

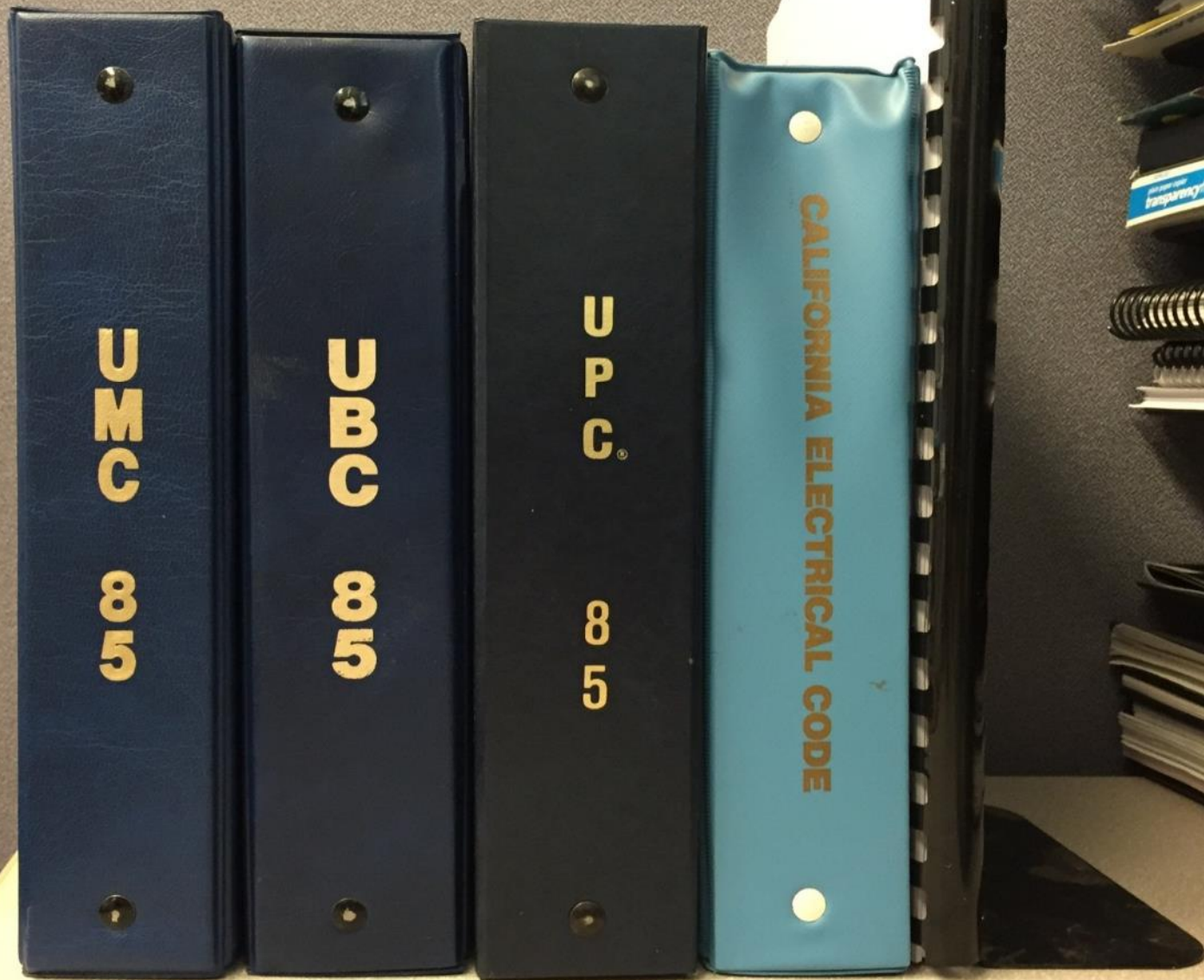
California Compliance Software Symposium 2

Industry Perspectives: **CALBO**

Thursday, July 12, 018

Gregory Mahoney
Assistant Director Department of Community
Development and Sustainability, City of Davis
Chair, CALBO Energy Commission Advisory Committee







WATER FLOODPLAIN MANAGER PROGRAM (CFM® Program)

CALIFORNIA CODE ENFORCEMENT SOURCEGUIDE



California Solar Permitting Guidebook
Improving Permit Review and Approval for Small Solar Photovoltaic (PV) Systems

Certified Access Specialist Program Practice Standards and Best Practices Handbook

CALIFORNIA 2013 GREEN BUILDING STANDARDS CODE

INTERNATIONAL RESIDENTIAL CODE
FOR ONE- AND TWO-FAMILY DWELLINGS
Part of the International Code Family

AB 1236
TEXT

BUILDING ENERGY EFFICIENCY STANDARDS FOR RESIDENTIAL AND NONRESIDENTIAL BUILDINGS
2013
TITLE 24, PART 6 AND ASSOCIATED ADMINISTRATIVE REGULATIONS IN PART 1

CALIFORNIA LAW
CIVIL CODE

CALIFORNIA LAW
CALIFORNIA HEALTH AND SAFETY CODE
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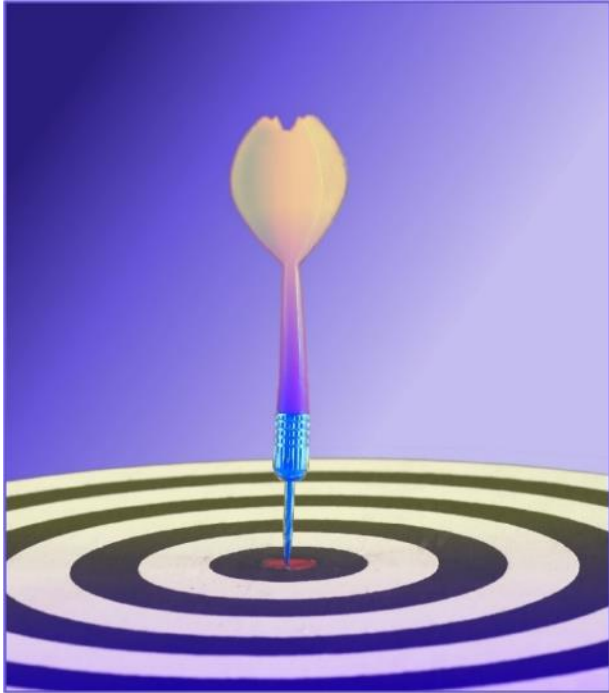
Potential Improvements



Less is more!

- Make the compliance documents simple so the plans examiner and field inspector can review them in a few minutes.
- Create registries to store the background info.

Potential Improvements



Remember your audience!

- Remove pages and info that are not useful to plans examiner, contractors and inspectors.
- Much of the current documentation is not helpful for compliance.

It seems to be what the CEC and the software designers feel is important.

Potential Improvements



Remember: We inspect construction that we can physically see

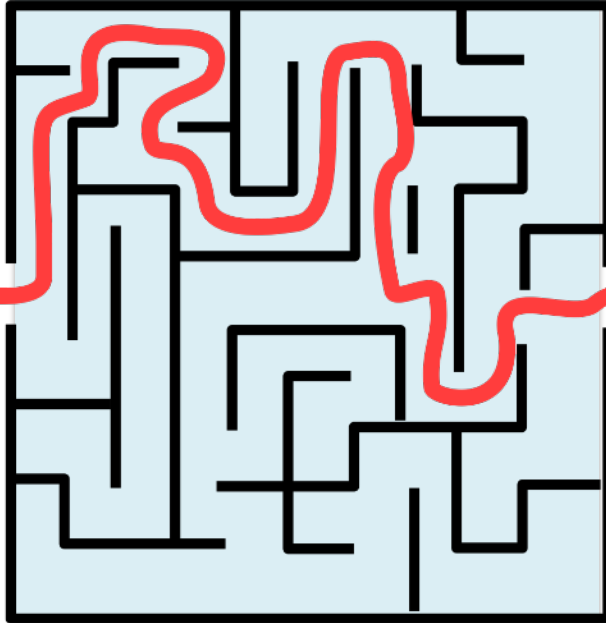
We don't inspect U values in the field.

- All the extra boxes and code references and empty/unused spaces on the document are not of value to a plan examiner, contractor, or inspector.
- The residential mandatory measures summary is not helpful (typically references code sections).

Potential Improvements

Fewer work-arounds

- If there are work-arounds then publish them so everyone knows about them.
- Provide modeling capability for unvented crawl space.
- Do not allow using performance values in fields that are just names (e.g., naming a wall "R-19 Wall" when it can be modeled as R-13).



Potential Improvements



- Do not report features on CF-1R if they are not important to compliance
 - (e.g., specific wall assembly layers, sidings, furnace fan type, garage surfaces, etc.)
- The software needs to be able to take all the engineering decisions in the design and present it in a simple real world format.
 - Consider the audience and purpose of the forms.
- List all forms required in the field for compliance verification and final inspection.

Example

Comment EM1

T-24 performance compliance lists **64 VAV** boxes in NRCC-PRF-01-E form.
Plans show **287 VAV** boxes.

Response

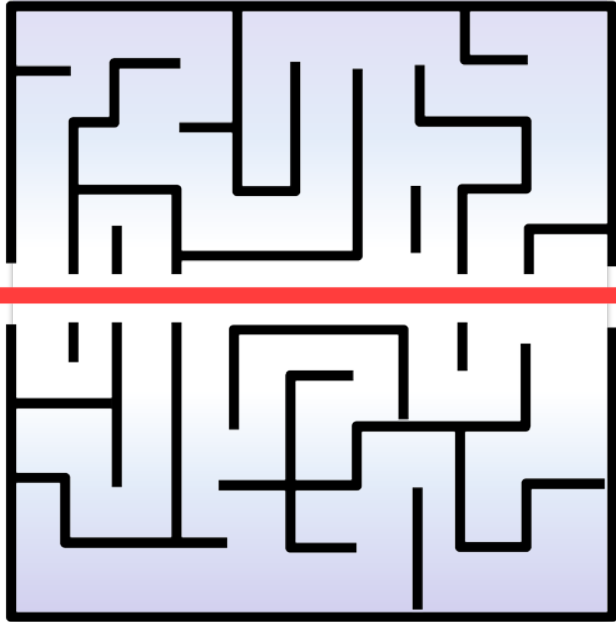
The CBECC-com model is an approximate representation of the building. The building area is about 250,000 sf — for the sake of simplifying the model, certain areas (with similar program or similar load profile) were combined such that the building performance would not be altered significantly.

Fewer VAV boxes are modeled are a result of zone grouping so that CBECC-com can run the simulation efficiently.

The airflows and heating coil capacities at the grouped VAV boxes were adjusted to mimic the actual design.

How do you plan check an approximate representation?!

Summary of most important improvements



- Create central registries for residential and non-residential projects.
- Provide compliance and verification/acceptance summary sheets to include only the measures required for compliance.
- Eliminate installation forms.

What do you think?



- Any questions?
- Comments?

Let's move on to a discussion of...

Industry Perspective: CABEC

Lucas Morton

