Building for Life
Fires kill more people in the United States every year than all natural disasters combined. 80% of all fire deaths occur in the home. The single most effective way to prevent fire-related deaths is the installation of residential fire sprinklers. Combined with smoke alarms, they cut the risk of dying in a home fire by 82% compared to having neither.

Fire sprinklers can save money for developers, builders, home owners, and communities. Through the use of trade-ups, developers and builders can achieve reduced construction costs while providing higher value homes for their customers. In the event of a home fire, homeowners can expect financial losses 90% lower than those that occur from fires in unsprinklered homes. Communities can deploy emergency services resources more effectively by reducing the burden caused by home fires.

Build high-value personal security into your new homes with fire sprinklers. Home buyers have never been as aware of security and safety as they are now. New home builders must
offer buyers a new level of value to compete successfully. Fire sprinklers are an economic way to increase the desirability of new homes and enhance the builder’s reputation for quality construction.

**FIRE SPRINKLER FACTS**

**Only the sprinkler closest to the fire will activate, spraying water directly on the fire.** Each sprinkler is individually activated by heat. Despite “sight gags” on TV sit-coms, smoke does not trigger sprinkler operation. The rest of the sprinklers in a house will not activate unless there is also a fire in that location. 90% of all home fires are contained with a single sprinkler.

**Fire hoses, on average, use more than 15 times the water that sprinklers do to contain a fire.** According to the Scottsdale Report, a 10-year study of fire sprinkler effectiveness, a fire sprinkler uses, on average, 209 gallons of water to control a fire. Firefighters, on average, use 3,290. Reduced water damage is a major source of savings for homeowners.

**The odds of accidental activation are 1 in 16 million.** Sprinkler mishaps are generally less likely and less severe than accidents involving home plumbing systems.

**Modern fire sprinklers provide unobtrusive protection.** Unlike commercial fire sprinklers, residential sprinklers are small, and can be recessed into ceilings or walls. Some models are completely concealed by plates that can be matched to room paint colors.
Over the last twenty years home fire sprinklers have become more economical and easier to install. The development of chloro-polyvinyl chloride (CPVC) and other listed non-metallic pipe has simplified installation and has made sprinkler systems more cost effective. In markets where fire sprinklers have become commonplace the cost per square foot has fallen significantly.

A single fire sprinkler can protect an average size bedroom. The standard system for installation, based on NFPA's standard 13D, uses its own...
dedicated system. Each fire sprinkler can cover a maximum area of 12 by 12 feet. A fire sprinkler specialist can design systems for the houses you build that are effective and efficient. A wide variety of available fire sprinkler designs address the needs for installation in ceilings, walls, or sloped ceilings.

NFPA 13D now provides for the installation of multipurpose piping systems for fire protection, which feed both fire sprinklers and cold-water fixtures with the same pipes.
Trade-ups can increase fire safety, control municipal operating expenses and lower construction costs. The best time to take advantage of the trade-up concept for subdivision development savings is prior to submitting subdivision plans. When proper subdivision and development options are provided, development cost can be reduced. Sprinklered developments provide an excellent opportunity to provide increased fire safety.

The cost of developing raw land into an approved building site can be significantly reduced through trade-ups. These options are only applicable if all the buildings in the development will have built-in automatic fire protection. Options include:

Street Width Reduction: Traffic lanes may be narrowed, substantially reducing the amount of pavement in every linear foot of street in the development.

 Longer Dead-end Streets: Dead-end streets may be increased in length allowing additional building lots to be accessed.

Tee Turnarounds Permitted: The permitted use of tee turnarounds in sprinklered developments can create at least one additional lot per cul-de-sac.

Increased Street Grades and Building Setbacks: Steeper street grades and building locations further from paved fire vehicles access may be permitted.
Additional Units Permitted: Although the actual percentage may vary, increases up to 20 percent are not uncommon.

Expansion of Existing Water Supply May Not Be Needed: Required fire flows for fully sprinklered developments can be greatly reduced compared to non-sprinklered developments.

Increased Hydrant Spacing: Supply mains may be reduced and hydrant spacing can be increased.

Decreased Death Rates and Property Loss: Over time, communities with fully sprinklered developments should see a decrease in fire death rates and property loss.

Including fire sprinklers in all new construction is a win-win decision. The community has additional fire protection without higher taxes or increased insurance rates. The developer can reduce land development costs. The builder can reduce construction costs. And the buyer will have increased life and property protection at a lower cost.