire alarm system is activated, acknowledgement at the control unit by trained personnel shall be accomplished within 15 seconds in order to initiate the alarm investigation phase. If the signal is not acknowledged within 15 seconds, all building or facility and remote signals shall be activated immediately and automatically (general alarm).

6. If an initiating device of the fire alarm system is activated, all notification devices in that zone shall be activated. The zone notification shall include the floor of, the floor above and the floor below the activated device. The zone notification areas may be modified with the approval of the AHJ. This zone notification shall be for a maximum of three (3) minutes, during which trained personnel shall initiate the alarm investigation phase, communicate their findings immediately to the fire department, and reset the system if appropriate. After three (3) minutes, or an activation of any other initiating device(s), the fire alarm system shall be activated immediately and automatically for the entire building or facility (general alarm). At no time shall the fire alarm system be silenced until verification of the alarm is accomplished.
7. The fire alarm system shall provide a means to bypass the positive alarm sequence and immediately activate the general alarm for the entire building or facility.
8. The AHJ shall conduct a test of the positive alarm sequence prior to implementation.
9. The AHJ may disapprove or rescind approval of the positive alarm sequence of the fire alarm system if all of the above requirements are not met and shall require the fire alarm system to be reprogrammed to meet a general alarm notification at the owners expense." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-63 Fire alarm system modified positive alarm sequence: This was §12-45.1-52 in the previous State Fire Code. It adds a section explaining the requirements of the fire alarm system modified positive alarm sequence. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-64 **Audibility.** Section 13.7.1.4.9.8 is amended to read: "The alarm signal shall be a distinctive sound, which is not used for any other purpose other than the fire alarm. Alarm-signaling devices shall produce a sound that exceeds the prevailing equivalent sound level in the room or space by 15 decibels minimum, or exceeds any maximum sound level with a duration of 60 seconds minimum by 5 decibels minimum, whichever is louder. Sound levels for alarm signals shall be 120 decibels maximum." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-64 Audibility: This was §12-45.1-53 in the previous State Fire Code. The amendment changes the duration of the sound level for audibility from 30 to 60 seconds in conformance with the 1997 Uniform Fire Code Standards 10-2.)

§12-45.1-65 **General.** Sections 13.7.2.3.1 and 13.7.2.4.1 are amended by adding a second paragraph to read: "Fire alarm systems shall be tested and logged monthly." Sections 13.7.2.3.1 and 13.7.2.4.1 are also amended by adding a paragraph to read: "An annunciator panel shall be provided in the office of each school." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-65 General: This was §12-45.1-44 in the previous State Fire Code. The first added paragraph includes the requirement that fire alarm systems for schools be tested and logged monthly. The second added paragraph adds the requirement that annunciator panels for schools be located in the school office.)

§12-45.1-66 **Existing Apartment Buildings.** Sections 13.7.2.12.1, 13.7.2.12.2 and 13.7.2.13.3 are deleted.

(§12-45.1-66 Existing Apartment Buildings: This was determined by the State Fire Council to be unnecessary, since most of this was addressed by the legislative requests to provide high-rise apartment sprinklers.)

§12-45.1-67 **Existing Mercantile Occupancies.** Section 13.7.2.18 is deleted.

(§12-45.1-67 Existing Mercantile Occupancies: This was determined by the State Fire Council to be unnecessary as most of these have been provided with sprinklers.)

§12-45.1-68 **Existing Business Occupancies.** Section 13.7.2.20 is deleted.

(§12-45.1-68 Existing Business Occupancies: This was determined by the State Fire Council to be unnecessary since most of these occupancies are already protected by Sprinklers.)

§12-45.1-69 **Fire department communication system.** Section 13.7.2.27.2.2 is amended to read: "A two-way, fire department communication system approved by the AHJ shall be provided for fire department use. A jack or plug receptacle shall be located at the following locations:

1. The central control station/central location approved by the AHJ.
2. The designated fire service elevator(s)
3. Each elevator lobby on each floor of the building.
4. Emergency and standby power rooms.
5. The stairwell side of each exit into each required stairway.

The height of the jack or plug receptacle shall be not more than 5 feet and not less than 3 feet above floor level. Portable hand sets in compliance with the

following provisions shall be provided by the building owner or management for fire department use:

1. Not less than 10 approved-type portable hand sets shall be stored and maintained in the central control station.
2. Length of cord for portable hand sets shall be provided as recommended and approved by the AHJ.
3. Hand sets approved by the AHJ shall be maintained in an operative condition at all times and shall be replaced or repaired when found to be defective." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-69 Fire department communication system: This was §12-45.1-47 in the previous State Fire Code. This gives specific requirements for the jack or plug receptacle for the two-way fire department communication system in high-rise buildings. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-70 **Manual Fire Alarm Boxes.** Section 13.7.3.3.6 is amended to add a sentence as follows: The location of manual fire alarm boxes may be modified by the AHJ.

(§12-45.1-70 Manual fire Alarm Boxes: This provision was revised to give the AHJ the authority to require boxes in other locations. The 1997state fire code is not amended to require pull stations to be installed inside classrooms. But, based on an agreement between the "State Fire Marshal" and Dept of Education from the 1960's, County fire departments have been installing the pull stations (see 13.7.3.3.5 and 13.7.3.3.6) inside classrooms rather than in the hallway as required. This will give the authority to the Fire Department to giving notice to comply with the agreement with the Dept of Education.)

§12-45.1-71 **Application.** Section 14.1 is amended to read: "14.1 Application. Means of egress in existing buildings shall comply with this Code. The provisions of this chapter for new construction do not apply. For new construction see the building code. Existing buildings shall be maintained to the building code to which it was built unless specifically indicated for existing facilities. Provisions in this chapter are provided for maintenance purposes.

Exception: Stairway marking requirements set forth in Section 14.6.4.1 shall apply to new and existing construction."

(§12-45.1-71 Application: This code is not intended to apply to new construction because the building code regulates new construction. Each County will be able to adopt the state fire code with provisions for new

construction if they so choose because they have the authority to be more restrictive. Existing buildings do not need to be brought up to newer editions of the building code if no work is being done to the building or the use and occupancy have not changed.)

§12-45.1-72 **Additional doors.** Section 14.5.1.6 is amended by adding an exception to read:

“EXCEPTION: Double-acting screen doors used in conjunction with exit doors having panic hardware in school cafeteriums.” [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-72 Additional doors: This was §12-45.1-66 in the previous State Fire Code. This exception, found in the current State Fire Code, is added to 14.5.1.6 to allow double acting screen doors to be allowed in school cafeteriums. The section was add to the previous code to allow for double-acting screen doors provided for egress purposes in school cafeteriums, conforming with the 1997 Uniform Building Code, Section 1003.3.15, as amended.

§12-45.1-73 **Latch.** Add section 14.5.2.12 to read:

“14.5.2.12 In accordance with the building code, security gates may be permitted across corridors or passageways in school buildings if there is a readily visible durable sign on or adjacent to the gate, stating ‘THIS GATE IS TO REMAIN SECURED IN THE OPEN POSITION WHENEVER THIS BUILDING IS IN USE’. The sign shall be in letters not less than one inch high on a contrasting background. The use of this exception may be revoked by the building official for due cause.” [Eff](Auth: HRS §1323)(Imp: HRS §132-3)

(§12-45.1-73 Latch: This was §12-45.1-67 in the previous State Fire Code.. This provision allows security gates across corridors with signs to indicate that the gates shall be secured in the open position when school is in session, conforming with the 1997 Uniform Building Code, Section 1007.3.11, as amended. This provision was an exception in the previous State Fire Code. UFC section 14.5.1.1.4 allows a similar situation, but adds more conditions to the use of horizontal-sliding or vertical-rolling security grilles. One of the issues is that item 4 requires that they be operable from the inside, which the State Fire Code does not require. Putting this provision as it’s own section is intended to supersede the general requirement and associated conditions in 14.5.1.1.4 for school buildings.)

§12-45.1-74 **Determination of occupant load.** Add a Section 14.8.1.7 to read: “The number of persons in a building or portion thereof shall not exceed the amounts determined as specified in the building code.” [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-74 Determination of occupant load: This was §12-45.1-74 in the previous State Fire Code. This requires the occupant load to be determined by the county Building Code.)

§12-45.1-75 **Occupant Load Factor.** Section 14.8.1.2 is amended to read: "14.8.1.2* Occupant Load Factor. The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in the building code."

(§12-45.1-75 Occupant Load Factor: The building code establishes the occupant load factor for new construction.)

§12-45.1-76 **Occupant Load Factor.** Table 14.8.1.2 is deleted.

(§12-45.1-76 Occupant Load Factor: The table was deleted because the building code establishes the occupant load factor for new construction.)

§12-45.1-77 **Mall Building Occupant Load Factors.** Figures 14.8.1.2 (a) and (b) are deleted.

(§12-45.1-77 Mall Building Occupant Load Factors: The figures were deleted because the building code establishes the occupant load factor for new construction.)

§12-45.1-78 **Occupant Load Increases.** Section 14.8.1.3.1 is amended to read: "14.8.1.3.1 When approved by the AHJ, the occupant load in any building or portion thereof shall be permitted to be increased from the occupant load established for the given use in accordance with 14.8.1.2 where all other requirements of this *Code* are also met, based on such increased occupant load."

(§12-45.1-78 Occupant Load Increases: If the egress capacity can handle the increased occupant load, it should be allowed. One concern is that the structural elements handle an increased occupant load. The AHJ should have the discretion to allow such an increase or not, based on the egress aspects, structural aspects or other circumstances.)

§12-45.1-79 **Egress Capacity.** Section 14.8.3.1 is amended to read: "14.8.3.1 Egress capacity for approved components of means of egress shall be based on the capacity factors shown in the building code."

(§12-45.1-79 Egress Capacity: The building code establishes egress capacity.)

§12-45.1-80 **Capacity Factors.** Table 14.8.3.1 is deleted.

(§12-45.1-80 Capacity Factors: The building code establishes egress capacity factors.)

§12-45.1-81 **Elevator identification.** Add a new section 14.14.6.5.3.3 to read: "At all elevator locations on each floor level above and below the floor of exit discharge, there shall be displayed in a conspicuous location a sign reading: 'IN CASE OF FIRE USE EXIT STAIRWAYS. DO NOT USE ELEVATORS'. Lettering shall be not less than 5/8-inch high.

EXCEPTION: Signs at least 2-3/4-inches X 2-1/4-inches in overall size with legible wording and approved by the AHJ, may be used as an alternate and shall be affixed at each elevator call button assembly.

Elevator service companies shall have their name and telephone number in the elevator key box." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-81 Elevator identification: This was §12-45.1-68 in the previous State Fire Code. This adds requirement for location and warning signs at every level of each elevator lobby. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-82 **Outdoor Fires.** Section 17.3.4.7.1 is amended to read: "17.3.4.7.1* Outdoor fires shall not be built, ignited, or maintained in or upon hazardous fire areas, without approval from the AHJ."

(§12-45.1-82 Outdoor Fires: The term "without approval" replaces the term "except by permit". Permits are not issued, but in a hazardous fire area outdoor fires should not occur without approval from AHJ.)

§12-45.1-83 **Special Hazards.** Add a paragraph to Section 18.1 to read: "For occupancies of an especially hazardous nature, or where special hazards exist in addition to the normal hazard of the occupancy, or where access for fire apparatus is unduly difficult, or areas where there is an inadequate fire flow, or inadequate fire hydrant spacing, the AHJ may require additional safeguards including, but not limited to, additional fire appliance units, more than one type of appliance, or special systems suitable for the protection of the hazard involved." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-83 Special Hazards: This was §12-45.1-33 in the previous State Fire Code. Adds in specific additional hazards such as inadequate fire flow and inadequate fire hydrant spacing that can require additional fire protection appliances. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-84 **Dimensions.** Sections 18.2.3.4.1.1 and 18.2.3.4.1.2 are deleted and replaced with the following: "The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-84 Dimensions: This was §12-45.1-21 in the previous State Fire Code. This requires the width of the fire access roads to meet the appropriate county requirements and not the 20 feet as stated in the original code.)

§12-45.1-85 **Turning radius.** Section 18.2.3.4.3.1 is deleted and replaced to read: "The turning radius of a fire apparatus access road shall meet county requirements." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-85 Turning radius: This was §12-45.1-22 in the previous State Fire Code. This requires the turning radius of the fire access roads to meet the appropriate county requirements.)

§12-45.1-86 **Bridges.** Section 18.2.3.4.5.1 is deleted and replaced to read: "When a bridge is required to be used as part of a fire apparatus access road, it shall be constructed and maintained in accordance with county requirements" [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-86 Bridges: This was §12-45.1-24 in the previous State Fire Code. This requires a bridge of the fire access roads to meet the appropriate county requirements.)

§12-45.1-87 **Grade.** Section 18.2.3.4.6 is deleted and replaced to read: "The gradient for a fire apparatus access road shall meet county requirements." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-87 Grade: This was §12-45.1-25 in the previous State Fire Code. This requires the grade of the fire access roads to meet the appropriate county requirements.)

§12-45.1-88 **Required water supply for fire protection.** Section 18.3.1 is amended to read: "A water supply approved by the county, capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ. For on-site fire hydrant requirements see section 18.3.3.

EXCEPTIONS:

1. When facilities or buildings, or portions thereof, are completely protected with an approved automatic fire sprinkler system, the provisions of section 18.3.1 may be modified by the AHJ.
2. When water supply requirements cannot be installed due to topography or other conditions, the AHJ may require additional fire protection as specified in section 18.3.2, as amended in this code.
3. When there are not more than two dwellings, or two private garages, carports, sheds and agricultural Occupancies, the requirements of section 18.3.1 may be modified by the AHJ." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-88 Required water supply for fire protection: This was §12-45.1-26 in the previous State Fire Code. This allows similar exceptions or alternatives as when road requirements cannot be met. The alternatives allows the AHJ to meet the intent of the code by using alternatives such as installing fire sprinklers when water requirements cannot be met. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-89 **Required installations.** Section 18.3.3 is deleted and replaced to read: "The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be provided on a fire apparatus access road or on the site of the premises or both, in accordance with the appropriate county water requirements." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-89 Required installations: This was §12-45.1-28 in the previous State Fire Code. This changes the road requirement from a public street to a fire apparatus access road, which is what is required in different sections on road requirements.)

§12-45.1-90 **Testing.** Section 18.3.5 is amended to read: "18.3.5 Private water supply systems shall be tested and maintained in accordance with NFPA 25 or county requirements as determined by the AHJ."

(§12-45.1-90 Testing: The reference to county requirements was added as an option because some counties may elect to use NFPA 25 and other counties use their own standards.)

§12-45.1-91 **Testing and maintenance.** Section 18.3.7 is added to read: "The AHJ shall be notified whenever any fire hydrant is placed out of service or returned to service. Owners of private property required to have hydrants shall maintain hydrant records of approval, testing, and maintenance, in accordance with

the respective county water requirements. Records shall be made available for review by the AHJ upon request." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-91 Testing and maintenance: This was §12-45.1-27 in the previous State Fire Code. This allows additional requirements such as fire hydrant systems to be certified and approved before being placed into service, notification of the fire department when hydrants are placed out of service and owners of private hydrants to maintain records of approval, testing and maintenance. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-92 **Nonmetallic containers.** Section 19.2.1.2.1 is amended by adding an exception to read: "**EXCEPTION:** Containers used by private residences for refuse pickup." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-92 Nonmetallic containers: This was §12-45.1-58 in the previous State Fire Code. This exception allows nonmetallic rubbish containers for private residences.)

§12-45.1-93 **Decorative materials.** Section 20.1.2.1 is amended by adding a second sentence to read: "A record of fire-resistant treatment shall be kept on the premises for review by the AHJ." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-93 Decorative materials: This was §12-45.1-72 in the previous State Fire Code. This adds a requirement for a record of fire-resistant treatment of decorative materials in assemblies to be kept on the premises. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-94 **Amusement buildings.** Section 20.1.3.2 is amended to read: "An automatic sprinkler system shall be installed in all permanent and portable amusement buildings. The main water-flow switch shall be electrically supervised. The sprinkler main cutoff valve shall be supervised. When the amusement building is portable, the sprinkler water-supply system may be a temporary type, as approved by the AHJ.

EXCEPTION: An automatic sprinkler system need not be provided when the floor area of a portable amusement building is less than 1,000 square feet and the exit travel distance from any point is less than 50 feet." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-94 Amusement buildings: This was §12-45.1-36 in the previous State Fire Code. This comes from the previous State Fire Code and

conforms to the 1997 Uniform Building Code, Section 904.2.3.6 as amended. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-95 **Plan of exit ways and aisles.** Add new section 20.1.4.1.3 to read: "A floor plan indicating the seating arrangements, location and width of exit ways and aisles shall be submitted to the AHJ for review for places of assembly with an occupant load of 300 or more persons. A copy of the plan shall be kept on display on the premises. An exit plan shall also be posted in a conspicuous location near the main entrance and shall be maintained in a legible condition by the owner or an authorized agent.

Management of the event or business shall be responsible for the inspection before each show or event of all required means of egress from each part of the building, including stairways, egress doors and any panic hardware installed thereon, aisles and corridors. Passageways and similar elements of the means of egress shall be available for immediate use and free of all obstructions before each show or event. Management shall inform all patrons of all required exit locations before each show or event in places of assembly with an occupant load of 300 or more persons." [Eff](Auth: HRS §1323)(Imp: HRS §132-3)

(§12-45.1-95 Plan of exit ways and aisles: This was §12-45.1-73 in the previous State Fire Code. This adds requirements for the maintenance of exit ways and aisles for places of assembly with an occupant load of 300 or more persons. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-96 **Overcrowding.** Add new section 20.1.4.1.4 to read: "20.1.4.1.4 Overcrowding. Overcrowding and admittance of persons beyond the approved capacity of a place of assembly are prohibited. The AHJ, upon finding overcrowding conditions or obstructions in aisles, passageways or other means of egress, or upon finding a condition which constitutes a serious menace to life, is authorized to cause the performance, presentation, spectacle or entertainment to be stopped until such conditions or obstruction is corrected.

(§12-45.1-96 Overcrowding: This provision is in 2501.16.3 in the current State Fire Code and is helpful.)

§12-45.1-97 **Candles and other open-flame devices.** Section 20.1.4.3 is amended by adding item (7) to read:

"(7) When approved by the AHJ, open-flame devices may be used on stages or platforms, provided adequate precautions are taken to prevent ignition of combustible materials. So-called flaming sword or other like equipment shall not be used except in areas protected by an automatic sprinkler system. This shall be construed to mean that stages, platforms, dressing and storage rooms or areas used as places for the performance of flaming sword or other dance performances using fire or flame, shall be sprinklered. In addition, a suitable non-combustible net shall be erected to prevent accidental release onto the viewing audience." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-97 Candles and other open-flame devices: This was §12-45.1-75 in the previous State Fire Code. This adds an item for regulating open flame devices used in performances in assemblies so as not to create a fire hazard. These are limited to areas protected by automatic fire sprinklers. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-98 **Portable heating equipment.** A new section 20.1.4.3 (8) is added to read: "(8) Portable heating equipment, not flue-connected, shall be permitted only as follows: Equipment fueled by small heat sources which can be readily extinguished by water, such as candles or alcohol-burning equipment (including solid alcohol) may be used provided adequate precautions satisfactory to the AHJ are taken to prevent ignition of any combustible materials." [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-98 Portable heating equipment: This was §12-45.1-76 in the previous State Fire Code. This adds a requirement that heating equipment be limited to small heat sources so as not to create a fire hazard. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-99 **Fire drills.** Section 20.2.3.2.2 is amended by adding an exception to read:

"EXCEPTION: Fire drills at high schools, middle schools and intermediate schools shall be conducted at least quarterly during school sessions." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-99 Fire drills: This was §12-45.1-69 in the previous State Fire Code. This exception allows high and middle schools to conduct quarterly fire drills rather than monthly for elementary schools.)

§12-45.1-100 **Use of School Facilities for Sleeping.** Add Section 20.2.3.6 to read: "20.2.3.6 Use of School Facilities for Sleeping. Educational occupancies that allow sleeping on a temporary basis shall prohibit smoking or open flames and shall be provided with one of the following:

- 1 Smoke alarms shall be provided in the designated sleeping area. When the facility is provided with a fire alarm system, the smoke alarms shall be connected to the fire alarm system, or
- 2 An approved fire watch shall be provided.

(§12-45.1-100 Use of School Facilities for Sleeping: Children's teams and other student or non-student activity groups that travel to neighboring islands often use school buildings to spend the night before or after the event. This provides a minimum level of protection in an occupancy that is not designed for sleeping. Fire watch approval is intended to include that direction is provided to the person conducting the fire watch and they understand their duties.)

§12-45.1-101 **Manufactured Housing.** Section 20.11.3 is deleted.

(§12-45.1-101 Manufactured Housing: This is deleted because it is regulated by the building code.)

§12-45.1-102 **Central control station.** Section 20.16.1.1 is amended to read: "A central control station room for fire department operations shall be provided. The location and accessibility of the central control station room shall be approved by the AHJ. The room shall be accessible from the exterior of the building. The central control station room shall be separated from the remainder of the building by not less than a one-hour fire-resistive occupancy separation. The room shall be a minimum of 96 (9 mm²) square feet with a minimum dimension of 8 feet (2438 mm). It shall contain the following as a minimum:

1. The voice alarm and public address system panels.
2. The fire department communications panel.
3. Fire-detection and alarm system annunciator panels.
4. Annunciator visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air handling systems.
6. Controls for unlocking all stairway doors simultaneously.
7. Sprinkler valve and water-flow detector display panels.
8. Emergency and standby power status indicators.
9. A telephone for fire department use with controlled access to the public telephone system.
10. Fire pump status indicators.

11. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire-protection systems, firefighting equipment and fire department access.
12. Work table.

Control panels in the central control station shall be permanently identified as to function.

Alarm, supervisory and trouble signals as required by Items 3 and 7 above shall be annunciated in compliance with the fire code in the central control station by means of an audible and visual indicator." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-102 Central control station: This was §12-45.1-48 in the previous State Fire Code. This comes from the previous State Fire Code and conforms with the 1997 Uniform Building Code, Section 403.6. This is a room for fire department use in the event of a fire in a high-rise building. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-103 **Scope.** Add an exception to Section 25.1.1 to read: "Exception: The provisions of this chapter do not apply to tents and temporary membrane structures having an area 200 square feet and canopies having an area of 400 square feet or less."

(§12-45.1-103 Scope: Article 32 of the 1997 code excludes these from the requirements, and it seems reasonable.)

§12-45.1-104 **Scope.** Section 25.1.1 is amended to read: "Tents and canopies having an area in excess of 2100 square feet shall comply with Chapter 25. Temporary membrane structures shall comply with the county building code." [Eff] (Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-104 Scope: This was §12-45.1-81 in the previous State Fire Code. Requirements for tents and canopies and requirements for temporary membrane structures shall be referred to the Building Code.)

§12-45.1-105 **Fireworks.** Section 25.1.5.5 is amended to read: "25.1.5.5 Fireworks or unapproved open flames shall be prohibited in any tent or temporary membrane structure.

Exception: Where permitted by Section 65.11."

(§12-45.1-105 Fireworks: The term "approved" means approved by the AHJ. The term "unauthorized" is not defined in the code.)

§12-45.1-106 **Application.** Add a sentence to Section 34.1.1 to read: "Automatic sprinkler systems shall be installed in accordance with Section 13.3.2.25."

(§12-45.1-106 Application: This will provide a reference to when sprinklers are required.)

§12-45.1-107 **Permit Authorizing Individual.** Section 41.2.1.2 is amended to read: "41.2.1.2 Management shall designate a permit authorizing individual (PAI), regardless of whether a permit is required by the AHJ.

(§12-45.1-107 Permit Authorizing Individual: The State does not require permits for hot work operations. This is added to stress the point that the PAI responsibilities are still necessary regardless of whether a permit is issued.)

§12-45.1-108 **Permit Authorizing Individual.** Section 41.2.2 is amended to read: "41.2.2 Permit Authorizing Individual (PAI). In conjunction with management, the PAI shall be responsible for the safe operation of hot work activities regardless of whether a permit is required by the AHJ."

(§12-45.1-108 Permit Authorizing Individual: The state does not require permits for hot work operations. This is added to stress the point that the PAI responsibilities are still necessary regardless of whether a permit is issued.)

§12-45.1-109 **Guard Posts.** Section 42.2.3.8.2 is amended to read: "42.2.3.8.2* Guard posts or other approved means shall be provided to protect tanks that are subject to vehicular damage in accordance with section 60.1.2.13.2."

(§12-45.1-109 Guard Posts: Referring to section 60.1.2.13.2 will pick up the requirements for the top of the posts being at least 3 ft above ground and that they be 5 ft from the tank. Reference to this also picks up the revision in Section 60.1.2.13.2, title 12-45.1-117.)

§12-45.1-110 **Emergency Electrical Disconnects.** Add the following sentences to the end of Section 42.2.5.7 to read: "Such devices shall be distinctly labeled as EMERGENCY FUEL SHUTDOWN DEVICE. Signs shall be provided in approved locations. The signs shall be in red letters on a white background, not less than two inches high, with a ¼ inch stroke."

(§12-45.1-110 Emergency Electrical Disconnects: This signage requirement is a good safety requirement.)

§12-45.1-111 **Occupancy Classification.** Section 42.2.6.1.1 is amended to read: "42.2.6.1.1 Occupancy Classification. The occupancy classification of a motor

fuel dispensing facility that is located inside a building or structure shall be as defined in the building code."

(§12-45.1-111 Occupancy Classification: The county building codes establish occupancy classification.)

§12-45.1-112 **Means of Egress.** Section 42.2.6.1.2 is amended to read: "42.2.6.1.2 Means of Egress. In a motor fuel dispensing facility that is located inside a building or structure, the required number, location, and construction of means of egress shall meet all applicable requirements for special purpose industrial occupancies, as set forth in the building code."

(§12-45.1-112 Means of Egress: The county building codes establish occupancy classification.)

§12-45.1-113 **Age Limitation.** Add Section 42.2.7.1.1 to read: "42.2.7.1.1 Age Limitation. Persons under the age of 15 years are prohibited from dispensing fuel."

(§12-45.1-113 Age Limitation: Persons that dispensing fuel should be of an age to understand the dangers involved. It is considered that a person 15 years old is likely to understand the danger and act responsibly. Further, persons are eligible to test for their driving permit at this age.)

§12-45.1-114 **Foreign Objects.** Add Section 42.2.7.1.2 to read: "42.2.7.1.2 Foreign Objects. The placement of a foreign object(s), that allows the fuel dispensing lever to remain in the open position, is prohibited at all times."

(§12-45.1-114 Foreign Objects: This is an unsafe practice and should be prohibited.)

§12-45.1-115 **Sources of Ignition.** Add a sentence to the end of Section 42.2.7.2.5.1 to read: "Adequate grounding and bonding shall be provided to prevent the accumulation of static electricity wherever Class I or II liquids are transferred or dispensed."

(§12-45.1-115 Sources of Ignition: This will prevent the possibility of ignition due to static electricity.)

§12-45.1-116 **Signs.** Add an item to the end of Section 42.2.7.2.5.4 to read: "42.2.7.2.5.4* Signs. Warning signs shall be conspicuously posted in the dispensing area and shall incorporate the following or equivalent wording:

WARNING:

It is unlawful and dangerous to dispense gasoline into unapproved containers.
No smoking.

Stop motor.

No filling of portable containers in or on a motor vehicle.

Place container on ground before filling.

Discharge your static electricity before fueling by touching a metal surface away from the nozzle.

Do not re-enter your vehicle while gasoline is pumping.

If a fire starts, **do not** remove nozzle — back away immediately.

Do not allow individuals under the age of 15 years to use the pump.

The placement of a foreign object(s), that allows the fuel dispensing lever to remain in the open position, is prohibited at all times."

(§12-45.1-116 Signs: The revision to the age was to coordinate with the amendment to section 42.2.7.1.1. The last item was added because this is currently required in the HI state code, as revision #3 of February 3, 2005. The word "conspicuously" allows the AHJ to determine contrast and letter stroke see 60.1.2.11.)

§12-45.1-117 **Latch-Open Device.** Add Section 42.2.7.4.3.2 to read:
"42.2.7.4.3.2 The hose nozzle valve shall not be equipped with an integral latch-open device where dispensing of Class I, II or III-A liquids is performed by someone other than a qualified attendant. The placement of a foreign object(s), that allows the fuel dispensing lever to remain in the open position, is prohibited at all times."

(§12-45.1-117 Latch-Open Device: This is currently the decision of the State Fire Council which advised the counties to enforce this provision per Revision #3 of February 3, 2005.)

§12-45.1-118 **Latch-open device.** Section 42.2.7.5.4 is amended to read:
"42.2.7.5. The hose nozzle valve shall not be equipped with an integral latch-open device where dispensing of Class I, II or III-A liquids is performed by someone other than a qualified attendant. The placement of a foreign object(s), that allows the fuel dispensing lever to remain in the open position, is prohibited at all times."

(§12-45.1-118 Latch-open device: This is currently the decision of the State Fire Council which advised the counties to enforce this provision per Revision #3 of February 3, 2005.)

§12-45.1-119 **Materials.** Section 42.3.7.3 is amended to read: "42.3.7.3 Materials shall not be placed on a pier in such a manner that they obstruct access to fire-fighting equipment or important piping system control valves. Where the pier is accessible to vehicular traffic, an unobstructed roadway to the shore end of the wharf shall be maintained for access by fire-fighting apparatus in accordance with county requirements."

(§12-45.1-119 Materials: To be consistent with fire apparatus access

road amendments, specification of 20 ft width is amended out in favor of county requirements. See amendment to 18.2)

§12-45.1-120 **Liquefied Petroleum Gas (LP-Gas)**. Section 42.5.2.1 is amended to read "42.5.2.1 Fuel dispensing facilities for vehicles using LP-Gas shall comply with NFPA 52 and 42.5.2."

(§12-45.1-120 Liquefied Petroleum Gas (LP-Gas): Since refueling provisions for LPG are now in NFPA 52, this reference will be corrected to NFPA 52 instead of NFPA 58. Provisions of NFPA 52 are critical for the details of alternative fueling and the reference should be retained.)

§12-45.1-121 **Operations and maintenance**. Section 50.5.2.1 is amended to read: "Extinguishing systems shall be serviced at least every six months or after activation of the system. Inspections shall be conducted by a qualified individual as approved by the AHJ. A copy of the inspection test report shall be kept on the premises and a copy of the inspection report shall be forwarded to the AHJ within five (5) working days of completion of the required servicing and testing."

Section 50.5.2.1 is also amended by adding a paragraph to read: "The AHJ shall be notified a minimum of four (4) working days prior to the service date by the company conducting the test. The AHJ shall be informed of the name of the business being serviced, date and time of servicing, and the company and the individual conducting the servicing." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-121 Operations and maintenance: This was §12-45.1-43 in the previous State Fire Code. The first paragraph adds requirements to keep a copy of the inspection report on the premises and to forward it to the AHJ within 5 working days. The second paragraph requires the servicing company to notify the AHJ 4 working days prior to testing. This allows time for fire inspectors to witness the testing if needed. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-122 **Permits**. Section 60.1.2.3 is deleted.

(§12-45.1-122 Permits: While section 1.12.20 has been deleted so that each county can put in their own permit requirements, this is also deleted because it provides details that may or may not be the same from county to county. It is anticipated that each county will insert their own permit requirements here. With regard to 60.1.2.3.2, the State DOH already requires a 30 day notification for a facility closure for flammable and combustible liquids. And the State also requires notification to the local FD.)

§12-45.1-123 **Facility Closure.** Section 60.1.2.4 is deleted.

(§12-45.1-123 Facility Closure: the State DOH already requires a 30 day notification for a facility closure for flammable and combustible liquids. And the State also requires notification to the local FD.)

§12-45.1-124 **Hazardous materials management plan.** Section 60.1.2.5.1 is amended to read: "When required by the AHJ, the owner of buildings or facilities shall have a hazardous materials management plan (HMMP) posted on site. An example of a HMMP can be found in Annex D." The second sentence of section 8001.3.2 is deleted. [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-124 Hazardous materials management plan: This was §12-45.1-114 in the previous State Fire Code. This requires a hazardous materials management plan for review to address any response to emergencies by fire personnel. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-125 **Hazardous materials inventory statement.** Section 60.1.2.5.2 is amended to read: "When required by the AHJ, a hazardous materials inventory statement (HMIS) shall be made a part of the hazardous materials management plan. An example of a HMIS can be found in Annex D." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-125 Hazardous materials inventory statement: §12-45.1-115 Hazardous materials inventory statement. This requires the hazardous materials inventory statement to be included with the hazardous materials management plan. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-126 **Protection from vehicles.** The paragraph numbered 2 of Section 60.1.2.13.2 is amended to read:

"2. Spaced not more than 3 feet (914 mm) between posts on center,"

The paragraph numbered 5 of section 60.1.2.13.2 is amended to read:

"5. Located not less than 3 feet (914 mm) from the tank." [Eff](Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-126 Protection from vehicles: This was §12-45.1-116 in the previous State Fire Code. This requires specific dimensions for the installation of guard posts for the protection of storage tanks.)

§12-45.1-127 **Special Information for Permit Application.** Section 60.2.3 is deleted.

(§12-45.1-127 Special Information for Permit Application: While section 1.12.20 has been deleted so that each county can put in their own permit requirements, this is also deleted because it provides details that may or may not be the same from county to county. It is anticipated that each county will insert their own permit requirements here.)

§12-45.1-128 **Special Information for Permit Application.** Table 60.2.6.5 is deleted.

(§12-45.1-128 Special Information for Permit Application: While section 1.12.20 has been deleted so that each county can put in their own permit requirements, this is also deleted because it provides details that may or may not be the same from county to county. It is anticipated that each county will insert their own permit requirements here.)

§12-45.1-129 **Separation of Occupancies of High Hazard.** Section 60.3.2.3 and Table 60.3.2.3 are deleted.

(§12-45.1-129 Separation of Occupancies of High Hazard: The separation requirements are very similar to the IBC. Each county uses a different building code. The committee determined to delete this table in favor of the separation requirements in the county building code. This is consistent with eliminating the general occupancy separation requirements in chapter 13.)

§12-45.1-130 **Mechanical Exhaust.** Section 60.3.2.5.2 is amended to read: "60.3.2.5.2 Mechanical exhaust systems shall comply with the building code."

(§12-45.1-130 Mechanical Exhaust: The reference "Mechanical Code" was changed to "Building Code". There is no mechanical code adopted in any county. In Hawaii, the building code regulates exhaust systems via a reference to the IMC. This is an adoption by reference and considered to be part of the county building code. So the reference to the county building code appropriately takes the code user to the provisions to be enforced in the building code. "Building Code" is defined as the county building code.)

§12-45.1-131 **Supply and Exhaust Openings.** Section 60.3.2.5.9 is amended to read: "60.3.2.5.9 The location of supply and exhaust openings shall be in accordance with the building code.

(§12-45.1-131 Supply and Exhaust Openings: The reference "Mechanical Code" was changed to "Building Code". There is no mechanical code adopted in any county. In Hawaii, the building code regulates exhaust systems via a reference to the IMC. This is an adoption

by reference and considered to be part of the county building code. So the reference to the county building code appropriately takes the code user to the provisions to be enforced in the building code. "Building Code" is defined as the county building code.)

§12-45.1-132 **Remote Containment.** Amend the first paragraph of Section 60.3.2.8.3.12 to read: "60.3.2.8.3.12 Where remote containment systems are provided, drainage systems shall be in accordance with the Plumbing Code, and the following provisions also shall be met:"

(§12-45.1-132 Remote Containment: The reference "Plumbing Code" was changed to "Plumbing Code". Each county adopts their own plumbing code, and the definition "plumbing code" has been amended in this code to reference the "county" plumbing code.)

§12-45.1-133 **Permits.** Section 63.1.2 is deleted.

(§12-45.1-133 Permits: These specific provisions for permits are deleted since each county has it's own permit requirements.

§12-45.1-134 **Tank vehicles.** Section 63.4.13.1.2 is amended to read: "Tank vehicles transporting cryogenic fluids shall not be left unattended on any residential street or within 500 feet of any residential area, apartment or hotel complex, educational, hospital or care facility at any time; or at any other place or location that would present a hazard to persons or property from fire loss.

EXCEPTION: When unattendance is necessary in connection with unloading the vehicle or servicing tanks; or when in case of accident or other emergency, the operator must leave the vehicle to obtain assistance." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-134 Tank vehicles: This was §12-45.1-101 in the previous State Fire Code. This adds requirements for vehicles transporting cryogenic fluids left unattended on any residential street or area, apartment or hotel complex, educational, hospital or care facility or any place that may present an extreme life hazard, with the exception of an extreme emergency.)

§12-45.1-135 **Seizure of fireworks.** Section 65.1.3 is added to read: "The AHJ is authorized to require the owner to remove at the expense of the owner, all fireworks offered for sale, stored, or possessed in violation of Chapter 65, or other applicable state or county laws or rules." [Eff](Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-135 Seizure of fireworks: §12-45.1-105 Seizure of Fireworks. Authorizes the AHJ to remove all stocks of fireworks when the permit holder is not in compliance by the appropriate county agency at the expense of the owner. "Chief" was changed to "AHJ" to be consistent with

the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-136 **Prohibition.** Section 65.1.4 is added to read: "Importation, storage, possession, sale, purchase, transfer, public displays and discharge of fireworks, shall be in accordance with chapter 132D, HRS." [Eff] (Auth: HRS §132-3) (Imp: HRS §132-3)

(§12-45.1-136 Prohibition: §12-45.1-106 Prohibition. Amended to allow regulation of fireworks not otherwise prohibited by local or state laws, ordinances and regulations.)

§12-45.1-137 **Permits.** Section 65.9.2.2. is deleted.

(§12-45.1-137 Permits: Section 65.9.2.1 is not deleted because Section 1.12.20 was deleted by amendment. Honolulu county amendment added permit requirements here based on HRS 396-9. Section 65.9.2.2 is deleted as it is a specific requirement.)

§12-45.1-138 **Minors.** Section 65.11.2.8 is amended to read: "65.11.2.8 It shall be unlawful for any minor to sell, handle or give away for recompense any fireworks products.

(§12-45.1-138 Minors: HRS 132D section 12 addresses the sale of fireworks to minors. This provision adds to the HRS, through this state fire code, that minors should also be prohibited from selling fireworks products. Fireworks are dangerous and should be sold and handled by responsible adults.)

§12-45.1-139 **Plan.** Section 65.11.4.1 is amended to read: "65.11.4.1 Plan. Where required, plans for CFRS facilities shall be submitted to the AHJ."

(§12-45.1-139 Plan: Requirements referencing permits have been deleted because permits are omitted from the State Fire Code and will be reinserted by each County.)

§12-45.1-140 **Permits and Plans.** Section 66.1.5 is amended to read: "66.1.5 Permits and Plans. Permits, where required, shall comply with Section 1.12 and applications for permits shall be submitted with a proposed site plan.

(§12-45.1-140 Permits and Plans: This language for permits will remain because specific permit requirements were deleted in section 1.12.20 so each county can put them back in. Plans were added to clarify that plans shall be submitted with the permit application. This should be

clarified when each county puts in their permit requirements in 1.12.20.)

§12-45.1-141 **Tanks abandoned in place.** Section 66.2.5.5.4 is amended to read: "Tanks may be abandoned in place only if a certified structural engineer confirms that the removal of the tank will jeopardize the structural integrity of the existing building. An affidavit attesting to this determination shall be submitted to the AHJ prior to taking abandonment measures. Tanks abandoned in place shall be abandoned as follows:

1. Flammable and combustible liquids shall be removed from the tank and connected piping,
2. The suction, inlet, gage, vapor return and vapor lines shall be disconnected.
3. The tank shall be filled completely with an approved, inert solid material.
4. Remaining underground piping shall be capped or plugged, and
5. A record of tank size, location and date of abandonment shall be retained by the owner and a copy submitted to the AHJ." [Eff]
(Auth: HRS §132-3)(Imp: HRS §132-3)

(§12-45.1-141 Tanks abandoned in place: §12-45.1-112 Tanks abandoned in place. Adds requirements for the abandonment of flammable and combustible liquid storage tanks. "Chief" was changed to "AHJ" to be consistent with the NFPA 1. The term AHJ is more flexible and will usually apply to the Chief. However, it could include other authorities, such as the building official, if they are the one with the authority. Also, "Chief" is not defined in this code, whereas "AHJ" is defined.)

§12-45.1-142 **Manufacturing Plants.** Section 70.2.4.1.2.4.1 is deleted.

(§12-45.1-142 Manufacturing Plants: This provision seems subjective.)