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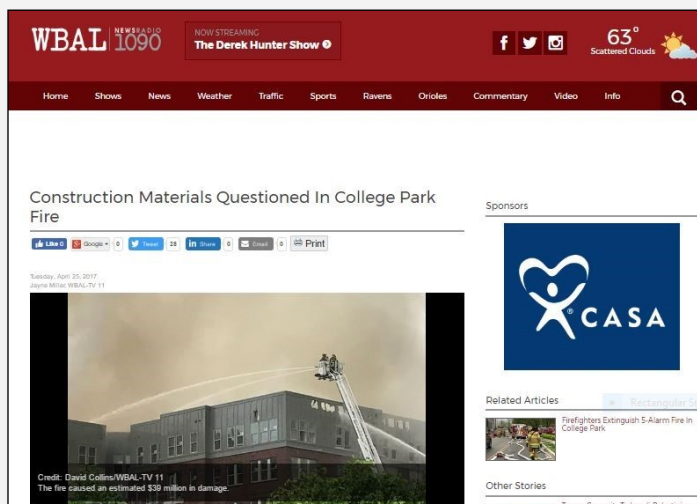
## The K.I.S.S. Principle, Russian Pencils & The Building Code

Lately, I have been giving many Lunch & Learn presentations on Fire Safety and Concrete Masonry Fire Walls (one of my favorite presentation topics). I've given versions of this presentation around the country to local AIA and CSI chapters and at various National Concrete Masonry Association meetings for about 20 years. One of my standard practices has always been to find local building fire examples to emphasize and highlight my key presentation themes and take-away messages. These themes being simply that concrete masonry firewalls do not burn, are fail safe 'Passive Systems' and should be included (rather than minimized or completely eliminated) in buildings.

Usually, I had to manually scour the internet to find newspaper clippings or magazine stories. Today, with Google's strong search engine features and the abundance of useful Newsletters (like this one), these stories find their way to me effortlessly! Let me give you two recent examples.



The first one, in Raleigh, NC occurred on March 18th in a 241 unit, \$51 million apartment building that was under construction. It was completely destroyed. Many local headlines questioned the wisdom in building a 5-story wood-frame apartment building. Based on changes in the national building code, the NC building code was changed in 2009 to allow 4 wood-framed stories atop a pedestal. Apparently there were not any non-combustible fire walls in this building. And, the 'Active Systems' were not yet installed or operating. A simple CMU fire wall may have helped contain this fire. The Chicago-based developer plans to rebuild on site as soon as possible.



The second occurred on April 24th near my alma mater in College Park, MD in a 275 unit wood-framed apartment building, that again, was under construction. While not completely destroyed, the building suffered an estimated \$39 million in damage. And, the smoke from the fire forced the closure of the University of MD and the evacuation of a retirement home across the street.

## The K.I.S.S. Principle, Russian Pencils & The Building Code (cont.)

I have to ask, or at least ponder, this question. Are non-masonry buildings with their fancy and high tech 'Active Systems' catching fire more often? Or, are their Active Systems failing more often once the building catches fire? Or, is it both? I do not know the answer. However, it certainly seems like a no-brainer to at least include some non-combustible CMU fire walls to better contain the fire to its point of origin. Unfortunately, this simple approach was not taken in the two examples cited above.

We know that Active Systems, by their very nature are not fail safe. This is well known and has been documented by NFPA and many insurance companies. Maybe the construction industry, and society at large by extension, is okay with these large fires because nobody was killed? Maybe the cost to re-build them is acceptable? Maybe the disruption to the future residents and those nearby is seen only as minor? Maybe developers are only doing what the Building Code allows?

I am not here to condemn any one party's motives and reasons for building these type of buildings. However, I am here to ask the design community, developers and building code officials to consider keeping our building's fire safety design features a little simpler. How about relying more upon passive, fail safe, non-combustible CMU fire walls and fire resistive walls? How about building with less combustible materials? How about Keeping It Simple Stupid?

The city of Chicago, and the Chicago building code writers, understand the KISS principle very well. After all, we did have the 'Great Chicago Fire' in 1871. Its legacy, in the form of a building code that encouraged the use of more, rather than less, non-combustible masonry building materials is still felt in Chicago to this day.

This brings me to my final point, which is another historical reference. In the 1960s, the US Government (via NASA) spent prodigious sums of money trying to develop an ink pen that would work in the zero gravity conditions found in space. They were not successful. The Russians, on the other hand, decided a simple pencil, sharpened regularly would work just fine. Talk about the ultimate KISS principle.

This type of thinking needs to come back to our Building Codes. Let's remember that old fashioned, simple principles, like a CMU fire wall, are often are the best solutions.

Do you have questions about this or other masonry related topics?

Call MAC at **847-297-6704** for FREE Masonry Advice!



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