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Residential Fire Safety Advisory Committee  
Honolulu Fire Department  
636 South Street  
Honolulu, Hawaii 96813-5007

November 8, 2017

The Honorable Ron Menor  
Chair and Presiding Officer  
and Members  
Honolulu City Council  
530 South King Street, Room 202  
Honolulu, Hawaii 96813

CITY COUNCIL  
HONOLULU, HAWAII  
2017 NOV -7 P 9:44  
RECEIVED

Dear Chair Menor and Councilmembers:

SUBJECT: Report from the Residential Fire Safety Advisory Committee

Position Statement from the International Association of Fire Chiefs:

“Modern fire and building codes require complete automatic fire sprinkler protection and a variety of other safety features in new high-rise construction. Many older high-rise buildings lack automatic fire sprinkler protection and other basic fire protection features necessary to protect the occupants, emergency responders, and the structure itself. Without complete automatic fire sprinkler protection, fire departments cannot provide the level of protection that high-rise buildings demand.

Existing high-rise buildings that are not protected with fire sprinklers installed in accordance with national standards represent a significant hazard to occupants and fire fighters forced to mitigate this protection shortfall. Additionally, high-rise fires can significantly impact communities’ infrastructure and the economic viability of a downtown area.”

Introduction

Bill 69 (2017) was introduced by the request of Mayor Kirk Caldwell on July 17, 2017, and would require existing high-rise residential buildings not equipped with automatic fire sprinkler systems to install such systems within five years.

Committee Draft (CD) 1 was drafted by the Honolulu Fire Department (HFD) to reinsert deleted language from the national model fire code to require existing high-rise buildings to be equipped with automatic fire sprinkler systems throughout per National Fire Protection Association (NFPA) 13 and the International Building Code (IBC). To

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accomplish this, building owners would send a letter of intent to comply within 180 days, City and County of Honolulu (City) departments having authority would respond within 60 days following receipt of the letter, and affected buildings would have 12 years to comply with the ordinance.

The Honolulu City Council, through Resolution No. 17-195, requested the City administration to reconvene the Residential Fire Safety Advisory Committee (RFSAC) that was first formed in 2004-2005. This voluntary citizens advisory committee's purpose is to research and provide recommendations for requirements, timeframes, cost incentives, and benefits regarding residential high-rise building fire safety applications. The RFSAC was formed with Fire Chief Manuel Neves appointed as its Chair and includes representatives from the following City and State agencies and private organizations:

- American Institute of Architects, Hawaii Chapter
- Building Industry Association
- Department of Budget and Finance (State)
- Department of Budget and Fiscal Services (BFS) (City)
- Department of Planning and Permitting (DPP) (City)
- Hawaii Council of Associations of Apartment Owners
- Hawaii Council of Community Associations
- Hawaii Fire Fighters Association
- Hawaii Public Housing Authority (State)
- Hawaii State Fire Council (State)
- Hawaii State Fire Protection Engineers
- Hawaii Trades Council
- Honolulu Board of Water Supply (City)
- Honolulu Board of Realtors
- Honolulu Fire Department (City)

#### RFSAC Actions to Date

Chair Neves created two research groups, a fire and building codes requirements group led by HFD Assistant Chief Socrates Bratakos, and a financial incentives group led by then BFS Deputy Director Peter Biggs. Chief Bratakos was assigned to manage the RFSAC communications and meet with both research groups. Committee participants were invited to join either or both groups. The RFSAC met semimonthly, and the findings from the four meetings held on September 8 and 21 and October 12 and 19, 2017, are as follows:

1. The installation of an automatic fire sprinkler system and other life safety systems in existing residential high-rise buildings is presently not required, but would significantly reduce the life safety and property damage risk from the consequences of fire.
2. The adopted Building Code of the City and County of Honolulu, IBC 2006, requires the installation of automatic fire sprinklers and other life safety systems in new residential high-rises. Although neither the Hawaii State Fire Code nor the Fire Code of the City and County of Honolulu require the retrofitting of automatic fire sprinklers and other life safety systems in existing high-rise residential buildings, the model code, based on NFPA 1, 2012 edition, does.
3. A proposed CD1 is attached that reflects RFSAC's recommendations and was prepared by the HFD to reinsert the following existing high-rise language from the national model fire code: existing high-rise buildings shall be equipped with an automatic fire sprinkler system throughout per NFPA 13 and the IBC.

Existing high-rise residential buildings not protected throughout by an automatic fire sprinkler system shall receive a building fire and life safety evaluation in accordance with the listed codes. This evaluation consists of an assessment of building safety features and fire protection systems providing a minimum level of fire and life safety to occupants and fire fighters that is approved by the Authority Having Jurisdiction (AHJ).

The recommendations of RFSAC include exceptions to the sprinkler retrofit requirements. These exceptions are incorporated in the proposed CD1, and include:

Existing high-rise residential buildings are exempt from automatic fire sprinkler system requirements if all dwelling units have exterior access and a continuous egress path to exit the building and have no full-length interior corridors.

Existing high-rise residential buildings less than ten floors can receive a building fire and life safety evaluation passing score in lieu of approved automatic sprinkler system requirements.

Existing high-rise buildings may be protected throughout by an approved automatic fire sprinkler system per NFPA 13R when approved by the AHJ.

Private balconies that have at least one long side that is 50% open are not required to have automatic fire sprinkler protection.

Elevator hoistways and machine rooms are not required to have automatic fire sprinkler protection.

Class II wet standpipe systems may be removed when buildings are protected throughout by automatic fire sprinkler systems per Section 13.3.2.26.2.

Combined standpipe and sprinkler systems using existing standpipes shall be permitted to require pump sizing for the greater of the fire sprinkler demand or standpipe demand.

4. A listing compiled by the HFD and the DPP for approximately 360 residential high-rise buildings not equipped with automatic fire sprinkler systems that are eight stories and above is attached.
5. Based upon this list of residential high-rise buildings without automatic fire sprinkler systems, there are approximately 39,428 individual residential high-rise dwelling units within the City.
6. The RFSAC fire and building codes research group is evaluating the use of a building fire and life safety evaluation tool (attached) that will be adapted for Honolulu. This will be based on a building safety evaluation matrix currently in the existing 2012 IBC and considerations from the NFPA 101 life safety code and its requirements for an engineered life safety system. Existing buildings would be evaluated by design professionals, licensed engineers, or architects. They would be required to achieve a passing score and maintain it thereafter. Similar evaluations are used by the state of Florida and the city of Chicago.
7. The RFSAC financial incentives group researched possible incentives (attached) to mitigate the cost of retrofitting residential high-rise buildings with automatic fire sprinklers and other life safety systems.

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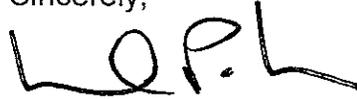
Please note that these incentives do not reflect an agency's support or opposition for any of the listed incentives.

8. The Honolulu City Council and the Hawaii State Legislature should consider enacting legislation to provide incentives to owners of residential structures who are willing to install fire sprinklers. Such installations will not only reduce property damage and save lives, but also provide additional revenue from taxes paid by businesses involved in the installation of fire sprinklers.

The RFSAC has provided the abovementioned information to assist in determining whether or not an ordinance to retrofit residential high-rise buildings with automatic fire sprinklers should be passed.

Should you have questions or wish to discuss this further, please contact me at 723-7101 or [mneves@honolulu.gov](mailto:mneves@honolulu.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'M.P.N.', with a stylized flourish at the end.

MANUEL P. NEVES  
Chair

Attachments

**PROPOSED CONFERENCE DRAFT (CD) 1 TO BILL 69 (2017)**

CD1 proposes the following changes to Bill 69:

- A. Instead of amending Chapter 20, Article 2, Revised Ordinances of Honolulu, it amends Section 20-1.1 in Chapter 20, Article 1, and leaves Article 2, including the title of Article 2, unchanged.
- B. Amends Section 2 of Bill 69 by amending Section 20-1.1, Revised Ordinances of Honolulu, by adding a new paragraph (15) with the following language:

Amending Section 13.3.2.26.2. Section 13.3.2.26.2 is amended to read:

13.3.2.26.2 Existing high-rise buildings not protected throughout by an automatic fire sprinkler system shall receive a building fire and life safety evaluation in accordance with this code and the building code. This evaluation consists of an assessment of building safety features and fire protection systems. A passing score on the evaluation provides a minimum level of fire and life safety to occupants and fire fighters that is approved by the AHJ. A building fire and life safety evaluation shall be conducted by a licensed design professional within three years from the effective date of this ordinance. Buildings shall comply by passing the building fire and life safety evaluation within six years from the effective date of this ordinance. The AHJ may grant an extension per Section 13.3.2.26.5 if automatic fire sprinkler systems are required to achieve compliance. All buildings must continue to maintain a passing status on their respective building fire and life safety evaluations.

13.3.2.26.2.1 Existing high-rise buildings shall be protected throughout by an approved automatic fire sprinkler system in accordance with this Chapter and the building code.

13.3.2.26.2.2 Each building owner shall, within 180 days from the effective date of this ordinance, file an intent to comply with this regulation with the AHJ for approval.

13.3.2.26.2.3 The AHJ shall review and respond to the intent to comply submittal within 60 days of receipt of the intent to comply.

13.3.2.26.2.4 The entire building shall be required to be protected by an approved automatic fire sprinkler system as approved by the AHJ within 12 years of the adoption of this ordinance, except where an extension is approved by the AHJ as provided in Section 13.3.2.26.2.5.

13.3.2.26.2.5 Compliance with the automatic fire sprinkler system provisions of Section 13.3.2.26.1 shall be achieved as follows: common areas for buildings 20 floors and over shall be completed within 8 years from the effective date of this ordinance, common areas for buildings 10 to 19 floors shall be completed within 10 years from the effective date of this ordinance, and all buildings, regardless of

the number of floors, shall be completed within 12 years from the effective date of this ordinance. An extension to 15 years from the effective date of this ordinance may be approved by the AHJ, provided compliance has been achieved for common areas.

EXCEPTION: Existing high-rise residential buildings are exempted from the automatic fire sprinkler system requirements in Section 13.3.2.26.2.1 if all dwelling units have exterior access and a continuous egress path to exit the building and have no full-length interior corridors.

EXCEPTION: Existing high-rise residential buildings less than 10 floors in height can receive a building fire and life safety evaluation passing status in lieu of the approved automatic fire sprinkler system requirements in Section 13.3.2.26.2.1.

EXCEPTION: Existing high-rise buildings may be protected throughout by an approved automatic fire sprinkler system per NFPA 13R when approved by the AHJ.

EXCEPTION: Private balconies that have at least one long side that is 50% open are not required to have automatic fire sprinkler protection.

EXCEPTION: Elevator hoistways and machine rooms are not required to have automatic fire sprinkler protection.

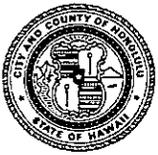
EXCEPTION: Class II wet standpipe systems may be removed when buildings are protected throughout by automatic fire sprinkler systems per Section 13.3.2.26.2.

EXCEPTION: Combined standpipe and automatic fire sprinkler systems using existing standpipes shall be permitted to utilize pump sizing for the fire sprinkler demand.

- C. The existing paragraphs following the inserted paragraph (15) are reordered.
- D. Amends Section 3 by inserting the language previously included in Section 8.
- E. Amends Section 4 by replacing the previously included language with:

This ordinance shall take effect on January 1, 2018.

- F. Deletes Sections 5 through 8.



**A BILL FOR AN ORDINANCE**

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RELATING TO FIRE SAFETY.

BE IT ORDAINED by the People of the City and County of Honolulu:

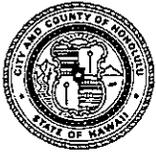
SECTION 1. The purpose of this ordinance is to address fire safety. More specifically, this ordinance requires existing high-rise residential buildings to retrofit when necessary to comply with specified fire safety standards.

SECTION 2. Section 20-1.1, Revised Ordinances of Honolulu (ROH) 1990 ("Fire Code of the City and County of Honolulu"), is amended to read as follows:

**"Sec. 20-1.1 Fire Code of the City and County of Honolulu**

The State Fire Code, as adopted by the State of Hawaii on August 15, 2014, pursuant to Chapter 132 of the Hawaii Revised Statutes (HRS), which adopts, with modifications, the 2012 National Fire Protection Association (NFPA) 1 Fire Code, published and copyrighted by the NFPA, is adopted by reference and made a part hereof, subject to the following amendments which, unless stated otherwise, are in the form of amendments to NFPA 1:

- (1) Amending Section 1.1.2. Section 1.1.2 is amended to read:  
  
**1.1.2 Title.** This code shall be known and cited as the "Fire Code of the City and County of Honolulu" and will be referred to herein as "this code."
- (2) Amending Section 1.10. Section 1.10 is amended to read:  
  
**1.10 Board of Appeals.** See Chapter 16 (Building Code), Article 1, ROH.
- (3) Amending Section 1.12.8. Section 1.12.8 is amended to read:  
  
**1.12.8 Permits, Licenses, and Fees.** A permit or license shall be obtained from the Honolulu Fire Department's (HFD) Fire Prevention Bureau or designated agency prior to engaging in the following activities, operations, practices, or functions:
  - 1. Places of Assembly. To operate a place of assembly. For permit requirements, see Section 20.1.1.1.



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Annual Permit Fee: \$200

2. Tents and Canopies. For permit requirements, see Section 25.1.2.

Permit Fee: \$200

3. Application of Flammable Finishes. For permit requirements, see Section 43.1.1.4.

Annual Permit Fee: \$200

4. Flammable and Combustible Liquid Tank Installation. For permit requirements, see Section 66.1.5.

One-Time Permit Fee:

\$150 for a tank capacity of 61 to 4,999 gallons

\$200 for a tank capacity of 5,000 gallons or greater

5. Liquefied Petroleum Gas (LPG) Container (Tank) Installation. For permit requirements, refer to Section 69.1.2.

One-Time Permit Fee:

\$200 for a single container or the aggregate of interconnected containers of 125-gallon water capacity or more

6. Licenses to inspect, test, and maintain the following fire protection systems:

Water-Based Systems - Three-Year License Fee: \$100

Nonwater-Based Systems - Three-Year License Fee: \$100

Portable Fire Extinguishers - Three-Year License Fee: \$100

7. Fireworks. For permits and license requirements, see Chapter 20, Article 6, ROH.

8. Automatic Fire Extinguishing Systems for Commercial Cooking Equipment Inspection Fee.

Initial Inspection Fee: \$100



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Reinspection Fee: \$100

9. Fire Alarm Systems Acceptance Test Inspection Fee. Inspection fees are as follows:

1-100 devices or appliances:

Initial Fee: \$100  
Retest Fee: \$100

101-250 devices or appliances:

Initial Fee: \$250  
Retest Fee: \$250

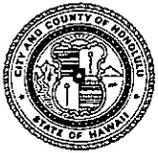
More than 250 devices or appliances:

Initial Fee: \$500  
Retest Fee: \$500

10. Fire Plans Review Fee.
- a. When plans or other specifications are submitted to the fire department per the Building Code, a plans review fee shall be paid at the time of submittal. The fees collected are hereby deemed appropriated upon receipt and may be expended for fire prevention activities relating to public education, fire investigations, plans checking, permit processing, fire inspections, certifications, and training.
- b. The Fire Plans Review Revolving Fund is established and created herewith as a repository for such fees.

The Fire Plans Review Fee shall be ten (10) percent of the building permit fee payable to the City prior to the issuance of the building permit.

**EXCEPTION:** Where an automatic fire sprinkler system is elected to be installed in accordance with NFPA 13D, NFPA



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13R, or NFPA 13, the Fire Plans Review Fee shall be waived.

11. Fireworks Public Display Inspection Fee. For permit requirements, see Section 20-6.12.  
Inspection Fee: \$200

- (4) Amending Section 1.16.4. Section 1.16.4 is amended to read:

**1.16.4 Citations.** Any person, firm, or corporation who fails to comply with the provisions of this code or carry out an order made pursuant to this code or violates any condition attached to a permit, approval, or certificate, shall be deemed guilty of a misdemeanor.

- (5) Amending Section 1.16.4.3. Section 1.16.4.3 is amended to read:

**1.16.4.3 Failure to Comply.** Each person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any provisions of this code is committed, continued, or permitted. Upon conviction of any such violation, such person shall be punished by a fine of not more than \$1,000 or imprisonment of not more than one year or both such fine and imprisonment.

- (6) Amending Section 10.11.1. Section 10.11.1 is amended to read:

**10.11.1 Open Burning Fires.** Open burning shall be conducted in accordance with this section and may be prohibited when the authority having jurisdiction (AHJ) determines such fires are a hazard.

**10.11.1.1 Compliance.** Open burning shall comply with the following:

1. Fires for Cooking Food. Persons responsible for such fires not contained within an appliance, such as an imu, shall notify the HFD's Fire Communication Center (FCC) 15 minutes prior to lighting such fires.
2. Fires for Recreational, Decorative, or Ceremonial Purposes. Obtain written permission from the property owner. Submit a letter to the AHJ for approval at least 14 days prior to the event, noting the date, time, and location of the fire. Persons responsible shall notify the HFD's FCC 15 minutes prior to lighting such fires.



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3. Fires to Abate a Fire Hazard. Obtain written permission from the property owner. Submit a letter to the AHJ for approval at least 14 days prior to the event, noting the date, time, and location of the fire. Persons responsible shall notify the HFD's FCC 15 minutes prior to lighting such fires.
4. Fires for Prevention or Control of Disease or Pests. Obtain written permission from the property owner. Submit a letter to the AHJ for approval at least 14 days prior to the event, noting the date, time, and location of the fire. Persons responsible shall notify the HFD's FCC 15 minutes prior to lighting such fires.
5. Fires for Training of Fire Fighting Personnel. Fires for the training of fire fighting personnel shall be in accordance with NFPA 1403 and conducted only with the AHJ's approval. Persons responsible shall notify the HFD's FCC 15 minutes prior to lighting such fires.
6. Fires for Disposal of Dangerous Materials. Submit a letter to the AHJ for approval at least 14 days prior to the event, noting the date, time, and location of the fire. Persons responsible shall notify the HFD's FCC 15 minutes prior to lighting such fires.
7. Fires for Residential Bathing Purposes. Notify the HFD's FCC at least 15 minutes prior to lighting such fires.

**10.11.1.2 Responsibility.** Fires for open burning allowed under Section 10.11.1 shall be the responsibility of the person igniting and maintaining the fire.

**10.11.1.3 Incinerators.** Private incineration is prohibited by State health laws.

**EXCEPTION:** Closed incinerators approved by the State Department of Health (DOH) shall be in accordance with NFPA 82.

(7) Amending Section 10.11.6.1. Section 10.11.6.1 is amended to read:

**10.11.6.1** For other than one- and two-family dwellings, no hibachi, grill, or other similar devices used for cooking, heating, or any other purpose shall be used or kindled on any balcony, under any overhanging portion, or within 10 feet (3 meters) of any structure without the AHJ's approval.



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(8) Amending Section 10.11. Section 10.11 is amended by adding Subsection 10.11.11 to read:

**10.11.11 Open Flame Performances Before a Proximate Audience.**

**10.11.11.1** Open flame performances before a proximate audience shall comply with the following:

1. Performances that use an open flame, such as, but not limited to, "fire dancing" and "logo burns," shall be held outdoors or within a building protected with an automatic sprinkler system in accordance with Section 20.1.5.3.
2. Performances shall be in an area provided with at least 25 feet of clearance to readily combustible materials.
3. A minimum clearance of 20 feet shall be kept between the performance and the audience at all times. This distance may be reduced, provided an AHJ-approved, noncombustible safety net is in place in accordance with Section 20.1.5.3.
  - a. Gasoline, white gas, or any Class I flammable liquid shall not be used as the fuel source.
  - b. Fuel storage shall be kept in an approved container at least 25 feet away from the performance and the audience. The quantity of fuel stored shall only suffice for a single performance.
  - c. Performers shall not throw any open-flame props over the audience.
  - d. A CO2 fire extinguisher with a minimum 20B rating and an ABC fire extinguisher with a minimum 4A rating shall be readily available and within 30 feet of the performance. The fire extinguishers shall be constantly attended by a competent adult trained in the use of portable fire extinguishers.
  - e. Fire props shall be adequately extinguished immediately after performances by soaking in a bucket of water.



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f. Additional clearances and/or means of fire extinguishment shall be provided if deemed necessary by the AHJ.

(9) Amending Section 10.14.1.1. Section 10.14.1.1 is amended by adding Subsection 10.14.1.1.1 to read:

**10.14.1.1.1**

**EXCEPTIONS:**

1. Natural cut Christmas trees shall be allowed in assembly occupancies that, except for those occupancies subject to exception 3 below, the occupancy shall be protected throughout with an approved automatic fire sprinkler system that is installed in accordance with NFPA 13.
2. Natural cut Christmas trees shall be allowed in hotel occupancies that are protected throughout with an approved automatic fire sprinkler system that is installed in accordance with NFPA 13. An approved fire watch shall be provided for the duration in which the Christmas trees remain in the hotel.
3. Natural cut Christmas trees shall be allowed in Honolulu Hale and Kapolei Hale. An approved fire watch shall be provided for the duration in which the Christmas trees are displayed.

(10) Amending Section 10.14.10. Section 10.14.10 is amended by adding Subsection 10.14.10.4 to read:

**10.14.10.4 Clearance of Brush or Vegetative Growth from Structures.** Persons owning, leasing, controlling, operating, or maintaining buildings or structures in, upon, or adjoining hazardous fire areas and persons owning, leasing, or controlling land adjacent to such buildings or structures shall at all times:

1. Maintain an effective firebreak by removing and clearing flammable vegetation and combustible growth from areas within 30 feet of such buildings or structures.

**EXCEPTION:** Single specimens of trees, ornamental shrubbery, or similar plants used as ground covers, provided they do not form a



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means of rapidly transmitting fire from the native growth to any structure.

2. Maintain additional fire protection or firebreak by removing brush, flammable vegetation, and combustible growth located from 30 to 100 feet from such buildings or structures when required by the AHJ because of hazardous conditions causing a firebreak of only 30 feet, which is insufficient to provide reasonable fire safety.

**EXCEPTION:** Grass and other vegetation located more than 30 feet from buildings or structures and less than 18 inches in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

3. Remove portions of trees which extend within ten feet of a chimney's outlet.
4. Maintain trees adjacent to or overhanging a building free of deadwood.
5. Maintain the structure's roof free of leaves, needles, or other dead vegetative growth.

- (11) Amending Section 11.12.2.2.1.2. Section 11.12.2.2.1.2 is amended by adding an exception to read:

**EXCEPTION:** One- and two-family dwellings shall require only one three-foot wide access pathway from the eave to the ridge on each roof slope where the modules are located.

- (12) Amending Section 11.12.2.2.2.2. Section 11.12.2.2.2.2 is amended by adding an exception to read:

**EXCEPTION:** One- and two-family dwellings shall be located not less than 1½ feet below the ridge.

- (13) Amending Section 13.1.2. Section 13.1.2 is amended by adding Subsections 13.1.2.1 and 13.1.2.2 to read:

**13.1.2.1 Halon and Clean Agent Systems.** Condition of acceptance of halon and clean agent systems shall be satisfactory passage of a final



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approval of an installation test in accordance with nationally recognized standards and the manufacturer's instructions prior to final acceptance of the system. The test shall be witnessed by the AHJ.

**13.1.2.2 Nonwater-based Fire Extinguishing Systems.** Upon completion of a nonwater-based fire extinguishing system installation that is required by this code, a satisfactory final approval of the system's installation test shall be made in accordance with nationally recognized standards and the manufacturer's instructions. Nonwater based systems include, but are not limited to, dry chemical and carbon dioxide extinguishing systems. The test shall be witnessed by the AHJ.

(14) Amending Section 13.3.2.20.1. Section 13.3.2.20.1 is amended to read:  
**13.3.2.20.1** When required by the county building code, all new one- and two-family dwellings shall be protected throughout by an approved automatic sprinkler system in accordance with Section 13.3.2.20.2.

(15) Amending Section 13.3.2.26.2. Section 13.3.2.26.2 is amended to read:

13.3.2.26.2 Existing high-rise buildings not protected throughout by an automatic fire sprinkler system shall receive a building fire and life safety evaluation in accordance with this code and the building code. This evaluation consists of an assessment of building safety features and fire protection systems. A passing score on the evaluation provides a minimum level of fire and life safety to occupants and fire fighters that is approved by the AHJ. A building fire and life safety evaluation shall be conducted by a licensed design professional within three years from the effective date of this ordinance. Buildings shall comply by passing the building fire and life safety evaluation within six years from the effective date of this ordinance. The AHJ may grant an extension per Section 13.3.2.26.6 if automatic fire sprinkler systems are required to achieve compliance. All buildings must continue to maintain a passing status on their respective building fire and life safety evaluations.

13.3.2.26.2.1 Existing high-rise buildings shall be protected throughout by an approved automatic fire sprinkler system in accordance with this Chapter and the building code.

13.3.2.26.2.2 Each building owner shall, within 180 days from the effective date of this ordinance, file an intent to comply with this regulation with the AHJ for approval.



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13.3.2.26.2.3 The AHJ shall review and respond to the intent to comply submittal within 60 days of receipt of the intent to comply.

13.3.2.26.2.4 The entire building shall be required to be protected by an approved automatic fire sprinkler system as approved by the AHJ within 12 years of the adoption of this ordinance, except where an extension is approved by the AHJ as provided in Section 13.3.2.26.2.5.

13.3.2.26.2.5 Compliance with the automatic fire sprinkler system provisions of Section 13.3.2.26.1 shall be achieved as follows: common areas for buildings 20 floors and over shall be completed within 8 years from the effective date of this ordinance, common areas for buildings 10 to 19 floors shall be completed within 10 years from the effective date of this ordinance, and all buildings, regardless of the number of floors, shall be completed within 12 years from the effective date of this ordinance. An extension to 15 years from the effective date of this ordinance may be approved by the AHJ, provided compliance has been achieved for common areas.

**EXCEPTION:** Existing high-rise residential buildings are exempted from the automatic fire sprinkler system requirements in Section 13.3.2.26.2.1 if all dwelling units have exterior access and a continuous egress path to exit the building and have no full-length interior corridors.

**EXCEPTION:** Existing high-rise residential buildings less than 10 floors in height can receive a building fire and life safety evaluation passing status in lieu of the approved automatic fire sprinkler system requirements in Section 13.3.2.26.2.1.

**EXEPTION:** Existing high-rise buildings may be protected throughout by an approved automatic fire sprinkler system per NFPA 13R when approved by the AHJ.

**EXCEPTION:** Private balconies that have at least one long side that is 50% open are not required to have automatic fire sprinkler protection.

**EXCEPTION:** Elevator hoistways and machine rooms are not required to have automatic fire sprinkler protection.



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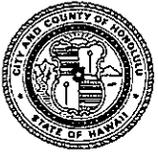
**EXCEPTION:** Class II wet standpipe systems may be removed when buildings are protected throughout by automatic fire sprinkler systems per Section 13.3.2.26.2.

**EXCEPTION:** Combined standpipe and automatic fire sprinkler systems using existing standpipes shall be permitted to utilize pump sizing for the fire sprinkler demand.

~~[(15)]~~(16) Amending Section 13.7.1.4.10.4. Section 13.7.1.4.10.4 is amended to read:

**13.7.1.4.10.4** When approved by the AHJ and 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 24-hour basis. The staff shall be instructed in fire emergency procedures and the use and operation of in-house fire appliances. Documentation of such training shall be maintained and filed on the premises.
4. Immediate notification of the fire department shall take place upon activation of any fire alarm initiating device.
5. If the fire alarm system's initiating device is activated, acknowledgement at the control unit by trained personnel shall be accomplished within 15 seconds in order to initiate the alarm investigation phase. If the signal is not acknowledged within 15 seconds, all building or facility and remote signals shall be activated immediately and automatically (general alarm).



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**A BILL FOR AN ORDINANCE**

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6. If the fire alarm system's initiating device is activated, notification devices in that zone shall be activated. The zone notification shall include the floor of, the floor above, and the floor below the activated device. The zone notification areas may be modified with the AHJ's approval. This zone notification shall be for a maximum of three (3) minutes, during which trained personnel shall initiate the alarm investigation phase, communicate their findings immediately to the fire department, and reset the system if appropriate. After three (3) minutes or an activation of any other initiating device(s), the fire alarm system shall be activated immediately and automatically for the entire building or facility (general alarm). At no time shall the fire alarm system be silenced until verification of the alarm is accomplished.
7. The fire alarm system shall provide a means to bypass the positive alarm sequence and immediately activate the general alarm for the entire building or facility.
8. The AHJ shall conduct a test of the positive alarm sequence prior to implementation.
9. The AHJ may disapprove or rescind approval of the fire alarm system's positive alarm sequence if all of the above-mentioned 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.

~~[(16)]~~(17) Amending Section 13.7.3.2. Section 13.7.3.2 is amended by adding Subsection 13.7.3.2.5 to read:

**13.7.3.2.5 Fire Alarm System Testing.** A tag shall be placed on the fire alarm panel when tested in accordance with Section 13.7.3.2. Information on the tag shall include the testing date, testing company and contact information, technician performing the test, and satisfactory testing result.



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~~[(17)]~~(18) Amending Section 18.2.3.1.3. Section 18.2.3.1.3 is amended to read:

**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 exist:

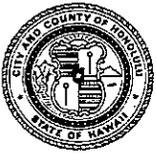
1. Not more than two one- and two-family dwellings protected by an approved automatic sprinkler system in accordance with Section 13.1.
2. Not more than two existing one- and two-family dwellings.
3. Private garages having an area not exceeding 1,000 square feet.
4. Carports having an area not exceeding 1,000 square feet.
5. Agricultural buildings having an area not exceeding 1,000 square feet.
6. Sheds and other detached buildings having an area not exceeding 1,000 square feet

~~[(18)]~~(19) Amending Section 18.2.3.2.2.1. Section 18.2.3.2.2.1 is amended to read:

**18.2.3.2.2.1 Automatic Sprinkler Systems.** When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 130, or NFPA 13R, an increase in distance in Section 18.2.3.2.2 shall be permitted as set forth by the AHJ.

~~[(19)]~~(20) Amending Section 18.2.3.2. Section 18.2.3.2 is amended by adding Subsection 18.2.3.2.3 to read:

**18.2.3.2.3 Access for High-Piled Storage.** When high-piled storage areas exceed 12,000 square feet, one or more access doors shall be provided in each 100 lineal feet, or major fraction thereof, of the exterior walls which face required access roadways. Required access doors shall be a minimum of three feet wide and six feet eight inches high. Roll-up doors shall not be allowed as access doors, unless approved by the AHJ.



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~~[(20)]~~(21) Amending Section 18.5.6. Section 18.5.6 is amended to add a sentence to read:

Global positioning system coordinates of new and existing private hydrant locations shall be provided to the fire department.

~~[(21)]~~(22) Amending Section 20.1.1.1. Section 20.1.1.1 is amended to read:

**20.1.1.1 Permits and Plans.** A permit is required for each place of assembly with an occupant load capacity of 300 or more persons, such as restaurants, nightclubs, and dancing and drinking establishments. The permit shall be posted in a conspicuous location on the premises.

At the time of applying for a permit, the applicant shall submit to the AHJ two copies of the establishment's floor plan indicating the square footage (gross), seating arrangements (if more than one seating configuration is used by the establishment), occupancy load, aisle widths, exits and access ways to exits, and compliance with other fire code requirements in accordance with Chapter 20 of this code. See also amended Section 1.12.8.

~~[(22)]~~(23) Amending Section 20.1.5.10.3.1. Section 20.1.5.10.3.1 is amended to read:

**20.1.5.10.3.1** Any room or area constituting an assembly, regardless of seating arrangements, shall have a permanent occupant load sign posted in a conspicuous place near the main exit from the room. The occupant load shall be established per the current building code.

~~[(23)]~~(24) Amending Section 25.1.2. Section 25.1.2 is amended by adding Subsection 25.1.2.1 to read:

**25.1.2.1 Tents and Canopies.** A permit is required to erect or operate a tent or canopy having an area in excess of 2,100 square feet. At the time of application, two copies of the plot plan shall be submitted to the AHJ indicating distances to property lines, buildings, other tents and canopies, parked vehicles, or internal combustion engines. Refer to amended Section 1.12.8.



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**EXCEPTION:** Permits are not required for private parties on private property.

~~[(24)]~~(25) Amending Section 43.1.1.4. Section 43.1.1.4 is amended to read:

**43.1.1.4 Permits and Plans.** A permit is required for spraying or dipping operations utilizing flammable or combustible liquids or the application of combustible powders regulated by Chapter 43 of this code. At the time of applying for a permit, the applicant shall submit to the AHJ two copies of the spraying or dipping installation plan with distances from the storage of flammable or combustible liquids. The plan shall indicate the location of exits from the spraying or dipping area, an approved fixed extinguishing system installed in the permitted area, and other fire code requirements in accordance with Chapter 43 of this code. See also amended Section 1.12.8.

~~[(25)]~~(26) Amending Section 50.4.4.3.1. Section 50.4.4.3.1 is amended to read:

**50.4.4.3.1** In existing systems, when changes in the cooking media, positioning, operation and use, or replacement of cooking equipment, or changes in ownership occur, the fire-extinguishing system shall be made to comply with 50.4.4.3 and 50.4.11.

~~[(26)]~~(27) Amending Section 50.4.11. Section 50.4.11 is amended by adding Subsection 50.4.11.3 to read:

**50.4.11.3 Acceptance Test.** Prior to commencing 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.

~~[(27)]~~(28) Amending Section 65.1.1. Section 65.1.1 is amended to read:

**65.1.1** The storage, use, and handling of explosives, fireworks, and model rocketry shall comply with the requirements of this chapter, NFPA standards referenced within this chapter, Sections 60.1 through 60.4 of this code, and applicable county laws and rules.

~~[(28)]~~(29) Amending Section 66.1.5. Section 66.1.5 is amended by adding Subsection 66.1.5.1 to read:



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**A BILL FOR AN ORDINANCE**

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**66.1.5.1 Permits and Plans.** A permit is required to install or operate equipment in connection with the storage, handling, use, or sale of flammable or combustible liquids regulated under Chapter 66 of this code. Permits are not transferable and any change in use, occupancy, operation, ownership, vendor, or capacity shall require a new permit. At the time of application, two copies of the plot and cross-sectional plans indicating distances from property lines, buildings, other fuel tanks located on the premises, dispensers, emergency electrical shutoff, vent lines and diameter, piping, location of fire extinguisher, and necessary signage and placards shall be submitted to the AHJ.

Tank installations within the jurisdiction of the City and County of Honolulu (City) shall be approved by the Department of Planning and Permitting's (DPP) Zoning Division prior to submitting an application for the HFD's Flammable and Combustible Liquid Tank Installation Permit. For installations in State conservation zoned areas, tank installations shall be reviewed and approved by the State Department of Land and Natural Resources (DLNR). Refer to amended Section 1.12.8.

~~[(29)]~~(30) Amending Section 66.21.7.4.3.4. Section 66.21.7.4.3.4 (1) is amended to read:

1. All flammable and combustible liquids, residues, and vapors shall be removed from the tank, appurtenances, and piping. Confirmation that the atmosphere in the tank is safe shall be by testing of the atmosphere using combustible gas indicators or an oxygen meter.

~~[(30)]~~(31) Amending Section 69.1.1.3. Section 69.1.1.3 is amended by adding Subsection 69.1.1.3.1 to read:

**69.1.1.3.1 Records.** Installers shall maintain a record of installations for permits not required by Section 1.12.8, and such record shall be available for inspection by the AHJ.

**EXCEPTION:** Installation of gas-burning appliances and replacement of portable cylinders.



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~~[(31)]~~(32) Amending Section 69.1.2. Section 69.1.2. is amended to read:

**69.1.2 Permits and Plans.** A permit is required to install or dispense LPG or maintain an LPG container (tank).

**EXCEPTION:** A permit is not required to install or maintain a portable container or the aggregate of interconnected containers of less than a 125-gallon water capacity.

Permits shall not be transferable and any change in use, occupancy, operation, ownership, vendor, or capacity shall require a new permit. Distributors shall not fill an LPG container for which a permit is required, unless a permit for installation has been issued for that location by the AHJ.

Where a single container or the aggregate of interconnected containers is of a 125-gallon water capacity or more, the installer shall submit plans to the AHJ. LPG installations requiring a permit shall have the permit on site and available for inspection by the AHJ.

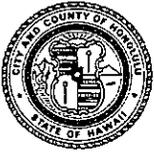
At the time of application for a permit, the installer shall submit to the AHJ two copies of the plot and cross-sectional plans indicating distances from property lines, buildings, other fuel tanks located on the premises, dispensers, emergency electrical shutoff, vent lines and diameter, piping, location of fire extinguisher(s), and necessary signage and placards.

Container installations within the jurisdiction of the City shall be approved by the DPP's Zoning Division prior to submitting an application for the HFD's LPG Tank Installation Permit. For installations in State preservation-zoned areas, container installations shall be reviewed by the State DLNR. Refer to amended Section 1.12.8.

~~[(32)]~~(33) Amending Section 69.3.6.1.2. Section 69.3.6.1.2 is amended to read:

**69.3.6.1.2** LPG containers or systems of which they are a part shall be protected from damage from vehicles in accordance with Section 60.5.1.9.

SECTION 3. Ordinance material to be repealed is bracketed. New ordinance material is underscored. When revising, compiling, or printing this ordinance for



**CITY COUNCIL**  
CITY AND COUNTY OF HONOLULU  
HONOLULU, HAWAII

ORDINANCE \_\_\_\_\_

BILL 69 (2017), CD1  
(Proposed)

**A BILL FOR AN ORDINANCE**

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inclusion in the ROH, the revisor of ordinances need not include the brackets, the bracketed material, or the underscoring.

SECTION 5. This ordinance shall take effect on January 1, 2018.

INTRODUCED BY:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DATE OF INTRODUCTION:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Honolulu, Hawaii

\_\_\_\_\_  
Councilmembers

APPROVED AS TO FORM AND LEGALITY:

\_\_\_\_\_  
Deputy Corporation Counsel

APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

\_\_\_\_\_  
KIRK CALDWELL, Mayor  
City and County of Honolulu

Worksheet Cover Sheet	
FIRE AND LIFE SAFETY EVALUATION WORK SHEET FOR RESIDENTIAL HIGH-RISE BUILDINGS	
FACILITY: ZONES(S) EVALUATED EVALUATOR:	Jane Sugimura's Building BUILDING: Pearl I
PURPOSE:	To establish a fire safety index for the building.
DATE: 10/10/2017	

Complete this work sheet for each fire compartment (floor) Where conditions are the same in several zones, one work sheet can be used for those zones.

\* Fire/smoke zone is a space separated from all other spaces by floors, horizontal exits or smoke barriers.

**Table 1. Occupant and Firefighter Risk Parameters**

Risk Parameters	RISK PARAMETER VALUES					
1. RESIDENT EVACUATION CAPABILITY	MOBILITY STATUS	FAST	SLOW MOBILITY	REQUIRE ASSISTANCE	NOT MOVABLE	
	OCCUPANT RISK FACTOR (O1)	1.00	1.50	2.50	4.00	
	FIREFIGHTER RISK FACTOR (FF1)	1.00	1.60	3.00	5.00	
	ENTER (O1)	<b>1.50</b>				
ENTER (FF1)	<b>1.60</b>					
2. OCCUPANT LOAD	RESIDENT'S	1 TO 25	26 TO 50	51 TO 100	> 100	
	OCCUPANT RISK FACTOR (O2)	1.00	1.10	1.20	1.30	
	FIREFIGHTER RISK FACTOR (FF2)	1.00	1.10	1.20	1.30	
	ENTER (O2)	<b>1.10</b> The occupant load is _____ persons				
ENTER (FF2)	<b>1.10</b>					
3. FIRE COMPARTMENT LOCATION (L)	FLOOR	5TH FLOOR OR LOWER	5TH TO 9TH	10TH TO 19TH	20TH TO 29TH	> 30TH
	OCCUPANT RISK FACTOR (O3)	1.00	1.10	1.20	1.30	1.40
	FIREFIGHTER RISK FACTOR (FF3)	1.00	1.20	1.50	1.80	2.00
	ENTER (O3)	<b>1.30</b> Highest floor with residential dwellings is _____ floor.				
ENTER (FF3)	<b>1.80</b>					

**Step 2. Risk Factor - Use Table 2**

- A. Transfer the risk factor values selected from Table 1 to the corresponding blocks in Table 2.
- B. Compute by multiplying the risk factor values as indicated in Table 2.

**Table 2. Risk Factor Calculations**

OCCUPANT RISK FACTOR (ORF)	O1	X	O2	X	O3	=	<b>ORF</b>
	1.50		1.10		1.30		<b>2.15</b>
FIREFIGHTER RISK FACTOR (FFRF)	FF1	X	FF2	X	FF3	=	<b>FFRF</b>
	1.60		1.10		1.80		<b>3.17</b>

**Step 3: Compute adjusted Building Status (R) Use Table 3A or 3B**

- A. If building is classified as "new," use Table 3A. If buildings is classified as, "existing," use Table 3B.
- B. Transfer the value of F from Table 2 to Table 3A or Table 3B, as appropriate. Calculate R.
- C. Transfer R to the block labeled in Table 7.

Table 3A. New Buildings			
1.00	x	ORF 2.15	= R 2.15
1.00	x	FFRF 0.00	= R 0.00

Table 3B. (Existing Buildings)			
0.60	x	ORF 2.15	= ORF 1.29
0.60	x	FFRF 3.17	= FFRF 1.90

This facility is an existing building.

OCCUPANT RISK FACTOR (ORF)	1.29
FIREFIGHTER RISK FACTOR (FFRF)	1.90

Table 4 Fire Safety Parameter Values

Parameters	Parameter Values				
1. CONSTRUCTION TYPE	NONCOMBUSTIBLE TYPES I AND II				
		TYPE IIA, TYPE IIB, V	TYPE IIA (ONE HOUR)	TYPE IIA or IB (FIRE RESISTIVE)	
	FLOOR OF ZONE				
	6TH OR LESS	NP*	NP*	2	
	7TH TO 15TH	NP*	NP*	1	
16TH TO 20TH	NP*	NP*	0		
21ST TO 30TH	NP*	NP*	-1		
30TH AND ABOVE	NP*	NP*	-2		
ENTER 1.	-1				
2. INTERIOR FINISH (Corridors and Exits)	UNDETERMINED OR LESS THAN CLASS C				
	-10	CLASS C	CLASS B	CLASS A	
ENTER 2.	3				
3. CORRIDOR & DWELLING UNIT SEPARATION WALLS	NONE OR INCOMPLETE		< 1/3 HDL	> 1/3 < 1.0HR	>= 1.0 HR
			NON-MASONRY (e.g. gypsum wall board and partition)	MASONRY OR CONCRETE*	
ENTER 3.	-10	-5	0	4	
5. DOORS TO CORRIDOR*	NO DOOR OR DOOR CONTAINS UNPROTECTED OPENINGS		<20 MIN. FPR NO CLOSER	<20 MIN. FPR WITH CLOSER	MINIMUMUM 20 MIN. FPR WITH CLOSER
	-10	-5	2	5	
ENTER 4.	5				
6. EXIT ACCESS	MAXIMUM CORRIDOR DEAD END				
	>100 FEET	51' - 100'	21' - 50'	TRAVE DISTANCE >150 FEET	NO DEAD END > 20
6A. INTERIOR CORRIDOR	-8	-6	-4	-3	100' - 150'
					<100 FEET
6B. EXTERIOR EGRESS BALCONIES (EXT)	MAXIMUM CORRIDOR DEAD END				
	>100 FEET	50' - 100'	30' - 50'	TRAVE DISTANCE >150 FEET	NO DEAD END > 30
ENTER 5.	-4	-2	-1	1	100' - 150'
7. VERTICAL OPENINGS	OPEN 4 OR MORE FLOORS		OPEN 2 OR 3 FLOORS	ENCLOSED WITH INDICATED FIRE RESISTANCE	
				< 1 HR	>= 1 HR < 2 HR
ENTER 6.	-12	-10	0	2	
8. HAZARDOUS AREAS	DOUBLE DEFICIENCY		SINGLE DEFICIENCY		NO DEFICIENCIES
	IN ZONE	OUTSIDE ZONE	IN ZONE	OUTSIDE ZONE	
ENTER 7.	-11	-5	-6	-2	0
9. SMOKE MANAGEMENT	NONE		SMOKEPROOF ENCLOSURE	SMOKEPROOF ENCLOSURE (VIA NATURAL VENTILATION OR MECHANICAL PRESSURIZATION)	MECHANICAL SMOKE CONTROL WITHIN FIRE COMPARTMENT
			IN ONLY ONE EXIT STAIR	ALL EXIT STAIRS	ALL EXIT STAIRS
ENTER 8.	-5	-2	3	4	4
10. EGRESS ROUTES	< 2 ROUTES		MULTIPLE ROUTES		
			DEFICIENT	NOT DEFICIENT	
ENTER 9.	-4	-2	0		
11. FIRE ALARM SYSTEM	NONE OR NONOPERATIONAL		MANUAL INITIATION WITHOUT FIRE DEPARTMENT NOTIFICATION		
			OCCUPANT NOTIFICATION WITHOUT VOICE COMMUNICATION	OCCUPANT NOTIFICATION WITH VOICE COMMUNICATION	
ENTER 10.	-10	1	4		
12. SMOKE DETECTION	NONE		CORRIDORS*	TOTAL SPACE IN ZONE	
	0	3		5	
ENTER 11.	3				
13. AUTOMATIC SPRINKLERS	NONE		CORRIDOR EXTERIOR AREAS	FIRE BUILDING WITH REPA FLOOR RESISTIVE FLOORS	ENTIRE BUILDING*
	-8	0	3	10 (5)*	
ENTER 13.	0				
14. SMOKE ALARMS	NONE		ONE IN EACH NEAR BEDROOM	IN ALL BEDROOMS AND HALLWAYS NEAR BEDROOMS NO TANDEM OPERATION	IN ALL BEDROOMS AND HALLWAYS NEAR BEDROOMS WITH TANDEM OPERATION
	10	-2	-1	2	4
ENTER 14.	-1				
15. STANDPIPE SYSTEM	NONE		CLASS I STANDPIPE PRESENT BUT NOT IN ALL REQUIRED EXITS	CLASS I MANUAL STANDPIPE IN ALL EXIT ENCLOSURES	AUTOMATIC WET STANDPIPE OR COMBINED SYSTEM WITH HOSE VALVES IN ALL EXIT ENCLOSURES
	-10	-5	5	10	
ENTER 15.	5				
16. ELEVATORS	NO RECALL OR NO FIREFIGHTER SERVICE		WITH RECALL AND FIREFIGHTER SERVICE		
			NO EMERGENCY POWER	EMERGENCY POWER	
ENTER 13.	-5	0	3		
17. EMERGENCY LIGHTING	NO EMERGENCY LIGHTING		EXITS ONLY	EXIT ACCESS AND EXITS	
	-2	0	2		
ENTER 13.	2				

\* For locations where there are no interior corridors, only exterior egress balconies, use 4 points, regardless of wall type.

\* For buildings with exterior egress balconies enter 5 regardless of door type

\* For locations where there are no interior corridors, only exterior egress balconies, use 3 points, even if there is no smoke detection.

\* For locations where there are no interior corridors, only exterior egress balconies, use 5 points, even if there is no sprinkler protection

Give full credit if at least one elevator has emergency power



DRAFT 10/10/2017  
FIRE SAFETY EVALUATION WORKSHEET

Table 6 Minimum Required Fire Safety Indices

	COMPARTMENT FIRE SAFETY Sa		EXTINGUISHMENT FIRE SAFETY Sb		EGRESS FIRE SAFETY Sc		OCCUPANT FIRE SAFETY Sc		FIRE FIGHTER SAFETY Se		
	Sa	Sa	Sb	Sb	Sc	Sc	Sc	Sc	Se	EXIST.	
		8		8		8		6		8	

Sa = 8

Sb = 8

Sc = 8

Sc = 6

Se = 8

**Step 7: Evaluation Fire Safety Equivalency - Use Table 7**

- A. Perform the indicated subtractions in Table 7. Enter the differences in the appropriate answer blocks.  
 B. For each row check "Yes" if the value in the answer block is zero or greater. Check "no" if the value is a negative number

Table 7. Zone Safety Equivalency Evaluation						YES	NO
CALCULATED FIRE SAFETY INDEX		MINIMUM REQUIRED FIRE SAFETY INDEX				Is C >=0?	
COMPARTMENTATION FIRE SAFETY (S1)	less	COMPARTMENT FIRE SAFETY (Sa)	S1	Sa	=	C	
			9.0	8.0		1.0	X
EXTINGUISHMENT FIRE SAFETY (S2)	less	EXTINGUISHMENT FIRE SAFETY (Sb)	S2	Sb	=	E	
			11.0	8.0		3.0	X
EGRESS FIRE SAFETY (S3)	less	EGRESS FIRE SAFETY (Sc)	S3	Sc	=	P	
			12.8	8.0		4.8	X
GENERAL OCCUPANT SAFETY (S4)	less	GENERAL OCCUPANT SAFETY (Sd)	S4	Sd	=	G	
			14.8	6.0		8.8	X
FIRE FIGHTER SAFETY (S5)	less	FIRE FIGHTER SAFETY (Se)	S5	Se	=	F	
			10.3	8.0		2.3	X

**TABLE 8 CONCLUSIONS**

All of the checks in Table 7 are in the "Yes" column. The level of fire safety is acceptable.

One or more of the checks in Table 7 are in the "No" column. The level of fire safety is not acceptable.

## Residential Fire Safety Advisory Committee

### Financing Options and Incentives for Fire Sprinkler System Installation

October 12, 2017

#### Background

There are 360 residential buildings on Oahu that are more than seven floors in height that do not have fire sprinkler systems. The cost to install a fire sprinkler system in these buildings varies widely. The Honolulu Fire Department (HFD) estimates a per unit cost ranging from \$6,888 to \$21,557 for a complete sprinkler system installation, including sprinklers in residential units and the building's common areas.

#### Traditional Financing Option

##### **Bank and Credit Union Loans to Association of Apartment Owners (AOAO)**

Many AOAOs may qualify for loans from banks or credit unions to pay for fire sprinkler systems. Banks will review the building's owner-occupancy ratio, the delinquency rate on maintenance fees, and the building's reserve in determining whether or not to approve a loan. The loans generally have a 20-year amortization with a fixed interest rate for the first ten years. In the current interest rate environment, the rates on these loans may range from four to five percent.

Benefit: Sprinklers may be installed once financing is received. There is no need to build up a reserve over a number of years before the fire sprinklers are installed.

Issues:

- Maintenance fees will increase. An installation with a cost of \$14,222 per unit and a loan interest rate of five percent will increase monthly maintenance fees by an estimated \$94.
- Not all AOAOs will qualify for loans.
- A loan must be approved by the majority of the condominium owners in the AOAO. This may be a problem, especially in buildings with a significant number of foreign owners.

Other Comments: Property managers have reached out to state legislators requesting to introduce a bill that would amend condominium law to provide that the majority of board members of an AOAO may approve a loan without further owner approval if the purpose of the loan is for health and safety improvements mandated by law.

## **Loans and Grants to Condominium Owners**

### **0% Loans for Condominium Owners**

Zero percent loans are available through the City and County of Honolulu's (City) Rehabilitation Loan Program to owner-occupants whose income is less than 80 percent of the median income. If an AOA levied a special assessment to fund a fire sprinkler system installation, an eligible condominium owner could receive a 0% loan to repay the assessment.

**Benefit:** The monthly payment on a \$14,222 loan with a 20-year term would be approximately \$59.

**Issue:** It is estimated that less than 10% of condominium owners whose buildings must install fire sprinklers will be eligible. A two-person household would need a household income of less than \$67,000.

**Funding Source:** An existing Community Development Block Grant (CDBG) revolving loan fund. An alternative funding source may be necessary if CDBG funds are not available.

### **Grants for Condominium Owners**

The City may be able to offer grants to owner-occupants whose income is less than 80 percent of the median income to fund fire sprinkler system installation. In order to ensure that grants are available to qualified applicants, the City may choose to limit the amount a recipient may receive to a designated amount.

**Benefit:** Condominium owners will receive a grant to repay a special assessment.

**Issues:**

- It is estimated that less than 10% of condominium owners whose buildings must install fire sprinklers will be eligible. A two-person household would need a household income less than \$67,000.
- An opinion by the Department of the Corporation Counsel is still pending.
- **Funding Source:** CDBG Funds. An alternative funding source may be necessary if CDBG funds are not available.
- **Approval Needed:** The Honolulu City Council will need to approve an amendment to the CDBG Action Plan.

## **Waiver of Fees for Fire Sprinkler Systems**

### **Building Permit and Plans Review Fees**

The City may waive the building permit and plans review fees for retrofitting a building with fire sprinklers.

Benefit: The cost of the project will be reduced. On a \$1,000,000 project, the City would charge a building permit fee of \$7,415 and a plan review fee of \$1,483.

Approval Needed: The Honolulu City Council will need to approve the fee waiver.

### **HFD Plans Review Fee**

The City may waive the HFD plans review fee, which is 10% of the building permit fee.

Benefit: The cost of the project will be reduced.

Approval Needed: No further approval is needed, as this is part of the current Revised Ordinances of Honolulu, Chapter 20, Fire Code.

### **Water Meter Fee**

Applicable fees may be waived. The Board of Water Supply (BWS) may require the installation of a dedicated water meter for a sprinkler system. Buildings will be evaluated on a case-by-case basis. The estimated requirements will be calculated by the AOA's engineers or consultants.

Benefit: The cost of the project will be reduced.

Approval Needed: The BWS Board of Directors must abide by the formal water rate adoption process.

## **Tax Credits for Fire Sprinkler System Installations**

### **Real Property Tax Credit**

The City may choose to offer a property tax credit for owner-occupants. Additionally, the City may choose to limit the tax credit to a designated percentage of the special assessment resulting from the fire sprinkler system installation.

Benefit: Condominium owners would be incited to install fire sprinkler systems since they would not bear the full cost.

Issue: This could result in a significant impact to City real property tax revenue.

Approval Needed: The Honolulu City Council must approve the tax credit.

## **State of Hawaii (State) Income Tax Credit**

The State may choose to offer an income tax credit to owner-occupants. Additionally, the State may choose to limit the tax credit to \$3,000 of the special assessment resulting from the fire sprinkler system installation.

Benefit: Condominium owners would be incited to install fire sprinkler systems since they would not bear the full cost.

Issue: This could result in a significant impact to State income tax revenue.

Approval Needed: The State Legislature must approve the tax credit.

## **Bond Financing**

### **Community Facilities District Bonds**

A Community Facilities District may be created, encompassing all of the buildings that need sprinkler systems. Bonds could then be issued to fund the sprinkler projects. The City would levy a special tax on the district which would be used to pay debt service.

Benefit: This may be a financing source for AOAOs that are unable to qualify for bank loans.

Issues:

- Since these fire sprinkler systems benefit the condominium owners, not the general public, the bonds must be taxable. Additionally, they will not be rated by the credit agencies. The interest rate on these bonds may range from six to seven percent, which is significantly higher than a bank loan.
- The bond-issuing process will be very complex and time-consuming.
- Approval Needed: The Honolulu City Council must approve the bond.

### **Special Purpose Revenue Bonds**

Special Purpose Revenue Bonds may be another potential source of financing. However, since fire sprinkler systems are not one of the designated purposes, a State constitutional amendment must be passed. Additionally, AOAOs would need the State Legislature to authorize the issuance of bonds for their fire sprinkler projects; however, this would not guarantee that the bonds would be issued.

Benefit: These bonds are expected to be tax-exempt and should provide financing at reasonable interest rates.

Issues:

- AOAOs must undergo a credit approval process similar to that of a bank loan. It is unclear whether these bonds would be preferable to a bank loan.
- Fixed issuance costs may be relatively high.
- Passing a constitutional amendment would be challenging.

Approval Needed: The State Legislature must approve the constitutional amendment and authorize individual bond issuances. The State Department of Budget and Finance must approve bond sales.

### **Discount on Property Insurance**

#### **Reduced Premium on Fire Insurance**

The property insurance premium for the building will be reduced after the installation of fire sprinklers.

Benefit: One insurance company suggested that the premium on a large building may be reduced between \$10,000 and \$15,000 annually.

### **Extended Compliance Period**

#### **A Longer Compliance Period**

Once a bill requiring fire sprinkler systems is passed, condominium law requires that buildings begin reserving for the installation of the fire sprinkler systems. A compliance period of 20 years will enable AOAOs the time build up their reserves. It will also spread out the demand for fire sprinkler systems over a longer period making it more feasible for contractors to have the capacity to complete the projects.

Issue: Will AOAOs delay the installations until the end of the compliance period?

### UNSPRINKLERED HIGH-RISE MATRIX

COST	HIGH-RISE FLOORS	EVALUATION 3 YRS.	PASS EVALUATION 6 YRS.	COMMON AREAS 8 YRS.	COMMON AREAS 10 YRS.	100% COMPLETE 12 YRS.	EXTENSION 15 YRS.
\$7-14,000	20 & over w/ Interior Corridors	X		X		X	*
\$7-14,000	10-19 w/ Interior Corridors	X			X	X	*
\$0-5000	Below 10 w/ Interior Corridors	X	X				
\$0-5000	All Exterior Corridors Only	X	X				

\$14,000 is the median estimated cost of installing an automatic fire sprinkler system throughout the building.  
 \$7,000 is the median estimated cost of installing an automatic fire sprinkler system only in the common areas.  
 \$5,000 is the estimated cost to install other needed fire safety improvements, if required.

No.	NAME	ADDRESS	ZIP	TMK	FLOORS	UNITS	INT CORRIDOR	YEAR BUILT	COUNCIL DIST.
1	AQUA ISLAND COLONY HOTEL	445 SEASIDE AVE	96815	26021026	44	740	Y	1979	4
2	PEARLRIDGE SQUARE	98-288 KAONOHI ST	96701	98039005	44	282	Y	1981	8
3	DISCOVERY BAY	1778 ALA MOANA BLVD	96815	26012010	42	666	Y	1977	4
4	REGENCY TOWER	2525 DATE ST	96826	27019015	42	238	Y	1973	5
6	YACHT HARBOR TOWERS	1600 ALA MOANA	96814	23036039	40	457	Y	1971	4
7	CHATEAU WAIKIKI	411 HOBROUN LN	96815	26012029	39	459	Y	1975	4
8	ROYAL KUHIO CONDO	2240 KUHIO AVE	96815	26020058	39	385	Y	1976	4
10	THE VILLA ON EATON SQUARE	400 HOBROUN LN	96815	26013014	38	429	Y	1974	4
12	THE CONTESSA	2825 S KING ST	96826	27027023	37	144	Y	1971	5
13	MARCO POLO	2333 KAPIOLANI BLVD	96826	27004001	36	572	Y	1970	5
15	DIAMOND HEAD VISTA - RESIDENTI	2600 PUALANI WAY	96815	26028040	35	173	Y	1975	4
18	KUKUI PLAZA - DIAMOND HEAD TO'	55 S KUKUI ST	96813	21004040	32	454	Y	1976	6
17	1350 ALA MOANA	1350 ALA MOANA	96814	23006001	32	353	Y	1969	5
19	PEARL TWO	98-410 KOAUKA LP	96701	98039013	32	317	Y	1975	8
24	THE PAVILLION	1925 KALAKAUA AVE	96815	26007006	30	154	Y	1974	5
23	WAIKIKI TOWNHOUSE	2421 TUSITALA ST	96815	26024059	30	108	Y	1979	4
22	WAIKIKI SKYTOWER	2410 CLEGHORN ST	96815	26024053	30	102	Y	1977	4
25	FAIRWAY VILLA	2345 ALA WAI BLVD	96815	26021021	29	364	Y	1974	4
26	ALOHA TOWER I	430 LEWERS ST	96815	26017005	29	124	Y	1977	4
28	CRAIGSIDE - TOWER I	2101 NUUANU AVE	96817	22020002	28	189	Y	1981	6
30	KAPIOLANI MANOR	1655 MAKALOA ST	96814	23022052	27	417	Y	1971	5
32	CRAIGSIDE - TOWER II	38 JUDD ST	96817	22020002	27	53	Y	1981	6
33	FOSTER TOWERS - RESIDENTIAL TO'	2500 KALAKAUA AVE	96815	26026014	26	127	Y	1961	4
35	2033 NUUANU	2033 NUUANU AVE	96817	22010023	26	72	Y	1970	6
34	ACADEMY TOWERS	1425 WARD AVE	96822	24014012	26	50	Y	1968	6
37	FOUR PADDLE CONDOMINIUM	2140 KUHIO AVE	96815	26017057	25	250	Y	1973	4
41	QUEEN EMMA GARDENS CONDOM	1515 NUUANU AVE	96817	21005004	25	176	Y	1963	6
36	MOUNT TERRACE	250 KAWAIHAE ST	96825	39035013	25	126	Y	1973	4
45	KAIMANA LANAIS	2444 HIHIWAI ST	96826	27013023	24	114	Y	1974	5
42	REGENCY AT KAHALA	4340 PAHOA AVE	96816	35016016	24	88	Y	1969	4
48	FOUR FOURTY FOUR	444 NAHUA ST	96815	26021049	23	192	Y	1976	4
51	PACIFIC GRAND	747 AMANA ST	96814	23021025	22	360	Y	1968	5
57	CENTURY WEST	3161 ALA ILIMA	96818	11060011	22	352	Y	1972	7
58	PEARL ONE	98-500 KOAUKA LP	96701	98030053	22	300	Y	1974	8
54	KINAU LANAIS	775 KINALAU PL	96813	21040003	22	183	Y	1976	6
56	KEOLA HOONANEA	1465 AALA ST	96817	17023036	22	175	Y	1971	7
55	KAULUWELA 1	1450 AALA ST	96817	17023039	22	126	Y	1970	7
53	MAKIKI ROYAL	1310 HEULU ST	96822	24025073	22	44	Y	1970	6
52	WILDER TOWER	1323 WILDER AVE	96822	24021057	22	42	Y	1970	5
59	KEONI ANA APARTMENTS	430 KEONIANA ST	96815	26015050	21	184	Y	1976	4
63	KING MANOR	818 S KING ST	96813	21042001	21	115	Y	1970	6
61	PUMEHANA APARTMENTS	1212 KINAU ST	96814	24011039	21	80	Y	1972	5

60	WILDER REGENT	1121 WILDER AVE	96822	24019017	21	40	Y	1969	5
71	HOLIDAY VILLAGE	750 AMANA ST	96814	23021028	20	238	Y	1965	5
64	COLONY SURF	2895 KALAKAUA AVE	96815	31032010	20	172	Y	1959	4
73	PRINCESS LEILANI	1561 KANUNU ST	96814	23021020	20	136	Y	1970	5
65	WAIKIKI SKYLINER	2415 ALA WAI BLVD	96815	26024074	20	122	Y	1966	4
76	RAINBOW PLACE	2754 KUILEI ST	96826	27017002	20	90	Y	1976	5
68	SUNSET TOWERS	419 ATKINSON DR	96814	23036001	20	81	Y	1970	4
79	LAKESIDE WEST	909 ALA NANALA	96818	11058011	20	76	Y	1973	7
75	KAPIOLANI ROYALE	2474 KAPIOLANI BLVD	96826	27014037	20	68	Y	1976	5
66	2233 ALA WAI	2233 ALA WAI BLVD	96815	26020053	20	52	Y	1969	4
72	1111 WILDER AVE	1111 WILDER AVE	96822	24019015	20	38	Y	1970	5
78	MAKIKI MANOR	1130 WILDER AVE	96822	24030051	20	38	Y	1970	6
85	SCENIC TOWER	796 ISENBERG ST	96826	27006007	19	162	Y	1973	5
82	ATKINSON PLAZA	475 ATKINSON DR	96814	23036011	19	127	Y	1979	4
81	CRESCENT PARK AOA	2575 KUHIO AVE	96815	26027003	19	62	Y	1970	4
96	HARBOUR RIDGE	3045 ALA NAPUAA PL	96818	11061012	18	320	Y	1975	7
89	ILIKAI MARINA TOWER	1765 ALA MOANA	96815	26010002	18	261	Y	1967	4
97	THE HIGHLANDER	98-450 KOAUKA LP	96701	98012054	18	204	Y	1974	8
95	LILIHA SQUARE	1425 LILIHA ST	96817	17023008	18	137	Y	1975	7
93	999 WILDER	999 WILDER AVE	96822	24016045	18	82	Y	1966	6
90	ALOHA TOWER II	2215 ALOHA DR	96815	26020029	18	73	Y	1976	4
91	POMAIKAI	1804 ALA MOANA BLVD	96815	26012007	18	34	Y	1978	4
105	KAPIOLANI TERRACE	1560 KANUNU ST	96814	23017013	17	264	Y	1971	5
102	AQUA OHIA WAIKIKI	2280 KUHIO AVE	96815	26021078	17	251	Y	1970	4
107	TOWN HOUSE	1415 VICTORIA ST	96822	24017056	17	198	Y	1960	6
100	THE PALMS CONDOMINIUM	431 NAHUA ST	96815	26021020	17	140	Y	1967	4
101	ALA MOANA TOWER	1617 KAPIOLANI BLVD	96814	23041011	17	114	Y	1970	4
109	ROYAL COURT	920 WARD AVE	96814	21044033	17	112	Y	1971	6
104	H & M (A) APARTMENTS	777 PAANI ST	96826	27006022	17	78	Y	1970	5
124	SAKURA	2029 NUUANU AVE	96817	22010022	16	129	Y	1962	6
119	KAPIOLANI TOWERS	1610 KANUNU ST	96826	23019067	16	101	Y	1965	5
114	GOVERNOR CLEGHORN	225 KAIULANI AVE	96815	26024097	16	90	Y	1965	4
125	SKY TOWER	1515 WARD AVE	96822	24015021	16	89	Y	1967	6
123	SUMMER VILLA	737 OLOKELE AVE	96816	27035079	16	84	Y	1978	5
120	COTY TOWER	731 AMANA ST	96814	23021011	16	61	Y	1967	5
117	BIG SURF CONDOS	1690 ALA MOANA BLVD	96815	26011021	16	32	Y	1970	4
122	PALO ALTO	1521 PUNAHOU ST	96822	28012049	16	30	Y	1969	5
137	SEASIDE TOWERS CONDO	435 SEASIDE AVE	96815	26021025	15	126	Y	1961	4
145	MCCULLY VILLA	2121 ALGAROBA ST	96826	27007055	15	120	Y	1975	5
144	NANIWA GARDENS	6750 HAWAII KAI DR	96825	39070002	15	111	Y	1974	4
138	MARINA TOWERS	1645 ALA WAI BLVD	96815	26013018	15	109	Y	1966	4
142	250 OHUA	250 OHUA AVE	96815	26025021	15	93	Y	1970	4
141	KUHIO AT WAIKIKI	2450 PRINCE EDWARD ST	96815	26023072	15	91	Y	1970	4

143	HALE MOANI	2115 ALA WAI BLVD	96815	26017016	15	69	Y	1971	4
151	LEHUA MANOR	2929 ALA ILIMA	96818	11062009	15	56	Y	1972	7
140	KEALANI CONDOMINIUM	2533 ALA WAI BLVD	96815	26025001	15	53	Y	1970	4
139	KAILANI	440 LEWERS ST	96815	26017031	15	51	Y	1970	4
148	1616 LIHOLIHO	1616 LIHOLIHO ST	96822	24029026	15	51	Y	1972	6
150	LAKEVIEW TERRACE	2889 ALA ILIMA	96818	11062005	15	28	Y	1972	7
163	HOLIDAY MANOR	1650 KANUNU ST	96826	23019061	14	225	Y	1965	5
162	LEISURE HERITAGE	311 OHUA AVE	96815	26025015	14	69	Y	1974	4
181	UH EAST-WEST CENTER - HALE MAI	1711 EAST WEST RD	96822	NULL	13	372	Y	1931	5
194	PUNAHOU GARDENS	1550 WILDER AVE	96822	24023033	13	190	Y	1966	6
188	PUNAHOU TOWER	1621 DOLE ST	96822	28012036	13	96	Y	1973	5
183	KAPIOLANI TOWNHOUSE	1624 KANUNU ST	96826	23019065	13	89	Y	1966	5
190	THE ALEXANDER	1505 ALEXANDER ST	96822	28013042	13	72	Y	1975	5
191	1001 WILDER	1001 WILDER AVE	96822	24016046	13	69	Y	1963	6
187	HONO HALE TOWERS - BUILDING B	2651 KUILEI ST	96826	27017020	13	68	Y	1969	5
186	HONO HALE TOWERS - BUILDING A	2637 KUILEI ST	96826	27017020	13	67	Y	1969	5
178	DIAMOND HEAD APARTMENTS	2969 KALAKAUA AVE	96815	31032004	13	55	Y	1959	4
179	FAIRWAY MANOR	2465 ALA WAI BLVD	96815	26024085	13	52	Y	1968	4
195	CONTINENTAL PLAZA - MAKAI TOW	1040 LUNALILO ST	96822	24017004	13	35	Y	1982	6
193	THE MAILE TOWER	1025 WILDER AVE	96822	24016014	13	24	Y	1965	6
221	REGENCY PARK	3138 WAIALAE AVE	96816	33001007	12	272	Y	1982	5
212	ARCADIA RETIREMENT RESIDENCE	1434 PUNAHOU ST	96822	24008003	12	250	Y	1966	5
201	ROSALEI	445 KAIOLU ST	96815	26017004	12	160	Y	1954	4
231	WARD KINAU	824 KINAU ST	96813	21040001	12	147	Y	1974	6
217	1112 KINAU	1112 KINAU ST	96814	24012012	12	100	Y	1972	5
215	MAKINI AT KINAU	1050 KINAU ST	96814	24013032	12	96	Y	1970	5
220	PIIKOI PLAZA	725 PIIKOI ST	96814	23014059	12	73	Y	1976	5
229	PRINCESS KEALOHA	1333 HEULU ST	96822	24025039	12	72	Y	1972	6
230	ROSE TERRACE	1687 PENSACOLA ST	96822	24030075	12	72	Y	1973	6
228	MAKIKILANI PLAZA	1560 THURSTON AVE	96822	24016005	12	62	Y	1972	6
223	ROYAL VISTA	1022 PROSPECT ST	96822	22005004	12	60	Y	1968	6
222	CROWN THURSTON	1069 SPENCER ST	96822	24016004	12	50	Y	1967	6
200	TROPIC SEAS - BUILDING A	2943 KALAKAUA AVE	96815	31032030	12	48	Y	1953	4
207	LILIUOKALANI PLAZA	222 LILIUOKALANI	96815	26024010	12	48	Y	1968	4
216	845 UNIVERSITY	845 UNIVERSITY AVE	96826	27016019	12	48	Y	1972	5
206	KING KALANI	303 LILIUOKALANI AVE	96815	26025048	12	44	Y	1968	4
213	PUNAHOU MANOR	1805 POKI ST	96822	24023005	12	43	Y	1968	5
205	SCANDIA TOWERS	155 PAOAKALANI AVE	96815	26027026	12	42	Y	1967	4
208	435 WALINA APARTMENTS	435 WALINA ST	96815	26021050	12	41	Y	1971	4
227	ANGA-ROA	1545 NEHOA ST	96822	24023014	12	40	Y	1972	6
232	NUUANU TOWERS	2055 NUUANU AVE	96817	22010025	12	40	Y	1976	6
233	CONTINENTAL PLAZA - MAUKA TOV	1050 LUNALILO ST	96822	24017004	12	35	Y	1982	6
214	MANOALANI APARTMENTS	1629 WILDER AVE	96822	28012061	12	32	Y	1969	5

203	3003 KALAKAUA	3003 KALAKAUA AVE	96815	31033011	12	25	Y	1960	4
251	VILLAGE MALUHIA	1535 PENSACOLA ST	96822	24019010	11	161	Y	1969	5
245	KAIOLU SUNRISE	430 KAIOLU ST	96815	26017060	11	89	Y	1961	4
249	TRADEWINDS PLAZA	2572 LEMON	96815	26027020	11	80	Y	1979	4
258	MAUNAIHI TERRACE	1039 MAUNAIHI PL	96822	24016023	11	74	Y	1969	6
247	SHERRY WAIKIKI II	334 LEWERS ST	96815	26018083	11	53	Y	1967	4
252	PLEASANTON	1710 PUNAHOU ST	96822	24023013	11	49	Y	1971	5
244	CORAL STRAND APARTMENTS	2979 KALAKAUA AVE	96815	31032003	11	42	Y	1960	4
246	KUHIO PLAZA	2442 KUHIO AVE	96815	26024014	11	40	Y	1966	4
259	WILDER TERRACE	1137 WILDER AVE	96822	24019069	11	40	Y	1975	6
262	KEMOO BY THE LAKE	1830 WILIKINA DR	96786	73012014	10	105	Y	1971	2
278	ALA WAI COVE	509 UNIVERSITY AVE	96826	27013011	10	77	Y	1960	5
274	WAIKIKI WALINA APARTMENTS	441 WALINA ST	96815	26021018	10	75	Y	1969	4
267	ALA WAI PALMS	2355 ALA WAI BLVD	96815	26021110	10	70	Y	1960	4
280	PACIFICANA APARTMENTS	1125 YOUNG ST	96814	24003003	10	69	Y	1966	5
277	SEASIDE SUITES	440 SEASIDE AVE	96815	26020001	10	62	Y	1986	4
266	SEASHORE	2450 KOA AVE	96815	26023018	10	57	Y	1960	4
287	LIME TREE	2015 LIME ST	96826	27003051	10	56	Y	1975	5
285	JASON APARTMENTS	1415 PUNAHOU ST	96822	28012022	10	48	Y	1973	5
273	CORAL TERRACE	2222 ALOHA DR	96815	26020040	10	36	Y	1969	4
282	H & M APARTMENTS	2211 DATE ST	96826	27006022	10	36	Y	1970	5
286	PUNAHOU SUNSET	1617 CLARK ST	96822	28012025	10	36	Y	1974	5
275	ALA WAI MANSION	2029 ALA WAI BLVD	96815	26015009	10	34	Y	1970	4
268	THE BEL AIRE	2015 ALA WAI BLVD	96815	26015035	10	22	Y	1961	4
311	MCCULLY CIRCLE APARTMENTS	1919 CITRON ST	96826	23030026	9	99	Y	1979	5
322	SALT LAKE MANOR	2977 ALA ILIMA	96818	11061024	9	70	Y	1971	7
307	SUN HALA	754 EKELA	96816	27035015	9	52	Y	1972	5
304	PARKVIEW	240 MAKEE RD	96815	26028019	9	50	Y	1964	5
314	CRAIGSIDE - TOWER III	21 CRAIGSIDE PL	96817	22020002	9	50	Y	1965	6
326	LEHUA NANI APARTMENTS	950 LEHUA AVE	96782	97021020	9	49	Y	1974	8
317	PACIFIC MANOR	785 KINAU ST	96813	21041013	9	48	Y	1973	6
297	KUHIO COURTE	2170 KUHIO AVE	96815	26017051	9	44	Y	1959	4
313	THE BIRCH AND ELM	907 BIRCH ST	96814	23013024	9	32	Y	1993	5
321	ALA ILIMA APARTMENTS	2950 ALA ILIMA	96818	11062018	9	32	Y	1971	7
296	TAHITIENNE	2999 KALAKAUA AVE	96815	31032001	9	28	Y	1957	4
319	THE WARD LANAI	905 SPENCER ST	96822	24015008	9	28	Y	1981	6
300	3056 KALAKAUA	3056 KALAKAUA AVE	96815	31033015	9	16	Y	1967	4
312	KINAU TERRACE	1032 KINAU ST	96814	24013073	9	12	Y	1982	5
334	1971	2555 CARTWRIGHT RD	96815	26027028	8	92	Y	1971	4
352	965 PROSPECT	965 PROSPECT ST	96822	24015030	8	66	Y	1978	6
329	THE KAINALU	2801 COCONUT AVE	96815	31033001	8	59	Y	1958	4
354	BEL-AIR PLAZA	1054 GREEN ST	96822	24017014	8	56	Y	1981	6
341	HAUSTEN GARDENS	808 HAUSTEN ST	96826	27009016	8	49	Y	1978	5

344	KINAU VILLA - BUILDING D	827 KINAU ST	96813	21041024	8	48	Y	1956	6
328	PALMS OF KILANI	1060 KILANI AVE	96786	74007001	8	46	Y	1972	2
330	FOUR ELEVEN	411 KAILOLU ST	96815	26017053	8	39	Y	1959	4
338	MAKIKI VISTA	1155 HASSINGER ST	96822	24019034	8	28	Y	1969	5
353	EDEN GARDEN I	60 N KUAKINI ST	96817	17011017	8	19	Y	1980	6
343	LUKEPANE COURT	723 LUKEPANE AVE	96816	27035073	8	14	Y	1986	5
5	2121 ALA WAI BLDG	2121 ALA WAI BLVD	96815	26017003	41	211	N	1979	4
9	WAIPUNA	469 ENA RD	96815	26013002	38	406	N	1971	4
11	ALA WAI SKYRISE	555 UNIVERSITY AVE	96826	27013008	38	206	N	1971	5
14	ALOHA LANI	2211 ALA WAI BLVD	96815	26020033	35	359	N	1975	4
16	BANYAN TREE PLAZA	1212 PUNAHOU ST	96826	24007002	35	240	N	1972	5
20	LELEPONO CONDOMINIUM	98-99 UAO PL	96701	98039009	32	300	N	1976	8
21	SEVENTEEN SEVENTEEN ALA WAI	1717 ALA WAI BLVD	96815	26013013	30	283	N	1969	4
27	FIVE REGENTS	2888 ALA ILIMA	96818	11062024	29	300	N	1980	7
31	HALE KULANUI	2740 KUILEI ST	96826	27017004	27	180	N	1975	5
29	KAHALA TOWERS - BUILDING A	4300 WAIALAE AVE	96816	35017004	27	154	N	1967	4
40	MAKIKI PLAZA	1561 PENSACOLA ST	96822	24019014	25	131	N	1979	5
39	KAIMANA VILLA	2550 KUHIO AVE	96815	26028024	25	114	N	1978	4
38	LA CASA	2092 KUHIO AVE	96815	26016009	25	102	N	1976	4
44	SUMMER PALACE	1848 KAHAKAI DR	96814	23036020	24	146	N	1976	4
43	CANAL HOUSE	2611 ALA WAI BLVD	96815	26028001	24	144	N	1974	4
47	WAIKIKI PARK HEIGHTS	2440 KUHIO AVE	96815	26024024	23	269	N	1974	4
46	WAILANA AT WAIKIKI	1860 ALA MOANA BLVD	96815	26012002	23	198	N	1968	4
50	CAMELOT	1630 LIHOLIHO ST	96822	24029023	23	190	N	1972	6
49	MONTE VISTA	320 LILIUOKALANI AVE	96815	26024079	23	90	N	1977	4
62	PLUMERIA HALE	2630 KAPIOLANI BLVD	96826	27018036	21	66	N	1975	5
69	MAUNA LUAN EAST	501 HAHAIONE ST	96825	39070004	20	217	N	1975	4
70	MAUNA LUAN WEST	511 HAHAIONE ST	96825	39070004	20	217	N	1975	4
74	MAKUA ALII	1541 KALAKAUA AVE	96826	23019004	20	210	N	1972	5
67	ALA WAI TOWN HOUSE	2421 ALA WAI BLVD	96815	26024073	20	100	N	1970	4
77	KAPIOLANI GARDENS	2439 KAPIOLANI BLVD	96826	27019001	20	73	N	1979	5
83	THE WOODROSE	780 AMANA ST	96814	23021032	19	143	N	1967	5
88	GREENVIEW	1160 ALA NAPUNANI	96818	11065016	19	126	N	1980	7
86	PIIKOI TOWER	1556 PIIKOI ST	96822	24019003	19	120	N	1975	5
87	LAKE VIEW GARDENS	1121 ALA NAPUNANI	96818	11065001	19	76	N	1971	7
80	TWIN TOWERS	2085 ALA WAI BLVD	96815	26016001	19	72	N	1967	4
84	THE CORONET	1314 VICTORIA ST	96814	24014052	19	71	N	1971	5
94	GREENWOOD	1128 ALA NAPUNANI	96818	11065029	18	153	N	1972	7
92	MAKIKI TOWERS	1617 KEEAUMOKU ST	96822	24024029	18	136	N	1965	6
98	MAKAHA VALLEY TOWERS - CORE 2 84-710 KILI DR.		96792	84002010	17	153	N	1969	1
99	MAKAHA VALLEY TOWERS - CORE 3 84-740 KILI DR.		96792	84002010	17	153	N	1969	1
103	HERITAGE HOUSE - RESIDENTIAL	6710 HAWAII KAI DR	96825	39070003	17	135	N	1974	4
112	ROYAL TOWERS	5180 LIKINI ST	96818	11058009	17	104	N	1972	7

108	THE BARCLAY	1400 PENSACOLA ST	96822	24017002	17	101	N	1969	6
111	HALE O PUMEHANA	757 KINALAU PL	96813	21040014	17	70	N	1974	6
106	VICTORIA TOWERS	1420 VICTORIA ST	96822	24014004	17	55	N	1957	6
110	1010 WILDER	1010 WILDER AVE	96822	24031002	17	42	N	1973	6
126	THE TOWERS AT KUHIO PARK - TOV	1545 LINAPUNI ST	96819	13039009	16	270	N	1963	7
127	THE TOWERS AT KUHIO PARK - TOV	1475 LINAPUNI ST	96819	13039010	16	270	N	1963	7
121	PAOAKALANI TOWER	1583 KALAKAUA AVE	96826	23019004	16	150	N	1969	5
116	ROYAL ALOHA CONDOMINIUM	1909 ALA WAI BLVD	96815	26014026	16	143	N	1969	4
130	MALULANI HALE	114 N KUAKINI ST	96817	17014044	16	140	N	1975	7
113	HAWAIIAN PRINCESS AT MAKAHA	84-1021 LAHILAHI ST	96792	84004006	16	122	N	1979	1
128	LAKE SHORE TOWER	2920 ALA ILIMA	96818	11062019	16	96	N	1970	7
131	COLONADE ON THE GREEN - BUILD	98-707 IHO PL	96701	98011042	16	75	N	1976	8
118	KAIMUKI JADE	1139 9TH AVE	96816	32005023	16	72	N	1965	5
129	HOLIDAY LAKE VIEW	949 ALA NANALA	96818	11058013	16	60	N	1972	7
115	ALA WAI TERRACE	1684 ALA MOANA	96815	26011022	16	43	N	1968	4
135	WAIKIKI SHORE APARTMENTS	2161 KALIA RD	96815	26004012	15	168	N	1959	4
149	KALANIHUIA BUILDING	1220 AALA ST	96817	17026006	15	151	N	1967	7
133	MAKAHA VALLEY TOWERS - CORE 1	84-680 KILI DR.	96792	84002010	15	142	N	1969	1
132	MAKAHA VALLEY TOWERS - CORE 4	84-770 KILI DR.	96792	84002010	15	138	N	1969	1
134	ATKINSON TOWERS	419A ATKINSON DR	96814	23036038	15	111	N	1959	4
136	SAN SOUCI	2877 KALAKAUA AVE	96815	31032007	15	88	N	1960	4
147	PROSPECT TOWER	927 PROSPECT ST	96822	24015017	15	76	N	1971	6
146	VICTORIA PLAZA	1441 VICTORIA ST	96822	24015004	15	72	N	1968	6
172	SUNSET LAKEVIEW - BUILDING A	3215 ALA ILIMA	96818	11060012	14	310	N	1972	7
173	SUNSET LAKEVIEW - BUILDING B	3215 ALA ILIMA	96818	11060012	14	310	N	1972	7
152	POHAI NANI	45-90 NAMOKU ST	96744	45033003	14	188	N	1962	3
157	HARBOR VIEW PLAZA	1676 ALA MOANA	96815	26011023	14	140	N	1966	4
174	FAIRWAY GARDENS	5210 LIKINI ST	96818	11058006	14	138	N	1980	7
161	PLAZA AT HAWAII KAI	6770 HAWAII KAI DR	96825	39070001	14	121	N	1974	4
170	HALAWA VIEW APARTMENTS - BUII	99-9 KALALOA ST	96701	99003026	14	121	N	1971	7
167	VICTORIA MANSION A	1456 THURSTON AVE	96822	24015005	14	118	N	1965	6
153	HAIKU HALE - BUILDING C	46-283 KAHUHIPA ST	96744	46031019	14	112	N	1975	3
154	THE KALIA - BUILDING A	425 ENA RD	96815	26012065	14	104	N	1958	4
155	THE KALIA - BUILDING C	425 ENA RD	96815	26012065	14	104	N	1958	4
156	THE KALIA - BUILDING B	425 ENA RD	96815	26012001	14	104	N	1959	4
169	PUNAHOU ROYALE	1541 DOMINIS ST	96822	24023026	14	99	N	1973	6
159	KAHALA TOWERS - BUILDING B	4300 WAIALAE AVE	96816	35017004	14	80	N	1967	4
171	LAKEVIEW ROYAL	801 ALA NIOI PL	96818	11061015	14	78	N	1972	7
165	ALEXANDER ARMS	1320 ALEXANDER ST	96826	28011006	14	75	N	1970	5
176	COLONADE ON THE GREEN - BUILD	98-715 IHO PL	96701	98011042	14	70	N	1976	8
175	COLONADE ON THE GREEN - BUILD	98-719 IHO PL	96701	98011042	14	65	N	1976	8
168	THE KAMAAINA	1520 WARD AVE	96822	21039002	14	56	N	1967	6
158	MAKEE AILANA	204 KAPAHULU AVE	96815	26027002	14	48	N	1967	4

160	OHUALANI	320 OHUA AVE	96815	26025017	14	27	N	1970	4
164	BELLEVUE TOWERS	1309 WILDER AVE	96822	24021054	14	26	N	1967	5
166	PUNAHOU VISTA	1635 DOLE ST	96822	28012043	14	25	N	1971	5
185	ALA WAI PLAZA - ALA WAI TOWER	500 UNIVERSITY AVE	96826	27013002	13	169	N	1969	5
192	HALE O KALANI TOWERS	1702 KEWALO ST	96822	24028001	13	100	N	1964	6
189	HALE LUANA	1215 ALEXANDER ST	96826	28010024	13	96	N	1974	5
182	TERRACE TOWERS	2440 DATE ST	96826	27015004	13	73	N	1966	5
177	HALE ANA' OLE BLDG A	46-255 KAHUHIPA ST	96744	46031016	13	72	N	1975	3
184	HONO HALE TOWERS - BUILDING C	2648 KUILEI ST	96826	27017020	13	66	N	1969	5
180	OAHU SURF TWO	439 KEONIANA ST	96815	26015030	13	54	N	1970	4
237	KAPUNA I APARTMENTS	1015 N SCHOOL ST	96817	16007104	12	163	N	1981	7
199	WAIKALANI WOODLANDS - BUILDING	95-227 WAIKALANI DR	96789	95013028	12	96	N	1978	2
210	THE SANDALWOOD	910 AHANA ST	96814	23018029	12	96	N	1964	5
211	PUNAHOU CIRCLE APARTMENTS	1617 S BERETANIA ST	96826	28001042	12	96	N	1964	5
224	THE SURFVIEW	1018 LUNALILO ST	96822	24017005	12	96	N	1970	6
236	LAKESIDE MANOR	3030 ALA ILIMA	96818	11058002	12	88	N	1973	7
209	LUNALILO TOWER	710 LUNALILO ST	96813	21040037	12	83	N	1974	4
225	1011 PROSPECT	1011 PROSPECT ST	96822	24016043	12	80	N	1971	6
226	1013 PROSPECT	1013 PROSPECT ST	96822	24016043	12	80	N	1971	6
197	WAIKALANI WOODLANDS - BUILDING	95-269 WAIKALANI DR	96789	95013028	12	72	N	1978	2
198	WAIKALANI WOODLANDS - BUILDING	95-273 WAIKALANI DR	96789	95013028	12	72	N	1978	2
218	1040 KINAU	1040 KINAU ST	96814	24013033	12	70	N	1973	5
219	THE HAUSTEN	739 HAUSTEN ST	96826	27010036	12	52	N	1975	5
196	WAIKALANI WOODLANDS - BUILDING	95-257 WAIKALANI DR	96789	95013028	12	48	N	1978	2
234	DYNASTY TOWER	1031 ALA NAPUNANI	96818	11062042	12	48	N	1969	7
235	PIKAKE MANOR	3148 ALA ILIMA	96818	11058010	12	48	N	1973	7
204	BOULEVARD TOWERS	2281 ALA WAI BLVD	96815	26021084	12	36	N	1962	4
238	COLONADE ON THE GREEN - BUILDING	98-703 IHO PL	96701	98011042	12	36	N	1976	8
202	3019 KALAKAUA	3019 KALAKAUA AVE	96815	31033009	12	12	N	1960	4
250	ALA WAI MANOR	620 MCCULLY ST	96826	23034004	11	92	N	1955	5
240	MERIDIAN EAST	14 AULIKE ST	96734	43054013	11	90	N	1966	3
256	UNIVERSITY VILLA	1025 KALO PL	96826	28024028	11	80	N	1975	5
253	1134 KINAU	1134 KINAU ST	96814	24012010	11	70	N	1973	5
239	CATHEDRAL POINT- BUILDING D	95-61 WAIKALANI DR	96789	95012017	11	66	N	1972	2
257	THE CONSULATE	1634 MAKIKI ST	96822	24024022	11	66	N	1965	6
255	1073 KINAU	1073 KINAU ST	96814	24013015	11	56	N	1975	5
248	ALA WAILANI	2609 ALA WAI BLVD	96815	26028037	11	50	N	1968	4
254	THE ALIKA	1414 ALEXANDER ST	96822	28012014	11	50	N	1974	5
260	LAKEVIEW SANDS	1099 ALA NAPUNANI	96818	11062051	11	44	N	1974	7
242	THE NIIHAU	247 BEACH WALK	96815	26003013	11	43	N	1959	4
243	HHV - DIAMOND HEAD APARTMENT	252 PAOA PL	96815	26008002	11	40	N	1960	4
261	COLONADE ON THE GREEN - BUILDING	98-711 IHO PL	96701	98011042	11	29	N	1976	8
241	SEABREEZE	3065 KALAKAUA AVE	96815	31033059	11	10	N	1959	4

284	KALAKAUA MIDRISE	1545 KALAKAUA AVE	96826	23019004	10	123	N	1972	5
290	THE MAGELLAN	410 MAGELLAN AVE	96813	21021045	10	74	N	1968	6
293	KAUHALE CONDOS	99-60 KAUHALE ST	96701	99040052	10	68	N	1970	8
283	KAAHUMANU PLAZA	1122 KINAU ST	96814	24012011	10	64	N	1972	5
263	CATHEDRAL POINT- BUILDING C	95-20 WAIHONU ST	96789	95012017	10	60	N	1972	2
264	NORTHBROOK - BUILDING D	95-2031D WAIKALANI PL	96789	95012030	10	60	N	1973	2
289	OAHUAN TOWER	1710 MAKIKI ST	96822	24024014	10	56	N	1957	6
276	PACIFIC INTERNATIONAL	2509 ALA WAI BLVD	96815	26025040	10	54	N	1973	4
281	KALAKAUA SANDS	1670 KALAKAUA AVE	96826	23023005	10	54	N	1968	5
265	WAIKIKI IMPERIAL APARTMENTS	225 LILIUOKALANI AVE	96815	26025032	10	40	N	1960	4
272	441 LEWERS CONDO	441 LEWERS ST	96815	26020069	10	40	N	1969	4
279	HI-SIERRA	3350 SIERRA DR	96816	33005008	10	40	N	1965	5
291	KAHANA KAI	3020 ALA NAPUAA PL	96818	11061020	10	39	N	1969	7
292	ILANIWAI	975 ALA LILIKOI	96818	11059028	10	36	N	1974	7
271	NAPILI TOWERS	455 NAHUA ST	96815	26021045	10	34	N	1969	4
270	ALA WAI EAST	2547 ALA WAI BLVD	96815	26025060	10	19	N	1967	4
269	OCEANSIDE MANOR	3015 KALAKAUA AVE	96815	31033010	10	18	N	1965	4
288	KAIMUKI PARKSIDE	2781 KAPIOLANI BLVD	96826	27025005	10	18	N	1991	5
301	ESPLANDE	500 LUNALILO HOME RD	96825	39008009	9	208	N	1973	4
294	MAKAHA BEACH CABANAS	84-965 FARRINGTON HWY	96792	84004014	9	162	N	1966	1
320	WESTLAKE APARTMENTS	3139 ALA ILIMA	96818	11060008	9	96	N	1971	7
310	MATLOCK HALE	1326 KEEAUMOKU ST	96814	24011056	9	66	N	1979	5
306	ODE RANCHO	1447 KEWALO ST	96822	24021039	9	65	N	1971	5
323	CENTRE COURT	99-15 KALALOA ST	96701	99064025	9	63	N	1974	7
318	MAKIKI COLONY	1620 KEEAUMOKU ST	96822	24025022	9	56	N	1979	6
325	WAIKELE TOWERS	94-344 PUPUMOMI ST	96797	94039083	9	50	N	1971	8
324	LAKE CREST	1147 ALA NAPUNANI	96818	11065005	9	48	N	1980	7
315	1628 KEEAUMOKU ST	1628 KEEAUMOKU ST	96822	24025021	9	43	N	1966	6
309	1650 YOUNG	1650 YOUNG ST	96826	28001037	9	42	N	1973	5
308	1650 PIIKOI APARTMENTS	1650 PIIKOI ST	96822	24030058	9	40	N	1973	5
299	HAWAIIAN CROWN APARTMENTS	236 LILIUOKALANI AVE	96815	26024032	9	36	N	1966	4
295	NA PALI GARDENS	45-535 LULUKU RD	96744	45039001	9	33	N	1966	3
303	WAIALAE TOWER	3185 WAIALAE AVE	96816	32002020	9	32	N	1963	5
316	KAM TOWERS	2001 AUPUNI ST	96817	16018084	9	32	N	1969	6
305	PUNAHOU WILDER	1535 PUNAHOU ST	96822	28012051	9	28	N	1965	5
298	HALE O NAI'A	320 AINAKEA WAY	96815	26028035	9	19	N	1964	4
302	WAIALAE TOWNHOUSE	3175 WAIALAE AVE	96816	32002020	9	18	N	1959	5
346	PUNCHBOWL HOME	730 CAPTAIN COOK AVE	96813	21039012	8	196	N	1960	6
337	ALA WAI PLAZA - DIAMOND HEAD	1500 UNIVERSITY AVE	96826	27013002	8	180	N	1969	5
327	PAT'S AT PUNALUU/HANO HANO	53-567 KAM HWY	96717	53008001	8	124	N	1971	2
331	STAY WAIKIKI	2424 KOA AVE	96815	26023039	8	73	N	1964	4
339	HOLIDAY PARKWAY	910 KAPAHULU AVE	96816	27031017	8	72	N	1970	5
340	KAUALANA MANOR	1941 CHURCH LN	96826	27027025	8	70	N	1971	5

355	SALT LAKE PROJECT APARTMENTS	2907 ALA ILIMA	96818	11062007	8	64	N	1969	7
360	WAIPAHA TOWER	94-337 PUPUMOMI ST	96797	94039048	8	64	N	1970	8
342	THE ELMS	1122 ELM ST	96814	23011025	8	63	N	1979	5
345	TERRAZZA	1020 GREEN ST	96822	24017006	8	61	N	1957	6
335	PUNAHALA	1615 WILDER AVE	96822	28012050	8	56	N	1967	5
336	BANYAN HOTEL APARTMENTS	929 SHERIDAN ST	96814	23018008	8	56	N	1968	5
351	WESTVIEW PLAZA	1516 WARD AVE	96822	21039004	8	56	N	1972	6
350	MAILE TERRACE	1403 MAKIKI ST	96814	24009008	8	52	N	1971	6
359	THE CHANDELIER	3070 ALA ILIMA	96818	11058004	8	46	N	1980	7
348	MOKULANI APARTMENTS	1716 KEEAUMOKU ST	96822	24025067	8	42	N	1967	6
357	EAST LAKE APTS	1077 ALA NAPUNANI	96818	11062049	8	42	N	1971	7
358	LAKEVIEW PLAZA	955 ALA LILIKOI	96818	11059026	8	40	N	1973	7
349	ALAPAI APARTMENTS	1301 LUSITANA ST	96813	21037001	8	34	N	1969	6
356	VISTA DEL MAR	1015 ALA NAPUNANI	96818	11062001	8	32	N	1971	7
332	REGENCY ALA WAI	454 NAMAHANA ST	96815	26015012	8	29	N	1966	4
347	PARK TOWER	625 IOLANI AVE	96813	21038008	8	24	N	1962	6
333	COLONY BEACH	2893 KALAKAUA AVE	96815	31032009	8	8	N	1969	4

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HONOLULU FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

636 South Street  
Honolulu, Hawaii 96813-5007  
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL  
MAYOR



MANUEL P. NEVES  
FIRE CHIEF

LIONEL CAMARA JR.  
DEPUTY FIRE CHIEF

**RESIDENTIAL FIRE SAFETY ADVISORY COMMITTEE (RFSAC)  
Meeting Minutes**

Date of Meeting: September 8, 2017

Time of Meeting: 4 p.m.

Place of Meeting: Honolulu Fire Department's Hale Kinau Ahi Auditorium  
636 South Street  
Honolulu, Hawaii 96813

Present:

Manuel P. Neves	Chair Fire Chief, Honolulu Fire Department (HFD)
Socrates Bratakos	Administrator State Fire Council
Peter Biggs	Member Deputy Director, Department of Budget and Fiscal Services, City and County of Honolulu (City)
Garon Hamasaki	Member Civil Engineer IV, Board of Water Supply (BWS), City
Willard Nishigata	Member Engineer IV, Department of Permitting and Planning (DPP), City
Scott Kami	Member Administrator, Department of Budget and Finance, State of Hawaii
Hakim Ouansafi	Member State of Hawaii Public Housing Authority

Sam Dannaway	Member Fire Protection Technology, Coffman Engineers
Derek Lau	Member Real Estate Specialists LLC
Jim Reinhardt	Member American Institute of Architects
Jane Sugimura	Member President, Hawaii Council of Associations of Apartment Owners
Tracy Tanouye	Member Plumbers and Fitters UA Local Union 675
Richard Emery	Vice President of Government Affairs Associa Hawaii
<u>General Audience</u>	
Christine Cabalo	HFD
David Jenkins	HFD
Wayne Masuda	HFD
Mark Nakagawa	HFD
Jarin Wong	HFD
Brad Kitsu	Ombudsman, Office of the Mayor, City
Jolyn Prieto	Hawaii Fire Fighters Association
Terry Seelig	
Richard Soo	

I. Introduction

- A. Chair Neves called the meeting to order at 4:03 p.m.
- B. Chair Neves welcomed everyone and an introduction of attendees followed.
- C. Approval of the agenda

Motion: A motion was made to approve the agenda. The motion passed.

II. New Business

A. Purpose of the Committee

Chair Neves stated that the committee is a voluntary citizen's advisory committee. Honolulu City Council Resolution 17-95 requested the City's Administration to provide an update of the 2005 RFSAC report by either reconvening the 2005 Advisory Committee or establishing a new advisory committee. The committee's mission is to research and explain options for requirements, timeframes, cost incentives, and other concerns regarding fire safety for existing high-rise residential buildings.

B. Election of Chair and Vice Chair

Chair Neves stated that he will chair the committee and assigned Member Bratakos to be the Administrator to organize meetings in his absence.

C. Investigative Committees

- 1. Chair Neves suggested forming two research groups, a fire code requirements group and a financial incentive group. Administrator Bratakos will meet with both groups. Committee participants are welcome to join either or both groups. Members of the public who want to be involved may see Administrator Bratakos or Member Biggs.

a. Fire Code Requirements

Administrator Bratakos stated that Bill 69 (2017) would require buildings to have fire sprinklers installed within the next five years. He stated that proper safety measures for a building depend on the building's construction, and sprinklers are the best measure for fire

safety in buildings. Stakeholders must review all options to make the community and fire fighting conditions safer. Administrator Bratakos briefly discussed building life safety evaluations and possible exemptions to fulfill fire sprinkler requirements.

b. Financial Incentives

- (1) Member Biggs stated that financing options are available and has reached out to banks and credit unions. Those organizations indicated that financial organizations that are already lenders for Association of Apartment Owners would consider loans for fire sprinklers. Most of the loans are for approximately 20 years with a fixed rate for the first ten years at a rate of four to five percent. Not all buildings may meet the requirements for those loans, as there are credit criteria. There is traditional bank financing that is available for buildings.
- (2) Member Biggs stated that, depending on what the committee recommends, the time in years for compliance will be important, not only for the owner's ability to pay, but to avoid creating a surge in demand for contractors for a number of years. This would also allow certain buildings to build up a reserve to fund these projects.
- (3) The City has zero percent loans for condo owners who make 80 percent less than the median income. Member Biggs is also researching grants for owners who earn 80 percent or less of the median income. This research is not yet complete, but has a positive outlook. If sprinklers are being funded by block grant funds, the amount of the grants must be determined. This could be an excellent solution for those who have low to moderate income levels.
- (4) Member Biggs stated that the DPP is considering the elimination of plan review and permit fees. The HFD will waive their plans review fee.
- (5) Member Biggs spoke to the BWS about fees for dedicated water meters for these sprinkler systems. The BWS will conduct further research on this.

- (6) Member Biggs spoke with a few insurance companies who indicated they could provide a significant discount on the fire insurance component for a building retrofitted with fire sprinklers. Member Biggs will explore other ideas, but these are initial ideas and existing incentives directed to those with moderate incomes.

Chair Neves thanked both research groups and asked if the committee had questions.

2. Member Sugimura stated that 50 percent of the occupants must vote in favor; however, many owners live out of state. She suggested approaching the legislature to change the laws and obtaining a narrow exception whereby the 50 percent requirement for actions will not be required.
3. Member Sugimura also stated that a tax credit was difficult to obtain from the legislature, but should still be considered. She said there is a lot of publicity about it. When the RFSAC met in 2005, they tried to obtain a legislative tax credit for homeowners.
4. Member Ouansafi asked how many potential buildings need sprinklers. Administrator Bratakos said there is a list of 360 residential high-rises that are sorted by several risk factors, including whether the building has indoor corridors, the height in floors, and the number of units. This is an updated list from 2005 and includes improved data. The list was given to the committee at the beginning of the meeting.

### III. Public Comments

Mr. Emery stated he met with condo associations and industry organization boards. He stated that legislation could grant associations permits for interior improvements without getting into legal arguments. Mr. Emery also stated there are two boards that are open to the idea. Otherwise, it is difficult to obtain approval from condo owners who reside out of state.

### IV. Meeting Dates

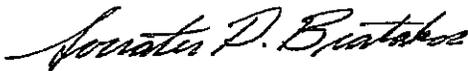
Chair Neves stated that individual research and investigative committees may form their own deadlines, but there will be set times for the entire committee to

meet. Chair Neves asked for location and time preference. The committee agreed to meet at 4 p.m. in the HFD's Headquarters auditorium.

Before adjourning, the committee clarified that the research subcommittees will make recommendations to the RFSAC who will then make recommendations to the Honolulu City Council. The Honolulu City Council must take action on recommendations.

Upcoming meetings have been scheduled on the first and third Thursdays of the month. The next meeting is scheduled on September 15, 2017, at 4 p.m.

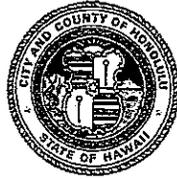
- V. The meeting was adjourned at 4:35 p.m.

  
SOCRATES D. BRATAKOS  
Administrator

HONOLULU FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

636 South Street  
Honolulu, Hawaii 96813-5007  
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL  
MAYOR



MANUEL P. NEVES  
FIRE CHIEF

LIONEL CAMARA JR.  
DEPUTY FIRE CHIEF

**RESIDENTIAL FIRE SAFETY ADVISORY COMMITTEE (RFSAC)  
Meeting Minutes**

Date of Meeting: September 21, 2017

Time of Meeting: 4 p.m.

Place of Meeting: Honolulu Fire Department's Hale Kinau Ahi Auditorium  
636 South Street  
Honolulu, Hawaii 96813

Present:

Manuel P. Neves	Chair Fire Chief, Honolulu Fire Department (HFD)
Socrates Bratakos	Administrator State Fire Council
Peter Biggs	Member Deputy Director, Department of Budget and Fiscal Services, City and County of Honolulu (City)
Evan Fujimoto	Member President, Graham Builders
Scott Kami	Member Administrator, Department of Budget and Finance, State of Hawaii
Ellen Kitamura	Member Deputy Manager and Chief Engineer, Honolulu Board of Water Supply
Derek Lau	Member Honolulu Board of Realtors

Ben Park	Member Representative, Hawaii Public Housing Authority
Jim Reinhardt	Member American Institute of Architects
Jane Sugimura	Member President, Hawaii Council of Associations of Apartment Owners (AOAO)
Tracy Tanouye	Member Hawaii Trades Council
David Talbert	Member President, Hawaii Chapter of Community Associations Institute
Celeste Nip	Member Hawaii Fire Fighters Association

Members not present:

Robert Bigtas	Member Coffman Engineers
Timothy Hiu	Member Department of Planning and Permitting, City (DPP)

General Audience

Brad Kitsu	Ombudsman, City
Willard Nishigata	DPP
Lance Luke	Consultant, Construction Management Inspection
Christine Cabalo	HFD
Wayne Masuda	HFD
Darryl Mau	HFD

Lance Luke

Gladys Marrone

Ann Port

Richard Port

Raelene Tenno

I. Introduction

A. Chair Neves called the meeting to order at 4 p.m.

B. Chair Neves welcomed everyone, and an introduction of attendees followed.

Chair Neves recommended name tags for the next committee meeting.

C. Approval of the agenda

Upon reviewing the minutes from the previous meeting, it was confirmed that Mr. Richard Emery is not a voting member of the committee, but will be recognized as a general audience and public stakeholder. It was also confirmed that Mr. Willard Nishigata is not a voting member of the committee.

Motion: A motion was made to approve the agenda. The motion passed.

II. Public Comment

At the September 8, 2017, meeting, the committee questioned whether Yacht Harbor Towers had an interior corridor. Member Sugimura and general audience members confirmed the lobby area near the elevators is enclosed; however, other areas are open.

III. New Business

A. Research Group for Fire/Building Codes

1. Administrator Bratakos stated that the fire/building codes research group is considering the use of a building safety evaluation checklist that is based on fire and building codes and standards. Administrator Bratakos and the

committee members in attendance agreed that they do not expect existing high-rise buildings to meet the same extent of safety features in modern buildings, but they must still meet safety standards.

2. The proposed amendments for the Fire Code of the City and County of Honolulu will have requirements and exemptions. Some older fire code requirements, such as maintaining wet hose cabinets or telephone jacks for fire fighters' use, may not be necessary. Administrator Bratakos stated the codes group would meet after the RFSAC meeting concludes and, by the next RFSAC meeting, the group will have completed more provisions.
3. Administrator Bratakos stated that out of the 360 buildings identified with no sprinklers, it is possible that only one-half must install sprinkler systems. He stated the safety of a building depends on how it was built and maintained, as some of the buildings on the list have features and systems that are helpful in mitigating a fire.
4. Questions were posed to Administrator Bratakos. Chair Neves wanted to know what the committee intends to present at the October 5 meeting. Administrator Bratakos said there will be a compilation of ideas, a draft matrix, and Bill 69 CD-1 amendments.
  - a. Member Reinhardt stated that one of the items he found useful from the fire/building code group's last meeting was seeing the different evaluation factors on a matrix. He said providing a matrix to the AAOs for their board of directors is a solid resource. The matrix allows AAOs to review the list of factors and estimate their rating to see where they can improve. Member Reinhardt stated that he likes how the matrix is an interactive tool that boards and apartment owners can use.
  - b. Member Sugimura was concerned about consumer protection from professionals who would calculate a fire safety score using the matrix. She suggested a cap on how much could be charged for a fire safety evaluation to avoid being gouged for services. Administrator Bratakos added that a licensed architect or engineer should be able to conduct the evaluation.
  - c. Several members asked whether the matrix will encompass award points for readiness to include how residents evacuate and what to do if the main exit is blocked.

- d. Administrator Bratakos was not sure which standards could be used to check for readiness other than measuring how well people can evacuate from a building.
- e. Administrator Bratakos encourages code and building safety and emphasized the importance of subject matter education for the public. This is why the code groups are researching building construction and fire protection systems, such as a fire alarm system (FAS), how stairwells are rated, and other factors that can help to protect lives in the event of fires.

#### B. Research Financial Incentives

- 1. Members Biggs continued the discussion on financing alternatives and incentives and built on items mentioned in the previous committee meeting.
  - a. Member Biggs stated that banks will review owner occupancy rates, delinquent maintenance fees, and a building's reserves. Poor ratings in any of these criteria will present challenges in obtaining a bank loan. The finances group also discussed the challenge of the state law requiring 50 percent approval from its building owners before any facility action can take place.

Member Biggs stated that under current condominium law, each building must conduct a reserve study and an immediate collection of money to install sprinklers if Bill 69 (2017) becomes law. The group discussed the impact this could have on monthly fees. Based on the current bill for fire sprinklers, the estimated cost for installation is from \$10,000 to \$20,000 per unit. Buildings may have a longer time to comply if there is a modification in condominium law or an AOA is allotted time to gather a majority vote for a health or safety concern.

- b. The finances group discussed the zero percent loan program and how it could expand to a grant program for condominium owners who earn 80 percent or less of the median income. He said these loans and grants are good tools, but are available to only ten percent of residents.
- c. Member Biggs stated that the group also discussed a real property tax credit as an incentive. This could be complicated, but possible, through bond financing. Another consideration is buildings could be grouped in districts, and bonds would be issued to each district to pay for sprinkler

system retrofitting. The City could then tax the building's community to repay the bond. This is called a community facilities district bond approach. Member Biggs stated he is unsure of the benefit of this approach. These bonds are not rated by credit agencies and may be expensive.

- d. The finances group intends to compile alternatives to show what incentives are available today. This list would also include lower insurance premiums and would note what incentives require City or state approval. The group will compile the list and include: pros and cons; costs and benefits for condominium owners; and benefits to the City which may waive revenue to fund fire safety measures, such as fire sprinklers.
  - e. The finances group also discussed how incentives may change in the future, depending on the recommendation for building safety. Member Biggs said he will research alternative sources of federal funding and that there may be grants for low and moderate income residents and/or community development block funds.
2. The finances group used a benchmark of 12 years to complete fire sprinkler installation and divided the project into phases. Cost totals should include updated installation costs with an assumed five-percent increase per year.
  3. Administrator Bratakos spoke with a National Fire Protection Association representative and found that the cost of installing fire sprinklers in the common areas is approximately 50 percent of the cost of installing fire sprinklers throughout the building. Buildings would still need to run pipes in hallways and pay for pumps. Administrator Bratakos stated that the cost could then be \$10,000 per unit or less. A complete FAS may cost \$4,000 to \$12,000 per unit. Administrator Bratakos stated that the cost of upgrading all parts of the building, such as the FAS, elevators, and stairs, may be more costly than installing fire sprinklers. Administrator Bratakos said the RFSAC may provide condominium associations with choices on what keeps them fire safe.

Among the targeted buildings, approximately 25 to 50 percent would probably need at least a partial fire sprinkler system installed. Other buildings would only need to maintain their current fire protection system to remain compliant. He said the groups will start making recommendations for compliance timeframes and look closer at finances.

4. Member Sugihara stated that apartment management companies may have information regarding owners' income to help determine whether they can afford sprinklers or qualify for assistance. Three or four companies manage a large percentage of the residential buildings on Oahu. Members Biggs and Sugihara stated they would contact the management companies.
5. Member Talbert stated a concern that what many apartment complexes face today is the need to replace clay pipes. Member Reinhardt stated many associations were not aware the pipes would break down due to PH levels in the water. He said the pipe issue could be used to gauge the impact on an association for carrying long-term loans similar to what may be needed for sprinklers.

Member Sugimura stated that some associations are already reserving money in case of pipe failure. Not many buildings have clay pipes, but those that do, are scrambling and putting it in as a budgeted item.

6. Another issue presented by Member Reinhard regarding AOA's sprinkler affordability are apartment complexes that have high window erosion. These associations could face large expenditures at the same time fire sprinklers would be required. Administrator Bratakos suggested that it may be best to take a holistic approach and agrees that it is not feasible to upgrade everything at once. Administrator Bratakos stated these buildings could be around for another 100 years and, if not fixed, repairs will be left for the next generation.
  - a. The RFSAC received sprinkler installation estimates for four types of apartment buildings. Member Biggs asked why there was so much variability in sprinkler costs. Administrator Bratakos stated that installations varied depending on construction, features that owners request, and how the pipes were laid out.
  - b. Member Sugimura stated that the 2005 RFSAC invited contractors to participate in the meetings and perhaps the current committee should invite them back.

#### C. Public Education

1. Chair Neves restated that the main concerns of the committee are to meet its objectives, research financing for fire sprinklers, and recommend a way

to evaluate and regulate the fire safety of older buildings. He asked the committee if this group should also spend time examining public education methods for fire safety. Chair Neves and Administrator Bratakos reported that the HFD needs more inspectors and building monitors who are qualified to assist in fire safety planning.

2. Member Sugimura agreed there is a need for fire safety training. Information could be placed on condominium television or YouTube. The Real Estate Commission's website and newsletter are also potential venues for information.

Member Sugimura stated it is important that condominium renters and owners talk to each other in order to successfully adopt any safety measures. Working together to implement safety measures, such as paying for sprinklers and finding out who is vulnerable in your building, can save people. Knowing your neighbors, especially those who have mobility concerns, can be critical in an emergency.

Since the Marco Polo condominium fire, Member Sugimura sees more fire safety activity in condominiums. Her own building has better visibility of evacuation plans on each floor. She has spoken with condominium owners to designate floor captains or zone leaders for safe evacuation.

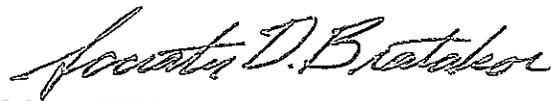
3. Chair Neves reopened the question of whether the RFSAC wants to take public education on as an issue now, later, or examine it simultaneously with current research efforts. Chair Neves, Administrator Bratakos, and Member Sugimura agree that fire sprinkler installation and other safety measures must be done while it is a current public issue. Member Sugimura reaffirmed that everyone is motivated now, and the public needs guidance and direction.
4. Chair Neves asked if there is a need to create a subgroup for fire prevention. This meeting could use the new subgroup as a centralized source for disseminating information. Several committee members said the general public must be informed of what is occurring. Member Biggs agrees that public education is important, but asked if the committee has the right people to assist.
5. Administrator Bratakos added there is a need for more communication between those who have solid fire safety knowledge and the AAOs. Communication will reinforce the HFD's support of the AAOs. Chair

Neves called a vote to defer this item. The motion was passed to continue discussion about adding a public education/fire prevention subgroup.

IV. Next Meeting Date: October 5, 2017

V. Adjournment

The meeting was adjourned at 5:05 p.m.



SOCRATES D. BRATAKOS  
Administrator

Residential Fire Safety Advisory Safety Committee  
Budget Worksheet

	5% year escalation x 12		5% year escalation x 12		5% year escalation x 12		5% year escalation x 12	
	Marco Polo		1001 Wilder Ave.		Pearl One		Royal Court	
Building type	Residential Condo		Residential Condo		Residential Condo		Residential Condo	
Cost for fire sprinkler (building)	\$ 1,912,500.00	\$ 3,060,000.00	\$ 373,500.00	\$ 597,600.00	\$ 1,984,500.00	\$ 3,175,200.00	\$ 915,000.00	\$ 1,464,000.00
Cost for fire sprinkler (common areas)	\$ 162,750.00	\$ 260,400.00	\$ 124,500.00	\$ 199,200.00	\$ 205,500.00	\$ 328,800.00	\$ 315,000.00	\$ 504,000.00
Cost for fire pump	\$ 75,000.00	\$ 120,000.00	\$ 78,000.00	\$ 124,800.00	\$ 55,500.00	\$ 88,800.00	\$ 55,500.00	\$ 88,800.00
Cost for BWS meter and connections	\$ 30,000.00	\$ 48,000.00	\$ -	\$ -	\$ 25,500.00	\$ 40,800.00	\$ 25,500.00	\$ 40,800.00
Cost for generator	\$ 75,000.00	\$ 120,000.00	\$ 75,000.00	\$ 120,000.00	\$ 75,000.00	\$ 120,000.00	\$ 75,000.00	\$ 120,000.00
Cost for asbestos remediation	\$ 207,525.00	\$ 332,040.00	\$ 49,800.00	\$ 79,680.00	\$ 219,000.00	\$ 350,400.00	\$ 123,000.00	\$ 196,800.00
<b>Total</b>	<b>\$ 2,462,775.00</b>	<b>\$ 3,940,440.00</b>	<b>\$ 700,800.00</b>	<b>\$ 1,121,280.00</b>	<b>\$ 2,565,000.00</b>	<b>\$ 4,104,000.00</b>	<b>\$ 1,509,000.00</b>	<b>\$ 2,414,400.00</b>
<b>Additional Items</b>								
Cost for fire alarm system upgrade	\$ 432,344.00	\$ 691,750.40	\$ 103,750.00	\$ 166,000.00	\$ 456,250.00	\$ 730,000.00	\$ 256,250.00	\$ 410,000.00
Cost for fire pump system and diesel	\$ 102,000.00	\$ 163,200.00	\$ 102,000.00	\$ 163,200.00	\$ 66,000.00	\$ 105,600.00	\$ 66,000.00	\$ 105,600.00
<b>Square foot costs</b>								
Estimated square footage	642,985		75,315		625,985		233,701	
Sprinkler system cost per square foot	\$ 3.83	\$ 6.13	\$ 9.30	\$ 14.88	\$ 4.10	\$ 6.56	\$ 6.46	\$ 10.34
Fire alarm system cost per square foot	\$ 0.67	\$ 1.07	\$ 1.38	\$ 2.21	\$ 0.73	\$ 1.17	\$ 1.10	\$ 1.76
<b>Cost Per Dwelling Unit</b>								
Number of dwelling units	572		67		300		112	
Sprinkler system cost per dwelling unit	\$ 4,305.55	\$ 6,888.88	\$ 10,459.70	\$ 16,735.52	\$ 8,550.00	\$ 13,680.00	\$ 13,473.21	\$ 21,557.14
Fire system cost per dwelling unit	\$ 755.85	\$ 1,209.36	\$ 1,548.51	\$ 2,477.62	\$ 1,520.83	\$ 2,433.33	\$ 2,287.95	\$ 3,660.72
<b>Sprinkler Cost by:</b>	Grinnell Fire Protection		Grinnell Fire Protection		Pacific Fire Protection		Pacific Fire Protection	
<b>Other Cost by:</b>	SSD		SSD		SSD		SSD	