

# SB2397

RELATING TO FIRE SPRINKLERS.

Prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes. Effective 1/1/2025. (SD1)

NEIL ABERCROMBIE  
GOVERNOR



DWIGHT TAKAMINE  
DIRECTOR

AUDREY HIDANO  
DEPUTY DIRECTOR

**STATE OF HAWAII**  
**DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS**

830 PUNCHBOWL STREET, ROOM 321  
HONOLULU, HAWAII 96813  
[www.hawaii.gov/labor](http://www.hawaii.gov/labor)  
Phone: (808) 586-8842 / Fax: (808) 586-9099  
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February 21, 2012

The Honorable Donovan Dela Cruz, Chair  
Committee on Water, Land, and Housing  
The State Senate  
State Capitol, Room 202  
Honolulu, Hawaii 96813

Dear Chair Dela Cruz:

Subject: S.B. 2397, S.D. 1 Relating to Fire Sprinklers

I am Kenneth G. Silva, Chair of the State Fire Council (SFC) and Fire Chief of the Honolulu Fire Department (HFD). **The SFC and the HFD strongly oppose S.B. 2397, S.D. 1.**

During its Regular Session of 2011, the Twenty-Sixth Legislature enacted House Resolution No. 47, H.D. 1, which requested that the State Building Code Council (SBCC) submit a report no later than 20 days before the Regular Session of 2015 convenes of its findings, recommendations, and actions taken to adopt the requirement that automatic fire sprinklers be installed in new one- and two-family dwellings.

The SBCC is reviewing the 2009 editions of the International Building and Residential Codes, which require residential fire sprinklers in new one- and two-family dwellings as minimum requirements. The SBCC formed a fire sprinkler investigative committee of stakeholders from public/private sectors, industry, and code regulators to explore issues relating to automatic fire sprinkler installations. The investigative committee's work is ongoing, and most infrastructure issues are complete.

However, issues relating to in-house systems must still be addressed. It would be a disservice to the community to enact an antisprinkler law based on one viewpoint without considering the research done by this committee, which represents all interests. The investigative committee's final report will be forwarded to the SBCC, who will decide what to adopt for the entire state.

The Honorable Donavan Dela Cruz, Chair

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The building codes are a comprehensive compilation of codes that address all aspects of the built environment. The resulting national codes reflect a consensus that balances safety; cost/benefit; and the most technologically advanced products, materials, and processes. Code revisions are enacted slowly, and many are a result of fatalities, serious injuries, or large property losses. When building codes are adopted at the county and state levels, they must undergo the administrative rules process, including being discussed at public hearings to allow the public an opportunity to participate and provide input. This process should not be circumvented.

There is no requirement in the current county or state building codes that mandates the installation of fire sprinklers in new one- and two-family residential dwellings. When homes undergo the county building permit process and do not meet fire department access road or fire fighting water supply requirements (hydrants), the fire code allows fire sprinklers to be installed as an alternative to meet the intent of the fire code. This bill may eliminate that alternative and would require the homeowner to meet road and water supply requirements, which is usually at a much greater cost than fire sprinklers, before a permit is issued.

By not allowing counties to mandate fire sprinklers in residential homes, adult residential care homes may not be allowed to be permitted or built, as fire sprinklers are required in this type of occupancy due to its incapacitated residents. If this bill passes, it would eliminate the counties' homerule to permit residential homes to be built when they do not meet other building or fire code requirements.

Home fire sprinklers are a proven way to protect lives and property against fires. These life saving systems respond quickly and effectively to the presence of a nearby fire. Approximately 90% of the time, fires are contained by the operation of just one sprinkler head. Hundreds of gallons of water are saved, and toxic air pollutants and ground water runoff are also significantly reduced.

Smoke alarms and other building safety requirements have progressively reduced fire losses and deaths. Working smoke alarms reduce the risk of fire fatalities by 50 percent. However, they are only effective if occupants are cognitively and physically capable of responding during a limited timeframe of rapid fire growth. National statistics have shown disproportionate fire deaths for the young and elderly for decades, which is an example of the types of individuals unable or incapable of exiting a home fire in a timely manner. The risk of dying in a home fire decreases by approximately 80 percent when fire sprinklers are present. Home sprinkler systems respond quickly to reduce heat, flames, and smoke from a fire, thus allowing families valuable time to safely exit.

The Honorable Donavan Dela Cruz, Chair

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Opponents of residential fire sprinkler systems like to boast that newer homes are safer and the fire and death problem is limited to older homes. The age of a home is a poor predictor of fire death rates. When an older home is associated with a higher death rate, it is usually a result of a disproportionate share of poorer, less educated households. Statistically, the only fire safety issue that is relevant to the home's age is outdated electrical wiring. Beyond that, it has little or nothing to do with fire safety.

A fire at 2 a.m. is just as deadly in a new home as it is in an older one. In fact, new methods of construction negatively impact occupant and fire fighter life safety under fire conditions. The National Research Council of Canada tested the performance of unprotected floor assemblies exposed to fire and found that these structures are prone to catastrophic collapse as early as six minutes from the onset of fire. Underwriters Laboratories conducted a study to identify the danger to fire fighters created by the use of lightweight wood trusses and engineered lumber in residential roof and floor designs. The findings point to the failure of lightweight engineered wood systems when exposed to fire. The same study found that the synthetic construction of today's home furnishings increased the risk by providing a greater fuel load. Fire sprinklers can offset increased dangers posed by lightweight construction and create a safer fire environment for fire fighters to operate in.

The contention that new home prices will dramatically rise is inaccurate. Hawaii's higher home prices are more directly impacted by high land prices, shipping costs for building materials, and contractor costs. On a national average, home fire sprinkler systems add 1% to 1.5% of the total building cost to new construction. In Hawaii, estimates obtained by the SBCC's fire sprinkler investigative committee were approximately \$1.50 per square foot. For example, a system, including permitting, installation, and materials, for a 2,500-square foot home, would cost \$6,000 to \$7,000. At \$200 per square foot, the home would cost \$500,000. The residential sprinkler system would be 1.3% of the total price. The most economical time to install sprinklers is during new construction.

Saving lives means more than just preventing deaths. Fire sprinklers not only reduce the risk of death, they also reduce property loss. In the City and County of Honolulu from 2006 to 2010, single-family home fires accounted for 40.7% (499) of the total fires; 52.6% (\$40,517,668) of all fire dollar losses; 53.3% (56) of the fire injuries; and 66.7% (10) of the fire fatalities. In contrast, buildings that were sprinklered accounted for 4.2% (52) of the total fires; 0.6% (\$428,320) of all fire dollar losses; 5.7% (6) of the fire injuries; and 6.7% (1) of the fire fatalities. The statistical report for this period is provided as Attachment A.

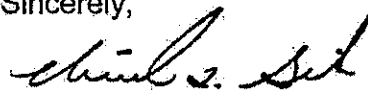
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February 21, 2012

Prohibition laws are normally enacted to control or ban potentially dangerous or harmful products or behaviors. Automatic fire sprinklers are a proven fire, life safety, and property protection measure with an outstanding performance record in reducing fire fatalities, injuries, and property losses.

The SFC and the HFD urge your committee's deferral of S.B. 2397, S.D. 1.

Should you have any questions, please contact SFC Administrator Socrates Bratakos at 723-7151 or [sbratakos@honolulu.gov](mailto:sbratakos@honolulu.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth G. Silva". The signature is written in a cursive style with a large initial "K" and "S".

KENNETH G. SILVA  
Chair

KGS/LR:cn

Attachment

ALAN M. ARAKAWA  
MAYOR



JEFFREY A. MURRAY  
CHIEF

ROBERT M. SHIMADA  
DEPUTY CHIEF

**COUNTY OF MAUI**  
DEPARTMENT OF FIRE AND PUBLIC SAFETY

200 DAIRY ROAD  
KAHULUI, MAUI, HAWAII 96732  
(808) 270-7561  
FAX (808) 270-7919  
EMAIL: fire.dept@mauicounty.gov

February 21, 2012

The Honorable Donovan Dela Cruz, Chair  
Committee on Water, Land, and Housing  
The State Senate  
State Capitol, Room 202  
Honolulu, Hawaii 96813

Dear Chair Dela Cruz:

Subject: **S.B. 2397, S.D. 1 Relating to Fire Sprinklers**

I am Jeffrey A. Murray, Fire Chief of the County of Maui, Department of Fire & Public Safety (MFD) and a member of the State Fire Council (SFC). The MFD and the SFC strongly oppose S.B. 2397, S.D. 1.

During its Regular Session of 2011, the Twenty-Sixth Legislature enacted House Resolution No. 47, H.D. 1, which requested that the State Building Code Council (SBCC) submit a report no later than 20 days before the Regular Session of 2015 convenes of its findings, recommendations, and actions taken to adopt the requirement that automatic fire sprinklers be installed in new one- and two-family dwellings.

The SBCC is reviewing the 2009 editions of the International Building and Residential Codes, which require residential fire sprinklers in new one- and two-family dwellings as minimum requirements. The SBCC formed an investigative committee of stakeholders from public/private sectors, industry, and code regulators to explore issues relating to automatic fire sprinkler installations. The investigative committee's work is ongoing, and most infrastructure issues have been completed, but issues relating to in-house systems must still be addressed. It would be a disservice to the community to enact an antisprinkler law based on one viewpoint without considering the research done by this committee, which represents all interests. The investigative committee's final report will be forwarded to the SBCC, who will decide what to adopt for the entire state.

The building codes are a comprehensive compilation of codes that address all aspects of the built environment. The resulting national codes reflect a consensus that balances

safety; cost/benefit; and the most technologically advanced products, materials, and processes. Code revisions are enacted slowly, and many are a result of fatalities, serious injuries and large property losses. When building codes are adopted at the state and county levels, they must undergo the administrative rules process, including being discussed at public hearings to allow the public an opportunity to participate and provide input. This process should not be circumvented.

There is no requirement in the current state or county building codes that mandates the installation of fire sprinklers in new one- and two-family residential dwellings. When homes undergoing the county building permit process do not meet fire department access road or fire fighting water supply requirements (hydrants), the fire code allows sprinklers to be installed as an alternative to meeting the intent of the fire code. This bill may eliminate that alternative and would require the homeowner to meet road and water supply requirements, which is usually at a much greater cost than sprinklers, before a permit is issued. It may well end up that the homeowner may not be able to build at all. By not allowing the counties to mandate sprinklers in all residential homes, adult residential care homes, which require sprinklers due to residents being incapable of exiting in a fire, may not be allowed to be permitted or built. If this bill passes, it would eliminate the counties "homerule" to permit residential homes to be built when they do not meet other building or fire code requirements.

Home fire sprinklers are a proven way to protect lives and property against fires at home. These life saving systems respond quickly and effectively to the presence of a nearby fire. Approximately 90% of the time, fires are contained by the operation of just one sprinkler head. This means hundreds of gallons of water saved compared with fire fighting hose lines used to extinguish a fire. Toxic pollutants to air and ground water runoff are also significantly reduced.

Smoke alarms and other building safety requirements have progressively reduced fire losses and deaths. Working smoke alarms cut the risk of dying in a home fire by 50 percent. However, they are only effective if the occupants are cognitively and physically capable of responding during a limited timeframe of rapid fire growth. National statistics have shown disproportionate fire deaths for the young and the elderly for decades, which is an example of the types of individuals unable or incapable of exiting a home fire in a timely manner. If you have a fire in your home, the risk of dying decreases by about 80 percent when sprinklers are present. Home sprinkler systems respond quickly to reduce the heat, flames, and smoke from a fire, giving families valuable time to get to safety.

Opponents of residential fire sprinkler systems like to boast that newer homes are safer homes and that the fire and death problem is limited to older homes. Age of housing is a poor predictor of fire death rates. When older housing is associated with higher rates, it

usually is because older housing tends to have a disproportionate share of poorer, less educated households. Statistically, the only fire safety issue that is relevant to the age of the home is outdated electrical wiring. Beyond that, age of the home has little or nothing to do with fire safety.

A fire at 2:00 a.m. is just as deadly in a new home as it is in an older home. In fact, new methods of construction negatively impact occupant and firefighter life safety under fire conditions. The National Research Council of Canada (NRC) tested the performance of unprotected floor assemblies exposed to fire; finding that these structures are prone to catastrophic collapse as early as six minutes from the onset of fire. Underwriters Laboratories (UL) conducted a study to identify the danger to firefighters created by the use of lightweight wood trusses and engineered lumber in residential roof and floor designs. The findings point to the failure of lightweight engineered wood systems when exposed to fire. The same UL study found that the synthetic construction of today's home furnishings add to the increased risk by providing a greater fuel load. Fire sprinklers can offset the increased dangers posed by lightweight construction and create a safer fire environment for fire fighters to operate in.

The contention that new home prices will dramatically rise is inaccurate. On a national average, home fire sprinkler systems add 1% to 1.5% of the total building cost to new construction. In Hawaii, estimates obtained by the SBCC sprinkler investigative committee were approximately \$1.50 per square foot. For example, a system, including permitting, installation, and materials, for a 2,500-square foot home would cost \$6,000 to \$7,000. At \$200 per square foot, the home would cost \$500,000. The residential sprinkler system would be 1.3% of the total price. Hawaii's higher home prices are more directly impacted by high land prices, the high cost to ship building materials, and higher contractor costs. The most economical time to install sprinklers is during new construction.

Saving lives means more than just preventing deaths. Just as there is no other fire safety technology or educational programs that produce as great a reduction in risk of death as sprinklers, there also is no other fire safety technology or program that produces as great a reduction in property loss per fire as sprinklers. In the City and County of Honolulu during the years 2006-2010, single-family home fires caused an estimated \$40,517,668 in damages, 10 fatalities, and 56 injuries. This accounted for 40.7 percent of the total damages for this period, 66.7 percent of the fire deaths, and 53.3 percent of the injuries. By contrast, sprinklered buildings caused an estimated \$428,320 in damages, 1 fatality, and 6 injuries. This was 4.2 percent of the total damages, 6.7 percent of the fire deaths, and 5.7 percent of the injuries. The statistical report for this period is provided as Attachment A.



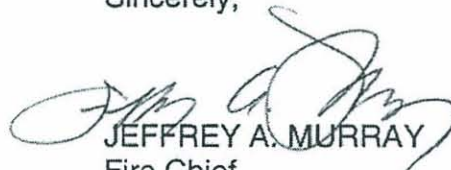
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February 21, 2012

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The MFD and the SFC urge your committee's deferral of S.B. 2397.

Should you have any questions, please contact SFC Administrator Socrates Bratakos at 723-7151 or sbratakos@honolulu.gov.

Sincerely,



JEFFREY A. MURRAY  
Fire Chief

**Bernard P. Carvalho, Jr.**  
Mayor



**Robert F. Westerman**  
Fire Chief

**Gary K. Heu**  
Managing Director

**John T. Blalock**  
Deputy Fire Chief

**KAUA'I FIRE DEPARTMENT**  
**County of Kaua'i, State of Hawai'i**

3083 Akahi Street, Suite 101, Līhu'e, Hawai'i 96766  
TEL (808) 241-4980 FAX (808) 241-6508

February 21, 2012

The Honorable Donovan Dela Cruz, Chair  
Committee on Water, Land, and Housing  
The State Senate  
State Capitol, Room 202  
Honolulu, Hawaii 96813

Dear Chair Dela Cruz:

**Subject: S.B. 2397, S.D. 1 Relating to Fire Sprinklers**

I am Robert F. Westerman, Fire Chief of the Kauai Fire Department (KFD) and a member of the State Fire Council (SFC). The KFD and the SFC **strongly oppose S.B. 2397, S.D. 1.**

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being discussed at public hearings to allow the public an opportunity to participate and provide input. This process should not be circumvented.

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The Honorable Donovan Dela Cruz, Chair  
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February 21, 2012

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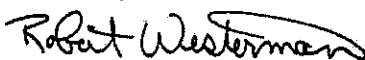
Saving lives means more than just preventing deaths. Just as there is no other fire safety technology or educational programs that produce as great a reduction in risk of death as sprinklers, there also is no other fire safety technology or program that produces as great a reduction in property loss per fire as sprinklers.

Prohibition laws are normally enacted to control or ban potentially dangerous or harmful products or behaviors. Automatic fire sprinklers are a proven fire, life safety, and property protection measure with an outstanding performance record in reducing fire fatalities, injuries, and property losses.

The KFD and the SFC urge your committee's deferral of S.B. 2397.

Please call me at (808) 241-4980 should you have any questions regarding this matter.

Sincerely,



Robert Westerman  
Fire Chief, County of Kaua'i

RFW/eld

## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



February 22, 2012

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman  
DENISE M. C. DE COSTA, Vice Chair  
THERESIA C. McMURDO  
DUANE R. MIYASHIRO  
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio  
GLENN M. OKIMOTO, Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

DEAN A. NAKANO  
Deputy Manager

The Honorable Donovan M. Dela Cruz  
Chair, and Members of the Senate Committee  
on Water, Land, and Housing  
State Capitol, Conference Room 225  
Honolulu, Hawaii 96813

Dear Chair Dela Cruz and Members of the Committee:

Subject: Board of Water Supply Testimony for Senate Bill No. 2397, SD1

The Honolulu Board of Water Supply (BWS) **does not support Senate Bill 2397, SD1** which prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes.

This bill will affect the Department's ability to provide a possible alternative to a homeowner seeking building permit application approval for areas where the existing off-site fire protection is not in compliance with BWS Water System Standards.

When the BWS reviews a building permit application and the off-site fire protection requirements are not in compliance with BWS Water System Standards, homeowners have the following alternatives in order to obtain approval for their building permit application by the BWS:

1. Upon the Honolulu Fire Department's (HFD) recommendation to install a fire sprinkler system.
2. Upgrade the water system by installing a fire hydrant and/or any necessary water lines as required by the BWS.
3. Wait until the BWS can upgrade the water system pending the availability of funds.

Senate Bill 2397, SD1 will result in one less alternative a homeowner, wanting to proceed with their improvements, will have if they are in an area where off-site fire protection requirements are not in compliance with BWS Water System Standards. Therefore, we respectfully urge this Honorable Committee to not pass Senate Bill 2397, SD1.

I appreciate the opportunity to provide testimony on this matter.

Very truly yours,

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer



**Hawaii Farm Bureau**  
F E D E R A T I O N

2343 Rose Street • Honolulu, Hawaii 96819  
Phone: (808) 848-2074 • Neighbor-Islands: (800) 482-1272  
Fax: (808) 848-1921 • Email: [info@hfbf.org](mailto:info@hfbf.org)  
[www.hfbf.org](http://www.hfbf.org)

FEBRUARY 23, 2012

HEARING BEFORE THE  
SENATE COMMITTEE ON WATER, LAND, AND HOUSING

TESTIMONY ON SB 2397 SD1  
RELATING TO FIRE SPRINKLERS

Room 225

1:30 PM

Chair Dela Cruz, Vice Chair Solomon, and Members of the Committee:

I am Brian Miyamoto, Chief Operating Officer and Government Affairs Liaison for the Hawaii Farm Bureau Federation (HFBF). Organized since 1948, the HFBF is comprised of 1,800 farm family members statewide, and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic and educational interest of our diverse agricultural community.

HFBF supports SB 2397, which would prohibit the requirement of installing or retrofitting of fire sprinklers for new or existing detached one- or two-family dwelling units in a structure used only for residential purposes. Such a requirement would add substantially to the cost of building or renovating homes. It would be especially costly in the case of farm dwellings, which may be in areas not served by public water systems or where the spacing of hydrants exceeds residential standards.

We respectfully request that SB 2397 SD1 be amended to extend this prohibition of sprinkler requirements to non-residential agricultural and aquacultural buildings and structures located outside the urban zone. HFBF is supporting other bills introduced this session that would reduce the cost and construction time of low-risk, non-residential farm structures by exempting these structures from county building permit requirements. Due to their location and functions, these buildings and structures present a lower risk of property damage and personal harm from fire than do dwelling units. Their exemption from permit requirements is necessary to allow farmers to build, at reasonable cost, structures to protect their crops and equipment from thieves, vandals, and the weather. Prohibiting a requirement for sprinkler systems would remove one major potential cost of constructing these structures, and would therefore further the State's goal of greater food self-sufficiency.

Thank you for the opportunity to testify. I can be reached at (808) 848-2074 if you have any questions or would like to discuss.

1065 Ahua Street  
Honolulu, HI 96819  
Phone: 808-833-1681 FAX: 839-4167  
Email: [info@gcahawaii.org](mailto:info@gcahawaii.org)  
Website: [www.gcahawaii.org](http://www.gcahawaii.org)



**GCA of Hawaii**

GENERAL CONTRACTORS ASSOCIATION OF HAWAII

Quality People. Quality Projects.

Uploaded via Capitol Website

February 23, 2012

TO: HONORABLE SENATORS DONOVAN DELA CRUZ, CHAIR, MALAMA SOLOMON, VICE CHAIR AND MEMBERS OF THE COMMITTEE ON WATER, LAND AND HOUSING

SUBJECT: **SUPPORT OF S.B. 2397, SD1, RELATING TO FIRE SPRINKLERS.**  
Prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes. Effective 1/1/2025. (SD1)

HEARING

DATE: Thursday, February 23, 2012  
TIME: 1:30 p.m.  
PLACE: Conference Room 225

Dear Chair Dela Cruz, Vice Chair Solomon and Members of the Committee:

The General Contractors Association (GCA) is an organization comprised of over six hundred (600) general contractors, subcontractors, and construction related firms. The GCA was established in 1932 and is celebrating its 80<sup>th</sup> anniversary this year; it remains the largest construction association in the State of Hawaii. GCA **supports** S.B. 2397, SD1, Relating to Fire Sprinklers.

S.B. 2397, SD1 amends Chapter 46 of the Hawaii Revised Statutes by adding a new section that would prohibit any county from mandating the installation or retrofit of automatic fire sprinklers or such a system in any new or existing detached one-or two-family residential dwelling unit.

GCA respectfully recommends an amendment to this measure for clarification, as follows:

No code adopted by a county may include a requirement that fire sprinklers be installed in a single family dwelling or a residential building that contains no more than two dwelling units.

GCA understands the necessity of protection and safety in homes. However, GCA is opposed to mandates that would present a significant cost burden to homebuilders and homeowners alike. Instead, GCA encourages incentives that would encourage homebuilders and homeowners to install fire safety measures that would reduce the likelihood of fire hazards. This bill addresses such mandates being considered in building codes.

GCA is opposed to the mandated installation of automatic sprinklers in residential homes for the following reasons: (1) cost burden to homeowners is significant; (2) new homes are built safer; (3) newer technologies to address fire hazards may be available in near future, negating installation of fire sprinklers; and (4) incentives are encouraged, rather than mandates.

Honorable Donovan Dela Cruz, Chair  
Senate Committee on Water, Land and Housing  
February 23, 2012  
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GCA is in support of S.B. 2397, SD1 and would respectfully request that this Committee pass this measure.

Thank you for the opportunity to testify.



# **BIA-HAWAII**

## **BUILDING INDUSTRY ASSOCIATION**

### **Testimony to Senate Committee on Water, Land, and Housing**

Wednesday, February 23, 2012

1:30 p.m.

Capitol Room 225

#### **RE: S.B. 2397 SD1, Relating to Fire Sprinklers**

Good morning Chair Dela Cruz, Vice-Chair Solomon, and members of the Committee:

My name is Gladys Quinto Marrone, Government Relations Director for the Building Industry Association of Hawaii (BIA-Hawaii). Chartered in 1955, BIA-Hawaii is a professional trade organization affiliated with the National Association of Home Builders, representing the building industry and its associates. BIA-Hawaii takes a leadership role in unifying and promoting the interests of the industry to enhance the quality of life for the people of Hawaii.

Thank you for holding a hearing on SB 2397 SD1, which prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes. **BIA-Hawaii strongly supports SB 2397 SD1.** We would like to **propose an amendment so SB 2397 SD1 will read instead: No code adopted by a county may include a requirement that fire sprinklers be installed in a single family dwelling or a residential building that contains no more than two dwelling units.** This language will not prevent the Fire Department from requiring fire sprinklers in homes that need it due to their rural nature or distance from a water source.

The home building industry is committed to the safety of the communities in which they build, but BIA-Hawaii opposes mandating fire sprinklers in new one- and two-family homes because: 1) new homes are built with better fire safety measures and other fire safety measures are required that are proven to save lives; 2) fire sprinklers are not cost-effective; 2) targeted fire safety education programs work; 3) fire sprinklers have not been proven to enhance the safety of occupants; and 4) if a homeowner wants to install a fire sprinkler, that option should be theirs.

#### **New homes are built better and safer.**

There have been significant improvements to the fire safety of homes over the past few decades leading to a dramatic and continued decrease in fire incidents, injury, death, and property loss. There is no data to suggest that sprinklers will significantly improve this decline.

Several examples of inexpensive fire safety improvements to residential construction that have led to these reductions in fire incident, injury and death include:

- . Interconnected, hardwired smoke alarm systems
- . Carbon monoxide detectors
- . Improved electrical systems
- . Improved framing and fire blocking techniques, and
- . Improved fire ratings on interior furnishings and building material

Additional information can be found in Attachment A.

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Furthermore, the majority of residential fires that occur today are in older homes that generally do not have many of the improved fire safety features required in today's construction. Based on our own research (see attached), since 2005, residential fires on Oahu involved older homes. Most were built prior to 1970, and as far back as 1912. Sprinkler proponents argue that "new homes become old." However, that argument lacks substance because it does not acknowledge that the fire safety features required in today's construction are permanent, as is the protection they provide. Fire sprinklers in new homes will not make them safe. Fire sprinklers in old homes will make them safe.

**Fire sprinklers are not cost-effective.**

Costs for residential fire sprinklers can vary. A BIA-Hawaii developer member received an estimate of **\$6,500** from a reputable sprinkler company using union labor for a new 1,400 square foot, two-story home. Additionally, another developer got an estimate in 2008 for **\$34,000** to sprinkle a 6-plex consisting of 3-bedroom units at 1,100 square feet each. The latter cost did not include the cost of infrastructure to bring the water to the building as it was on a separate water supply to ensure adequate pressure.

Proponents have presented estimates of \$4,000 and up, but those are based on mainland figures and do not include the cost of shipping and labor. As we have seen recently in Kailua, homeowners were quoted upwards of \$16,000 for a sprinkler system, and it was unclear whether that cost included connecting the system to the City's water source. Depending on where the new home will be built, issues such as water pressure, or whether trenching is required, all add to the cost of the system.

We are committed to the safety of the communities we build, but this additional cost can disqualify someone for a mortgage.

**Fire education programs work.**

BIA-Hawaii supports fire safety education programs for consumers as one of the most effective and reasonable means to preventing residential fires and reducing death, injury, and property loss well as cost-effective residential fire protection technologies that are required by current codes.

Other fire prevention efforts, such as targeted fire safety/prevention education programs, have also been successful. Programs of this nature should be considered first since they will ultimately prevent more fires and property loss and, more importantly, injury and death. For example: The State of South Carolina successfully implemented a fire safety program entitled "Get Alarmed South Carolina." As a result their fire death rate dropped 41% from 1996 to 1998. The program included a smoke alarm distribution component. Fire prevention education programs work, especially for those homes and home environments at greatest risk.

**Fire sprinklers have not been proven to enhance the safety of occupants**

Sprinkler mandates apply only to those homes at least risk. Furthermore, based on National Fire Protection Data, the risk of death in a home with sprinklers is still close to 30% and property loss is still substantial and would still be far less overall than the overall cost of sprinklers under mandatory requirements.

**Homeowners should decide.**

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Since the homeowner will be burdened with the tremendous cost of a fire sprinkler system, they should be able to decide whether a sprinkler system suits their needs. Homeowners should decide whether a 5-10% savings in homeowner's fire insurance, which equates to about \$65/year for one of our members, works for them. Proponents also discuss a possible tax credit as an incentive to install fire sprinklers. However, if sprinklers are mandated, tax credits as incentives don't work.

**Additional important information.**

*I-Codes:* Residential fire sprinklers are required in the 2009 International Building Code (IBC) and International Residential Code (IRC), which the SBCC will discuss this year. However, these I-Codes are only *model* codes, and not the minimum standard requirements. It becomes the minimum standard when the State adopts their code. Fire sprinklers goes far beyond the minimum requirement for public health and safety, particularly since fire safety measures are already required in the codes. These existing and new fire safety requirements cost far less than fire sprinklers and are proven to save more lives.

*Legislation:* Hawaii would not be the first state to do what SB 2397 SD1 proposes to do. To date, at least **35 states** across the nation have either amended the mandate out at the state level, or have passed legislation requiring that no model code be adopted by a municipality mandating residential sprinklers. (National Association of Home Builders; Attachment B.)

*Decreased fire deaths:* According to the Centers for Disease Control and Prevention (CDC), there were 377,000 home fires in the United States in 2009 which killed 2,565 people and injured another 13,050, not including firefighters. In 2009, there were 305,000,000 people living in the United States. The CDC goes on to say that the number of fatalities and injuries caused by residential fires has declined gradually over the past several decades, and many residential fire-related deaths remain preventable through education.

*Fire Sprinkler Investigative Committee:* Finally, fire sprinkler proponents argue that this requirement is not yet required in any code, so this bill is premature. However, the State Building Code Council (SBCC) has formed an investigative committee that is preparing a report pursuant to H.R. 47 HD1 (2011), which requested that the SBCC adopt the requirement that automatic fire sprinklers be installed in new one- and two-family residences. That report is due to the Legislature in 2015, but it will be biased in favor of residential fire sprinklers because that is what the committee is tasked to do.

SB 2397 SD1 is required because discussions at the SBCC on the upcoming 2009 IRC, which includes the sprinkler requirement, will likely begin in mid-2012 and the requirement can be adopted before the committee report is due. If it is adopted, then State DHHL housing projects, the Administration's plan for affordable housing, and Hawaii's economic recovery will be negatively impacted.

**BIA-Hawaii strongly supports SB 2397 SD1, with an amendment**

The Pacific Resource  
**PARTNERSHIP**



Testimony of C. Mike Kido  
External Affairs  
The Pacific Resource Partnership

Senate Committee on Water, Land, and Housing  
Senator Donovan M. Dela Cruz, Chair  
Senator Malama Solomon, Vice Chair

SB 2397, SD1 – Relating to Fire Sprinklers  
Thursday, February 23, 2012  
1:30 pm  
Conference Room 225

Aloha Chair Dela Cruz, Vice Chair Solomon, and Members of the Committee:

My name is C. Mike Kido, External Affairs of the Pacific Resource Partnership (PRP), a labor-management consortium representing over 240 signatory contractors and the Hawaii Carpenters Union.

PRP supports SB 2397, SD1 Relating to Fire Sprinklers which prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes.

PRP opposes mandating fire sprinklers in new one- and two-family homes for the following reasons:

First, Hawaii had the nation's lowest fire death rate in 2008, 1.6 per million residents, according to data compiled by the U.S. Fire Administration (a branch of FEMA). The national rate was 12.0 deaths per million. (The District of Columbia topped the list at 32.2 million.)

Nationally, residential building electric malfunction fires are trending downward, going from 30,000 in 2006 to 26,100 in 2010, a decline of 13%. Heating-related malfunctions are the second leading cause of residential fires in the US. Because few Hawaiian homes have heating systems, the incidence of residential fires is lower than the elsewhere.

According to the National Fire Protection Association, up to 90% of residential fires are contained by the operation of just one sprinkler, and that fatality risk is reduced by about 80% with automatic fire sprinkler systems.

Next, FEMA estimates the cost of a home sprinkler system in new construction at \$1.61 per square foot. The Building Industry Association of Hawaii calculates that the average size of a new single-family home is 2,377 square feet. Using the FEMA estimate, the additional cost of system installation comes to \$3827 for an average home.

Hawaii's distance and other factors together make the FEMA estimates low. A 20% Hawaii premium would mean installation costs of \$1.92 per square foot. Using three estimates for new residential construction costs (\$100, \$150, and \$200 per square foot) suggest the additional cost of a sprinkler system would be 1.92%, 1.28%, and 0.96%, respectively. These figures are in line with national estimates, which assume that home fire sprinkler installation adds 1-1.5% to the total building cost in new construction. Based on new SFH area of 2,377 square feet, the incremental increases would thus be partly mitigated by Hawaii's overall construction costs, with the biggest percentage burden falling on builders/owners of cheaper units.

According to the National Fire Protection Association, almost two-thirds of home fire deaths resulted from fires in homes without smoke alarms (38%) or with non-functioning fire alarms (24%). The 1994 Uniform Building Code Section 310.9.1 adopted by Hawaii requires residents to install smoke detectors in all new and renovated dwelling units.

The death rate per 100 reported home fires, NFPA data shows, is twice as high in homes without a working smoke alarm as it is in those protected by functioning alarm systems. NFPA has also cited a survey showing that in one-fifth of US homes with smoke alarms the alarms were not working.

Statewide fire policy is coordinated by the State Fire Council (SFC), on which the chiefs of the four county fire departments and other administrators serve. The SFC's aim is to "develop a comprehensive fire service emergency management network of the protection of life, property, and the environment through the state." The current state fire code was approved by the sitting governor in 2001; Maui was the final county to adopt the code, in 2006, while Hawaii County continues to utilize a 1988 code due to legal issues. According to the Honolulu Fire Department's website, Hawaii and Colorado remained the only two states not having a state fire marshal as of June 1, 2009.

Thank you for the opportunity to share our views with you and we respectfully ask for your support on SB 2397, SD1.

National Fire Incident Reporting System  
City and County of Honolulu  
Structure Fire Report  
2006-2010

| FIRES                        | TOTAL | % OF TOTAL LOSS | ESTIMATED DOLLAR LOSS | % OF TOTAL LOSS | INJURIES | % OF TOTAL INJURIES | FATALITIES | % OF TOTAL FATALITIES |
|------------------------------|-------|-----------------|-----------------------|-----------------|----------|---------------------|------------|-----------------------|
| All Structure                | 1,227 | n/a             | \$77,083,268          | n/a             | 105      | n/a                 | 15         | n/a                   |
| Single-Family                | 499   | 40.7            | 40,517,668            | 52.6            | 56       | 53.3                | 10         | 66.7                  |
| Multifamily                  | 214   | 17.4            | 9,494,685             | 12.3            | 28       | 26.7                | 5          | 33.3                  |
| High-Rise                    | 71    | 5.8             | 2,450,800             | 3.2             | 7        | 6.7                 | 0          | 0.0                   |
| High-Rise with Sprinklers    | 24    | 2.0             | 235,950               | 0.3             | 1        | 1.0                 | 1          | 6.7                   |
| High-Rise Without Sprinklers | 47    | 3.8             | 2,214,850             | 2.9             | 6        | 5.7                 | 0          | 0.0                   |
| Sprinklers                   | 52    | 4.2             | 428,320               | 0.6             | 6        | 5.7                 | 1          | 6.7                   |
| Without Sprinklers           | 1,175 | 95.8            | 76,654,948            | 99.4            | 99       | 94.3                | 14         | 93.3                  |

# ATTACHMENT A

## Additional Fire Safety Measures International Residential and Building Codes

There have been many improvements to reduce the number of injuries and fatalities in the built environment. Below are a few examples:

- **Smoke alarms-** The new 2012 International Residential Code now requires that smoke alarms are installed and maintained in accordance with the National Fire Alarm Code (NFPA 72). This code calls for smoke alarms to be installed inside every bedroom, on every level of the dwellings and an additional smoke alarm in the immediate vicinity outside the bedrooms. The smoke alarms are required to receive power from a primary power source with a battery back-up in case of power outages. The smoke alarms are also required to be interconnected so that if one smoke alarm detects a fire, all of the smoke alarms throughout the house will go into alarm. National Fire Alarm Code 72 also requires that the smoke alarms are tested annually and that they are replaced after ten years of service.
- **Carbon monoxide-** The 2009 and the 2012 International Residential Codes both require carbon monoxide detectors to be installed in dwellings that have fuel-fired appliances or have an interconnected garage. While carbon monoxide detectors do not detect fires, they do prevent fires that are the result of occupants misusing heating equipment or cooking appliance that are not intended to be used indoors that can lead to a potential fire.
- **Under floor protection and fire separation between the house and the garage-** While the code has required type-x wallboard between the habitable space of the home and the garage for many years, the 2012 International Residential Code now has a requirement that protect fire firefighters from early collapse of floor systems. Since the introduction of lightweight engineered floor products (such as open web trusses, wood I-beams, cold form steel joists etc.) the fire service has been concerned with the faster burn rate of these products due to the products not containing the same mass as dimensional lumber. The 2012 International Residential Code now requires that floor systems that use these products in location, such as over basements or crawlspaces that contain fuel fired appliances, that they must be protected by a layer of drywall.
- **Emergency escape and rescue openings-** Both the 2009 and 2012 International Residential Codes require that all bedrooms, basements, and habitable attics must have an emergency escape and rescue opening. These openings can be in the form of a door or window, as long as they meet a minimum opening dimension of 5.7 square feet. These openings are intended to be used as a secondary means of egress in the event that the occupant is unable to escape through the primary means of escape, the front door. These openings are also used by the fire service to gain entry into the house to fight basement fires, where entering through the main level could be hazardous.
- **Fire resistant construction-** Based on the proximity of the dwelling to the property line or adjacent buildings on other lots, the exterior of the dwelling is required to be constructed with a fire resistant rating of one hour. Based on the fire separation distance overhangs and projections, [exterior walls] are required to meet certain fire resistance ratings, while openings such as doors and windows are limited in their number based on the distance. Townhouse and two-family

dwellings are required to have a continuous fire rated wall assembly that separates the dwellings and extends from the foundation up to the underside of the roof.

- **Arc-Fault Circuit Interrupters (AFCI)**- AFCI's are required by both the International Residential Code and the National Electrical Code. These devices are intended to reduce the number of fires that are caused by arcs between wires that have either been damaged or worn protective sheathing.
- **Fuel gas appliances**- The 2012 International Residential Code has added several provisions to increase the safety of fuel fired appliances such as water heaters, boilers and heating equipment.

Sprinkler provisions already exist in Appendix P of the International Residential Code:

- Available for jurisdictions to adopt case by case
- Based on community specific need or want
- Does not force other jurisdictions to amend the IRC
- Current approach overwhelmingly endorsed by ICC membership

Based on these provisions and several other requirements within the 2012 International Residential Code, the National Association of Home Builders and the Building Industry Association of Hawaii continue to oppose the mandatory requirement of residential fire sprinklers.



## Honolulu House Fires

Source: Honolulu Advertiser/Star-Bulletin

### 2005

1. April 8, 2005. 815 Lopez Lane, Palama. No injuries. Smoke from bedroom windows; allegedly originated in a middle room. Estimated damage at \$275,000. (TMK 16001057; built 1912.) <http://archives.starbulletin.com/2005/04/08/news/story7.html>
2. June 17, 2005. 2441 Yvonne Place, Palolo. Older, wooden home. One dead, in his 70's; lived alone. (TMK: 34029001, built 1952.) <http://the.honoluluadvertiser.com/article/2005/Jun/17/br/br14p.html>
3. September 30, 2005. Ho'opi'o Street in 'Ewa Villages. Suspected arson. Two-story, single-wall home. No one home during fire. Damage estimated at \$450,000. <http://the.honoluluadvertiser.com/article/2005/Sep/30/ln/FP509300368.html>

### 2006

1. December 20, 2006. 684 Iana Street, Kailua. No one home during fire. Electrical problem blamed for fire. Damages estimated at \$250,000 to structure, \$50,000 to contents. (TMK: 4-2-046:029, built 1960.) <http://the.honoluluadvertiser.com/article/2006/Dec/20/br/br9371206485.html>
2. November 16, 2006. 'Ewa Beach. Determined as arson by stepson of victim. <http://www.kitv.com/news/10349286/detail.html>

### 2007

1. April 5, 2007. 1222 Honokahua Place. Family of four was home. Home was **35 years old**. Damages estimated at \$320,000 for structure and \$70,000 for contents. <http://archives.starbulletin.com/2007/04/05/news/story12.html>
2. April 10, 2007. Lalawai Drive in Halawa Heights. Suspected arson. <http://the.honoluluadvertiser.com/article/2007/Apr/11/br/br0625174389.html>
3. May 6, 2007. Pohaku Street, Kalihi. 93-year old man died in a back room. Caused by a space heater in victim's room that was positioned too close to the bedding. Damages estimated at \$200,000 to structure and contents. <http://the.honoluluadvertiser.com/article/2007/May/06/ln/FP705060358.html>
4. May 8, 2007. Waiialae Iki. Caused by an electrical short. Damages estimated at \$350,000. No injuries. Smoke detectors present, but not sure if triggered. <http://www.firehouse.com/news/news/family-escapes-honolulu-house-fire>

## 2008

1. April 1, 2008. Niu Valley, end of Puamamane Street. Home of Nainoa Thompson and Kathy Muneno. Caused by a malfunction of an electric tankless water heater. Damage estimated at \$300,000 to structure and \$50,000 to contents. No injuries.  
<http://the.honoluluadvertiser.com/article/2008/Apr/01/ln/hawaii804010334.html>
2. April 27, 2008. 1218 Ala Pili Loop, Salt Lake. Damages estimated at \$450,000 to structure and \$30,000 to contents. One man living alone escaped. (TMK: 11068054; built 1971.)  
<http://archives.starbulletin.com/2008/04/28/news/briefs.html>
3. June 6, 2008. 91-984 Waimomona Place, 'Ewa's Soda Creek subdivision. Damage estimated at \$410,000 to structure and contents. Man escaped. (TMK: 9-1-051:033; built 1989.)  
<http://the.honoluluadvertiser.com/article/2008/Jun/07/br/hawaii80607048.html>
4. June 6, 2008. 91-992 Waimomona Place, 'Ewa's Soda Creek subdivision. Damages estimated at \$430,000 for structure and contents. Woman escaped. (TMK: 9-1-051:032; built 1989.)  
<http://the.honoluluadvertiser.com/article/2008/Jun/07/br/hawaii80607048.html>
5. June 8, 2008. 1000 block of Kamahale Street, Enchanted Lake, Kailua. No injuries. Home was unoccupied. Suspected arson. Damages estimated at \$40,000 for structure and \$5,000 to contents.
6. November 28, 2008. Mililani. <http://www.topix.com/forum/city/honolulu-hi/TF1SG1UMDFBPIR803#comments>
7. December 19, 2008. Ala Moana apartment, The Commodore. Caused by a clock radio's electric malfunction. No one home during fire.  
<http://exactproductsinc.com/WordPress/?cat=15>
8. December 27, 2008. 45-114 Pua'ae Place, Kaneohe. No one home during fire, which started shortly after power resumed. (TMK: 4-5-084:048; built 1963.)  
<http://www.kitv.com/news/18367181/detail.html>
9. December 27, 2008. Ahuimanu Road, Kaneohe. Witnesses saw intense flames shortly after power resumed. <http://www.kitv.com/news/18367181/detail.html>

## 2009

1. April 23, 2009. 2069 Mauna Place, above Roosevelt High School, Makiki. (TMK: 2-4-037:031; built 1952.) 2 confirmed dead. 10-15 minutes to completely destroy the home. 8 people in the home when started. Alleged arson. Owner escaped after smoke alarms went off. <http://www.kitv.com/news/19259873/detail.html>

2. May 12, 2009. Mahau Street, at intersection of Meheula Parkway and Kamehameha Highway. Four people escaped two-story home.  
<http://www.kitv.com/news/19441720/detail.html>
3. October 30, 2009. Anoi Street, Kaneohe. Wood structure. No injuries. Damages estimated at \$500,000 for structure and \$100,000 to neighbor's home.  
<http://www.kitv.com/news/21478971/detail.html>
4. November 8, 2009. 1277 Kipaipai Street, Pearl City. (TMK: 97024027; Permitted 1974.) Ten people resided. Damages estimated at \$50,000 to structure and \$3,000 to contents. Damage limited to upstairs bedroom. Some smoke detectors present.  
<http://the.honoluluadvertiser.com/article/2009/Nov/09/br/hawaii311090017.html>
5. November 25, 2009. Bertram Street, St. Louis Heights. Caused by electrical short. Two people escaped. Roof made out of aluminum.  
<http://www.kitv.com/news/21724367/detail.html>
6. December 25, 2009. 95-604 Wehewehe Loop, Mililani. Suspected arson. Damages estimated at \$500,000. Single-story wooden home. No injuries. (TMK: 9-5-018:067; built 1969.)  
<http://www.kitv.com/news/22059921/detail.html>

## 2010

1. January 11, 2010. 2740 Pacific Heights Road. Caused by arson to cover up a burglary. Estimated damage at \$50,000 to structure and \$5,000 in property damage. No one home and no injuries. (TMK: 2-2-030:013; built 1929.)  
<http://the.honoluluadvertiser.com/article/2010/Jan/11/ln/hawaii1110345.html>
2. January 13, 2010. Ala Hoku Place. Moanalua Valley. No injuries.  
<http://www.kitv.com/news/22231386/detail.html>  
[http://www.youtube.com/watch?v=v\\_GuoF33iww](http://www.youtube.com/watch?v=v_GuoF33iww)
3. February 22, 2010. Victoria and Green Streets, Makiki. No injuries.  
<http://www.youtube.com/watch?v=5OVLtakPIMg>
4. March 1, 2010. 760 Hauoli Street, McCully apartment complex. Suspected arson. (TMK: 2-3-031:028; built 1941.)  
<http://the.honoluluadvertiser.com/article/2010/Mar/01/br/hawaii303010006.html>
5. March 3, 2010. Ho'olaule'a Street, Pearl City. 89-year old victim; lived alone. Damages estimated at \$250,000.  
<http://the.honoluluadvertiser.com/article/2010/Mar/03/ln/hawaii3030346.html>

6. July 30, 2010. 2203 Ahe Place, Palolo. (TMK: 3-4-003:010; built **1954, 1966, 1974**.) Suspected arson. No one home. Damage estimated at \$250,000.  
[http://www.staradvertiser.com/news/breaking/Police looking for arsonist in Palolo house fire.html?id=99663254](http://www.staradvertiser.com/news/breaking/Police%20looking%20for%20arsonist%20in%20Palolo%20house%20fire.html?id=99663254)
7. August 30, 2010. Pohakupuna Road, 'Ewa Beach. 70-year old resident in critical condition from smoke inhalation. Caused by an unattended cigarette. Estimated \$85,000 in damages.  
<http://www.hawaiinewsnow.com/Global/story.asp?S=13070478>
8. October 1, 2010. Waianae.

## 2011

1. February 25, 2011. 923 Lolena Street, Alewa Heights. Home abandoned. Damages estimated at \$300,000. Other homes also damaged. (TMK: 1-6-010:087; no data.)  
<http://www.firefighterclosecalls.com/news/fullstory/newsid/130247>
2. April 27, 2011. 3953 Koko Drive, Wilhelmina Rise. Speculated that the explosions may have come from other oxygen tanks in the home. A couple in their 80's was critically injured. (TMK: 3-3-014:072; Built **1957**.)  
[http://www.staradvertiser.com/news/breaking/Large fire engulfs house on Wilhelmina Rise.html?id=120798264](http://www.staradvertiser.com/news/breaking/Large%20fire%20engulfs%20house%20on%20Wilhelmina%20Rise.html?id=120798264)
3. May 31, 2011. Cottage next door to a mansion at 1 Kokee Place, Portlock. Damages were estimated at \$600,000. One person at home in the cottage got out without injuries. (TMK: 3-9-026:003; built **1971**.)  
<http://www.staradvertiser.com/news/breaking/122891579.html?id=122891579>
4. June 8, 2011. 94-326 Apele Street, Mililani. Two women who were sleeping in the home escaped without serious injury after they were awakened by the smell of smoke. (TMK: 9-4-105:038; built **1979**.)  
<http://www.staradvertiser.com/news/breaking/123472894.html?id=123472894>
5. June 10, 2011. Puhikani Place, Ewa Beach. Wife had just put a load of laundry in the dryer when she heard an explosion and saw flames. Three people were home and escaped without injury. Garage suffered extensive damage, but firefighters were able to help keep the fire from damaging the home.  
[http://www.staradvertiser.com/news/breaking/Firefighters extinguish fire at home of police union president.html?id=123639909](http://www.staradvertiser.com/news/breaking/Firefighters%20extinguish%20fire%20at%20home%20of%20police%20union%20president.html?id=123639909)
6. July 11, 2011. End of La'i Road off 10<sup>th</sup> Avenue, Palolo Valley. Two victims, elderly couple. Wood structure. <http://www.kitv.com/video/28517248/detail.html>

7. August 2, 2011. Two house fires: Pilimai Street, Waipahu, Waipahu Gardens Subdivision. Started in the back of the house. Kitchen fire with hot oil. Kapahu Street in Papakolea. Home belonged for former fire fighter. <http://www.kitv.com/video/28748832/detail.html>
8. September 25, 2011. Waimano Home Road, Pearl City. A cooking fire caused \$6,000 in damage. <http://www.staradvertiser.com/news/breaking/130548728.html?id=130548728>
9. November 1, 2011. 49-020 block of Kamehameha Highway, Kahaluu. The two-bedroom home was built of redwood and constructed in the **1950s**. No injuries. Damage was estimated at \$300,000. Fire source was 500 feet away.  
<http://www.staradvertiser.com/news/breaking/133057243.html?id=133057243>
10. November 24, 2011. 2634A Kalihi Street. Caused by a malfunctioning desk fan. A man in his 70s suffered a minor burn in the blaze. Dollar loss estimated at \$250,000. (TMK: 1-3-038:014; built **1980**.)  
<http://www.staradvertiser.com/news/breaking/134458963.html?id=134458963>
11. November 25, 2011. 640 Palawiki Street, Enchanted Lake. No one home. (TMK: 4-2-041:062; built **1959**.)  
<http://www.staradvertiser.com/news/breaking/134521273.html?id=134521273>
12. November 28, 2011. Nihi Street, Kalihi Valley. Fire was accidental due to unattended cooking (fried chicken). Possible portable propane tanks stored in home.  
<http://www.kitv.com/news/29874308/detail.html>
13. November 29, 2011. Foster Village. Intentionally set. Damages estimated at \$5,000 to structure and \$1,000 to contents.  
<http://www.therepublic.com/view/story/5f1e9a10d29a4bda8aefb7acd0bca553/HI--Fire-Attempted-Murder/>
14. December 1, 2011. 91-834 Kimopelekane Road, 'Ewa. No injuries. Damages estimated at \$275,000. (TMK: 9-1-008:006; built **1959**.)  
[http://www.khon2.com/content/news/developingstories/story/Fire-destroys-three-bedroom-home-in-Ewa-Beach/5kLO4ZM\\_AEaKrnvgdlodGg.csp](http://www.khon2.com/content/news/developingstories/story/Fire-destroys-three-bedroom-home-in-Ewa-Beach/5kLO4ZM_AEaKrnvgdlodGg.csp)
15. December 4, 2011. 2243 Sea View Avenue, Lower Manoa. (TMK 2-8-016:013; built **1941, 1954, 1960**.) No injuries. Damages estimated at \$200,000 to home and contents. Three other homes damaged, approximately \$50,000.  
<http://www.kitv.com/news/29919331/detail.html>
16. December 15, 2011. Bachelot Street, Liliha. 77-year old victim found on the second floor of the house. The front part of the home was on fire.

[http://www.msnbc.msn.com/id/45670970/ns/local\\_news-honolulu\\_hi/t/woman-dies-injuries-liliha-house-fire/#.Tu YvjUeN5g](http://www.msnbc.msn.com/id/45670970/ns/local_news-honolulu_hi/t/woman-dies-injuries-liliha-house-fire/#.Tu YvjUeN5g)

17. December 16, 2011. Kaipii Street, Kailua. Fire began in a cabinet located in the living room and was caused by a malfunction of a game console battery charger. Estimated damage at \$400,000. <http://www.kitv.com/news/30067057/detail.html>
18. December 17, 2011. Makule Road, 'Ewa. Damages estimated at \$250,000 for structure and \$50,000 to contents. Fire appeared to have started in the kitchen. No injuries. <http://www.staradvertiser.com/news/breaking/135816908.html?id=135816908>
19. December 21, 2011. 434 Launiu Street, Waikiki. Flames started in the living room of a downstairs rental unit and was caused by a hand-held electric massager. Damage estimated at \$450,000. (TMK: 2-6-017:046; built 1941.) <http://www.kitv.com/news/30067057/detail.html>

THE GENTRY COMPANIES



February 23, 2012

The Honorable Donovan Dela Cruz, Chair  
Senate Committee on Water, Land, and Housing  
State Capitol, Room 225  
Honolulu, HI 96813

RE: S.B. 2397, S.D. 1, Relating to Fire Sprinklers

Dear Senator Dela Cruz and Members of the Committee:

My name is Debbie Luning, Director of Government Affairs for Gentry Homes, Ltd., testifying in **strong support of S.B. 2397, S.D. 1, Relating to Fire Sprinklers**. The purpose of this bill is to prohibit the counties from requiring the installation or retrofitting of automatic fire sprinklers or an automatic fire sprinkler system in any new or existing detached one- or two-family dwelling unit in a structure used only for residential purposes. We believe that mandatory installation of fire sprinklers in single family and duplex homes, while well-intentioned, will not necessarily achieve the desired results of saving lives due to home fires. We are also concerned about the added cost to new homebuyers if it becomes a mandate. Our concerns about mandating fire sprinklers are summarized below.

- 1) **The requirement to install fire sprinklers would apply only to newly constructed homes, not to older homes which are basically the source of the problem.** Homes built nowadays are much safer in terms of fire prevention because of the types of materials, construction design and methods that are used. Examples include safer electrical wiring, double wall drywall construction, fire-rated garages, draft stops, cement siding and integrated smoke detector alarm systems that are very sensitive. These features were not necessarily included in homes built over 15 years ago; yet, the mandates in these resolutions would not apply to older homes -- they would only apply to newly constructed homes.
- 2) **Fire sprinklers will be ineffective unless there is a direct source of heat that triggers the sprinklers.** Smoke and noxious gases are the biggest threats in a home fire, and asphyxiation by poisonous fumes in the air outweighs burning as cause of death by a 3:1 ratio. A fire sprinkler, unless triggered by heat, will be ineffective in these circumstances.

3) **Fire sprinklers will be ineffective unless they are regularly maintained.** One cannot merely install a fire sprinkler system; it has to be regularly maintained in order for the system to work effectively. It is our contention that many homeowners will be negligent in regularly maintaining their fire sprinkler systems, thereby rendering them ineffective.

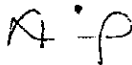
4) **Insurance companies will not cover the cost of damage caused by false alarms.** This is a very real and very practical concern. Insurance companies will not cover the cost of water damage should the fire sprinkler go off accidentally or unexpectedly – there has to be an actual fire in order for them to do so. This could mean tens of thousands of dollars of damage that the homeowner will have to pay for out of his/her own pocket.

5) **Mandating the installation of fire sprinklers in new homes would affect affordability.** Whenever additional requirements are placed on the development of newly constructed homes, the cost of homes increase and more people get priced out of the housing market. If one of the goals of the Legislature and government is to provide more affordable homes for Hawaii's people, it doesn't make sense to place additional requirements that add to the cost of a home, especially when the requirement has not been proven to be necessary. We are by no means advocating placing people's lives at risk, but we do have concerns about mandating fire sprinklers which may not be needed in newly constructed homes.

For the reasons stated above, we are strong support of this bill and urge its passage with the amendment proposed by the Building Industry Association of Hawaii. Thank you for the opportunity to provide comments.

Sincerely,

GENTRY HOMES, LTD.



Debra M. A. Luning  
Director of Governmental Affairs and  
Community Relations





**Alan Shintani INC.**  
GENERAL CONTRACTOR BC 13068

February 23, 2012

Senator Donovan Dela Cruz, Chair  
Senator Malama Solomon, Vice Chair  
Committee on Water, Land, and Housing  
State Capitol, Room 225  
Honolulu, Hawaii 96813

RE: SB 2397 SD1, Relating to Fire Sprinklers

Dear Chair Dela Cruz, Vice Chair Solomon, and Members of the Committee:

Thank you for holding a hearing on SB 2397 SD1, which prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes. **Alan Shintani, Inc. strongly supports SB 2397 SD1.** I would like to propose an amendment so SB 2397 SB1 will read, "No code adopted by a county may include a requirement that fire sprinklers be installed in a single-family dwelling or a residential building that contains no more than two dwelling units." This language will not prevent the Fire Department from requiring fire sprinklers in homes that need it due to their rural nature of distance from a water source.

Alan Shintani, Inc. is committed to the safety of the communities in which we build, but opposes mandating fire sprinklers in new one- and two-family homes because: 1) new homes are now being built with better fire safety measures and other fire safety measures are required that are proven to save lives; 2) fire sprinklers are not cost-effective; 3) targeted fire safety education programs work; 4) fire sprinklers have not been proven to enhance the safety of occupants; and 5) if a homeowner wants to install a fire sprinkler, that option should be theirs.

**New homes are now built better and safer.**

There have been significant improvements to the fire safety of homes over the past few decades leading to a dramatic and continued decrease in fire incidents, injury, death, and property loss. There is no data to suggest that sprinklers will significantly improve this decline. Furthermore, the majority of residential fires that occur today are in older homes that generally do not have many of the improved fire safety features required in today's construction.

**Fire sprinklers are not cost-effective.**

Costs for residential fire sprinklers can vary, but proponents have only presented cost estimates based on mainland figures and the County of Maui, about \$7,000 to \$9,000. As we have recently seen, Kailua homeowners were quoted a price upwards of \$16,000 for a sprinkler system. It was unclear whether that cost also included connecting the system to the City's water source. Depending on where the new home will be built, issues such as water pressure or

trenching is required, will also significantly add to the cost of the system. Another substantial expense not included is the cost of shipping, labor, and maintenance.

**Fire sprinklers have not been proven to enhance the safety of occupants.**

Sprinkler mandates apply only to those homes at least risk. Based on National Fire Protection Data, the risk of death in a home with sprinklers is still close to 30% with property loss still substantial. Overall, this would still be far less than the total cost of sprinklers under mandatory requirements.

**Homeowners should have the choice to choose.**

The homeowner should decide whether a sprinkler system is what they want. Even though the government is responsible for the public's health and safety, the homeowner is still who will bear the additional cost. Proponents also discuss a possible tax credit as an incentive to install fire sprinklers. However, if sprinklers are mandated, tax credits as incentives do not work.

Hawaii would not be the first state to do what SB 2397 SD1 proposes to do. To date, according to the National Association of Home Builders, at least 35 states across the nation either have amended the mandate out at the state level, or have passed legislation requiring that a municipality mandating residential sprinklers adopt no model code.

Fire sprinkler proponents argue that this requirement is not yet required in any code, so this bill is premature. However, the State Building Code Council (SBCC) has formed an investigative committee that is preparing a report pursuant to HR 47 HD1 (2011), which requested that the SBCC adopt the requirement that automatic fire sprinklers be installed in new one- and two-family residences. The report is due to the Legislature in 2015, but will be biased in favor of residential fire sprinklers because that is what the committee is tasked to do.

Finally, SB 2397 SD1 is required. Discussions at the SBCC on the upcoming 2009 IRC, which includes the sprinkler requirement, will likely begin in mid-2012 and the requirement can be adopted before the committee report is due. If adopted, State DHHL housing projects, the Administration's plan for affordable housing, and Hawaii's economic recovery will be negatively impacted.

**Alan Shintani, Inc. strongly supports SB 2397 SD1, with an amendment.**

Thank you for the opportunity to share my views with you.

Sincerely,



President  
Alan Shintani, Inc.



**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Wednesday, February 22, 2012 8:50 AM  
**To:** WLH Testimony  
**Cc:** greg@ccs-hawaii.com  
**Subject:** Testimony for SB2397 on 2/23/2012 1:30:00 PM

Testimony for WLH 2/23/2012 1:30:00 PM **SB2397**

Conference room: 225  
Testifier position: **Support**  
Testifier will be present: No  
Submitted by: Greg Thielen  
Organization: **Complete Construction Services**  
E-mail: [greg@ccs-hawaii.com](mailto:greg@ccs-hawaii.com)  
Submitted on: 2/22/2012

**Comments:**

I am the Owner of Complete Construction Services a small business specializing in residential remodeling and new home construction. I have over 20 years experience in the construction industry. Please pass SB2397. Our industry is currently under regulatory assault in terms of mandated code changes driving up the cost of construction and moving home ownership further out of reach. Homes today already are built to much higher safety standards. Fire Sprinklers just cost too much and provide no significant increase to personal safety.

February 22, 2012

To: The Committee of Water, Land, and Housing

Submitted by: Paul Haake

Occupation: Fire Prevention Bureau Captain  
Department of Fire & Public Safety, Maui County

Testimony: Not in Support of SB2397

Dear Committee Members:

I am not in support of SB2397. The requirement for the installation of fire sprinklers in one- and two- family dwellings has been included into nationally recognized fire prevention and life safety standards to address where the most fire deaths have occurred...in residential occupancies. These standards are minimum standards; to do less than the minimum is risky, to mandate to do less is, to me, unthinkable.

There are many positives regarding the installation of fire sprinklers in one- and two-family dwellings. First and foremost, these systems save lives! These systems also save water; reducing the amount of water necessary to extinguish a house fire. Money is saved by reducing the amount of damage that needs to be repaired. Land-fill space is saved by reducing the amount of fire-damaged materials that need to be disposed. The stress and despair people face when involved with a house fire is greatly reduced because priceless items are saved and all is not lost. Furthermore, jobs are created for people that will do the installation of these systems.

I have heard many of the myths that have been stated to bring forward such legislation: costs, water damage, maintenance, aesthetics, and retrofitting. Ironically, most people would spend more than the cost of a fire sprinkler system on a counter top or room ensemble. Most people don't know that only the sprinkler heads exposed to heat will activate, not all of them; and most times one or, at the most, two heads will put out the fire. There are very little working parts in a sprinkler system so very little maintenance is required. Also, sprinkler heads have been created that are concealed so you may not even know that a home is sprinklered. As far as retrofitting, none of the standards with a sprinkler requirement for dwellings require existing homes to be retrofitted; this requirement would only apply to new homes.

To say that the evolution of building codes have addressed the threat of fire in buildings is true to some degree, however this evolution has also introduced the use of light-weight construction materials. Homes built today don't withstand the heat of fire as they did before. Furthermore, the use of poly-urethane foams and other similar materials in furniture has introduced items into a home that burn just like gasoline in a fire, causing home fires to flashover (all items in the room burn instantly) within 2-3 minutes. Sprinkler systems would keep a home fire small (most times extinguish it), minimize the heat exposure to the light-weight construction materials and furniture of a house, and give people more time to escape. You could say that smoke alarms serve almost the same purpose; but when smoke alarms and a sprinkler system are provided in a home, fire deaths percentages are very close to zero.

Although I am definitely for fire sprinklers in one- and two-family dwellings, I am not saying these systems should be mandatory. I do feel that a community and its constituents, after being educated on the subject, should be able to make this decision through their county law-making process. To implement such a state-wide ban is unthinkable; fire sprinkler systems SAVE lives, not destroy them. Therefore, I ask you not to support SB2397.