Mark McKinnon, OPFFA President  
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Ontario College of Trades  
Board of Governors  
700 Bay Street, Suite 1700  
Toronto, ON M5G 1Z6  

Dear Board of Governors:  

The Ontario Professional Fire Fighters Association (OPFFA) offers this letter of support for the classification review of the trade of Sprinkler & Fire Protection Installer. We concur with the trade board’s intention to seek compulsory certification.  

As you know, the health and safety of firefighters in Ontario is a constant concern of the OPFFA. We maintain that with mandatory training and licensing, Sprinkler & Fire Protection Installers will greatly help to address the occupational health and safety risks associated with fighting fires.  

The health and well-being of firefighters and the citizens of Ontario should be a central part of discussions surrounding the regulation of construction trades in the province. The information contained in this package outlines in detail our organization and why compulsory certification of Sprinkler & Fire Protection Installers is important for our members’ safety.  

Thank you for your time and consideration.  

Sincerely,  

Mark McKinnon,  
OPFFA President
Who We Are

For more than 90 years, the Ontario Professional Fire Fighters Association (OPFFA) has been advocating for the occupational health and safety of firefighters across the province. Affiliated with the International Association of Fire Fighters (IAFF), the OPFFA today represents more than 11,000 professional firefighters in Ontario through 80 individual locals.

We were founded in 1920, two years after the IAFF was formed, as the Provincial Federation of Ontario Fire Fighters. As it was back then, our goal today is to provide career firefighters with the necessary support and highest level of service and expertise to assist them throughout their professional career. To do this, we look beyond the bargaining table and use educational seminars, legislative action and media outreach.

OPFFA continues to grow and represent Ontario firefighters at all levels of government.

Executive Board

As of 2002, OPFFA delegates began electing their Executive Board for two-year terms. Below is a list of the current Executive Board:

President — Mark McKinnon
Elected as President in June 2012, Mark previously held the position of Executive Vice-President (2008-2012) and Secretary-Treasurer (2006-2008). He is a firefighter from Toronto, holding the rank of Captain. Mark also has nine years of experience in municipal politics, sitting on Whitby city council from 1997-2006.

**Executive Vice President — Jim Holmes**

Jim Holmes was elected Executive Vice-President in 2012 and has previously served as Treasurer and President. He began his career with the London Fire Department in 1978 and holds the rank of Platoon Chief. As Executive Vice President, Jim oversees the Association’s legislative branch and political activity.

**Secretary Treasurer — Ernie Thorne**

After working for 26 years in Toronto local associations, Ernie Thorne was elected the Secretary Treasurer in 2012. Ernie has served in various roles previous such as District 1 Vice President and on the Executive for the Etobicoke Professional Fire Fighters Association and Toronto Professional fire Fighters Association.

**District VPs**

- District 1- Brent Heppell
- District 2- Chris Francescone
- District 3- Mike Pauze
- District 4- Carmen Santoro
What Firefighters Face

Firefighting is a consistently dangerous job. Trained for more than extinguishing fires, the job description of an Ontario firefighter has broadened along with public expectations. Ensuring personal safety, saving victim’s lives and minimizing property damage all combine to make the job increasingly complex. With these complexities are constant health and safety risks that we strive to minimize whenever possible.

Moreover, firefighters are facing new hazards every day that may not have been a concern in the past. New building material and an increase in the construction of high-rise buildings in major urban areas are presenting new health and safety concerns for firefighters.

Decades ago, smoke inhalation did not pose the same level of toxic risks it does today. Households had comparatively limited items at risk of generating chemical-laden fumes. New technology and an increase in plastic household items have created much more dangerous and increasingly toxic smoke for firefighters. The release of carbon dioxide, carbon monoxide and methane are notably higher in rooms burning without the aid of
sprinkler heads. The release of carbon monoxide in buildings without automatic sprinkler heads, a deadly gas, can be as high as 100,000 ppm compared to a building equipped with sprinkler heads which produces 10,000 ppm.¹

Emerging Health and Safety Concerns

Firefighters are exposed to a growing number of dangerous gases when they are battling fires, such as:

- carbon monoxide and dioxide; sulfur oxides
- Bromide; chlorine or bromine; simple hydrocarbons; amines; nitrites
- Benzene
- Nitrogen oxides; hydrogen cyanide; hydrogen chloride, fluoride
- Irritant Gases - such as aldehydes, organic acids, ketones and acrolein

This change has resulted in emerging health and safety concerns for firefighters. One of the most prominent health concerns from firefighting is the development of cancer.

The OPFFA has firsthand experience with the tremendous loss that fire departments and communities experience when a member is diagnosed with a cancer caused

through occupational-related toxins. On August 3, 2012, Innisfil fire fighter and OPFFA member, Craig Hofland, lost his battle with fire exposure related cancer.

Hofland had been diagnosed with Multiple Myeloma, a cancer that is more often found in firefighters who are exposed to carcinogens in smoke. The many new carcinogens that are present in fires from new building materials and an increase in plastic household items are making this type of cancer even more prevalent in firefighters. The introduction of sprinkler systems has proven to decrease the amount of air pollutants compared to fires that are not contained by activated sprinkler heads.²

With the passing of Bill 221, the _Workplace Safety and Insurance Amendment Act_, the Minister of Labour was able to amend regulations to recognize occupational diseases contracted by professional firefighters. Later, in June of 2007, the Ontario government made those amendments to include eight new cancers as occupational diseases contracted through firefighting. This legislative step displays the government’s recognition of the increased risks in modern firefighting.

Even with recognition in legislation, this new and dangerous smoke is another reason that fires must be contained and toxic smoke levels decreased. The ever-increasing number of toxins produced by fires means that the proper installation of sprinkler systems by trained and licensed professionals has the ability to combat this challenge.

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Statistics show that when sprinklers operate as designed – and are properly installed and maintained – they are highly effective at reducing the spread of fires. Fire damage is up to six times worse in buildings that do not have an adequately installed and maintained sprinkler system.\(^3\) In a fire test using identical rooms, the non-sprinklered room had more than 200 kg of damaged materials, while the sprinklered room only had a weight of 12.8 kgs.\(^4\) Additionally, sprinkler systems have been quoted as being effective 90 per cent of the time.\(^5\)

The uses of automatic sprinkler systems in fires have shown to reduce the emission of carbon dioxide, methane and nitrous oxide by 97.8\%.\(^6\) This drastic decrease proves that when automatic sprinkler systems are properly installed and functioning, firefighters and Ontario public breathe in drastically cleaner air.

**Injury and Fatalities of Firefighters**

While diseases such as cancer are a major concern for firefighters, injury and death from combating fires remains a constant possibility throughout a firefighter’s career.

Over the years 2002-2011, 206 fire fighters lost their lives in Canada in the line of duty, with many of those being in Ontario. While the number may not appear high, it still

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\(^3\) FM Approvals, “Understanding the Benefit: FM Approved Sprinkler” 2012  
\(^4\) ibid, page 64  
\(^6\) ibid, ii
represents the real risks of the occupation. OPFFA continues to work to reduce the risks faced by its members and will actively advocate for potential steps that can be taken by the Ontario government to prevent the injury and death of firefighters. The use of sprinkler systems clearly slows the fire spread and thus greatly reducing the chance of death or serious injury to firefighters. In this case, the compulsory certification of Sprinkler & Fire Protection Installers will contribute to the safety precautions that we have worked to establish. Although sprinkler systems have a positive effect in reducing the spread of fires and toxic smoke, they are no replacement for fire fighters who must still enter a burning building to perform rescue and further fire fighting operations.

The Interdependence of Water Systems

The proper installation of sprinkler systems in buildings is an extremely complex task, one that involves an in-depth understanding of the building's current water systems. The improper installation of sprinkler systems can to seriously disrupt the function of a building's water supply, something that could seriously compromise the efforts of firefighters.

After the design area has been determined for a building, calculations must be performed to determine the appropriate water source for the system that can deliver the necessary water pressure. The calculation process is highly complicated and if
adequate water sources are not still available after installation, firefighters may lack the necessary resources to combat fires.

When fire crews arrive at any building in a fire situation that has a fire sprinkler and or a standpipe system connected to fire hose cabinets, they need to be able to rely on a suitable connection to these vital systems. Firefighters depend on these systems to supply the water they need to suppress the fire and protect their crews, the occupants of the building and the property of the building. It is imperative that these systems operate as prescribe in codes and standards as the lives of occupants and fire crews depend on it.

This is a major concern for the OPFFA and our members. Firefighters must be equipped with all necessary resources to complete the job at hand. In the case of a fire, water is a necessity — without it, firefighters’ lives are at serious risk.

**Increase in Sprinkler Systems**

The Ontario government recently enacted a policy that mandates sprinkler systems in high-rise buildings and long-term care facilities, an initiative that will result in a drastic increase in the installation of sprinkler systems. It has been mandatory to include sprinkler systems in newly-built senior homes in Ontario since 1998; however this measure will require all senior homes in the province to retrofit their facilities to comply.
The changes will come into effect on January 1, 2014, and buildings will have up to five years to comply. This legislative change is sure to increase the amount of tradespeople installing sprinkler systems.

Ontario is home to 50,000 seniors who reside in about 700 retirement homes. By 2017, Ontario will have more people aged over 65 than children under 15. The need for retirement home space is only growing in the province. This, coupled with the now mandatory installation of sprinkler systems, means that sprinkler fitting will become a trade that is in high demand.

This reality is yet another reason the Ontario College of Trades must ensure sprinkler fitters are properly trained and licensed underneath the college. The increased demand for sprinkler fitters will most definitely draw inexperienced, non-licensed workers to the trade. Remaining a voluntary trade will only encourage non-licensed workers to install sprinkler systems, potentially improperly, exposing seniors, the public and firefighters to unnecessary danger. Unless sprinkler and fire protection installers are designated a mandatory trade, there is always a risk that contractors will find ways to cut costs and use uncertified people to install sprinkler systems, with the subsequent risk that is not properly installed and maintained.

The consequences of this action have the potential to be dire.
This regulatory change is the right step by the government of Ontario. The OPFFA fully supports the installation of sprinkler systems in all long-term care homes, which house some of our most vulnerable citizens. The OPFFA supports any legislation that increases the use of sprinkler systems in all commercial and residential buildings.

Flashovers in home fires lead to many of the injuries and death of building residents. As noted above, material in homes has evolved over the years, reducing the time between the start of a fire and when a flashover occurs. Some have cited this time has almost been cut in half, from 4.3 minutes to 2.2 minutes. The use of sprinkler systems has the ability to combat flashovers, which can easily harm resident in less than three minutes.

Most fatal fires occur between 12:00 am and 6:00 am, when victims are sleeping and unable to move quickly after being alerted by a smoke alarm. Sprinkler systems work to target the fire before flashover occurs, thus reducing death. For these reasons, OPFFA is fully supportive of the increased use of sprinkler systems.

However, this step will not be effective without sprinkler fitters falling underneath the compulsory designation to ensure they are properly trained and licensed while completing this complex work.

*Increased Height of Wood Framed Buildings*
In the past two parliaments, three private member’s bills have been brought forward aiming to amend the Building Code Act, 1992. Previously, wood structures were regulated to a maximum height of four storeys — the proposed legislation looked at increasing that number to six storeys.

The bills were presented with the intention of increasing demand for the Northern Ontario lumber industry, while at the same time lowering costs for home builders. Progressive Conservative MPP Vic Fedeli, the sponsor for two of the three private member bills, represents a Northern Ontario riding and sees both the benefit of increased demand for lumber and decreased costs for home builders.

While the support for this bill is fragmented, it should be noted that the increase in wood-framed buildings has precedent outside of Ontario. In 2009, British Columbia passed amendments to its building code increasing the maximum height to six storeys. This increase has shown new demand for lumber in the province and also more willingness for builders to construction wood-framed multi-dwelling buildings, combating urban sprawl.

Representing the professional firefighters of Ontario, it will be a serious concern for our organization that the proper precautions are in place to ensure more fires do not occur.
While we understand the merit in this legislation, it will be essentials to ensure properly installed sprinkler systems are in place in these wood-framed buildings.

The main safety concern that accompanies an increase in wood-framed buildings is the rapid spread of fire throughout such structures. When more buildings are being built at a height of six storeys, it will be necessary to equip such buildings with sprinkler systems. It is crucial that these sprinkler systems are installed properly by trained and licensed professionals.

**What We Have Done**

We have not stood idly by while firefighters continue to face occupational health and safety risks. As an association representing the province’s career firefighters, we have participated in a number of activities to ensure the health and safety of our members. Here is a small sample of the things we have done:

- **Cancer/Disease Advocacy**
  - The OPFFA understands the occupational risk factors that are associated with fighting fires. We have made it clear that we support government initiatives to fight occupational hazards such as cancer.
  - Beyond occupational concerns, we are intimately involved in fundraising for colon and other cancers.
• Supporting Fire Prevention
  
  o We offer health and safety seminars to our members to better address the health concerns from fighting fires.
  o We promote the need for fire prevention in household and commercial spaces. We have done this recently by being vocal in the media after fire tragedies and engaging in public relations outreach that includes education and awareness about the necessity of working smoke alarms in homes and businesses.
  o We are strong advocates for the proper installation and maintenance of sprinkler systems.

• Political Action
  
  o In 2002, we created PROPAC, a political action group that addresses the issues of our members’ wages, health and safety to the provincial government.
  o We understand the political landscape and know government capability to address health and safety concerns in a pragmatic way.

What Can Be Done

One measure to reduce fire damage is the proper installation and use of fire prevention equipment. Fire extinguishers, alarms and sprinkler systems all should be available and properly installed. While the drive to equip residential homes with smoke alarms is an
ongoing task for fire departments across the province, sprinkler systems may be the best prevention method, especially in large commercial and multi-residential spaces.

Currently, the Ontario College of Trades does not recognize sprinkler and fire protection installers as a compulsory trade. This is problematic, as it is essential to fire safety that sprinkler systems are properly installed. It only takes a few sprinkler heads to be improperly installed to compromise the integrity of the entire sprinkler system. It is a complex trade that requires properly trained and licensed sprinkler fitters to do the job.

It is obvious that our members stand to benefit from properly installed and maintained sprinkler systems in the province. Ontario has already witnessed the problems that result from improperly installed sprinkler systems:

- Improper maintenance of the sprinkler system in an Ottawa nursing home caused the system to freeze, and then flood the facility. The system was turned off and left out of service for the winter.

- Sprinkler heads at the Peterborough Sports Complex were installed above a suspended ceiling, providing no protection below the ceiling.

- Toronto office workers were put at risk when sprinkler heads were installed in the ceiling, but no pipes were connected to the heads.
- A dry system in Kingston was filled with anti-freeze, a poisonous substance that threatened the safety of the people of the building and had the potential to contaminate the public water supply.

Ontario firefighters should be confident that the sprinkler systems in place to help reduce the damage or completely stop a fire are working properly. Beyond just the mishaps from faulty systems, Ontario has also witnessed a number of serious injuries and deaths from a lack of sprinkler systems:

- In 1980, 25 residents of the Extendicare Retirement Home in Mississauga were killed in a fire.
- In 1995, eight residents of the Meadowcroft Place Retirement Home in Mississauga died in a fire.
- Fires at Rowanwood Retirement Residence home in Huntsville caused more than $8 million in damage in 2008-09.
- A fire at the Niagara Falls Cavendish Manor Retirement Residence resulted in the hospitalization 11 seniors, including three in critical condition.
- A fire at the Muskoka Heights retirement home in Orillia resulted in the deaths of four seniors and the permanent brain damage of three others.
- In May 2012, an elderly couple was killed in a fire at a nursing home in Hawkesbury.
By designating sprinkler fitters as a compulsory trade, the Ontario College of Trades would be standing up not only for the health and safety of Ontario firefighters, but also for every resident of and visitor to the province. Sprinkler systems protect people and their belongings from the ravaging damages of fire and smoke; it is vitally important that they are installed properly, maintained consistently. The best way to ensure this happens is to certify sprinkler fitters as a compulsory trade and require standardized training and certification to install and work on this crucial fire prevention tool.