



## OFF-CAMPUS

By Tim Knisely

March 2017

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### **New Construction Features: 'A System of Systems'**

Over the last five or ten years there has been an incredible surge in the construction of modern off-campus properties. And, there doesn't appear to be a slowdown in sight. Some of these properties are a few miles from the campus on undeveloped land, or perhaps with older commercial or residential structures being demolished. The location of this housing will be an attraction for some students as long as they have a car, or a bus service. There is also an increase in new construction closer to the campus, within walking distance to

campus and other attractions. These buildings may be taller or high-rise due to the limits in land acquisition.

Some people will be critical of this development no matter where it occurs. Some worry about the impact to traffic, water or other infrastructure.

But, most developers are well prepared and experienced in what they do. They know the rules of zoning, municipal planning and building code requirements.

Typically, if the developers have submitted a plan for land development, they aren't going away.

They already have

enough information to know if their investment of time and money will provide a return. So, we might as well be ready to work alongside them. And, if you as the AHJ have some specific requirements or requests, make sure you share these plans early on.

From a fire safety perspective, new construction is healthy for our students. However, just because the buildings are new the students will still make the same choices. Some good, and others not so good. And, fires will happen. This time, the fires might not make the headlines due to the modern



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construction features.

It may be early suppression by a sprinkler, or early detection by the supervised smoke detector. It could even be the fire-stopping features that prevent smoke and fire from traveling through penetrations in concealed spaces. It could be all of the above. Either way, the occupants are much safer in this housing than what was standing on the property previously.

These buildings will also be safer for the firefighters that respond to fires and incidents here. Overall, any incident will be less labor intensive with the

building systems working in conjunction against the fire. Fires spreading from floor-to-floor or building-to-building will be less frequent.

Of course, these benefits will only be realized if the systems are properly designed, installed and maintained. Thorough plan review and inspection at the time of construction, as well as regular fire inspections of these buildings is all essential.

Property managers, maintenance staff and sub-contractors must all understand how each of these systems function and what can happen if

the systems are altered.

This goes far beyond the maintenance of systems. Training is essential for everyone that works in these modern buildings every day, or one day. This includes:

- Proper training of the painting contractor and knowing what happens if a detector or sprinkler is painted.
- If cable or internet wiring is added to the attic, make sure everyone understands the existing fire-stopping systems and how to properly protect new penetrations.
- If fire rated doors or windows or are damaged or replaced,



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make sure the proper replacement is installed.

Knowing how the systems work or how these were installed, will help to ensure that the systems were restored to normal at the completion of each work order.

The building was built as a system of systems, and must be maintained as such. Failure to maintain these systems may result in undetected, uncontrolled fire growth that will cause significant and unnecessary damage. And, place the residents and firefighters will be placed at undue risk.

*Tim*

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In this position he manages the Existing Structures Division that administers the fire and property maintenance code in all existing commercial and residential rental properties, and coordinates the life safety education for the community including off-campus and Greek housing.

Tim has been active with The Center for Campus Fire Safety since its inception and served as treasurer from 2007 to 2010.

He is a frequent presenter at Campus Fire Forum, an instructor for the Fire-Wise Campus program and served as project manager for Campus Fire Data.

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