



Memorandum

TO: Kevin J. Jackson, Village Manager 

FROM: Craig Failor, Development Services Director 

FOR: Village Board of Trustees

DATE: September 16, 2025

SUBJECT: Fire Code Sprinkler Regulations Response

Purpose

The purpose of this memorandum is to present current and relevant data for the Village Board's contemplation in response to their questions regarding fire sprinkler regulations within existing Building and Fire Codes that were discussed at their June 3, 2025, Village Board meeting.

Background

At the June 3, 2025, Village Board meeting, Development Services staff presented, as a "first reading", a request to update current building and fire codes from the 2021 version to the 2024 version. Staff identified key changes with each applicable code subject of the presentation. One item that was identified for further discussion was a commission-driven change to the construction limitation when a sprinkler system is required based on the square footage of a building addition/renovation. Current requirements, which have been standard practice in Oak Park since 2015, state that if a building addition reaches or exceeds 50% of the building's square footage, a sprinkler system must be installed.

It was mentioned at the June meeting that the Building Code Advisory Commission (BCAC) recommends the threshold for sprinkler systems be increased from the current 50% to 75% of the building's square footage. It was also mentioned that the former and current Fire Chief, as well as Development Services staff, continue to support the 50% regulation, as the 50% rule is consistent with other building code demarcations, such as the International Existing

Building Code (IEBC). Minutes from September 19, 2024, BCAC meeting, where they changed their previous support of retaining the 50% rule, indicated that a discussion was had regarding River Forest's sprinkler system requirements, whose threshold is currently set at 90%. After speaking with a Fire Department representative from River Forest, it was indicated that the Fire Department was still supportive of their previous 50% rule.

Building Permit Summary – Five-year history.

Building permit research was conducted from January 2021 to the present day. It was discovered that a total of 109 sprinkler systems were installed in Oak Park's residential community. There were 551 new water services installed in residential areas as well. In a further review of those permits, it was found that only four (4) specified a need to increase water service lines due to the installation of a fire sprinkler system, which can cost, on average, approximately \$6,700 in addition to the fire sprinkler system. One anomaly was a direct bore of 60 feet that cost \$10,000. It was also revealed that the average installation cost of a fire sprinkler system was \$11,721.50. This calculation includes additions, new construction, new homes, ADUs, and gut rehabs. There are two acceptable methods to support fire sprinkler installation: municipal water service line/upgrade or a tank and pump system. The latter system is less expensive. On an existing 3/4" water service line using a 110-gallon tank and 2hp pump, it will cost around \$3,800 – \$4,400. On a 65-gallon tank and 1.5 hp pump, it will cost approximately \$3,600–\$4,200. This cost is in addition to the fire sprinkler system.

Other Communities and Regulations (attached)

The *Illinois Residential Sprinkler Retrofit Requirements* for home sprinklers table, prepared by staff, shows the retrofit requirements of regional and adjacent communities. In a majority of communities identified, 50% of a remodeled area or new additions on existing residential structures require the installation of a residential sprinkler system. Several of the communities have stricter requirements, and a few are less restrictive. Overall, the 50% rule is the point at which sprinklers can be installed with open walls in half or more of the home. This makes installation easier and more cost-effective.

The 50% rule is a percentage used in our Existing Building code in which a Level 2 alteration, which involves the reconfiguration of space, adding or removing doors or windows, reconfiguring or extending building systems, or installing additional equipment, all within a work area that is equal to or less than 50% of the building's aggregate area. Level 3

installation, which is an extensive reconfiguration exceeding 50% of the building area. Level 3 installations require the designer to go into new construction codes for code-required installation. For all new residential construction, sprinklers are required regardless of size.

Accessory Dwelling Units

The Village Zoning Ordinance offers five types of ADUs: Coach house, stand-alone, attic conversion, basement conversion, and an addition to the principal structure. Two of the five would require sprinkler systems, as they are deemed new residential construction: a coach house and a stand-alone unit. Other units' needs for a fire sprinkler system would depend on their square footage. To date, only the coach house type of ADUs has been constructed.

Insurance

Regarding the question of whether or not sprinkler systems effectuate a reduction in home insurance costs and an increase in home value, the *Home Fire Sprinkler Coalition*ⁱ states that most insurers offer premium discounts for smoke alarms, but home fire sprinkler systems are also eligible for a premium discount with most insurers. Having it connected to a central station is usually worth an additional discount. In their advertised survey, they indicate that 69% of homeowners say fire sprinklers increase a home's value. A local American Family Insurance agent in River Forest agreed that most carriers offer a home sprinkler system discount. He stated further that adding a sprinkler system should also increase the replacement value due to its cost to install. As a result, overall cost savings could be close to a wash.

Highlights:

- *Home Fire Sprinkler Coalition / State Farm* reports average property loss of about \$2,166 in homes with sprinklers versus \$45,019 in non-sprinklered homes. That's a reduction of over \$42,800 per fire event.
- A Scottsdale, AZ study found losses of \$1,945 in sprinklered incidents vs. \$17,067 in non-sprinklered ones—yielding roughly \$15,122 in savings per incident.
- Additional data from Prince George's County, MD showed average damage of \$3,429 with sprinklers vs. \$326,752 without sprinklers — over \$323,300 saved per case.
- *NFPA (National Fire Protection Association)* indicates that sprinklers reduce property damage by about 62%, lowering average loss from around \$21,700 to roughly \$8,200.
- *American Fire Sprinkler Association* states sprinklers may reduce fire damage up to 97% and repeats the \$2,166 vs \$45,019 example.

Residential fire sprinkler systems can save homeowners tens of thousands—and in some cases, hundreds of thousands—of dollars in property damage per fire. While exact savings vary by circumstance and home type, most studies point to dramatic reductions in loss, making sprinklers a highly cost-effective safety upgrade.

Sustainability

While this subject was not raised, it is important to point out the sustainable attributes fire sprinkler systems provide. The *Home Fire Sprinkler Coalition* contends that sprinkler systems can dramatically reduce pollution from a home fire.

1. Greenhouse gas emissions are cut by 97.8%.
2. Water usage is reduced between 50% and 91%.
3. Fewer persistent pollutants, such as heavy metals, are found in sprinkler wastewater compared to fire hose water.
4. Without fire sprinklers, the high pH level and pollutant load of suppression wastewater are an environmental concern.

Useful links:

<https://www.nfpa.org/education-and-research/research/nfpa-research/fire-statistical-reports/fire-loss-in-the-united-states>

<https://firesprinklerassoc.org/home-fire-sprinkler-facts/>

<https://firesprinklerassoc.org/13d-communities/>

<https://apps.usfa.fema.gov/civilian-fatalities>

For questions, please contact Craig Failor, Development Services Director, via email at cfailor@oak-park.us or by phone at 708-358-5422.

Attachments:

Illinois Residential Sprinkler Retrofit Requirements – Other Community Regulations.

HFSC Flyers

US Experience with Sprinklers

Insurance Information

Cc: Lisa Shelley, Deputy Village Manager
Ahmad Zayyad, Deputy Village Manager
Christina M. Waters, Village Clerk
Gregory Smith, Village Attorney
Joseph T. Terry, Fire Chief
All Department Directors
Mark Thompson, Fire Marshal
Sean Lintow Sr., Chief Building Official / Permit & Development Manager
Noemy Diaz, Development Services Administrative Officer

ⁱ Home Fire Sprinkler Coalition: “Formed in 1996, HFSC is a 501(c)(3) charitable organization and the leading resource for independent, noncommercial information about home fire sprinklers, their installation and operation, and their proven protection of people, pets and property. HFSC strives to improve and increase awareness of home fire dangers and the life safety benefits of sprinklers for residents and responding firefighters. HFSC creates original and effective educational content and advocacy resources and offers them at no cost.”