

April, 2004
Newsletter

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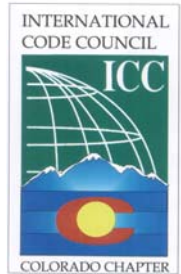
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On the web at:

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Educational Institute Breaks All Records! Dan Nickle

The recent Educational Institute was an absolute success! This event broke all previous records. This year we had 1741 registered attendees representing 28 states and a number of foreign countries. These record numbers represent the maximum number of students that the current facility can handle. On any given day we can seat 1033 students and on Monday and Tuesday we had 996 and 985 respectively.
More on Page 2



Steve Thomas teaching one of sixty class offered during the five day event.



Nearly 1000 students, instructors, and organizers at lunch!

Educational Institute Exhibitors Jim Thelen

Hopefully everyone noticed the exhibitors at this year's Educational Institute and had a chance to visit and learn more about the products or services that were offered. This was our first attempt at having exhibitors at the Institute. We learned a lot about what we did right and what we need to approve upon in order to make next year's event even better. This year we had thirteen paid exhibitors and our ultimate goal is to fill all the fifty available spaces.

The idea of having exhibitors is two fold. First, the revenue generated will help keep the cost of education affordable for our members by offsetting the rising cost of producing the institute each year. Second, the exhibits compliment the classroom education with a practical education of new products the inspectors will find in the field. They also present new materials and methods of construction that the plan reviewer must know about and maybe some software options or consulting services the building official is trying to locate.

Next year we want to expand on the exhibitors to cover additional areas of interest for the electrical inspectors, fire prevention officers, mechanical and building officials. Your help is needed to locate



these exhibitors. If you know of a sales rep that would be interested in being an exhibitor, or if you have an new product in-house training session that is interesting, or find an advertisement in a trade magazine that lists a local rep, please contact either Becky Baker, Dave Horras, Dan Nickle, or myself.

We look forward to seeing you next year!

President's Message Dave Horras

Another year, another successful Educational Institute. Sounds simple enough. Something that we almost take for granted anymore, but only because those involved in all the planning, coordinating and hard work make it appear that way. If they only knew.

The Colorado Chapter Educational Institute was started 19 years ago with the intent of providing high quality training at a reasonable cost. It has grown to become probably the most successful training event of its type in the country. The Colorado Ed Institute has provided training to thousands of individuals over the years, which has greatly increased the knowledge level of our profession.

The Education Committee is constantly looking for new ways to maintain those original goals. This year was the first year that the Institute had vendors in attendance. This proved to be a win-win proposition for both the vendors and the attendees. The vendor fees helped offset ever increasing Institute costs while

vendors and attendees had an opportunity to discuss different and new building products.

Many thanks to Dan Nickle, the instructors, and all of the volunteers that continue to make this event, often copied but hardly duplicated, so successful. See you all again at next years Institute.

Editor's note: Dave Horras has taken this organization to new heights! To the left you will see Dave and the Governor Owens with the 2004 Building Safety Week proclamation. Dave joined a number of Chapter members and fellow life safety professionals during the signing ceremony in April. Special thanks to Becky Baker and Leslie Carpenter for this great accomplishment!



TIM PATE

2003 IECC now requires that supply ducting run within exterior wall have R-8 insulation between duct and exterior. This is difficult with 2 X 4 walls. Is anyone aware of an approved product that will slip in behind duct?

The top of exterior stairs/landings will need lighting in immediate vicinity. This is hard to achieve at large decks with stairs at outer edge of the deck. It is simply not close enough to the light located outside of the back door.

When you measure the drop at the door of the house to a new deck or landing, you measure from the top of the threshold down to the decking/landing - 7 3/4" maximum.

Water hammer arrestors are required in 2003 IRC Section P2903.5. They are required on quick closing valves such as laundry supplies, dishwashers, and lawn sprinklers. An ice maker is a quick closing valve but I have received an ICC interpretation that states that there is not enough water flow to require one at ice maker. Issuing a irrigation permit for a house just got more complicated (and expensive). By the way, these need to go in the interior since there are none out there rated for exterior use and a Colorado licensed plumber has to install per state law.

The IRC requires a nosing on all stair treads unless the tread is 11" or more. We have been notifying contractors to make their concrete treads at least 11" since I doubt any concrete guy could make a concrete nosing that sticks out 3/4" to 1 1/4" out!!!



IBC Section 1009.8 - Winders no longer contains construction requirements for winder stairs. The 2000 IBC Section 1003.3.3.8 had the requirements but it seems like they disappeared with the rewrite and reorganization of Chapter 10 (simply editorial, right!?). Paul Armstrong at ICC concurs, but states that the provisions will be reincorporated in the supplement.

TOM MEYERS

Why doesn't the IRC require a 4" high minimum tread?

Interesting issue. As I recollect, the committee only heard testimony on maximums. It seems that the debate was so heated, we neglected the obvious. As you probably know, the IRC is derived from the CABO One and Two Family Dwelling Code. The 1996 edition used as the basis did not contain any minimum riser requirements. So...the first draft edition of the IRC did not either. Nearly every code change cycle addressed the maximum riser issue ranging from 7 to 8 inches. We finally settled on the 7 3/4" compromise that was in the CABO code. The only code change to the IRC that I am aware of was sponsored by the CCICC. Tom Royal submitted RB-83 last year (this current cycle) to make the minimum 4". The committee denied the change stating that, "no technical justification was presented to require the minimum riser height of 4 inches". That decision was not challenged so won't be heard next month in Overland Park.

IRC Landings

I took some time to review the 2003 IRC R311.4.3 landing debacle. As many of you are aware, these provisions became somewhat confusing following the rewrite of the Means of Egress section of the IRC. These are my conclusions based on what is currently written (my copy is a first edition, by the way). Here are some scenarios:

- *Exterior door that is a required exit*
 1. Floor or landing is required
 2. 1.5" maximum from top of threshold to the landing OR 7 3/4" max. below the top of the threshold (assumed) WHEN the door does not swing out over the landing (storm or screen doors may swing out over the landing).
- *Exterior door that is NOT the required exit*
 1. 7 3/4" drop to a landing is permitted (assumed top of threshold to landing). It is silent on the direction of the door swing.
 2. "Stairway" of two or fewer risers permitted. Since it is labeled a "stairway", the R311.5.3 geometry requirements and the R311.5.4

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Code Talk – Continued from pg. 3

requirements for a landing at the top and bottom of the stair are in play. This is also silent on direction of the door swing.

- *Interior door*

No requirement for a level floor or landing...unless:

1. It occurs coincidentally with the bottom of a flight of stairs (R311.5.4)
2. Top of stairs do not require a landing assuming a door does not swing over the stairs.

SPECIAL GUEST CODE GUY: STEVEN GOSSELIN **NORTH METRO FIRE RESCUE DISTRICT**

Tim Pate discovered a potentially big change from the UMC to the IMC. Check out the Exception 2 to IMC Section 606.4.1:

Provided for background only: 606.2.1 Return air systems. Smoke detectors shall be installed in return air systems with a design capacity greater than 2,000 cfm (0.9 m³/s), in the return air duct or plenum upstream of any filters, exhaust air connections, outdoor air connections, or decontamination equipment and appliances.

Exception: Smoke detectors are not required in the return air system where all portions of the building served by the air distribution system are protected by area smoke detectors connected to a fire alarm system in accordance with the International Fire Code. The area smoke detection system shall comply with Section 606.4.

606.4 Controls operation. Upon activation, the smoke detectors shall shut down the air distribution system. Air distribution systems that are part of a smoke control system shall switch to the smoke control mode upon activation of a detector.

606.4.1 Supervision. The duct smoke detectors shall be connected to a fire alarm system. The actuation of a duct smoke detector shall activate a visible and audible supervisory signal at a constantly attended location.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where the duct smoke detector activates the building's alarm-indicating appliances.
2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Duct smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

This appears to mean that, for example, a small group B office building without a sprinkler or fire alarm system will need some sort of "alarm" system specifically to supervise their duct detectors. Anybody have any clue as to what type of "alarm" system this will be? Tim Pate and the rest of the Building Division are trying to figure this one out too.

I envision something similar to the small switch-plate-style duct detector remote test stations we see mounted in ceilings sometimes - only there will be two new "lights" installed in the switch-plate – one for the duct detector supervisory signal (red?) and one for the duct detector trouble signal (yellow?). The audible sound can probably be the same for both signals and could be a small beep-beep, chirping device mounted in the same switch-plate. That would seem to me to fulfill the requirement without too much trouble. I wonder what the basis for this new requirement was? ...Call Sam Dardano!

Tim Pate - Sam Dardano, City of Boulder Mechanical Wizard, agrees that the Code really does want some sort of visual and audible alarm. He said it is entirely up to AHJ as to what to accept.

Plumbing Board Hearing – IPC or UPC?

The State Plumbing Board will be heating the proposed adoption of a 2003 version of a nationally accepted plumbing code, either the 2003 UPC or the 2003 IPC.

PLEASE ATTEND AND HAVE YOUR VOICE HEARD!!!!

DATE: May 6, 2003
TIME: 10:00am
LOCATION: 1580 Logan Street, Room 610, Denver

NOTE: If you want to receive automatic notices, you can register online at www.dora.state.co.us. Click on the button titled: **Office of Economic Competitiveness and Regulatory Reform**. Then click on the button titled: **Sign-up for a Regulatory Notice**.

Advanced Natural Building & Building Science: *Integrating Building Codes, Building Science and Natural Building*

This June, Solar Energy International (SEI) will be hosting an **Advanced Natural Building & Building Science** workshop. For the past 20 years, SEI has been training people in renewable energy and environmental building. SEI offers hands-on workshops that share knowledge and enhance skills in design, installation and maintenance of solar, wind and water energy systems and the building of state-of-the-art solar and natural homes.

This year we have decided to take a closer look at the regulations and science that influence the design and construction of sustainable, natural buildings in the Advanced Natural Building and Building Science one-week workshop. The workshop will be a gathering of building professionals including architects, builders/contractors, engineers, building scientists and code officials who will explore the new challenges inherent in designing, constructing and approving natural house building systems.

With more than 40% of the world's natural resources extracted and used in relation to the building industry, the way we design and build our homes is becoming one of the largest environmental decisions an individual can make. More and more, individuals are choosing natural or alternative building materials and methods, such as

strawbale construction and rubble-trench foundations, as an answer to reducing the environmental impact of their homes.

William G Reed, recently stated in the March/April

2002 Building Standards article that understanding the impacts of building and development on the environment while helping the public understand how small decisions can have broad ramifications on the overall health of environmental system will be among the most important functions of code officials in the 21st Century.

Local building departments have considered alternative designs and materials for decades, and have the

To my good friends in the Colorado Chapter of ICC:

If you were stimulated, intrigued, puzzled, inspired, or maybe even outraged by what I shared with you at the 50th Anniversary Annual Meeting in Colorado Springs in December, and you want more, I invite you to come join us for **SEI's Advanced Natural Building & Building Science workshop in June!** We'll have a great collection of knowledgeable instructors, we'll be meeting in a beautiful place (The Waldorf School on the Roaring Fork in Carbondale), and there should be enough serious learning and sharing going on to satisfy anyone. And it's likely to be as entertaining as any workshop you've ever attended. What could be better than that? I hope to see you there.

- David Eisenberg, DCAT

authority to approve all designs and materials that meet the intent of the building code. According to David Eisenberg (see sidebar) of the Development Center for Appropriate Technology (DCAT), Code Officials have a big job! Not only are you concerned with the health and safety of a building's occupants, but you are also responsible for building requirements and the intended and unintended outcomes from these requirements. Ultimately, Eisenberg points out, it is your awareness and concern that can result in environmentally responsible homes.



When involved from the inception of a project, Code Officials have the unique ability to evaluate a project's different systems and relate the performance of the whole to the performance of all the parts. You are in a position to familiarize yourself with the technical aspects of such systems and help in the optimization of an integrated

design. As professionals that can interpret building science you also have the opportunity to support and educate builders and members of the construction team. Sounds like a great job!

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During SEI's five day workshop, participants will focus on the integrated design approach process and opening the lines of communication between all specialists involved in residential construction. Building science and its influence on design, material selection, construction, and performance will be specifically applied to natural building systems. Specifically, building codes and their enormous authority on such things as the environmental performance, safety and the comfort of a home will be addressed.

Workshop Instructor **David Eisenberg** has well over twenty years of construction experience including troubleshooting construction of the steel and glass cover of Biosphere 2 in Oracle, Arizona, building a \$2 million structural concrete house, a hypo-allergenic structural steel house, and building masonry, wood, adobe, rammed earth, and straw bale structures. He is co-author of the *Straw Bale House* book, and helped write the first loadbearing straw bale construction building code for the City of Tucson and Pima County, Arizona. Much of his time is devoted to developing relationships with members of the building, design, and building regulatory communities, promoting a sustainable context for building regulation, offering trainings on alternative building approaches, and guiding alliances with partners in specific activities, such as the ASTM Earthen Materials Task Group and the Greening the Codes Committee of the U.S. Green Building Council. David is Vice-Chair of the ASTM E06.71 Subcommittee, and serves on the Board of Directors of the U.S Green Building Council.

Eisenberg will be joined by Dr. John Straube, Stephen Kanipe, and Jeff Ruppert. **Dr. John Straube** is a professor at the University of Waterloo in the Civil Engineering Dept., Building Engineering Group. His research interests include building performance (durability, energy efficiency, health, sustainability) as a function of use, climate regions, microclimates, etc. He also, researches heat air and moisture transport within building materials and systems and the resulting problems of freeze-thaw, corrosion, rot, mould, dissolution, etc., in relation to new and sustainable building products, materials and systems.

Jeff Ruppert is the owner of Odisea, LLC in Boulder, Colorado where he is a Consultant, Engineer, and General Contractor. He has consulted on over 400 straw bale and natural building projects around the country and is regarded as one of the leading structural engineers in the field of straw bale construction. He continues to participate and expand the breadth of knowledge and understanding at the national level.

Stephen Kanipe is the Chief Building Official for the City of Aspen and a very active member in the Colorado Chapter of the International Code Council. Kanipe developed and promoted Aspen's innovative Renewable Energy Mitigation Program (REMP) and has participated and approved numerous natural building projects.

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The Waldorf on the Roaring Fork, is the largest straw bale building in Colorado

This report is to provide the status of current bills being watched.

HB 1115: This is the Sunset bill for the State Board of Registration for the Professional Engineers and Professional Land Surveyors. This basically extends the Board to July 1, 2013.

Current Status: House Committee on Business Affairs and Labor passed an amended bill to the House Committee as a whole. The vote was 13-0. Scheduled for House vote on Senate amendments 04/22/04.

HB 1141: This bill is a new bill to create State Charter Schools. It parallels the current requirements for school districts. However, there are some big changes that mainly affect school districts and have a possible impact on local jurisdictions.

Current status: House Committee on Education passed an amended bill to the House Committee as a whole. The vote was 6-5. On second reading, was sent to Appropriations. Passed Appropriations 9-2, unamended. Scheduled for Senate vote as press time.

HB 1176: This bill, if passed, will be under the Colorado Division of Housing (DOH). This would require anyone receiving a grant from the DOH to construct or rehabilitate the housing in conformity with standards of "Universal Design", in other words a building code.

Current Status: This bill has been postponed indefinitely.

HB 1182: This is a new Meth Lab Clean-up bill. The bill requires use of the "Cleanup of Clandestine Methamphetamine Labs Guidance Document". The CDPHE will need to adopt rules for the state for cleanup of these meth labs. It protects a landlord from being sued by a future tenant or buyer if they have cleaned their property and it has been declared safe for human habitation.

Current Status: This bill was passed pending signature by the Governor.

SB 071: This bill is more for FMAC and the CSFCA than us. It is regarding fireworks and dealing with the regulation of fireworks. Also, containing two new definitions for "firework" and "Permissible Firework" are included.

Current Status: The bill was amended and sent to Appropriations. Scheduled for House Business Affairs hearing at press time.

SB 089: This bill requires an owner of a manufactured home park that intends to sell, to give the local housing authority and/or



the residents first refusal. In words, the owner must notify the resident that he/she intends to sell and give the residents 120 days to decide to form an HOA and buy the park first at the asking price.

Current Status: Posted: Pending Governor's signature.

SB 121: This bill is concerning the power of local health departments to clean up illegal drug labs. Passed 7-0 amended to remove "health department" and replace it with "fire department".

Last year a bill was defeated allowing jurisdictions to lien properties that they cleaned up. **Current Status:** Postponed indefinitely.

SB 162: This bill is in regards to the regulation of conveyances (elevators and escalators) and putting the administration in the division of oil and public safety.

Current Status: Postponed indefinitely but may be back next year

SB 199: This bill would regulate crane operators. Enforcement is placed on the local building department.

Current Status: Postponed Indefinitely

You can download any of these bills at www.leg.state.co.us/ then go to the House or Senate and click on bills.



Building Safety Week Proclamation Signing Ceremony

From Left to Right: Jerry Stricker, FMAC; Marlene Manzanares, CAPT; Sam Dardano, CAPMO; Becky Baker, ICC Foundation; Colorado Governor Bill Owens; Dave Horras, CCICC; Bob Wolney, IAEI; Gerry George, ICC Board; Dan Qualman, CSFCA.

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of the
International
Code Council**

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Special thanks to:
Everyone that helped
contribute to this month's
newsletter!!

Job Announcements

The Chapter Board voted to accept job announcements for specific jurisdictions to be posted in the newsletter, space permitting. If you have an announcement, please forward it to the newsletter committee.

City of Centennial
Plans Examiner/ Senior
Building Inspector
Plans Examiner Cert.
Req'd
Full job description is
available at
www.coinspect.com

Girl Scouts – June 5th!

Please mark your calendar for Saturday June 5th, our next Girl Scouts Give-A-Day.

From J.D. Potter:

We will be building a new cabin that is handicap accessible. We have a generous donation from Stock Building supply for a large portion of the building materials. Ike Dury will furnish the roofing material and labor for the roof. We also have 3 new water heaters donated for the unit shelters. It looks like we will have a very busy and very rewarding day. So far it is all coming together well.

The facility is located in the San Isabel Forest just south of Pueblo. It is about 5 miles past Rye on Highway 165. Look forward to more announcements!

For details or Friday night camping arrangements, contact J.D. at 719-543-0002