MFC News

"Building Understanding"
MFC will find out the truth about buildings and answer the hard questions.

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About MFC News

Myles F. Corcoran and his Team would like to share the best of what we've learned over the years about well-constructed buildings and resolving construction disputes.

Please help us make this a "Construction Community" endeavor by sending us your feedback, comments, wisdom, and ideas for future issues. Call 831-476-4502 or email us at: **mfcnews@mfcbuild.com**.

What's New at MFC...

All four MFC Inspector Consultants have completed, or are currently taking, the two 3-unit courses at Cabrillo College on the 2006 International Building Codes (adopted by the 2007 California Building Codes). Our dedicated IC's went to, or are now going to, night classes each week for two semesters, in order to deepen their understanding of the current building codes in use throughout the industry.

Congratulations are in order for Micah Rodler and Daniel Alcocer for becoming ICC-certified California Residential Building Inspectors.

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Come hear Myles speak at the Western Construction Consultants (Westcon) Dinner Meeting Wednesday, 10/21/09, 6:15 pm at the Encinal Yacht Club, in Alameda. The synopsis of his talk follows in this issues's *Building Tip*. Go to www.westcon.org for information on purchasing a ticket for dinner and his lecture.

Building Tip

Looking for Standards for Flanged Window Installation in Drainage Plane Systems
by Myles F. Corcoran

Is there a drainage plane window installation standard - or standards? What is it? Should such standards, if they exist, change by regional and building exposure factors?

For the rest of this article, see page 3.

Wisdom Corner

A Retrograde Interim for California Codes
by Douglas Hansen

To resolve construction disputes, we often need to know the codes that were in effect at the time of the approved plans and contract specifications. To accurately determine the answer, we need to be familiar with the model codes that were in effect, as well as any code amendments made by California or the local jurisdiction.

We are used to thinking of building codes as a steadily developing set of rules, with each new edition incorporating the latest technological advances and the lessons learned from experience, such as safety, earthquakes, or wildfires. It isn't always so straightforward, in part because of the politics that find their way into the code development process. California stayed with the "good old" Uniform Building Code (UBC) as the model for its codes up until 2008, even though the cover date for the final

UBC was 1997. The 2007 California Building Code, which took effect on January 1, 2008, is based on the 2006 International Building Code (IBC), and our next code, which should go into effect in 2011, will have its residential building portion based upon the 2009 International Residential Code (IRC). All of these codes are developed on a triennial basis.

One of the consequences of having these three different model codes in such a short time period is inconsistency. Our current code has some rules that are much stricter than the pre-2008 editions, and in 2011 we will in some cases, go back to the old rules. For example, our current code gives a maximum threshold height of a half-inch for all residential thresholds. California is the only state with such a strict standard for residential thresholds. The previous (UBC-based) code allowed one-inch thresholds. The half-inch height is normally only for commercial construction and those areas where disabled access is required. Since tripping hazards and slip & fall injuries are so common, this appears to be a significant (and expensive) change for greater safety. There are exceptions, such as for an exterior landing which can be 7¾ inches below the top of the threshold provided the door does not swing over the landing, or for sliding doors, which can have a one-inch threshold. Complying with this new rule can be very difficult, especially for applications such as out-swing, side-hinged exterior doors. The only practical solution for some of these is to recess the threshold. Flashing and water protection become much more difficult. The next model code does not have this provision. We are on track to have a code in 2011 that will allow 1½ inch thresholds, an even less restrictive rule than we had before the present one.

How did California place itself in such an odd position? To answer that question fully, we would have to delve into the politics behind the codes, and the different interest groups that influence them. We will spare you that journey. Suffice it to say, while most of the country was adopting the latest code every three years, California did not decide to adopt the family of codes from the International Code Council (ICC) until 2006, and at that point, we were in "catch-up" mode. Though the IRC publishes a separate residential code, California had no experience with such a model, and under time pressure, they adopted a code that was only intended as a commercial code, making minor amendments here and there to also use it for residences.

Not all of the stricter codes will be abandoned. In the 2007 California Building Code, the minimum height for a guard (formerly called a guardrail) is 42 inches. Again, that is a height that had previously only applied to commercial construction, while residential guardrails were allowed to be 36 inches at single family dwellings or the interior of individual apartments or condominiums. The current proposed amendments to the IRC will keep that 42-inch height in California, even though the IRC only calls for 36 inches.

In some cases, the next round of codes will provide greater clarity. For instance, the current code for fire separation of a dwelling from an attached garage is a prescriptive rule for ½-inch gypsum board, with 5/8-inch "type X" gypsum board only required on ceilings separating the garage from habitable areas above. This represents a radical departure from previous UBC rules for occupancy separation, and is less restrictive. The IRC provides a simpler prescriptive approach with fewer code loopholes than our current code. The main reason that our current code has such lack of clarity is that the model code was never intended as a residential code. Indeed, the exception to section 101.2 of the IBC instructs users *not* to apply it to single family and two-family dwellings and townhouses, and instead to use the IRC. Needless to say, California deleted that section.

The examples discussed here are just a fraction of the changes taking place at each new code cycle. When resolving future construction disputes, we may find that the designer and builder were held to a more restrictive standard than the one that applies for future repairs, or we may find the opposite, depending upon the specific issue. In any event, our research into the facts of the case must include very specific information on the codes in effect at the beginning of the project.

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Douglas Hansen is a code consultant and the principle author of the Code Check series of field guides to building codes, including Code Check for California. He can be contacted through www.codecheck.com.

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Standards for Flanged Window Installation *...continued from page 1.*

Mr. Corcoran has been working with damaged buildings since 1980. He has seen hundreds of buildings with window installation failures. He and his firm, Myles F. Corcoran Construction Consulting, Inc., discover the causes of these leaks, design fixes, and oversee repairs of the damage, as well as design and provide assistance for renovations and new buildings. Mr. Corcoran acts as private mediator and arbitrator in construction disputes and has been engaged as expert witness in a great many such disputes from 1988 to the present.

In this talk Mr. Corcoran will discuss the concept of "Standard of Care" generally through common definitions, the view from the current California Building Code, designers, consultants and from the builders' job site perspective. Mr. Corcoran will also ask why anyone should care if a "Standard of Care" exists. Might it not be better if we "let freedom ring" with the simple criteria being "water may not pass?" - or less?

From there, Mr. Corcoran will do a brief overview of what he knows of past and present common practices. We will look at examples from 1880, 1980, and the growing level of awareness and detail leading to current common practices: from wood trim overlapping wide gaps, to a paper sandwich of very thin asphalt with sisal strand reinforcement, to SAF, and beyond. We will review examples of current methods: Manufacturers, ASTM, AAMA, observations from the field, and finally Mr. Corcoran's own company standard.

In the final part, Mr. Corcoran will return to the question: Is there a "Standard of Care" and if so - what is it, or are they? With the AAMA, ASTM, many manufacturers, and select authors on the subject, all weighing in on how they think windows should be installed, can we and should we ever agree on any one "Standard" method?

Although we may not come to any final conclusions, Mr. Corcoran believes that when the designing, building, and consulting industry collaborate, we improve the level at which society builds.