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April 7, 2016

Mayor Scott Higgins
City Council Members - City of Camas
616 NE 4th Avenue
Camas, WA 98607

Dear Honorable Mayor Higgins and Members of the Camas City Council:

It has come to our attention that there has been a letter signed by four groups including the Building Industry Association of Clark County (BIACC) to the City of Camas that opposes a new mandatory fire sprinkler ordinance on all one and two family residential dwelling units. We fully support the ordinance and the improved life safety for single family residences that results from the installation of residential fire sprinklers. We are concerned that the information provided for your consideration in the letter they provided was incomplete and not current.

Groups opposed to residential sprinklers will state that the costs for residential sprinklers are the primary factor for not requiring their installation. They state that the cost is significant enough to affect housing sales and increase homelessness due to a shortage of affordable housing. For jurisdictions that have enacted a mandatory residential fire sprinkler ordinance, they have found that is not the case. The costs for residential sprinklers do vary by areas in the State, but they are currently averaging around 2-3% of the cost of the house. Comparing that to other components of construction costs, that is less than the costs for appliances or putting in granite counters (compared to other materials for the counters). The cost figures provided in their letter are not indicative of the actual costs that the fire sprinkler industry is charging. They have selected high cost examples or examples of homes that are much larger than the average size in order to indicate high dollar figures.

With the letter you received, there were several points that we would like to address:

1. *Not included in these costs is the ongoing maintenance of the systems* – there is little to no maintenance to residential fire sprinklers as the system is just like the plumbing in the home.
2. *Additional meters that are required in some jurisdictions* – There is a perception that the water use will exceed the capability of a normal meter. This is not the case. For the majority of jurisdictions, no additional meter is required.
3. *Increased costs for installation of larger water lines* – The piping for residential sprinklers can use the plumbing piping and resulting flows will not require the piping to be increase in size.
4. *And in many cases, a required water tank and a secondary water line between the meter and the home* – A pump and tank system can be required for very specific situations that have low water supply. The cost of the pump and tank are usually around \$1,500 – less than .5% of the cost of construction.



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We agree with the letter than in early 2008, the Washington Legislature requested the State Building Code Council (SBCC) to form a Fire Sprinkler Technical Advisory Group (TAG) to explore the broad ramifications that surround the installation of residential fire sprinklers statewide. In November 2008, the SBCC approved their report, "Voluntary Private Residential Fire Sprinkler Systems" and forwarded it to the Legislature as a guiding document as to why Washington does not mandate sprinkler systems for single family homes in the State's building codes. Members of our Association participated in that TAG.

The report identified seven barriers and stated that until these issues are resolved, residential fire sprinkler installation in single-family homes could be problematic. Although the information provided in the other letter indicated that these barriers are still valid today, they are not. There has been continuing removal of the barriers through legislation and growth of the fire sprinkler industry.

Here are our responses to those barriers:

Barrier 1: Lack of Education

There is an increased awareness among homeowners about the life-safety benefits of sprinkler systems. In many cases, homeowners are requesting fire sprinklers and there are some in the construction industry that are not willing to provide them. This is a closed-minded situation, and we agree that more needs to be done to improve the knowledge and understanding of fire sprinkler systems for the builders.

Barrier 2: Lack of Preferred Design and Installation Details and Guidelines

The requirements for the design and installation of fire sprinklers in residential dwellings can use NFPA 13D or Section P2904 of the State amended International Residential Code. For those locations in which fire sprinklers are installed, there are consistent installations that are resulting in lower costs as more systems are installed.

Barrier 3: Cost and Cost Recovery of a Voluntary RFSS Installation

We do agree that the cost of installing residential fire sprinklers can vary from area to area. This is usually based on the supply and demand. Areas with more fire sprinkler systems are less expensive to install compared to areas without regular installations. Nationally, the average cost has been decreasing. Cost recovery is becoming more available as more insurance carriers provide coverage discounts for fire sprinklers; for example a typical premium discount for fire sprinklers is between 4 to 13%. It is also worth mentioning that, by state law, jurisdictions are not allowed to impose fire impact fees for new developments where fire sprinklers are required.

Barrier 4: Costs for Permit and Inspection

For the jurisdictions that require installation of fire sprinklers, they have been able to incorporate the plan review and inspection with the normal building permit fees. For other jurisdictions, the costs for the required plan review and inspection are based usually on value of the work or the number of sprinklers. The fees are not significant.



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Barrier 5: Increased Cost of Hook-Up Fees in Form of Stand-By System Development Charges

There is a concern that homeowners may have to increase the meter size serving their property in order to proceed. That is not correct as the normal fire sprinkler system for a new home will use the same water line coming into the building as the plumbing.

Barrier 6: Shut-Off Issues

This particular issue has been addressed at the Legislative level. Water purveyors cannot be exposed to increased liability as a result of a fire at a residence that has a RFSS but is inoperable due to the water being shut off. There is no additional required maintenance for these types of fire sprinkler systems other than what is normally done with plumbing systems.

Barrier 7: Water Use Efficiency Rule Credit for Use of Larger Meters

This barrier was focused on the need for larger meters. For those jurisdictions installing fire sprinklers, the meter size is not affected. There is no need to address this concern as it has been deemed to be unnecessary.

Based on the actual installations of residential fire sprinklers in jurisdictions, such as Kenmore, their building industry has not collapsed. Instead it is solid and healthy. They have seen costs comparable to the national average (\$1.82/sf in 2013).

We are confused with this statement included in the letter: "Homebuilders cannot financially bear the increased cost to build a house if it cannot be passed on to homebuyers in the form of increased home prices." That seems to imply that homebuilders are incurring the costs, which is not what we have seen. The costs get passed to the homeowners and there are occurrences in which the builder markup has been inflated to demonstrate a higher cost (sprinkler contractor in Spokane was asked to increase the cost because it was too low and then the builder added a significant overhead).

The letter provided information from the 2014 Fire Fatality Report prepared by the Washington State Patrol - Office of the State Fire Marshal. The letter indicated that there is a reduction in fire deaths in the State and that the death rate is lower than the national average. We hope that trend continues. What is disconcerting to us is that they did not include the effect of fire in residential dwellings in regards to injuries (including fire fighters) and the value of fire loss.

They also indicated: "The continued decrease in fire related deaths can be attributed to new technology and modern building practices making today's new homes safer." In studies conducted by Underwriters Laboratories (UL), the time for flashover (all components in a room reach a temperature to ignite) in current construction is around 3-1/2 minutes. Older homes, in comparison, have less combustible or flammable construction and contents and have a much longer time to flashover (up to 30 minutes). Here is a link to a video of the test:

<https://www.youtube.com/watch?v=IEOmSN2LRq0>



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It is apparent that the potential for risk to the occupants and fire loss is higher for newer constructed homes.

We usually hear about a 2014 study by the National Association of Home Builders regarding the potential home buyers priced out of purchasing a home. This is a generic calculation that does not take into effect several factors and can be easily disproved when you look at the local housing market. For instance, low and moderate income first time homeowners do not typically purchase new homes, but purchase existing homes.

The letter indicated that the issue is keeping homes at an affordable price so that most people have an opportunity to purchase a home and experience the benefits of homeownership. What we are focusing on is the affordability, but with a home that is safe. Most fires in homes without fire sprinklers require extensive renovation and repair to the point that the homeowner has to live elsewhere. In homes with fire sprinklers, the repair and damage is limited to the point that the homeowner can stay in their home after an incident.

We greatly appreciate your service to the residents of Camas and ask that you look closely at what is being stated with efforts to reduce or dismiss property protection and life safety for your citizens and emergency responders.

Respectfully,



Jonathan Dunaway, President
Washington State Association of Fire Marshals