



## FIRE SPRINKLER SYSTEMS

### WHEN ARE FIRE SPRINKLER SYSTEMS REQUIRED TO BE INSTALLED?

This is a common enough question that the City has created this handout. Please note this handout is NOT a complete list of permit or code requirements and should NOT be used as a substitute for applicable laws and regulations. This handout is provided as a general guide for common types of occupancies and is intended to be a conversation starter. Please note that educational, factory, high-hazard, institutional, storage and utility/miscellaneous occupancy requirements are not covered AT ALL within this handout.

The City is required to adopt and enforce regulations such as Building and Fire codes to protect the public's health, safety and general welfare related to construction and occupancy of buildings and structures.

When any of the following occur fire sprinkler systems are required to be installed regardless of the type or use of a structure:

- When more than 30 residential units (regardless of whether they are single-or-multi-family) are being accessed off of one (1) road.
- When roads providing access to a structure have slopes in excess of 10%.
- When fire flow is insufficient to put out a fire<sup>1</sup>.
- When fire flow greater than 2,500 gallons per minute exists and the water line is not looped<sup>2</sup>.
- When structures are built that have more than three (3) stories; or are greater than 55 feet in height.
- Vehicular driveways that are: 1) more than 150 feet in length, or 2) do not comply with engineering/fire standards.

In addition to the list above, following is a list of fire sprinkler system triggers specific to multi-family and commercial buildings:

MULTI-FAMILY	COMMERCIAL
<ul style="list-style-type: none"> <li>○ Multi-family or townhouse structures with three (3) or more units built under the International Building Code (IBC).</li> </ul>	<ul style="list-style-type: none"> <li>○ Non-residential structures exceeding 5,000 square feet of fire area<sup>4</sup>.</li> <li>○ Any structure containing multi-theater complexes.</li> <li>○ Any remodel or addition to an existing non-residential structure that changes the footprint such that it exceeds 5,000 s.f.</li> <li>○ Any structure used for gathering people for civic, social, religious, or recreational functions (A-1, A-3 and A-4 Occupancies) where the fire area exceeds 12,000 square feet or the occupancy is for 300 or more people.</li> <li>○ Any structure used for the consumption of food and/or drinks (A-2 Occupancy) where the fire area exceeds 5,000 square feet, has an occupancy of 100 or more people, or when the ground floor exiting is on a different floor than where people will be eating and drinking.</li> <li>○ Mixed use buildings that contain commercial and residential uses; unless the dwelling unit qualifies as a watchman's quarters<sup>5</sup>.</li> </ul>

### BENEFITS OF FIRE SPRINKLERS

Even if you are not required to install a fire sprinkler system, there are many reasons you may still want to. As long as they're designed, installed, and maintained properly most homes and businesses benefit from fire sprinklers because they can:

- **SAVE LIVES:** more than seven (7) people a day die from house fires; according to the National Fire Protection Association (NFPA) sprinklered homes reduce the death rate from fires by 82 percent (82%).
- **REDUCE FIRE & WATER DAMAGE:** in the time it takes the fire department to respond to a 911 call a fire can spread rapidly destroying your building and its contents very quickly. Once firefighters arrive at a fire they will douse your building with an estimated 250 gallons of water per minute that can result in water damage. Fire sprinklers activate almost immediately when triggered and they drastically minimize fire damage and in most cases these systems only need to activate one or two sprinkler heads to extinguish the flames which means water damage is also greatly minimized.
- **LOWER YOUR INSURANCE PREMIUMS:** even if your building never experiences a fire, the lower insurance premiums you will likely realize should help the investment pay for itself.

### QUESTIONS OR ADDITIONAL INFORMATION?

Call the Mount Vernon Fire Marshall (360) 336-6277 or the Mount Vernon Building Official (360) 336-6214.

- 1 Fire flow, its calculations, and its sufficiency: fire flow is the quantity of water available for fire-protection purposes in excess of that required for other purposes. Mount Vernon is not a water purveyor; and as such, fire flow calculations are done by Skagit Public Utility District #1 (PUD). The Mount Vernon Fire Marshall calculates the required fire flow for structures/developments.
- 2 Looped fire line: is an underground conveyance pipe carrying water that is installed such that it creates a continuous loop.
- 3 Townhouse: is a single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with a yard or public way on at least two sides.
- 4 Fire area: is the total floor area enclosed and bounded by fire walls, fire barriers, exterior walls or fire-resistance-rated horizontal assemblies of a building.
- 5 A watchman's quarters is defined within the MVMC as 750 s.f. or less in size.