

State Fire Council

HAWAII STATE FIRE CODE

Effective Date: Month Day, Year

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RULES OF GENERAL APPLICABILITY

1. Purpose. The purpose of this chapter is to adopt the state fire code as required by section 132-3, Hawaii Revised Statutes (HRS).

(HRS 132-3 authorizes the State Fire Council (SFC) to adopt a state fire code establishing minimum requirements relative to the protection of persons and property from fire loss. The provisions of this chapter establish a reasonable level of fire and life safety from fire to building occupants, property protection, and enhanced emergency responder safety. HRS 107-25 also requires the state fire council to adopt the state fire code & becomes part of the Hawaii state building codes.)

2. Scope. This chapter sets forth minimum requirements necessary to establish a reasonable level of fire and life safety and property protection from the hazards created by fire, explosion, and dangerous conditions.

(The existing scope only addressed "fire loss" and this code does more than that. This takes text from the "purpose" section of NFPA 1 because it is more encompassing and reflects the provisions of the code. The scope of the state fire code include the diverse aspects relating to fire protection embodied in the latest edition of a national fire code with applicable state amendments.)

3. Definitions. In this chapter, unless the context otherwise requires:

“Annex” means the explanatory material attached to the NFPA 1, Fire Code.

“Authority having jurisdiction” or “AHJ” means an organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

“NFPA” means the National Fire Protection Association.

(This provision carries over from the previous edition, but with some revisions. The definition of “Authority having jurisdiction” is deleted from this amendment section because it is already in the code. Annexes and Table 13.2.3.4.3A are used in §12-45.4-4. The definition of “building code” is changed to match the definition in the amendment to section 3.3.53.1 of this code. It is not deleted because it is important to clearly delineate that the building code is whatever the county has adopted. The definition of NFPA 1 Fire Code is not needed in the definition section as it is stated in Section 12-44.4-4 below. Definition of Section is deleted because it commonly refers to a specific part of a chapter. These definitions seek to clarify terms used in this document to avoid confusion with similar terms in other documents or terms that are unfamiliar to the reader. The NFPA 1, Fire Code, Chapter 3, has a comprehensive list of definitions as used in this and other related NFPA documents. -“Inoperable System Sign”, and “ Water-based fire extinguishing system” in the “Definitions” section were moved to Section §12-45.4-20.)

4. Adoption of the 2021 NFPA 1, Fire Code. The NFPA 1, Fire Code, 2021 edition is made a part of this chapter, subject to the amendments provided in this chapter. The annexes to the NFPA 1, Fire Code are not adopted except as provided in this chapter.

(Clarifies that the NFPA 1 Fire Code, 2021 edition is the referenced national model fire code document with statewide application as amended herein. The annexes are reference

documents to the fire code and unless specifically adopted, are not requirements.)

5. County permit authorization. Each county may, by ordinance, require that a permit be obtained from the AHJ for any area regulated by this chapter.

(Under the authority of this code, there are no state fire code permits. Permit authorization fall under the jurisdiction of each adopted county fire code and is specifically authorized by HRS 107-28(a).)

AMENDMENTS TO THE NFPA 1, FIRE CODE

6. Title. Section 1.1.2 is amended to read as follows: 1.1.2 Title. 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.

(This has been in several previous state fire codes and gives the title to the state amendments to the NFPA 1 Fire Code, 2021 edition.)

7. Conflicts. Section 1.3.3.3 is added to read as follows: 1.3.3.3 When a difference 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.

Exception: This code does not apply to new construction except when this code is specifically referenced from the building code.

(This clarifies that the county building codes take precedence for design and construction of new buildings. The exception allows the fire code to apply to new construction when the building code authorizes it.

8. Building code. Section 1.3.6.3 is amended to read as follows: 1.3.6.3 Repairs, renovations, alterations, reconstruction, change of occupancy, and additions to buildings shall conform with the building code.

(This clarifies that the general adoption by reference of NFPA 101, Life Safety Code does not apply to renovations, because it is not currently adopted by the building departments for new construction.)

9. Administration and enforcement authority. Section 1.6 is amended to read as follows: 1.6 Administration and enforcement

authority. This Code shall be administered and enforced by the AHJ designated by HRS 132.

(This was changed to match the text in section 1.6, which uses the term "enforcement." It adds the reference to the overarching requirements for the Hawaii Revised Statutes section 132 that provide all the enforcement authority. This has been in previous state fire codes. Fire Chief was changed to AHJ to be consistent with NFPA 1. The term AHJ will usually apply to the Chief, but could include other authorities, such as the building official, if that authority applies. Also, "Chief is not defined in this code, but AHJ is defined. Nine previous amendments were deleted because this amendment authorizes the AHJ to administer & enforce this code as delineated in HRS 132)

10. Fire insurance records and reports. Section 1.11.4 is added to read as follows: 1.11.4 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 report forms may be used.

(This was in several previous state fire codes. In addition to requirements for county records it adds an authorization for the AHJ to review insurance carrier's records of fire losses.)

11. Permits. Section 1.12.8 and Tables 1.12.8(a), (b), and (c) are deleted in their entirety.

(This was in several previous state fire codes. There are no state fire code permit requirements. Permits are authorized by county ordinance through the respective adopted county fire code.)

12. Certificates of fitness authorization. Section 1.13.1 is amended to read as follows: See Hawaii Administrative Rules (HAR) 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication.)

13. Mandatory certificates of fitness. Section 1.13.2 is amended to read as follows: See HAR 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication. The HAR authorizes the county fire departments to issue the COF's and collect fees.)

14. Certification of applicant general. Section 1.13.5.1 is amended to read as follows: See HAR 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication. HAR provides a list of general COF provisions.)

15. Certification of applicant transfer. Section 1.13.6 is amended to read as follows: See HAR 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication. COF's are non-transferable.

16. Certification of applicant issuing period. Section 1.13.7 is amended to read as follows: See HAR 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication. HAR §12-44 .1 states a COF to be valid for 3 years before a renewal is required.)

17. Revocation or suspension of certificates of fitness conditions. Section 1.13.12.1 is amended to read as follows: See HAR 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication. It authorizes the county fire departments to have regulatory authority to deny, revoke, or suspend COF's based on the violations listed in HAR Section 12-44.1-4.

18. Revocation or suspension of certificates of fitness new issuance period. Section 1.13.12.1.1 is amended to read as follows: See HAR 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication. The issuance of a new COF after a revocation or

suspension will depend on the seriousness of the violation(s) & is subject to a one year maximum.

19. Revocation or suspension of certificates of fitness appeals. Section 1.13.12.4 is amended to read as follows: See HAR 12-44.1 Testing, Certifying, and Credentialing Individuals Who Perform Maintenance and Testing of Portable Fire Extinguishers, Fire Protection Systems, and Fire Alarm Systems.

(This amendment was revised per the DAG recommendation to cite HAR as the referenced document to avoid conflict & duplication. Criteria for appeals are found in HAR Section 12-44.1.5 and are filed with the county fire departments.

20. NFPA publications. Section 2.2 is amended to replace NFPA 1124 to read as follows: 2.2 NFPA 1124: Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles, 2013 Edition.

(This was added because it was deleted out of the NFPA 1 Fire Code 2015 Edition, but is included to allow the use of requirements for storage & retail sales of consumer fireworks from NFPA 1124 Chapter 6 & 7, 2013 Edition, in Section 65.10. It also allows the use of other 1124 Sections that are adopted by the counties.)

21. NFPA official definitions. Section 3.2 is amended by adding as follows:

“Inoperable system sign” means a weather resistant sign denoting “Inoperable” having a white background with red letters. The letters shall be a minimum height of three inches and a minimum width of one-fourth of an inch stroke.

“Water-based fire extinguishing system” means any class I, II, and III and combined standpipe system, automatic sprinkler system, fire pumps or automatic water spray fixed system utilizing water as an extinguishing agent.

(These definitions were moved from §12-45.4-3 Definitions to Chapter 3.2 NFPA Official Definitions in the state fire code.) Building code definition was removed as 3.3.54.1 in the fire code states that the building code is the code adopted by the jurisdiction.)

22. Electrical code. Section 3.3.56.2 is amended to read as follows: 3.3.56.2 Electrical Code. The electrical code is the electrical code adopted by the jurisdiction.

(This was in the previous state fire code. Each county adopts its own electrical code that is based on the adopted state electrical code. Jurisdiction is consistent with the building code definition in the fire code.)

23. Mechanical code. Section 3.3.56.3 is amended to read as follows: 3.3.56.3 Mechanical Code. The mechanical code is the mechanical code adopted by the jurisdiction.

(This was in the previous state fire code. The State Department of Health has ad rules for A/C & ventilation which are based on national standards & the International Mechanical Code The counties do not adopt the mechanical code. Honolulu reviews A/C & ventilation exempt from State requirements. Residential ventilation systems, except for one- & two-family dwellings are reviewed for Housing Code Compliance.

24. Plumbing code. Section 3.3.56.4 is amended to read as follows: 3.3.56.4 Plumbing Code. The plumbing code is the plumbing code adopted by the jurisdiction.

(Jurisdiction is consistent with the building code definition in the fire code. This was in the previous state fire code. Each county adopts its own plumbing code that is based on the adopted state plumbing code. The county plumbing code takes precedence for new building construction.)

25. Maintenance, inspection, and testing general requirements. 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. Maintenance shall be provided 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.

(This adds "and the building code" with applicable NFPA requirements for maintenance.

26. Authorization to witness maintenance, inspection, and testing. Section 4.5.8.8 is added to read as follows: 4.5.8.8 The AHJ is authorized to witness any maintenance, or test of a portable fire extinguisher, fire protection system, and fire alarm system by a certificate of fitness holder to determine if the maintenance or test meets the minimum requirements set forth by this code, applicable rules, and statutes.

(This was relocated from 13.1.1.2.1 which only included fire protection systems a new section of the fire code that includes witnessing any inspection test or maintenance of any device, equipment, system. etc. by a COF holder by the AHJ. This gives the AHJ authority to inspect or witness any fire protection system to ensure it meets minimum requirements and allows the AHJ to observe COF holders to determine if ITM of these appliances or systems are being conducted as required. The importance of the proper operation of these life safety devices and appliances cannot be overemphasized.)

27. Owner/occupant responsibilities of unsafe buildings. Section 10.2.4 is amended by adding a sentence at the end to read as follows: For abatement of unsafe buildings, see the building code.

(This was in previous state fire codes. Clarifies that the requirement for the abatement of unsafe buildings is authorized by the building code.)

28. On-premises fire fighting organization fire reporting.

Section 10.6.1.2 is amended to read as follows: 10.6.1.2 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.

(The reference to 10.7.1.2 was changed to 10.6.1.2 because the section changed in the 2015 edition. This was in the previous state fire code. Requires notification, submittal and approval of an on-premises fire fighting plan to the county fire department. This is to facilitate cooperation and awareness of the capabilities and expectations in the event of a mutual aid response to an incident.)

29. Posting of emergency action plans.

Section 10.8.2.1 is amended as follows: 10.8.2.1 (7) Posting of emergency evacuation diagrams and other items required by the AHJ.

(This is added to allow the AHJ to require posting evacuation diagrams. This is required in the code already for hotel rooms, but the AHJ may want to require this for classrooms and other rooms. Also leaving this amendment in this section allows the AHJ the flexibility for requirements concerning posting of exit plans.)

30. Open flames, candles, open fires, and incinerators permits.

Sections 10.10.1, 10.10.1.1, 10.10.1.2, 10.10.1.3, and 10.10.1.4 are deleted and replaced with sections 10.10.1 and 10.10.1.1 to read as follows: 10.10.1. Agricultural Burning. See Department of Health, Clean Air Branch, regulation of fires for agricultural burning.

- (1) 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.

- (2) For fire safety regulations, see county requirements and 10.10.1.1.

(Agricultural burning is regulated by the State Department of Health, Clean Air Branch. Safety requirements are found in the fire code.)

10.10.1.1 Open Fires in Counties. Control of the following fires shall be established by each county:

- (1) Fires for agricultural purposes;
- (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 and
- (8) Fires for cooking of food.

This was in the previous state fire codes. These types of fires mirror state administrative rules (HAR Title 11, Chapter 60, Subchapter 3 "Open Burning", but their control is under the jurisdiction of the county fire departments and are not subject to state air pollution laws. Fires for agricultural purposes require a permit from the State Department of Health. Section 10.10.1 (b) was moved from Open Fires in Counties and placed with the State's Agricultural Burning section.)

31. Open flames, candles, open fires, and incinerators hazardous conditions. Section 10.10.2 is amended to read as follows:
10.10.2 The AHJ shall have the authority to prohibit any or all open flames, candles, and open, recreational, and cooking fires or other sources of ignition, or establish special regulations on the use of any form of fire or smoking material where circumstances make such conditions hazardous. Open flame devices utilizing gas or liquid fuel, such as but not limited to tiki torches, shall keep a minimum of three feet clearance

from the flame to combustibles, and shall maintain a vertical height of seven feet from grade to flame. The AHJ is authorized to modify these clearances based on site conditions.

(This adds gas or liquid fueled open flames, such as tiki torches, with acceptable distances to nearby combustible material.)

32. Outdoor fires. Section 10.10.3.1 is amended to read as follows: 10.10.3.1 Outdoor fires shall not be built, ignited, or maintained in or upon hazardous fire areas, without approval from the AHJ.

(This removes the permit requirement from the fire code, but still requires AHJ approval.)

33. Open fires. Section 10.10.4.1 is amended to read as follows: 10.10.4.1 Open fires shall be located not less than fifty feet (fifteen meters) from structures or as approved by the AHJ.

(This adds "or as approved by the AHJ" to the fire code. There may be cases where the minimum distance cannot be met, but other requirements may be substituted.)

34. Cooking equipment on balconies. Section 10.10.6.2 is deleted in its entirety.

The purpose for deleting this section is to not tell apartment owners they cannot store a hibachi or other device on the balcony because they might store it in their apartment, which would be worse. 10.10.6.1 still says they cannot cook on the balcony. This was a 2015 amendment. This requirement was felt to be unenforceable by the fire departments to inspect all balconies and would be better left to each building's homeowner's association to prohibit. Also, if residents were not allowed to store on the balcony, even though they are prohibited from using it on the balcony, but use it for the beach or camping, would they then bring it indoors and create a greater potential hazard by storing a propane tank indoors?)

35. Storage of combustible materials. Section 10.19.1.1 is added to read as follows: 10.19.1.1 Signage posting. In storage and mercantile occupancies, a sign shall be posted on the automatic sprinkler riser stating the maximum allowable storage height for the design of the sprinkler system as approved by the AHJ.

This was in previous state fire codes & adds an additional requirement. It addresses the allowable storage height in these occupancies based on the original design of the sprinklers system. Businesses lease spaces in warehouses with high ceilings and bring in high-piled storage racks, which the original sprinkler system was not designed to control. This amendment assists the fire inspector with identifying these cases. Lloyd relocated this amendment into the general category instead of being in the ceiling clearance section.)

36. Elevators, escalators, and conveyors. Section 11.3 is deleted in its entirety.

(11.3 is deleted since the state elevator code will apply.) DLIR has Elevator Code.

37. Waste chutes, incinerators, and laundry chutes installation and maintenance. Section 11.6.2 is amended to read as follows: 11.6.2 Waste chutes, incinerators, and laundry chutes maintenance standards. Waste chutes, laundry chutes, and incinerators shall be maintained in accordance with NFPA 82, unless such installations are approved existing installations, which shall be permitted to be continued in service.

"Installation" is addressed in building code so it was removed. This was in previous State Fire Codes.

38. Emergency command center. Section 11.9.5 is amended by adding Items 12, 13, and 14 to read as follows:

- (12) The room shall be accessible from the exterior of the building.
- (13) Control panels in the emergency command center shall be permanently identified as to its function.
- (14) Alarm, supervisory and trouble signals shall be annunciated in compliance with the fire code in the emergency command center by means of an audible and visual indicator.

(These requirements were in the adopted state fire code Title 12 amendments to the 1997 edition of the Uniform Fire Code. They provide more direct room access and increased identification of control panel indicating devices.)

39. Roof access for one- and two-family dwellings and townhouses. Section 11.12.3.2.1 is amended to read as follows:
11.12.3.2.1 Roof access for one- and two-Family Dwellings and Townhouses for photo-voltaic systems. One- and two-family dwellings need not comply with this section.

(This amendment is being kept because Honolulu, Hawaii and Kauai counties don't currently review plans for PV installations for one- and two-family dwellings. This also coincides with Fire Operations strategies regarding structure fires involving one- and two-family dwellings.)

40. Fire door identification. Section 12.4.3 is added to read as follows: 12.4.3 Fire door identification. When required by the AHJ, a sign shall be displayed permanently near or on each required fire door in letters not less than one inch (twenty-five. four millimeters) high. The wording of the required sign can only be modified with prior written approval of the AHJ. The sign shall read as follows:

**FIRE DOOR
DO NOT OBSTRUCT
KEEP CLOSED**

(This came from the 1997 UFC section 1111.2.3. This amendment was revised because both messages are important & shall be provided. Originally there was an option to do "FIRE DOOR DO NOT OBSTRUCT" or "FIRE DOOR KEEP CLOSED".

41. Fire protection systems general. Section 13.1 is amended by adding a new first paragraph and exception to read as follows: 13.1 Fire protection systems 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 requirements 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.

(This was in the previous state fire code. The building code regulates requirements for new construction. Each county has the authority to adopt the state fire code with local amendments with provisions for new construction. Existing buildings are not required to comply with newer editions of the fire code unless there is a change in occupancy use or conditions exists that pose imminent danger to building occupants. This was relocated to 4.5.8.8 a new section of the fire code that includes any device, equipment, system. etc.)

42. Fire protection systems hose connection. Section 13.1.5.2 is added to read as follows: 13.1.5.2 Fire department hose connections serving standpipe and sprinkler systems shall be located within twenty feet of a fire apparatus access road, not less than eighteen inches and not more than four feet above grade, or as approved by the AHJ. Appropriate identification signs shall be provided as required by the AHJ.

(This has been in previous state fire codes. It requires connections to be in readily accessible locations to roadways for fire department use. It incorporated two amendments, one for standpipes and one for sprinklers into one amendment for both

types of connections. The heading title was changed to correspond with the chapter title in the fire code.

43. Fire protection systems records. Section 13.1.6 is amended to read as follows: 13.1.6 Detailed records documenting all systems and equipment inspections, testing, and maintenance shall be kept by the property owner and shall be made available upon request for review by the AHJ.

This amendment was in previous state fire codes. It only adds the word "inspections" to the records required to be kept by the owner and the title was changed to correspond with the chapter title in the fire code.

44. Fire protection systems authority having jurisdiction (AHJ) reports. Section 13.1.6.1 is added to read as follows: 13.1.6.1 A copy of a system's unsatisfactory inspection and maintenance test report shall be submitted to the AHJ by the testing company within five (5) working days after the completion of the test.

This was in previous state fire codes. ~~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. (This sentence was deleted because BWS does its own maintenance testing so an unsat report would be kept internally). The fire department does acceptance testing for fire alarm systems and commercial cooking fire extinguishing systems. This specifies that installation and location must be approved by the AHJ on these specific items. Amendment to section 13.1.5 was in in the previous state fire code. It coincides and reinforces the amendment to section 13.1.2. Section heading was amended to mirror the 2018 edition. Made revision to 13.1.5 to ITM to be consistent in the order.)~~

45. Fire protection systems out of service. Section 13.1.10 is amended to read as follows: 13.1.10 The AHJ shall be verbally notified

immediately when any fire protection system is out of service and on restoration of service.

(This has been in previous state fire codes. Any fire protection system that is not operational requires an immediate evaluation of the response and strategies to develop an action plan with alternatives in mitigating a fire incident.)

46. Fire protection systems advanced notification. Section 13.1.10 is amended by adding Sections 13.1.10.1, 13.1.10.2, and 13.1.10.3 as follows: 13.1.10.1 The county fire department shall be given a seventy-two hour notification prior to a scheduled inspection, testing, maintenance, or retesting of any fire protection system (including class I, II, and III, and combined systems, automatic fire sprinkler systems, and other fire extinguishing systems) and fire alarm systems within their respective jurisdiction in the State.

13.1.10.2 Failure to comply with the requirements of this section will result in the county fire department deeming it an invalid test. A retest may be required to be performed at the testing company's expense.

13.1.10.3 The certificate of fitness holder shall immediately notify the county fire department of any system inspection, testing or maintenance cancellations or changes to the scheduled date and time.

(This was in previous state fire codes. This allows the enforcing authority time to schedule or reschedule availability to witness any maintenance test by a COF holder.)

47. Fire protection systems inspection, testing, and maintenance labeling. Section 13.2.3 is amended by adding sections 13.2.3.3.1, 13.2.3.3.2, 13.2.3.3.2.1, 13.2.3.3.3, 13.2.3.3.3.1, 13.2.3.3.4, 13.2.3.3.4.1, 13.2.3.3.5, 13.2.3.3.5.1, and 13.2.3.3.5.2 as follows: 13.2.3.3.1 Inspection Label and Collar. An approved label and verification collar signifying successful passing of the system shall be

provided when inspecting, testing, or maintaining any class I, II, III, and combined standpipe fire extinguishing system.

13.2.3.3.2 Five Year Inspection Label

13.2.3.3.2.1 Class I, II, and III, and combined standpipe fire extinguishing systems passing a five-year inspection (annual inspection for class II hoses) shall have an approved, weatherproof, inspection label affixed to the fire department connection. If the system does not have a fire department connection, labels shall be affixed to hose cabinets located on the ground floor and the top-most floor.

- (1) The label shall indicate the type of system, month and year the system was inspected, tested, and maintained; the certificate of fitness holder's name and certificate number; and the company name, address, and contact information.
- (2) The label shall be yellow, at least two and one-fourth inches in width and three and one-fourth of an inch in length, and clearly visible without obstructing the operation of the fire extinguishing system.
- (3) The label shall be constructed of a durable material approved by the AHJ.
- (4) The label shall be punched with no more than one year and one month.

13.2.3.3.3 Verification Service Collar.

13.2.3.3.3.1 The verification of service collar shall be a circular, solid of continuous plastic with at least a three inch diameter hole in the center and shall slide onto each hose length approximately midway from the male and female couplings after the physical inspection has been completed and deemed satisfactory. The verification service collar shall:

- (1) Indicate the month and year the hose was inspected; the certificate of fitness holder's name and number; and company name, address and contact information; and
- (2) Be constructed of other suitable materials when approved by the AHJ.

13.2.3.3.4 Inoperable system sign

13.2.3.3.4.1 Systems that cannot be utilized for firefighting operations shall have an inoperable system sign affixed to the fire department connection.

- (1) The sign shall have a white background with red lettering and be constructed of wood, metal, or plastic.
- (2) The letters shall be a minimum height of three inches and a minimum width of one-fourth of an inch stroke.
- (3) If the system does not have a fire department connection, inoperable system signs shall be affixed to hose cabinets located on the ground floor and the top-most floor.
- (4) The sign shall remain in place until all repairs have been made and a satisfactory system test is completed.

13.2.3.3.5 Inspection, Testing, and Maintenance Report.

13.2.3.3.5.1 An inspection, testing, and maintenance report entitled "Standpipe and Hose Systems" available on the State Fire Council's website and at each county fire department's fire prevention bureau, or a similar report approved by the AHJ, shall be provided to the property owner or agent within fourteen days after the inspection, testing, and maintenance date.

13.2.3.3.5.2 An electronic copy of the unsatisfactory test report shall be submitted to the AHJ within five working days of the inspection, testing, and maintenance date. Submittals of satisfactory inspection, testing, and maintenance report shall be determined by the AHJ.

(This revision standardizes the ITM report form & where it may be found. These amendments standardize the ITM of fire protection systems identification and AHJ notification requirements).

48. Fire protection systems reference dates table. Sections 13.2.3.4.3 and 13.2.3.4.4 are added to read as follows: 13.2.3.4.3 Table 13.2.3.4.3A entitled "Fire Protection Systems Reference Dates" dated 1/12/2023 may be used as a reference for applicable codes and standards in effect when the building was permitted.

(This is a convenient table for ITM codes & NFPA standards that were in effect when buildings were permitted.)

13.2.3.4.4 Fire department connection gaskets shall be replaced with new gaskets during the required inspection, testing and maintenance of the system.

Gaskets have been known to deteriorate over time, causing leaks & even be missing.

**Table 13.2.3.4.3A Fire Protection Systems Reference Dates
(1/12/2023)**

Building Permit Date	Codes	NFPA References
All Buildings up to March 15, 1988	Ordinance 4598 (June 14, 1976) and the "Rules of the Fire Department City and County of Honolulu on Matters Related to the Testing of Fire Extinguishing Systems" (January 12, 1977). 1967 UBC Vol.1	1. NFPA 13
March 16, 1988 to July 20, 1992	1985 Uniform Fire Code Appendix III-A and referenced NFPA standards	<p>Water-Based Systems</p> <ol style="list-style-type: none"> 1. NFPA 25 - Water-Based Fire Protection Systems - Not Applicable 2. NFPA 13A – Recommended Practice for the Care and Maintenance of Sprinkler System - 1978 Edition. Referenced by 1985 UFC Standard, Appendix B. 3. NFPA 15 - Water Spray Fixed Systems for Fire Protection- 1979 Edition. As referenced by 1985 UFC Standard, #79-2
		<p>Other Systems</p> <ol style="list-style-type: none"> 1. NFPA 11 - Low-Expansion Foam – 1983 Edition 2. NFPA 11A - Medium- and High-Expansion Foam Systems - 1983 Edition 3. NFPA 12 - Carbon Dioxide Extinguishing Systems - 1985 Edition 4. NFPA 12A - Halon 1301 Fire Extinguishing Systems - 1980 Edition

		<ul style="list-style-type: none"> 5. NFPA 17 - Dry Chemical Extinguishing Systems - 1985 Edition 6. NFPA 96 - Removal of Smoke and Grease Laden Vapors from Commercial Cooking Equipment - 1984 Edition
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Building Permit Date	Codes	NFPA References
July 21, 1992 to October 9, 2002	1988 Uniform Fire Code Appendix III-C and referenced NFPA standards	<p style="text-align: center;">Water-Based Systems</p> <ul style="list-style-type: none"> 1. 1988 Uniform Fire Code - Appendix III-C (Testing Fire-Extinguishing Systems, Standpipes and Combination Systems). 2. NFPA 13A – Recommended Practice for the Care and Maintenance of Sprinkler Systems - 1978 Edition. As referenced by 1985 UFC Standards, Appendix B. 3. NFPA 15 - Water Spray Fixed Systems - 1988 UFC Standards (Volume II) which references NFPA 15, 1979 Edition with amendments. NOTE: The 1988 NFC references the 1985 Edition. <p style="text-align: center;">Other Systems</p> <ul style="list-style-type: none"> 1. NFPA 11 - Foam Extinguishing Systems - 1988 UFC Standards (Volume II) which references NFPA 11, 1978 Edition with amendments. 2. NFPA 11A - Medium and High-Expansion Foam Systems - 1988 Edition. 3. NFPA 12 - Carbon dioxide Extinguishing Systems - 1985 Edition. 4. NFPA 12A - Halon 1301 fire Extinguishing Systems - 1987 Edition. 5. NFPA 17 - Dry Chemical Extinguishing Systems - 1985 Edition. 6. NFPA 17A - Wet Chemical Extinguishing Systems - 1986 Edition. 7. NFPA 96 - Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment - 1987 Edition.

Building Permit Date	Codes	NFPA References
October 10, 2002 to January 1, 2010	1997 Uniform Fire Code Appendix III-C and referenced NFPA standards	<p style="text-align: center;">Water-Based Systems</p> <ol style="list-style-type: none"> 1. NFPA 25 - Water-Based Fire Protection Systems - 1997 UFC Appendix Standard A-III-C-1 (Volume II) which references and amends NFPA 25, 1992 Edition 2. NFPA 15 - Water Spray Fixed Systems - 1997 UFC Standards (Volume II) which references NFPA 15, 1990 Edition
		<p style="text-align: center;">Other Systems</p> <ol style="list-style-type: none"> 1. NFPA 11 - Low-Expansion Foam - 1997 UFC Standards (Volume II) which references NFPA 11, 1988 Edition 2. NFPA 11A - Medium-and High-Expansion Foam Systems - 1994 Edition 3. NFPA 12 - Carbon Dioxide Extinguishing Systems - 1993 Edition 4. NFPA 12A - Halon 1301 Fire Extinguishing Systems - 1997 Edition 5. NFPA 17 - Dry Chemical Extinguishing Systems - 1994 Edition 6. NFPA 17A - Wet Chemical Extinguishing Systems - 1994 Edition 7. NFPA 96 - Ventilation Control and Fire Protection of Commercial Cooking Operations - 1994 Edition 8. NFPA 2001 - Clean Agent Fire Extinguishing Systems - 1996 Edition
		<p style="text-align: center;">Fire Alarm Systems</p> <ol style="list-style-type: none"> 1. NFPA 72 - Installation, Maintenance, and Use of Fire-Protection Signaling Systems - 1997 UFC Standard 10-2 which references NFPA 72, 1993 Edition

Building Permit Date	Codes	NFPA References
January 2, 2010 to July , 2014	Hawaii State Fire Code (NFPA 1, 2006 edition) and referenced NFPA standards	<p style="text-align: center;">Water-Based Systems</p> <ol style="list-style-type: none"> 1. NFPA 15 – Standard for Water Spray Fixed Systems for Fire Protection, 2001 Edition 2. NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2002 Edition.
		<p style="text-align: center;">Other Systems</p> <ol style="list-style-type: none"> 1. NFPA 11 – Standard for Low-, Medium-, and High-Expansion Foam - 2005 Edition 2. NFPA 12 – Standard on Carbon Dioxide Extinguishing Systems, 2005 Edition 3. NFPA 12A – Standard on Halon 1301 Fire Extinguishing Systems, 2004 Edition 4. NFPA 17 – Standard for Dry Chemical Extinguishing Systems, 2002 Edition 5. NFPA 17A - Standard for Wet Chemical Extinguishing Systems, 2002 Edition 6. NFPA 96 - Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, 2004 Edition 7. NFPA 2001 - Standard on Clean Agent Fire Extinguishing Systems, 2004 Edition
		<p style="text-align: center;">Fire Alarm Systems</p> <ol style="list-style-type: none"> 1. NFPA 72 – National Fire Alarm Code, 2002 Edition

Building Permit Date	Codes	NFPA References
July 2014 to January 18, 2021	Hawaii State Fire Code (NFPA 1, 2012 edition) and referenced NFPA standards	<p>Water-Based Systems</p> <ol style="list-style-type: none"> 1. NFPA 15 – Standard for Water Spray Fixed Systems for Fire Protection, 2012 Edition 2. NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2011 Edition.
		<p>Other Systems</p> <ol style="list-style-type: none"> 1. NFPA 11 – Standard for Low-, Medium-, and High-Expansion Foam - 2010 Edition 2. NFPA 12 – Standard on Carbon Dioxide Extinguishing Systems, 2011 Edition 3. NFPA 12A – Standard on Halon 1301 Fire Extinguishing Systems, 2009 Edition 4. NFPA 17 – Standard for Dry Chemical Extinguishing Systems, 2009 Edition 5. NFPA 17A - Standard for Wet Chemical Extinguishing Systems, 2009 Edition 6. NFPA 96 - Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, 2011 Edition 7. NFPA 2001 - Standard on Clean Agent Fire Extinguishing Systems, 2012 Edition
		<p>Fire Alarm Systems</p> <ol style="list-style-type: none"> 1. NFPA 72 – National Fire Alarm Code, 2010 Edition

Building Permit Date	Codes	NFPA References
January 19, 2021 to present	Hawaii State Fire Code (NFPA 1, 2018 edition) and referenced NFPA standards	<p data-bbox="1036 388 1336 415">Water-Based Systems</p> <ol data-bbox="954 415 1417 615" style="list-style-type: none"> 1. NFPA 15 – Standard for Water Spray Fixed Systems for Fire Protection, 2017 Edition 2. NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2017 Edition. <p data-bbox="1084 621 1287 648">Other Systems</p> <ol data-bbox="954 648 1417 1283" style="list-style-type: none"> 1. NFPA 11 – Standard for Low-, Medium-, and High-Expansion Foam - 2016 Edition 2. NFPA 12 – Standard on Carbon Dioxide Extinguishing Systems, 2015 Edition 3. NFPA 12A – Standard on Halon 1301 Fire Extinguishing Systems, 2015 Edition 4. NFPA 17 – Standard for Dry Chemical Extinguishing Systems, 2017 Edition 5. NFPA 17A - Standard for Wet Chemical Extinguishing Systems, 2017 Edition 6. NFPA 96 - Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, 2017 Edition 7. NFPA 2001 - Standard on Clean Agent Fire Extinguishing Systems, 2015 Edition <p data-bbox="1052 1289 1320 1316">Fire Alarm Systems</p> <ol data-bbox="954 1316 1385 1369" style="list-style-type: none"> 1. NFPA 72 – National Fire Alarm Code, 2016 Edition

(The table reference fire code and NFPA standards and editions corresponding to the permitted date of the building. It was inserted as a table in the main body of the code and not in an annex.)

49. Fire protection systems existing assembly occupancies.
Section 13.3.2.7 is deleted in its entirety.

(This was in previous state fire codes. It recognizes that this code does not retroactively apply to existing assembly occupancies that were constructed to requirements to the building code of that time.)

50. Fire protection systems new educational occupancies. Section 13.7.2.3.1.1 is amended by adding a second paragraph to read as follows: An annunciator panel shall be provided in the office of each school.

(This provision facilitates consistent fire operations by standardizing the location of the fire alarm annunciator panel within school campuses dispersed over a large geographic area.)

51. Fire protection systems existing educational occupancies. Section 13.7.2.4.1.1 is amended by adding a second paragraph to read as follows: An annunciator panel shall be provided in the office of each school.

(This provision facilitates consistent fire operations by standardizing the location of the fire alarm annunciator panel within school campuses dispersed over a large geographic area.)

52. Fire protection systems existing health care occupancies. Section 13.3.2.11 is deleted in its entirety.

(This was in previous state fire codes. It recognizes that this code does not retroactively apply to existing health care occupancies that were constructed to requirements to the building code of that time.)

53. Fire protection systems existing detention and correctional facilities. Section 13.3.2.13 is deleted in its entirety.

(This was in previous state fire codes. It recognizes that this code does not retroactively apply to existing detention and

correctional occupancies that were constructed to requirements to the building code of that time.)

54. Fire protection systems existing hotels and dormitories. Section 13.3.2.15 is deleted in its entirety.

(This was in previous state fire codes. It recognizes that this code does not retroactively apply to existing hotels and dormitories occupancies that were constructed to requirements to the building code of that time.)

55. Fire protection systems existing residential board and care facilities. Section 13.3.2.21 is deleted in its entirety.

(This was in previous state fire codes. It recognizes that this code does not retroactively apply to existing residential board and care facility occupancies that were constructed to requirements to the building code of that time.)

56. Fire protection systems existing mercantile occupancies. Section 13.3.2.23 is deleted in its entirety.

(This was in previous state fire codes. It recognizes that this code does not retroactively apply to existing mercantile occupancies that were constructed to requirements to the building code of that time.)

57. Fire protection systems high-rise buildings. Section 13.3.2.25.2 is deleted in its entirety.

(This was in previous state fire codes and requires retrofitting with fire sprinklers. It recognizes that this code does not retroactively apply to existing high-rise occupancies, that were constructed to requirements to the building code of that time.)

(§12-45.5-57 deletes Section 13.3.2.25.2 in its entirety. It would have required high rise buildings to be retrofitted with sprinklers within 12 years)

58. Fire protection systems table. Sections 13.3.3.2.1, 13.3.3.2.2, 13.3.3.2.3, 13.3.3.2.4, 13.3.3.2.5, and 13.3.3.2.6 are added to read as follows: 13.3.3.2.1 Table 13.2.3.4.3A entitled "Fire Protection Systems Reference Dates" dated 7/18/2019 may be used as a reference for applicable codes and standards in effect when the building was permitted.

(This is useful information for the licensed COF and the AHJ in determining testing requirements. The fire code committee discussed this issue and determined to include the table in the main body of the document (Table 13.2.3.4.3A) CORRECTED by moving to appropriate section 10/17/17)

13.3.3.2.2 Pretest. The following requirements apply to all pretesting procedures:

- (1) An air test shall be conducted on the piping between the fire department connection and the sprinkler riser.
- (2) The piping shall be filled with twenty-five psi of air and held for fifteen minutes. No drop in pressure is allowed.
- (3) An air test need not be conducted when the piping is above ground and less than five feet in length.
- (4) Automatic fire sprinkler system without a fire department connection does not require an air test.

13.3.3.2.3 Inspection, Testing, and Maintenance Label. It shall be unlawful to inspect, test, or maintain any automatic fire sprinkler system without providing an approved label signifying successful testing of the system.

- (1) An approved inspection, testing, and maintenance label affixed to the fire department connection and the sprinkler riser. Automatic fire sprinkler systems that do not have a fire department connection shall have the label affixed to the riser.
- (2) The label shall indicate the type of system, month and year the system was tested; certificate of fitness holder's name

and number; and company's name, address and contact information.

- (3) The label shall be clearly visible and punched with no more than one year and one month.

13.3.3.2.4 The fire department shall be verbally notified immediately of any system determined to be out of service. Systems that cannot be utilized for firefighting operations shall have an inoperable system sign affixed to the fire department connection. The sign shall remain in place until all repairs have been made and a satisfactory inspection, test, and maintenance system test is completed.

13.3.3.2.5 Inspection, Testing, and Maintenance Report. An inspection, testing, and maintenance report entitled "Automatic Sprinkler Systems" available on the State Fire Council's website and at each county fire department's fire prevention bureau or a similar report approved by the AHJ, shall be provided to the property owner or agent within fourteen days after the test.

13.3.3.2.6 An electronic copy of the unsatisfactory report shall be submitted to the AHJ within five working days. Submittal of a satisfactory inspection, testing, and maintenance report will be determined by the AHJ.

(This revision standardizes the ITM report form & where it may be found. Consistent methods of system identification and reporting to the AHJ are the objectives.)

59. Stationary fire pump inspection, testing, and maintenance. Section 13.4.4 is amended to add sections 13.4.4.1 and 13.4.4.2 as follows: 13.4.4.1 Inspection, Testing, and Maintenance Label. Satisfactory inspection, testing, and maintenance system's tests shall have an approved inspection label affixed to the fire pump controller. The label shall follow the guidelines found in the water-based fire extinguishing systems inspection labels, tags, and collars.

13.4.4.2 Inspection, Testing, and Maintenance report. An inspection, testing, and maintenance report entitled "Fire Pumps" available on the State Fire Council's website and at each county fire

department's fire prevention bureau, or a similar report approved by the AHJ shall be provided to the property owner or agent within fourteen days after the test.

(This revision standardizes the ITM report form & where it may be found. ITM per NFPA 25 helps ensure that the pump is always ready for service. Amended Sections 13.4.4.1 and 13.4.4.2 ensures consistent testing identification and reporting.)

60. Private fire service mains inspection, testing, and maintenance. Section 13.5.4.2 is amended to read as follows: 13.5.4.2 A private fire service main installed in accordance with this code or the AHJ's water department shall be inspected, tested, and maintained in accordance with NFPA 25 or the AHJ's water department's inspection, testing, and maintenance standards.

(This revision standardizes the ITM report form & where it may be found. This amendment adds the water department's ITM standards to ensure private hydrants are maintained to same standards as the public hydrants).

61. Private service mains inspection, testing, and maintenance schedule. Sections 13.5.4.3, 13.5.4.4, 13.5.4.5, 13.5.4.6, and 13.5.4.7 are added to read as follows: 13.5.4.3 Testing. An annual inspection, testing, and maintenance shall be conducted by the certificate of fitness holder. If, during use, the hydrant does not perform adequately, it shall be tested and, if needed, restored to its proper operation by a licensed certificate of fitness holder.

13.5.4.4 Fire hydrants that fail the inspection, test, and maintenance shall have a readily visible, attached "OUT OF SERVICE" sign. The sign shall have a yellow background with black letters and be constructed of wood, metal, or plastic. The letters shall be a minimum height of three inches and a minimum width of one-fourth of an inch stroke. The sign shall remain in place until all repairs have been made and a satisfactory hydrant inspection, test and maintenance is completed.

13.5.4.5 The fire department shall be verbally notified immediately of any fire hydrant determined to be out of service. Fire hydrants deemed to be permanently inoperable or unusable shall be replaced.

13.5.4.6 Inspection, test, and maintenance report. An inspection, testing, and maintenance report entitled "Private Fire Service Mains" available on the State Fire Council's website and at each county fire department's fire prevention bureau, or a similar report approved by the AHJ, shall be provided to the property owner or agent within fourteen days after the test.

13.5.4.7 An electronic copy of the unsatisfactory test report shall be submitted to the AHJ within five working days of the test. The AHJ shall determine if the submittal of a satisfactory inspection, test, and maintenance report will be required.

(This revision standardizes the ITM report form & where it may be found. Regardless if there were no contractual provisions to conduct ITM annually or after each use, the hydrant needs to be ITM by a COF holder when deficiencies are encountered. NFPA 25 states after each use, but their ITM is not that comprehensive compared to BWS. A one-year annual ITM ensures the hydrant's operational use. This section applies consistent identification, reporting, and notification to the AHJ and the owner.)

62. Annual maintenance record keeping. Section 13.6.4.3.4.1.1 is amended to read as follows: The tag or label, as a minimum, shall entail the following:

- (1) Removing the previous tag or label;
- (2) Indicating the month and year the maintenance was performed;
- (3) Type of portable fire extinguisher tested;
- (4) Certificate of fitness holder's name and number;
- (5) Certificate of fitness holder's company name, address, and contact information;
- (6) Be yellow, at least two and one-fourth of an inch in width, three and one-fourth of an inch in length, and clearly visible without opening any cabinets;
- (7) Be constructed of a durable material approved by the AHJ;

- (8) Be punched with no more than one year and one month of the date of service; and
- (9) Not obstruct the portable fire extinguisher classification or instructions for use.

(Required information is needed to identify COF holder's name and provide uniform tag labeling & information. This also amends the previous amendment by replacing it, hence the renumbering.)

63. Extinguisher maintenance six-year internal examination label. Section 13.6.4.3.6.5.3 is amended to read as follows:

13.6.4.3.6.5.3 The 6-year internal examination label, as a minimum shall, entail the following:

- (1) Removing the previous six-year internal examination label;
- (2) Indicating the month and year the six-year internal examination was performed;
- (3) Certificate of fitness holder's name and number;
- (4) Certificate of fitness holder's company name, address, and contact information;
- (5) Type of portable fire extinguisher tested;
- (6) Be silver or white and at least two and one fourth of an inch in width and three and one-fourth of an inch in length; and
- (7) Not obstruct the portable fire extinguisher classification, instructions for portable fire extinguisher use, or manufacturer's labels.

(Additional information needed to identify COF holder and provide uniform tag labeling and information).

64. Extinguisher maintenance service collar information.

Section 13.6.4.11.3 is amended to read as follows: 13.6.4.11.3 The verification-of-service collar shall, at a minimum:

- (1) Indicate the month and year the examination was performed;
- (2) Display the certificate of fitness holder's name and number;
- (3) Display the certificate of fitness holder's company name, address and contact information;
- (4) Be a single circular piece of uninterrupted material forming a hole of a size that does not permit the collar assembly to

- move over the neck of the container unless the valve is completely removed; and
- (5) Not interfere with the operation of the fire extinguisher.

(Clarifies information needed on the service collar. This also amends the previous amendment by replacing it, hence the renumbering.) The collar was a certain circumference to ensure the extinguisher stem was physically removed & not slipped over the stem, the contents emptied & the cylinder pressure tested. Need to check this.

65. Positive alarm sequence occupant notification. Section 13.7.1.9.5 is amended to read as follows: 13.7.1.9.5 Where permitted by Chapter 11 through Chapter 43 of NFPA 101, a positive alarm sequence shall be permitted, provided that it is in accordance with NFPA 72. The following additional requirements shall also apply:

- (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 twenty-four 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) The AHJ shall conduct a test of the positive alarm sequence prior to implementation; and
- (6) 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 owner's expense.

(The section changed from 13.7.1.4.10.4 in the 2012 edition to section 13.7.1.9.4 in the 2015 & 2018 editions. The 2015 & 2018 editions references Chapters 11-43 not 11-42. The additional items for positive alarm sequence are above and beyond what NFPA 72 requires. This was added as a Honolulu amendments to the 2012. This is now added to the 2018 State code. Items 5 and 6 shown deleted were part of the 2012 Honolulu amendments, which are in the 2015 NFPA 72. This was in the previous state fire code. It allows with conditions, an exception to the requirement that fire alarm initiating devices produce an audible signal throughout the entire building.)

66. New and existing lodging and rooming houses. Sections 13.7.2.14.1, 13.7.2.14.2, 13.7.2.14.3, and 13.7.2.14.4 are deleted in their entirety.

(This section reference changed from 13.7.2.13 & 13.7.2.13.1 in the 2012 edition, which was deleted entirely, to 13.7.2.14.1.1 & 13.7.2.14.2 in the 2015 & 2018 editions. 13.7.2.14.3 & 4 are deleted because they are also related to the requirement for a fire alarm system. The smoke alarm requirement in 13.7.2.14.5 remains in the code as it did in the 2012 edition as section 13.7.2.13.3. This was in the previous state fire code. It recognizes that this code does not retroactively apply to existing lodging and rooming houses that were constructed to requirements in the building code of that time.

67. Existing apartment buildings. Sections 13.7.2.18.1, 13.7.2.18.2, 13.7.2.18.3, and 13.7.2.18.4 are deleted in their entirety.

(This section reference changed from 13.7.2.12.1 & 2 in the 2012 to 13.7.2.18.1 & 2 in the 2015 & 2018 editions. 13.7.2.18.3 & 4 are deleted because they are also related to the requirement for a fire alarm system. The smoke alarm requirement in 13.7.2.18.5 remains in the code as it did in the 2012 edition as section

13.7.2.12.3. This was in the previous state fire code. It recognizes that this code does not retroactively apply to existing apartment buildings that were constructed to requirements in the building code of that time.)

68. Existing mercantile occupancies. Section 13.7.2.24 is deleted in its entirety.

(13.7.2.18 was the reference in 2012, in the 2015 & 2018 editions it is 13.7.2.24. This was in the previous state fire code. It recognizes that this code does not retroactively apply to existing mercantile occupancies that were constructed to requirements in the building code of that time.

69. Existing business occupancies. Section 13.7.2.26 is deleted in its entirety.

(13.7.2.20 was the reference in 2012 edition. In the 2015 & 2018 editions it is 13.7.2.26. This was in the previous state fire code. It recognizes that this code does not retroactively apply to existing business occupancies that were constructed to requirements in the building code of that time.

70. Existing day-care and health care occupancies. Section 13.7.2.6 & 13.7.2.8 is deleted in its entirety.

This recognizes that this code does not retroactively apply to existing day-care & health care occupancies that were constructed to requirements in the building code of that time.)

71. Fire alarm systems inspection, testing, and maintenance notification. Section 13.7.3.2.4 is amended by adding section 13.7.3.2.4.1.1 to read as follows: 13.7.3.2.4.1.1 The county fire department shall be given a seventy-two hour notification prior to a scheduled inspection, testing, maintenance or retesting of any fire alarm systems within their respective jurisdiction.

72. Fire alarm systems inspection, testing, and maintenance labels. Section 13.7.3.2.4 (this was misnumbered) is amended by adding sections 13.7.3.2.4.4.1, 13.7.3.2.4.4.2, 13.7.3.2.4.4.3, and 13.7.3.2.4.4.4 to read as follows: 13.7.3.2.4.4.1 Labels. Fire alarm systems passing an annual inspection, testing, and maintenance test shall have an approved label affixed to the annunciator panel or, if not present, the fire alarm system control panel in accordance with section 13.7.3.2. Information on the label, at a minimum shall, entail the following:

- (1) Removal of the previous label;
- (2) Indicate the month and year the satisfactory test was performed;
- (3) Certificate of fitness holder's name and number;
- (4) Certificate of fitness holder's company name, address, and contact information;
- (5) Be yellow, at least two and one-fourth of an inch in width, and three and one-fourth of an inch in length;
- (6) Be clearly visible without obstructing the visibility or operation of the annunciator panel or, if not present, fire alarm system control panel; and
- (7) The label shall be clearly visible and punched with no more than one year and one month.

13.7.3.2.4.4.2 Fire alarm systems failing an annual inspection, test, and maintenance test shall leave the expired inspection tag or label in place on the annunciator panel or, if not present, the fire alarm system control panel until the system is repaired.

13.7.3.2.4.4.3 The AHJ and the building owner shall be verbally notified immediately when a fire alarm system becomes inoperable. Alternative notification and response plans shall be implemented after approved by the AHJ until the fire alarm system is fully operational.

13.7.3.2.4.4.4 An inspection, testing, and maintenance report entitled "System Record of Inspection and Testing", "Notification Appliance Supplementary Record of Inspection and Testing", "Initiating Device Supplementary Record of Inspection and Testing", "Mass Notification System Supplementary Record of Inspection and Testing", "Emergency Communications Systems Supplementary Record of Inspection and Testing", "Interface Component Supplementary Record of

Inspection and Testing”, available on the State Fire Council’s website and at each county fire department’s fire prevention bureau, or a similar report approved by the AHJ shall be provided to the property owner or agent within fourteen days after a satisfactory test.

(This revision standardizes the ITM report form & where it may be found. This adds additional information to the tag or label and expedites the notification to the AHJ of an inoperable fire alarm system. Exhibit B became Annex G)

73. Fire alarm systems inspection, testing, and maintenance tag. Section 13.7.3.2.4.7 is amended by adding as follows: Section 13.7.3.2.4.7 Tag. A tag shall be placed on the fire alarm panel when tested in accordance with NFPA 72. Information on the tag shall include the date of testing, testing company and contact information, technician performing the test and certificate of fitness number, and that the test was satisfactory.

(This was a consolidated county amendment from the NFPA Fire Code 2006 edition into the 2012 edition. Sections changed from 2012 edition to 2015 & 2018 editions. This moved from 13.7.3.2.5 to 13.7.3.2.4.7. The reference in the amendment to 13.7.3.2 is incorrect. Should be NFPA 72 Chapter 14.)

74. Fire alarm systems manually activated alarm-initiating devices. Section 13.7.3.3.9.4 is amended to add a new sentence at the end to read as follows: The location of manual fire alarm boxes may be modified by the AHJ.

(Section 13.7.3.3.6 in the 2012 edition is now 13.7.3.3.8.4 in the 2015 & 2018 editions. This amendment allows alternate locations for fire alarm pull stations by the AHJ. An example is the agreement between the State Department of Education and the State Fire Council to allow pull stations to be placed inside of classrooms with identification signs outside of those classrooms. The justification was to reduce vandalism and false activations with the rooms being accessible during school hours. This

amendment allows alternate locations for fire alarm pull stations by the AHJ.

75. Other fire protection systems compliance. Section 13.8.1 is amended to read as follows: Section 13.8.1. Other Fire Protection Systems. Where other fire protection systems are required to be installed by the provisions of this code, or are installed with the approval of the AHJ as an alternative or equivalency, the design and installation of the system shall comply with the appropriate standards listed in Table 13.8.1. The systems shall be inspected, tested, and maintained in accordance with the appropriate NFPA standard.

(Appropriate NFPA standards describe maintenance requirements. The reference in the code to Section 10.4 is a reference to Building Evacuation which is incorrect.)

76. Other fire protection systems inspection, testing, and maintenance label. Section 13.8 is amended to add as follows: Section 13.8.3 Inspection, Testing, and Maintenance Label. Other fire protection systems satisfactorily passing an inspection, testing, and maintenance test shall have an approved label affixed to the manual activation device or, if not present, actuator valve to the extinguishing agent. The label shall, as a minimum, entail the following:

- (1) Removal of the previous label;
- (2) Indicate the type of system, month and year the system was tested;
- (3) Certificate of fitness holder's name and number;
- (4) Certificate of fitness holder's company name, address and contact information;
- (5) Be yellow, at least two and one-fourth of an inch in width, and three and one-fourth of an inch in length;
- (6) Be constructed of a durable material approved by the AHJ;
- (7) Be clearly visible without obstructing the visibility or operation of the system; and
- (8) Be punched with no more than one year and one month.

13.8.4 Hydrostatic Testing. Every twelve years from the date of manufacture, stored pressure extinguishing agent cylinders shall be

hydrostatically tested.

13.8.5 Hydrostatic Testing Label. Stored pressure extinguishing agent cylinders satisfactorily passing a twelve-year hydrostatic test shall, as a minimum, have a label attached to the cylinder as follows:

- (1) Removal of the previous label.
- (2) Indicate the type of system, and month and year the system was tested.
- (3) Certificate of fitness holder's name and number.
- (4) Certificate of fitness holder's company name, address, and contact information.
- (5) Be yellow, at least two and one-fourth of an inch in width, and three and one-fourth of an inch in length.
- (6) Be constructed of a durable material approved by the AHJ.
- (7) Be clearly visible without obstructing the visibility or operation of the system.
- (8) Be punched with no more than one year and one month.

13.8.6 The fire department shall be verbally notified immediately of any systems determined to be out of service. Systems that cannot be utilized for firefighting operations shall have an inoperable system sign affixed to the manual activation device. The sign shall remain in place until all repairs have been made and a satisfactory system test is completed.

13.8.6 Inspection, testing, and maintenance report. An inspection, testing, and maintenance report entitled "Foam Water Sprinkler System", "Other Fire Protection Systems" available on the State Fire Council's website and at each county fire department's fire prevention bureau, or a similar report approved by the AHJ shall be provided to the property owner or agent within fourteen days after the test.

(This revision standardizes the ITM report form & where it may be found).

13.8.7 Inspection Report. An electronic copy of the unsatisfactory test report shall be submitted to the AHJ within five working days. The AHJ shall determine if the submittal of a satisfactory test report will be required.

13.8.8 Table 13.2.3.4.3A entitled "Fire Protection Systems Reference Dates" may be used as a reference for applicable codes and standards in effect when the building was permitted.

(Table 13.8 lists the various NFPA standards for the different types of systems. Exhibits provide additional system information. It also adds additional information to the tag or label and expedites the notification to the AHJ of a failed system.)

77. Means of egress application. Section 14.1 is amended to read as follows: 14.1 Means of egress application. Means of egress in existing buildings shall comply with this Code and NFPA 101, Life Safety Code. The provisions of this chapter do not apply for new construction. For new construction see the building code. Existing buildings shall be maintained to meet the requirements of the building code at the time the structure 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 10.11.3 shall apply to new and existing construction.

(This was in the previous state fire code. The reference to 14.6.4.1 in the exception of the NFPA 1 Fire Code, 2006 edition, was changed to 10.12.3 to match the appropriate section in the 2012 edition. Maintenance of building and fire protection systems and appliances are the enforceable objectives of the fire code. NFPA 101 is not a fire or building code, but is concerned with the protection of building occupants. The application to existing buildings eliminates conflicts with building code requirements for new construction. There are about 1500 sections that are extracted from NFPA 101 throughout NFPA 1 Fire Code, but there are other important provisions that are not. This means unless specifically adopted they would not apply. In addition, "grandfathering" in building codes leaves a loophole that NFPA 101 closes when imminent danger exists.)

78. Screen door assemblies and storm door assemblies. Section 14.5.1.4 is amended by adding an exception at the end to read as

follows: Exception: Double-acting screen doors used in conjunction with exit doors having panic hardware in school cafeteriums do not need to comply with this provision.

(This was in the previous state fire code. This allows double acting screen doors to be allowed in school cafeteriums for egress. It was allowed in previous building code amendments to allow doors that swung in both directions and provided additional ventilation for Hawaii's climatic conditions.) The section heading is amended to mirror NFPA 1 "Screen Door Assemblies and Storm Door Assemblies".)

79. Locks, latches, and alarm devices. Section 14.5.2.11 is added to read as follows: 14.5.2.11 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.

(This was in the previous state fire code. This was allowed in previous editions of the building code as amended, to provide security to corridors and passageways after regular school hours, and still provide clear egress width for occupants when classes are in session. The section heading is amended to mirror NFPA 1 "Locks, Latches, and Alarm Devices".)

80. Allowable occupant load increases. Section 14.8.1.3.1 is amended to read as follows: 14.8.1.3.1 The occupant load in any building or portion thereof shall be allowed to be increased from the occupant load established for the given use in accordance with the building code where all other requirements of this Code are also met, based on such increased occupant load. Occupant load increases shall be approved by the AHJ. The fire department shall be notified of any increase in occupant load.

(This was in the previous state fire code. It allows discretionary

approval by the AHJ, most likely by building/fire officials, for occupant load increases when circumstances or other elements are evaluated to determine whether approval may be granted or not, without compromising life safety. It also provides for fire department notification.)

81. Egress capacity. Section 14.8.3.1 is amended to read as follows: 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.

(This was in the previous state fire code. It requires egress capacities to be determined by the building code.)

82. Arrangement and marking of exit discharge. Section 14.11.3 is amended to add as follows: 14.11.3.4 Emergency exit door and exit discharge signage. When required by the AHJ, a sign shall be displayed permanently near or on the discharge side of each required non-fire-rated exit door or exit discharge in letters not less than two inches (fifty-one millimeters). The wording of the required sign can only be modified with prior written approval of the AHJ. The sign shall read as follows:

**EMERGENCY EXIT
DO NOT OBSTRUCT**

(This is a new amendment. Many required exit doors are often found to be obstructed by parked vehicles or other objects in front of the discharge side of required exit doors. This is presumably because the doors are unmarked and the public has no indication they are blocking an exit, violating Section 14.10.4.3.)

83. Special signs at elevators. Section 14.14.8 is amended to add as follows: 14.14.8.4 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.

(This was in the previous state fire code. This adds a requirement for location and warning signs at every level of each elevator lobby.) The section heading is amended to mirror NFPA 1 "Special Signs".)

84. Water supply during construction. Section 16.5.3.1.1 is amended to read as follows: 16.5.3.1.1 A water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material is present.

(This is a new amendment. It changes as soon as combustible material "accumulates" to "is present" to clarify that a water supply is required as soon as combustible material exists on the property during construction.)

85. Required access. Section 18.2.3.1.3 is amended to read as follows: 18.2.3.1.3 The provisions of 18.2.3.1 through 18.2.3.2.2.1 shall be permitted to be modified by the AHJ where any of the following conditions exists:

- (1) Not more than two one- and two-family dwellings protected by an approved automatic sprinkler system in accordance with Section 13.1;
- (2) Not more than two existing one- and two-family dwellings;
- (3) Private garages having an area not exceeding 1000 ft²;
- (4) Carports having an area not exceeding 1000 ft²;
- (5) Agricultural buildings having an area not exceeding 1000 ft²; and
- (6) Sheds and other detached buildings having an area not exceeding 1000 ft².

(This is a new amendment for the 2012 edition. It changes (1) and (2) to "Not more than two" one- and two-family dwellings and existing one- and two-family dwellings to limit its application. Changed the 400's to 1000 sq. ft. in items 3-6 since MFD and Honolulu have county amendments. 400 is too small it is patterned off a U occupancy type building from the building code.)

86. Fire department access road widths. Section 18.2.3.5.1.1 is amended to read as follows: 18.2.3.5.1.1 Fire department access roads shall have an unobstructed width of not less than twenty feet (six.one meters) or as approved by the AHJ.

(This was in the previous state fire code. It requires a clear 20 foot width and allows modifications approved by the fire department for certain circumstances.)

87. Fire department access road vertical clearance. Section 18.2.3.5.1.2 is amended to read as follows: 18.2.3.5.1.2 Fire department access roads shall have an unobstructed vertical clearance of not less than thirteen feet six inches (four.one meters) or as approved by the AHJ.

(This was in the previous state fire code. It requires a 13 feet 6 inch vertical height clearance and allows approved modifications by the fire department for certain circumstances.)

88. Fire department access roads bridges or culverts. Section 18.2.3.5.5.1 is amended to read as follows: 18.2.3.5.5.1 When a bridge or culvert is required to be used as part of a fire apparatus access road, it shall be constructed and maintained in accordance with county requirements.

(This was in the previous state fire code. County requirements follow national standards to support the weight of fire department apparatus. The term "Culverts" was added because they are not addressed in the national code.)

89. Fire department access roads bridges or culverts live loads. Section 18.2.3.5.5.2 is amended to read as follows: 18.2.3.5.5.2 The bridge or culvert shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

(This was in the previous state fire code. County requirements follow national standards to support the weight of fire department apparatus. The term "Culverts" was added because they are not addressed in the national code.)

90. Water supply fire flow. Section 18.3.1 is amended to read as follows: 18.3.1 An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with Section 18.4.

(Somehow this was left out. The 2015 edition amendment was different & carried over from previous amendment editions. Find out why this changed?)

91. Minimum number of fire hydrants for fire flow. Section 18.5.4.1 is amended to read as follows: 18.5.4.1. The minimum number of fire hydrants needed to deliver the required fire flow for new buildings in accordance with Section 18.4 shall be determined in accordance with Section 18.5.4 or as approved by the AHJ.

(This was in the 2012, because it was in the previous state fire code and allowed consistent application of hydrant requirements for each county whether it is from a public or private water supply. In 2015, the annex E for hydrant location and distribution was relocated into Section 18.5.1 which is preferred. But this revision allows the AHJ to accept the county water requirements.)

92. Hydrants out of service. Section 18.5.9.1 is amended by adding a paragraph to read as follows: 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. Records shall be made available for review by the AHJ upon request.

(This was in the previous state fire code. It 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. Section 18.5.6 in 2012 was changed to 18.5.9 in 2015. This will allow the engine company to preplan. This is consistent with 13.1.8. The reference to the county requirements is unnecessary since the AHJ already approves. The section heading is amended to mirror NFPA 1 "Hydrants Out of Service".)

93. Nonmetallic containers. Section 19.2.1.2.1 is amended by adding an exception at the end to read as follows:

Exception: Containers used by one- and two-family dwellings for refuse pickup.

(This was in the previous state fire code. It allows non-metallic rubbish containers for private residences and to not be fire rated if over the threshold. Private residences was changed to one- and two-family dwellings to be consistent with the defined term used to establish requirements throughout this code.)

94. Flame-retardant requirements. Section 20.1.2.1 is amended by adding a new sentence at the end to read as follows: A record of fire-resistant treatment shall be kept on the premises for review by the AHJ.

(This was in the previous state fire code. It adds a requirement for a record of fire-resistant treatment of decorative materials in assemblies to be kept on the premises for the fire department to verify. The section heading is amended to mirror NFPA 1 "Flame-Retardant Requirements".)

95. Means of egress floor plan. Section 20.1.5.1.4 is added to read as follows: 20.1.5.1.4 A floor plan indicating the seating arrangements, and 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 three hundred 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 building owner or agent. The building owner or agent 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. The building owner or agent shall inform all patrons of all required exit locations before each show or event in places of assembly with an occupant load of three hundred or more persons.

(This was in the previous state fire code. It adds requirements for the maintenance of exit ways and aisles for places of assembly with an occupant load of 300 or more persons. "Management" was changed to "building owner or agent" similar to use in section 20.1.5.1. The section heading is amended to mirror NFPA 1 "Means of Egress Inspection".)

96. Means of egress inspection overcrowding. Section 20.1.5.1.5 is added to read as follows: 20.1.5.1.5 Authority to Stop Performance. 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 an imminent danger, is authorized to cause the performance, presentation, spectacle, or entertainment to be stopped until such conditions or obstruction is corrected.

(This was in the previous state fire code. It authorizes fire departments to prevent a potential hazard to life safety due to overcrowding. But this is not just overcrowding. It addresses

obstructed exits or other imminent dangers, so the title was changed. Also "Menace to life" was changed to "imminent danger" to be consistent with 1.7.16 and 10.3.2 and 3.3.154.)

97. Assembly open flame devices and pyrotechnics general.

Section 20.1.5.3, Item (1) is amended to read as follows:

- (1) Pyrotechnic special effect devices shall be permitted to be used on stages before proximate audiences for ceremonial or religious purposes, as part of a demonstration in exhibits, or as part of a performance, provided that all of the following criteria are met:
 - (a) Precautions satisfactory to the AHJ are taken to prevent ignition of any combustible material;
 - (b) Use of the pyrotechnic device complies with Section 65.3;
 - (c) Use of pyrotechnic devices indoors shall only be allowed in buildings protected throughout with automatic fire sprinklers; and
 - (d) Use of pyrotechnic devices indoors shall only be allowed in buildings where all fire and life safety systems are deemed appropriate as determined by the AHJ.

(This amendment adds two additional requirements (c & d) in Item (1) for pyrotechnic special effects. 65.3 take you to 1126 which has requirement for approval by the AHJ to shut down which includes when systems are not deemed appropriate. There is no requirement they be used in a sprinklered building. So this is more restrictive with the sprinkler requirement.)

98. Assembly open flame devices and pyrotechnics fire prevention.

Section 20.1.5.3 is amended by adding paragraphs (7) and (8) to read as follows:

- (7) When approved by the AHJ, open-flame devices may be used by performers, provided adequate precautions are taken to prevent ignition of combustible materials. Such devices shall not be used except in areas protected by an automatic sprinkler system. In addition, a minimum 20 foot clearance to the viewing audience shall be provided, or an approved

barrier shall be erected to prevent accidental release onto the viewing audience. Performances with fire shall provide a plan approved by the AHJ. The plan shall address fuel use and storage, device ignition, device usage, and extinguishment procedures.

- (8) Portable heating equipment, not flue-connected, shall be allowed 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 approved by the AHJ are taken to prevent ignition of any combustible materials.

(This amendment added additional requirement as a separate Item (7) to address the open flames associated with fire dancing. This provision is similar to Item (1) in the previous amendment, but fire dancing does not use pyrotechnic special effects. The beginning statement "when approved by the AHJ" could be used to prohibit the double knife event. The term "suitable non-combustible net" was changed to "approved barrier" because most nets are not non-combustible and some combustible nets could be suitable, this would also suggest a net or plexiglass as suitable barrier. "Suitable" is not a defined term, but "approved" is. "Minimum" is added to the 20 foot clearance because in some cases the AHJ may want more (think of flaming hula-hoop). The second to last sentence is revised for readability. Item (8) is for when portable heating equipment is used to fuel open flame devices. This is worded similar to 20.1.5.2.4 for cooking. "permitted" is changed to "allowed" because a permit is not required. "Satisfactory" is changed to "approved" to require approval by the AHJ. Items (7) and (8) were separate amendments in the previous state fire code; this year they were added as one amendment.)

99. Use of school facilities for sleeping. Section 20.2.2.6 is added to read as follows: 20.2.2.6 Use of Educational Facilities for Sleeping. Educational occupancies that allow sleeping on a temporary basis shall:

- (1) Have the sleeping location approved by the AHJ;

- (2) Notify the AHJ no less than five (5) days prior to the event;
- (3) Prohibit smoking and open flames and shall provide one of the following:
 - (a) Smoke alarms 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; and
 - (b) A fire watch approved by the AHJ.

(This was in the previous state fire code. It provides a minimum degree of protection in an occupancy not designed for sleeping purposes and for a practice of visiting neighbor island students that travel to another neighbor island and spend the evening prior to or after an athletic event at the host school at a much lower cost than a hotel. Fire watch approval is intended to include fire watch duties to the person performing that function. This would be similar to a dormitory. Dormitories require smoke alarms not interconnected in section 13.7.2.16.5.-Section 13.7.1.8.10 allows smoke alarms to be connected to a fire alarm system). Committee voted to amend the above listed section and provide this information to the Hawaii Department of Education. The committee also added Sections 20.2.4.6.1- 20.2.4.6.3 for the AHJ to use in enforcing the provision.)

100. Emergency egress drills in schools. Section 20.2.4.2.3, paragraph (1) is amended by adding a new exception at the end to read as follows:

Exception: Fire drills at high schools, middle schools, and intermediate schools shall be conducted at least quarterly during school sessions.

This was in the previous state fire code. It allows fire drills at high and middle schools to be conducted quarterly instead of monthly. The older age groups should be able to retain the fire drill information and practices better than elementary age students. This is placed at the end of Item (1) because that is where the monthly requirement is located. The section heading is amended to mirror NFPA 1 "Emergency Egress Drills", "in schools" was added in by Lloyd to clarify the application.)

101. Manufactured housing. Section 20.11.5 is deleted in its entirety.

(This was in the previous state fire code. It is deleted because it is regulated by the building code.)

102. Tents and temporary membrane structures. Section 25.1.1 is amended by adding an exception at the end to read as follows:
Exception: The provisions of this section do not apply to tents and temporary membrane structures having an area seven hundred square feet or less.

(This was in the previous state fire code. Requirements for tents and temporary membrane structures are regulated by the building code. However, county fire departments have requirements and approve permits for larger tent sizes. This threshold was increase to the county with the smallest permit threshold of 700 sf. (other counties have a 2100 sf permit requirement.) The permit requirement is when the FD can notify the public of the requirements. If this stayed at 400 sf, there may be many events that the FD is not aware of before a permit is required. The committee thought that membrane structures under 700 sf were fairly safe without these requirements. The section heading is amended to mirror NFPA 1 "General".)

103. Physical protection for all outside aboveground tanks. Section 42.3.3.6.2 is amended to read as follows: 42.3.3.6.2 Guard posts or other approved means shall be provided to protect tanks and appurtenances that are subject to vehicular damage in accordance with section 60.5.1.9.

(This was in the previous state fire code. All requirements of 60.5.1.9 apply. This is referenced to require the same provisions for guard posts consistently as they have been historically required in Hawaii. The section heading is amended to mirror NFPA 1 "Physical Protection for All Outside Aboveground Tanks.")

104. Emergency electrical disconnect signs. Section 42.5.7.9 is amended by adding the following sentences at the end as follows: Such devices shall be distinctly labeled as "EMERGENCY FUEL SHUTOFF 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 one-fourth inch stroke.

(This was in the previous state fire code. It adds important signage information for emergency shutoffs.)

105. Fuel dispensing age limitation. Section 42.7.1.1 is amended by adding to read as follows: 42.7.1.1 Age Limitation. Persons under the eligible age to obtain a driver's license are prohibited from dispensing fuel.

(This was in the previous state fire code. It is believed that a person 15 years or older is likely to understand the dangers involved in improperly dispensing fuel into vehicles and are able to act responsibly. Further, persons of this age are eligible to test for driving permits. The age of 15 was changed to coordinate with the signage requirements in Section 42.7.2.5.4, which requires people of licensed age to dispense fuel. And if the license age changes, this still works. The original language "licensed age" was not clear & Lloyd revised).

106. Fuel dispensing prohibition of foreign objects. Section 42.7.1 is amended by adding to read as follows: 42.7.1.2 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.

(This was in the previous state fire code. It prohibits an unsafe practice and requires persons to be in constant attendance when refueling is in progress. The section heading is amended to mirror NFPA 1 "Operational Requirements"

107. Fuel dispensing signs. Section 42.7.2.6.4 is amended to

read as follows: 42.7.2.6.4 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 licensed age 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.

(This was in the previous state fire code. It keeps the most important safety information and adds the last two items that is consistent with previous amendment requirements. The second to last amended line is returned to the model code language because the amendment to cite the 15 year age limit was revised to "licensed age." The FPC believed the foreign object prohibition needs to be reinforced with other prohibited requirements.)

108. Attended self-service fuel dispensing prohibition of foreign objects. Section 42.7.4 is amended by adding as follows:
42.7.4.3.2 The placement of a foreign object, that allows the fuel dispensing lever to remain in the open position, is prohibited at all times.

Statistical history on fires or mishaps does not justify prohibiting the latch open devices. Existing dispensers may not have latch open devices so this amendment is still needed.

109. Unattended self-service fuel dispensing prohibition of

foreign objects. Section 42.7.5.4.1 is added to read as follows:
42.7.5.4.1 The placement of a foreign object, that allows the fuel dispensing lever to remain in the open position, is prohibited at all times.

Statistical history on fires or mishaps does not justify prohibiting the latch open device. Existing dispensers may not have latch open devices so this amendment is still needed. This amendment originally replaced 42.7.5.4, which would have deleted requiring a latch-open device. This needs to be retained & this amendment adds the prohibition of placing foreign objects to keep the nozzle open.

110. Flammable finish spray booth inspection, testing, and maintenance. Section 43.1.7 is amended by adding as follows:

43.1.7.1.5 Flammable finishing spray booth and spray room installed in accordance with this code shall be inspected, tested, and maintained in accordance with NFPA 17, 25, 33, 34 and 2001.

43.1.7.1.6 Inspection tag, label, and collar. Refer to the chapter on automatic fire sprinklers and other fire protection systems.

43.1.7.1.7 Inspection Report. Refer to the chapter on automatic fire sprinklers and other fire protection systems for requirements.

(This adds referenced NFPA standards for maintenance, system tag information, and reporting.)

111. Commercial cooking extinguishing system acceptance test. Section 50.4.3 is amended by adding as follows: 50.4.3.4. Prior to the commencement of initial cooking operations, a satisfactory acceptance test of the system shall be made in accordance with the manufacturer's instructions. The acceptance test shall be of an approved method and witnessed by the AHJ.

(This is a consolidated county amendment. It authorizes the AHJ to approve and witness the acceptance test of commercial cooking extinguishing systems before cooking operations commence. The

section heading is amended to mirror NFPA 1 "General Requirements".)

112. Inoperable commercial cooking extinguishing or exhaust system. Section 50.5.1.6.1 is amended to read as follows: Where the fire extinguishing system or exhaust system is inoperable the AHJ shall be verbally notified immediately. Where the systems are tested as unsatisfactory, the system owner or owner's representative shall be notified in writing of the impairment. [Eff _____] (Auth: RCH §4-105; ROH §1-9.1; HRS §132-2) (Imp: HRS §132)

(This adds immediate notification to the AHJ.)

113. Commercial cooking inspection, testing, and maintenance reference table. Section 50.6.2.2 is amended by adding as follows: 50.6.2.2.1 A list of the appropriate commercial cooking extinguishing systems are found in Table 13.2.3.4.3.A entitled "Fire Protection Systems Reference Dates". Other systems shall be approved by the AHJ. [Eff _____] (Auth: RCH §4-105; ROH §1-9.1; HRS §132-2) (Imp: HRS §132)

(This adds a referenced table for appropriate NFPA standards with their editions.)

114. Commercial cooking extinguishing system inspection, testing, and maintenance reports. Section 50.6.2 is amended by adding Sections 50.6.2.8.2 and 50.6.2.8.3 to read as follows:
50.6.2.8.2 An inspection, test, and maintenance report entitled "Commercial Cooking Extinguishing System Inspection, Testing and Maintenance Report" or similar report available on the State Fire Council's website and approved by the AHJ shall be provided to the property owner or agent within fourteen days after the test.

50.6.2.8.3 An electronic copy of the unsatisfactory test report shall be submitted to the AHJ within five working days. The AHJ shall determine if the submittal of a satisfactory test report will be required.

(This clarifies reporting requirements to the owner and the AHJ.)

115. Commercial cooking extinguishing system inspection, testing, and maintenance tag. 50.6.3.3 is amended by adding Section 50.6.3.3.3 to read as follows: 50.6.3.3.3 Inspection tag. Commercial cooking extinguishing systems passing an inspection shall have an approved tag affixed to the hood's extinguishing system piping near the manual activation device. The tag or label, as a minimum, shall entail the following:

- (1) Removal of the previous label;
- (2) Type of system tested;
- (3) Month and year the system was tested;
- (4) Certificate of fitness holder's name and number;
- (5) Certificate of fitness holder's company name, address and contact information;
- (6) Be yellow, at least two and one-fourth of an inch in width, and three and one-fourth of an inch in length without any visual obstructions;
- (7) Be constructed of a durable material approved by the AHJ; and
- (8) Be punched with no more than one year and one month.

(Tagging identification is clarified.)

116. Hazardous materials management plan (HMMP) on-site. Section 60.1.5 is amended by adding Section 60.1.5.4 to read as follows: The HMMP shall be made available on site.

(This was in the previous state fire code. It requires the Hazardous Materials Management Plan (HMMP) for buildings containing high hazard contents to be available on the premises for review by the AHJ. The section heading is amended to mirror NFPA 1 "Hazardous Materials Management Plan (HMMP)".)

117. Hazardous materials protection from vehicles. Section 60.5.1.9.2, Item (2) is amended to read as follows:

- (2) They shall be spaced not more than three feet between posts on center.

(This was in the previous state fire code. To protect hazardous material storage in tanks from vehicle damage it requires three feet spacing instead of four feet for guard posts.)

118. Fireworks removal. Section 65.1 is amended by adding Section 65.1.3 to read as follows: 65.1.3 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.

(This was in the previous state fire code. It authorizes the AHJ to have the owner, at their expense, to remove all fireworks from the premises when violations of this chapter or other laws governing fireworks are discovered.)

119. Fireworks regulation. Section 65.1 is amended by adding Section 65.1.4 to read as follows: 65.1.4 Importation, storage, possession, sale, purchase, transfer, public displays and discharge of fireworks shall be in accordance with chapter 132D, HRS.

(This was in the previous state fire code. It references HRS 132D, which regulates fireworks in the state. The section heading is amended to mirror NFPA 1 "General".)

120. Fireworks permits. Section 65.9.2.2 is deleted in its entirety.

(This was in the previous state fire code. Fireworks permits are issued and approved by the counties.)

121. Consumer fireworks retail sales. Section 65.10 is added to read as follows: Section 65.10 Retail sales of consumer fireworks in

both new and existing buildings, structures, and facilities shall comply with the requirements of Chapter 6 and 7 of NFPA 1124, 2013 Edition.

(This was added to have requirements for storage & retail sales as NFPA 1124 this was deleted from the 2015 edition. NFPA 1124 is no longer being updated or published, however in lieu of creating requirements not based on a national standard this was referenced. Also added to the References Section.)

122. Flammable and combustible liquid tank permits.

Section 66.1.5 is amended to read as follows: 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.

(This was in the previous state fire code. This allows the language for permits to remain because specific permit requirements were deleted in Section 1.12.8 so each county can place them in their county fire code. Plans were added to clarify that they shall be submitted with the permit application.)

123. Unpermitted flammable and combustible liquid tank prohibition. Section 66.1.5 is amended by adding Section 66.1.5.1 to read as follows: 66.1.5.1. Filling Unpermitted Tanks Prohibited. No fuel supplier shall fill or cause to be filled, an unpermitted storage tank. It is the supplier's responsibility to request and be presented with a copy of the approved permit issued by the AHJ.

(This was a consolidated county fire code amendment. It prohibits fuel suppliers from filling an unpermitted tank and requires an copy of the approved permit to be available to the fuel supplier for verification.)

124. Underground flammable and combustible liquid tank closure in place. Section 66.21.7.4.3.3 is amended to read as follows: 66.21.7.4.3.3 Underground Tanks Permanently Closed in Place. Underground tanks may be permanently closed 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 permanent closure measures. Tanks permanently closed in place shall meet all the following requirements:

- (1) All applicable AHJs shall be notified;
- (2) A safe workplace shall be maintained throughout the prescribed activities;
- (3) All flammable and combustible liquids and residues shall be removed from the tank, appurtenances, and piping and shall be disposed of in accordance with regulatory requirements and industry practices, using a written procedure;
- (4) The tank, appurtenances, and piping shall be made safe by either purging them of flammable vapors or inerting the potential explosive atmosphere. Confirmation that the atmosphere in the tank is safe shall be by testing of the atmosphere using a combustible gas indicator if purging, or an oxygen meter if inerting, at intervals in accordance with written procedures;
- (5) Access to the tank shall be made by careful excavation to the top of the tank;
- (6) All exposed piping, gauging and tank fixtures, and other appurtenances, except the vent, shall be disconnected and removed;
- (7) The tank shall be completely filled with an inert solid material;
- (8) The tank vent and remaining underground piping shall be capped or removed;
- (9) The tank excavation shall be backfilled; and
- (10) A record of tank size, location and date of permanent closure shall be retained by the owner and a copy submitted to the AHJ.

Allows abandonment in place for tanks that cannot be removed only due to the structural integrity of existing buildings above or nearby underground fuel storage tanks. The provision keeps items 1-9 in the model code and adds item (5) from the previous amendment about records. This provides reasonable safety precautions for tanks to be left in its underground location.)

125. Unpermitted liquefied petroleum gases and natural gases tank prohibition. Section 69.1.2 is amended by adding Section 69.1.2.1 to read as follows: 69.1.2.1. Filling Unpermitted Tanks Prohibited. No fuel supplier shall fill or cause to be filled, an unpermitted storage tank. It is the supplier's responsibility to request and be presented with a copy of the approved permit issued by the AHJ.

(This is a consolidated county fire code amendment. It applies to liquefied petroleum gases and liquefied natural gases and prohibits fuel suppliers from filling an unpermitted tank and requires an copy of the approved permit to be available to the fuel supplier for verification. This is the same requirement for flammable liquid tanks. The title was changed to match the amendment 66.1.5.1. The section heading is amended to mirror NFPA 1 "Permits".)

