

BBS Newsletter



Bob Taft
Governor
Gerald O. Holland
Chairman

Witt Named New CEO of the ICC



James Lee Witt play in building safer and smarter communities.

Witt's position as the new CEO of the International Code Council is the culmination of years of experience with building codes. When he was 21,

Council.

The Board of Directors welcomed James Lee Witt as the new Chief Executive Officer (CEO) of the International Code Council (ICC).

James Lee Witt has more than 25 years of leadership and experience in the field of disaster management, including eight years as the Director of the United States Federal Emergency Management Agency (FEMA). The former Director, a member of President Clinton's Cabinet, is widely recognized for his expertise in change management and the transformation of FEMA while under his guidance.

Witt was the visionary and architect of national government programs related to emergency preparedness, mitigation, response, and recovery to the private sector. During his time at FEMA, he elevated mitigation and the role that building codes

Witt founded his first company, a commercial and residential construction company. He would go on to be elected to six terms as County Judge and tapped by then-Governor Bill Clinton to serve as the Director of Emergency Management for the State of Arkansas before going on to Washington, DC to be the Director of FEMA.

In addition to the new duties Witt will assume in his role as CEO of the ICC, he will continue in his role as President of James Lee Witt Associates, LLC.

The Board of Directors would like to thank Bob Heinrich, former CEO of ICC, for his hard work and contributions during the transition from the three legacy model code groups (Building Officials and Code Administrators International, Interna-

(Continued on page 6)

Apparent Lack of Accessibility Enforcement in Ohio

Accessibility advocates contend that most multi-family housing built in Northeast Ohio over the past ten years fails to meet federal accessibility laws. They believe the record for the rest of the state may be similar.

The number of federal cases against architects, builders, and owners is on the increase. These cases have forced the retrofit of housing units with features that should have been incorporated when the units were built. A May 2002 settlement between the U.S. Department of Justice and a Chicago-area builder is cited as evidence that accessibility is a federal priority. The settlement in that case required the builder to pay \$40,000 in damages, \$3,000 in penalties, and almost \$400,000 in materials and labor to bring the structures into compliance.

Studies of new housing by advocacy groups show that most multi-family construction in several Northeast Ohio counties does not comply. These Ohio ac-

(Continued on page 8)

INSIDE THIS ISSUE:

In the News Around Ohio 2

BBS Personnel Experience and Testing Requirements 4

Memphis, Earthquakes, and the IBC 6

What is the New Madrid Seismic Zone? 8

BBS Quarterly Calendar 10

SPECIAL POINTS OF INTEREST:

- *New testing requirements options for certification*
- *NYC Accepts Recommendation to Adopt IBC*

REGULAR FEATURES:

- Legally Speaking 3
- Getting Mechanical 3
- Around the Code World 5
- Making it Understandable 7
- Training News 9

In the News Around Ohio



CLEVELAND—The city is requiring an east side roofing materials manufacturer to install a fire protection system. The owner has indicated that the decision could force him to leave Cleveland.

The owner has appealed rulings by the city and the Ohio Board of Building Appeals because he received permission to operate without sprinklers six years ago when he moved to the address in Cleveland.

Because of hazardous chemicals used at the site, the city fire chief affirms the conclusion of his inspectors and the appeals board that the building needed sprinklers.

Apparently, city development officials suggested operating at the address in 1997. The owner contends he requested fire and building inspections and has documents showing that the city waived sprinkler requirements because the building's use would not change.

The owner contends that the installation of the sprinkler system would cost about \$250,000.

CINCINNATI—Although a former state representative does not consider himself a slumlord, a candidate for City Council pleaded no contest in 1996 to building code violations.

A building bought at sheriff's sale was rented to a tenant who was supposed to fix it up, he said. He said the violations continued when the property was under land contract to another owner who also did not make the needed repairs.

Court records show that for almost a year the owner failed to comply with orders to cover windows, repair gutters, replace the roof, paint the exterior, cut weeds

and remove debris. Last November the owner went to court in an attempt to get the charges expunged from his record.

A Municipal Court Judge ruled he was not eligible for expungement because he was not a first offender. The owner has a previous conviction which apparently had been expunged.

City Council members have made cracking down on building violations an important part of their "clean and safe" strategy for neighborhoods.

TOLEDO—A "one-stop shop" for building permits and inspections remains a goal even though it been a goal since 1993.

An ordinance brought to council would allocate \$60,000 to continue implementing the one-stop shop, but not necessarily complete it.

Contractors have complained of delays in acquiring permits for commercial project. Toledo's process requires contractors to take architect drawings to Government Center downtown to apply for their permits, then return to pick them up.

The administration is increasing its permit fees, and decided to wait to program the system for the new permits and fees rather than the old ones.

Contractors said yesterday that a streamlined permit system would help them complete their jobs more quickly.

SARATOGA, CA — Three major Western contractor's associations have voiced their backing for the International family of building codes as California and other states prepare to enter a new cycle of statewide building code adoptions. Members of the Western Wall & Ceiling Contractors Association

(WWCCA)/Technical Services Information Bureau (TSIB), the Northern California Drywall Contractors Association (NCDCA) and the Northwest Wall & Ceiling Bureau (NWCB) voted to support to the I-Codes over a rival building code published by the National Fire Protection Association (NFPA).

Collectively, the associations represent hundreds of signatory union contractor, supplier and manufacturer members, and are recognized as the leading contractor groups in the western United States.

WASHINGTON, D.C.—A National Institute of Building Sciences (NIBS) study recommends the U.S. Department of Housing and Urban Development (HUD) drop its Minimum Property Standards (MPS) in favor of model codes developed by International Code Council (ICC). HUD building standards guarantee housing insured by the Federal program meets minimum requirements for construction quality, safety and durability.

The NIBS study recommended the 2000 *International Residential Code for One- and Two-Family Dwellings* (IRC), published by the ICC, and successor to the *CABO One- and Two-Family Dwelling Code*, replace HUD's MPS. In areas without building code enforcement, the report called for HUD to receive written certification by a licensed architect or engineer that the dwelling meets requirements of the IRC or the prevailing state residential code.

The NIBS study also suggested HUD discontinue its Technical Suitability of Products (TSP) program and instead rely on ICC's Evaluation Service (ICC-ES). ICC-ES is a voluntary program that evaluates building materials and products for code compliance.





Getting Mechanical—Debbie Ohler, P.E.

Up in smoke!

Perhaps one of the most mysterious fire protection systems mentioned in the building code is the smoke control system. I think it would be fair to say that these systems are still in their infancy as compared to their more mature relatives, the automatic sprinkler system or the fire alarm system. Smoke control system designs, unlike their other fire protection design counterparts, seem to be more of an art form than a science. For those of you who have followed code development over the last several cycles, you know that this art form takes a different shape with every code that is published. However, let there be no mistaking, science plays a huge role in the design

of these complex systems.

Over the past twenty years, much research has been done in an attempt to solve the smoke control system mystery. This research has given designers a better understanding of the complexity and the dynamics of smoke development and flow. Gone are the days when designing a code compliant smoke control system simply meant providing a certain number of air changes per hour for any given building. Research has proven that there are many variables to consider when adequately designing a smoke control system. For example, temperature, stack effect, buoyancy, wind velocity, forced ventilation systems in the building, rate of fire growth, and geometry

of the space are all variables that can change at any time and all play a critical role in predicting the behavior of the fire and smoke.

The process of design also adds complexity. First and foremost, the designer must fully understand the objective of the system, what the system is to accomplish. This objective is not usually prescribed in the codes adequately. In my opinion, the determination of the design objective would be better accomplished using a performance-based approach, taking into account the overall design objectives of the building, not just the smoke control system. The objective should be determined by discussions with the owner and

(Continued on page 5)



Legally Speaking—John Brant, Esq.

Recently, the Board of Building Standards has received several phone calls from building department personnel asking questions about whether there is a conflict of interest in a certain factual situation.

The most frequently asked question is whether an individual who is an inspector can teach courses where some or all of the students are contractors licensed by the Ohio Construction Industry Examining Board. In December, 1998, the Ohio Ethics Commission issued a formal Advisory Opinion No. 98-005 which outlined the conditions under which an electrical safety inspector could teach courses to electrical contractors. First, if the inspector received no compensation for teaching a continuing education course for recertification he can do so because there is nothing of value changing hands and hence no conflict.

Second, the inspector can teach a course for compensation to contractors if the contractors do not work within his political subdivision and are not subject to his jurisdiction.

Third, the opinion advised that Section 102.03 (E), R. C. clearly prohibits an inspector from receiving compensation for teaching a recertification class for contractors who perform work within the inspector's jurisdiction. The Commission also said that Section 2921.43 (A)(1), R. C. prohibits a public employee from receiving compensation from anyone other than his public sector employer if he is required to teach recertification classes as part of his inspector duties. Does this latter advisory finding prohibit the inspector from being employed by a joint vocational school, a community college, or a university if his job

duties do not require the inspector to teach recertification courses as a condition of employment? The answer would appear to be that it does not create a conflict if the inspector works directly for the educational facility, does not solicit students to attend the courses, does not receive payment from the students attending the course, and is not required to teach recertification classes for contractors as a condition of employment by his political subdivision. His financial arrangement for teaching the course must be with the public educational institution which pays the inspector as it would any other instructor on its teaching staff.

A second question which is often asked is whether an inspector or plans examiner can do work within his own jurisdiction if he does not review or examine his own work. Section 3781.10 (E) (5) (a), R. C.,

(Continued on page 8)

OBC REQUIREMENTS FOR BUILDING DEPARTMENT PERSONNEL
(4101:1-1-03 Ohio Administrative Code)

CERTIFICATION CLASSIFICATION		EXPERIENCE REQUIREMENTS	EXAMINATION REQUIREMENTS		PROFESSIONAL LICENSE REQ'MNT.
			NCPCCI	or ICC	
BUILDING OFFICIAL	Option #1	Five years of experience in building design and construction or OBC building inspection with a certified building department. NOTES 1 & 5	Not Available	Two examination modules: Management & Legal, and Technical. NOTE 4 & 6	Ohio registration as an Architect or Professional Engineer.
	Option #2	Ten years of experience as a construction contractor or superintendent of building construction or OBC building inspection with a certified building department. NOTES 1 & 5	Not Available	Two examination modules: Management & Legal, and Technical. NOTES 4 & 6	None Required
PLANS EXAMINER		Five years of experience in building design and construction or OBC plan review with a certified building department. NOTES 1 & 5	Modules required for: Architects: 2C, 3C, 4C Engineers: 1C, 2C, 3C NOTES 4 & 6	Modules for Architects and Engineers: B3, E3, M3 NOTES 4 & 6	Ohio Registration as an Architect or Professional Engineer.
TRAINEE		Graduate Architect or Engineer from an accredited university. Submit copy of degree. NOTE 3	Examination requirement to be completed within the allotted time of the trainee program.		Registered within the allotted time of the trainee program.
BUILDING INSPECTOR		Three years experience as a construction contractor or supervisor or as a skilled tradesman for work subject to inspection. NOTES 1 & 5	Examination modules: 1A, 1B, 3B NOTES 4 & 6	Examination modules: B1, B2 NOTES 4 & 6	None Required
TRAINEE		At least one year experience as a skilled tradesman for work subject to inspection. NOTES 1, 2, & 3	Examination requirement to be completed within the allotted time of the trainee program.		None Required
AUTOMATIC SPRINKLER SYSTEM INSPECTOR		Three years of automatic sprinkler system installation experience or at least three years of OBC inspection experience with a certified building department or three years as a certified fire safety inspector. A maximum of two years as a fire protection system designer may be substituted for two of the three years of experience. NOTES 1 & 5	Examination required: Administered by the Board of Building Standards.		None Required
HVAC, MECHANICAL		Three years as a skilled HVAC tradesman for work subject to inspection by building department. NOTES 1 & 5	Examination modules: 4A, 4B NOTES 4 & 6	Examination modules: M1, M2 NOTES 4 & 6	None Required
TRAINEE		At least one year experience as a skilled HVAC tradesman for work subject to inspection. NOTES 1, 2, & 3	Examination requirement to be completed within the allotted time of the trainee program.		None Required
ESI		1. Journeyman electrician or equivalent for 4 years, 2 as an electrician foreman, and 2 years experience as a building department ESI trainee; 2. Journeyman electrician or equivalent for 4 years and 3 years experience as a building department ESI trainee; 3. 4 years experience as a building department ESI trainee; 4. Journeyman electrician or equivalent for 6 years; OR 5. Electrical engineer registered in State of Ohio.	Examination required after application to and approval by the Board: Exam administered by the Board of Building Standards.		Required only for applicant using option #5
TRAINEE		1. 2 years experience in installation of electrical systems under NEC; 1 year approved vocational training in fundamentals of electricity may be substituted for 1 year experience, and 2. Full-time employment by & supervised by full-time employed ESI of a political subdivision.	Examination required after completion of the trainee program and application to and approval by the Board: Exam administered by the Board of Building Standards.		None Required
PLUMBING INSPECTOR		1. Seven years experience in the installation of plumbing; 2. A degree in engineering or architecture and three years experience in plumbing system design.	Examination modules: 5A, 5B NOTES 4 & 6	Examination modules: P1, P2 NOTES 4 & 6	Required only for applicant using option #2
PLUMBING INSPECTOR TRAINEE		Three years experience in the installation of plumbing. NOTES 1, 2, & 3	Examination requirement to be completed within the allotted time of the trainee program.		None Required

NOTE 1. Only experience directly related to buildings/structures within scope of groups regulated by Ohio Building Codes is acceptable for any certification.
NOTE 2. All Building Inspectors, Mechanical Inspectors, Plumbing Inspectors and trainee applicants may obtain credit for one year of the required experience through education pursuant to Section 103.3.15.6 of Rule 4101:1-1-03 of the OAC. Documentation must be submitted with the application.
NOTE 3. All trainee applicants must be under the direct supervision of a person certified in the trainee's respective field. Sponsor and Supervisor forms must be signed by the Building Official and the certified supervisor, respectively. Submit with application.
NOTE 4. Building Official applicants contact International Code Council, National Certification Services, 900 Montclair Road, Birmingham, AL 35213, (877) 783 - 3926, www.iccsafe.org.
 Plans Examiner, Building, Mechanical, and Plumbing Inspector applicants contact either: Expenor Assessments, 1360 Energy Park Drive, St. Paul MN 55108, (800) 864 - 5309, www.expenoronline.com for NCPCCI exams or, International Code Council, National Certification Services, 900 Montclair Road, Birmingham, AL 35213, (877) 783 - 3926, www.iccsafe.org.
NOTE 5. Only enforcement, inspection, or plans examination experience performed (a) prior to September 25, 1984, for a building department certified by the BBS to exercise enforcement authority for buildings or structures within the scope of the groups regulated by the Ohio Building Code, (b) for an agency or jurisdiction outside the state of Ohio enforcing a model code of a national model code organization for buildings or structures within the scope of the groups regulated by the Ohio Building Codes, or (c) by an employee of a certified building department who is the holder of a BBS certification other than that for which application is being made. **ONLY ELECTRICAL SAFETY INSPECTORS MAY LIST 1-, 2-, or 3-FAMILY EXPERIENCE.**
NOTE 6. Module description: **NCPCCI:** 1A - Building 1-, 2-Family Dwelling 4A - Mechanical 1-, 2-Family Dwelling **ICC:** B1 - Residential Building Inspector P2 - Commercial Plumbing Inspector
 1B - Building General 4B - Mechanical General M1 - Residential Mechanical Inspector B3 - Building Plan Examiner
 1C - Building Plan Review 4C - Mechanical Plan Review P1 - Residential Plumbing Inspector E3 - Electrical Plan Examiner
 3B - Fire Protection General 5A - Plumbing 1-, 2-Family Dwelling B2 - Commercial Building Inspector M3 - Mechanical Plan Examiner
 2C - Electrical Plan Review 5B - Plumbing General M2 - Commercial Mechanical Inspector
 3C - Fire Protection Plan Review

Around the Code World with Mike Brady



USE GROUP VERSUS OCCUPANCY

I know the current OBC refers to “Group” not the term “Use Group,” but, for the purposes of this article, it works for me. The real purpose of this article is to clear up some current misconceptions about use groups and occupancies.

When a “group” is assigned to a building under Chapter 3, it doesn’t necessarily establish the types of occupancies that may occur within that building. For example, OBC Section 303.1 reads:

“A room or space used for assembly purposes by less than 50 persons and accessory to another occupancy shall be included as a part of that occupancy.”

The purpose of this provision is to avoid triggering the requirements of section 302.3 for portions of buildings where occupancy separation is not warranted. Does this mean an office building that includes a conference room with less than 50 persons should be considered as use group B? Yes, it does. But let’s look at it in a different way.

Let’s use the example of a conference room included in use group B. Does that mean we have to select the “business area” category in Table 1003.2.2.2 to determine its occupant load? Not necessarily. The “business area” category is one of a number of occupancies listed in this table. Nowhere in

this table does it refer to use group B. What this means is that, even though you have established use group B for this building, you have not yet established the occupancies inside.

To determine the proper occupant load in this case, we would have to look at the occupancy for each space and individually make the calculations according to the categories in Table 1003.2.2.2. For example, the occupant loads for office areas would be determined by dividing the gross floor area by 100. The occupant loads for assembly areas like lobbies, cafeterias and meeting rooms would be

(Continued on page 6)

Up in smoke!

(Continued from page 3)

the authority having jurisdiction early in the design phase. Examples of design objectives may be to keep smoke within a certain area of the building or to keep the means of egress clear of smoke and toxic gases. The design goals and objectives should not only be limited to code requirements. Often overlooked is that the model code equations associated with certain design methods were developed for large open spaces such as atria and cannot be used under different conditions, such as a one-story building with ten-foot ceiling heights, is often overlooked. As is often the case, these equations are inappropriately applied and the resulting design solutions often appear to be infeasible and impractical. This makes it critical that the design professional fully understands the limitations and intended use of the equations and makes a professional judgment whether to utilize a code prescribed method and design objective or to

propose an alternate engineered design.

After the design objective has been determined, the designer must then decide what type of system to use to achieve the design objective. There are two general categories of smoke control systems: passive and active. Some systems are entirely passive. These generally take advantage of barriers, protected openings, and large high bay areas that can be used to “store” the smoke in lieu of (actively) mechanically exhausting, moving or maintaining the smoke from, to, or in preferred areas around the building. In other systems, passive systems of some kind must be provided to help an active smoke control system work. The compartmentation and protection created through the use of fire barriers, smoke barriers, smoke partitions, protected openings, fire stopping, and natural vents are all examples of passive systems. Active systems generally utilize mechanical fans and dampers to accomplish the design objective of

airflow, smoke exhaust, or pressurization. Active systems must incorporate passive protection and account for such variables as the sprinkler system and comfort HVAC system shut down or supplementation. Additionally, make up air should be provided to balance the loss of exhaust air in a smoke exhaust design.

The OBC outlines the three methods or approaches to designing active smoke control systems: the code preferred method, the pressurization method; the rarely used airflow design method; and the commonly misunderstood method, the exhaust method. The current code requires special permission from the building official to utilize anything other than the pressurization method. Typically, many good designs will incorporate combinations of these methods.

In order for the designer to make a decision as to what type of system to specify, it is critical to be able to calculate how much smoke a given

(Continued on page 10)

Code World

(Continued from page 5)

calculated using the assembly category in this table. In this case, the occupant load of a dining room, for example, would be calculated by dividing the net floor area by 15 [Assembly-unconcentrated (tables and chairs)]. A meeting room occupant load might be calculated by dividing the net floor area by 7 [Assembly-concentrated (chairs only)].

You can imagine the impact the different occupant loads would have on how the rest of the code is applied. For example, additional exits might have to be provided, exit corridors serving these spaces might have to be protected by fire-resistant construction or there may

have to be additional plumbing fixtures. As it happens, sometimes these assembly spaces are incorrectly viewed as office areas and, consequently, none of these provisions get triggered or enforced.

While there are many provisions in the OBC that are use group-dependent, there are also many others that are occupancy-dependent. The number of plumbing fixtures in Table 2902.1, for example, depends on the number of occupants determined by occupancy-based Table 1003.2.2.2 (see section 2902.1).

Table 1607.1 regulates live loads according to type of occupancy, not use group.

Table 415.3.1 regulates separation distances for buildings according

to the amount of explosives they contain, not according to use group. Table 403.3 in the mechanical code also regulates ventilation rates according to type of occupancy, not use group.

Finally, section 3406 regulates how the code is applied whenever there is a change of occupancy. A change of occupancy is defined in section 3402 as "A change in the purpose or level of activity within a structure that involves a change in the application of the requirements of this code." This distinction is a little more subtle than a change in use group. The important thing to remember is that a change in occupancy will often trigger the application of the code long before a change in use group



Witt Named New CEO of the ICC

(Continued from page 1)

tional Conference of Building Officials and Southern Building Code Congress International) into the International Code Council. President Paul Myers stated that "With the inclusion of Mr. Witt as the CEO, we are confident the ICC will continue its growth as a world class organization that is setting the standard for building safety."

The 50,000-member association is dedicated to building safety, develops the codes used to construct residential and commercial buildings, including homes and schools. Through its founders, the ICC has more than 190 years of collective experience developing building safety codes that save lives. The majority of U.S. cities, counties and states that adopt codes choose building and fire safety codes developed by the ICC.



Should Memphis Build for "California Style" Earthquakes?

The federal government is urging Memphis and other parts of the Midwest to adopt a new building code that would make buildings as earthquake resistant as those in southern California, where shaking is much more likely to seriously damage a building. A new study by researchers at Northwestern University, the Reaves Firm in Memphis, and Los Alamos National Laboratory finds that the prescribed measures for the Midwest's New Madrid seismic zone (NMSZ) would cost far more than the damage prevented. The New Madrid seismic zone includes parts of Tennessee, Kentucky, Missouri, Arkansas, Illinois, Indiana, and Mississippi.

The study, by seismologist Seth Stein of Northwestern, Joseph Tomasello, structural engineer at

the Reaves Firm in Memphis, Tennessee, and Andrew Newman, a seismologist at the Los Alamos National Laboratory in New Mexico, appears in the May 13 issue of *Eos*, published by the American Geophysical Union. "We need to learn more about earthquakes in the Midwest, but we already know that New Madrid and California are very different earthquake problems," said Stein, whose measurements in the NMSZ using the Global Positioning System indicate that the ground is moving very slowly, if at all. "The hazard for New Madrid is significantly less than for California."

The question is how to protect Memphis and other areas from earthquakes. Earthquakes in the NMSZ are typically small and

(Continued on page 11)

Making it Understandable - Jan Sokolnicki



I've gotten in the habit of choosing topics for this article based on the questions we most often get at the board. Lately, the hot topic seems to be connected to when elevators are required and chairlifts are allowed.

When Are Elevators Required In New Construction?

Four stories or more in height

For those of you who have never ventured into Chapter 30 of the OBC, it may be news to you that **all buildings more than 3 stories in height must have an elevator.**

This provision is found in §3002.4 and is there to assure fire department emergency access to all floors as well as adequate car size to accommodate EMT equipment & stretchers.

Two or three storied facilities with health care providers & shopping centers

When a facility has or intends to have a health care provider on other than (above or below grade level) the grade level floor, the facility must have an elevator to serve each floor. The US Dept. of Justice defines a health care provider as "a state regulated professional providing physical or mental health services to the public".

All multi-storied (2 or 3 floors) shopping centers or malls must have the sales/retail floors served by an elevator. The US Dept. of Justice defines a shopping center or mall as "a building with five or more sales or retail establishments," or "a series of buildings on a common site, under common ownership, control or developed together, with five or more sales or retail establishments".

This criteria applies to 2-3 storied buildings regardless of where the stories are located (above or below

grade) and to other facilities where such care is provided as in nursing homes, hospitals, etc.

Two or three storied public agency facilities.

Two & three story buildings owned or used by government or other public agencies (school districts, etc.) must have an elevator serving each floor. (There is a rare-case exception when separate agencies are located on separate floors and each level has the public and employee entrances at grade.

Two or three storied facilities with R-2 or R-3 occupancies.

Two & three story R-2 or R-3 buildings are not required to have an elevator. If a common or public use elevator is installed, it must serve each floor with unit entry doors.

Three storied facilities with other occupancies.

Facilities of other occupancies three stories (regardless of location of level, above or below grade), are not required to have an elevator when each floor has less than 3,000 square feet in area.

Two storied facilities with other occupancies.

Facilities of other occupancies limited to two stories (regardless of location of level, above or below grade), are not required to have an elevator regardless of floor area.

For the purposes of this MEMO, "other occupancies" means those not described or referred to in the MEMO.

It should be noted that even if an elevator is not required, all common & public use areas on all floors must be designed and constructed in accordance with OBC Chapter 11, ADAAG and other applicable requirements.

We'll cover chairlifts in another article.



ICC Adoptions

Eight more states adopt. 46 states now use the I-Codes.

Indiana has a new state building code as does Minnesota, West Virginia, New Jersey, Tennessee, Virginia, Washington, & Wyoming. Those 8 states adopted new building safety codes created by ICC.

Nationally, 46 states have adopted one or more of the I-Codes at the state or jurisdictional level. The District of Columbia, Puerto Rico, and Federal agencies also are enforcing one or more of the International Codes.

Indiana adopted the 2000 IBC, the IFC, IFGC, and IMC effective May 21.

Minnesota now enforces the 2000 IBC, IFC and IRC, effective March 31.

New Jersey gave notice of final action in the May 5 New Jersey Register adopting the 2000 IBC and IRC, effective immediately.

Tennessee approved the IBC and IFC for local adoption throughout the state for exempt jurisdictions, effective April 24.

Virginia approved adoption of the 2000 IBC, IFC and IRC on April 7 (pending final signature by the attorney general).

Washington adopted the IBC, IRC, IFC and IMC (with IFGC adopted by reference) on May 14. The statute becomes effective 90 days later.

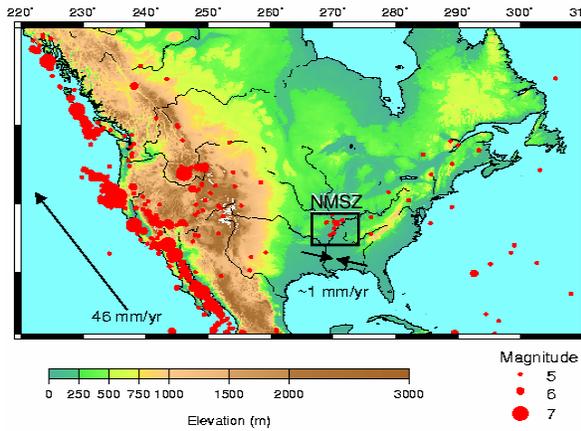
West Virginia adopted the 2000 IBC, IRC, IMC, IPC, IFGC, IECC, IPMC (optional), the 1998 ICC/ANSI A117.1 Standard, and the 2003 IEBC, effective April 1.

Wyoming adopted the IBC, IFC, IMC and IFGC, effective July 1.

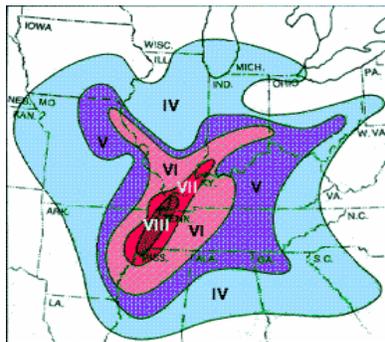
A ninth state, Kansas addressed energy conservation by adopting the IECC on April 30, effective July 1.



The New Madrid Seismic Zone (NMSZ)



The New Madrid Fault system extends 120 Miles southward from the area of Charleston, Missouri, and Cairo, Illinois, through New Madrid and Caruthersville, following Interstate 55 to Blytheville and on down to Marked Tree, Arkansas. It crosses five state lines and cuts across the Mississippi River in three places and the Ohio River in two places. The fault is active, averaging more than 200 measured events per year (1.0 or more on the Richter scale), about 20 per month. Tremors large enough to be felt (2.5-3.0 on the Richter scale) are noted annually. Every 18 months the fault releases a shock of 4.0 or more, capable of local minor damage. Magnitudes of 5.0 or greater occur about once per decade, can do significant damage and be felt in several



Map of New Madrid Seismic Zone showing where a hypothetical magnitude 8 (VIII) earthquake would be felt and at

states. A damaging earthquake (≥ 6.0) occurs about every 80 years (the last one in 1895). The results would be serious damage to schools and masonry buildings from Memphis to St. Louis. A major earthquake in this area (≥ 7.5) happens every 200-300 years (the last one in 1812). There is a 25% chance of such a disaster by 2040. A New Madrid Fault rupture this size would be felt throughout half the United States and damage expected in 20 states or more. Missouri alone could anticipate losses of at least \$6 billion from such an event. ▲

Accessibility Failures

(Continued from page 1) Accessibility advocacy groups use federal housing grants to investigate possible violations which can lead to the filing of complaints with HUD and/or the Ohio Civil Rights Commission (OCRC). Complaints generally are first submitted to the OCRC for a determination if Ohio's housing discrimination regulations have been violated (OCRC's regs refer to the accessibility provisions in the OBC). Based on the OCRC's findings, they may choose to proceed with legal action, refer the case to mediation, HUD for federal enforcement proceedings or dismiss the complaint. Multifamily residential accessibility requirements have been a part of the OBC since the early 1990's. The BBS Newsletter has continued to include OBC accessibility information under the "Making It Accessible/Understandable" feature in practically every volume since the BBS began its printing. ▲

Legally Speaking

(Continued from page 3)

provides that any employee of a building department or person who contracts for service with the department is disqualified from performing services for the department when the same would require the employee or person to pass upon, inspect, or otherwise exercise any authority given by the Ohio Building Code for the construction, alteration, or maintenance of a building or the preparation of working drawings or specifications for work within the jurisdiction area of the department. This sub-section also provides that the department shall provide other similarly qualified personnel to enforce the requirements of the Ohio Building Code as it pertains to such work. In recent conversations with the Ohio Ethics Commission, its staff indicated that inspectors or design professionals can work within their own jurisdiction as long as they do not review or inspect their own work or that no one employed by their private business performs any review of plans or makes inspections on work done by the private company. The individual employed as a replacement or substitute by the political subdivision must have no relationship to the person that is replaced.

The Ohio Ethics Commission is a user friendly agency. If you have ethics questions related to public sector employment, you should avail yourself of their services. The Ohio Ethics Commission can be contacted at 614/466-7090 or at www.ethics.state.oh.us. The BBS staff will also assist on issues that relate directly to the enforcement of the Ohio Building Code. Our telephone number is 614/644-2613. BBS's website address ▲



Training News—Billy Phillips

BOARD ADDS ANOTHER TESTING OPTION FOR BUILDING DEPARTMENT PERSONNEL CERTIFICATIONS. The Board has recently added a second option for examinations to become a certified plan examiner or building, mechanical, or plumbing inspector. In the past, the only exams recognized the Board were those offered through Experior Assessments, National Construction Program for Construction Code Inspectors (NCPCCI). The second option recently approved by the Board is the International Code Council's, National Certification Services (NCS) examinations. The building officials exam is still only offered through NCPCCI. However, the plan examiner and building, mechanical, and plumbing inspector examinations all offered through both NCPCCI and NCS.

The key to understanding examination required for each certification category is to obtain the OBC REQUIREMENTS FOR BUILDING DEPARTMENT PERSONNEL found on page 4 of this newsletter, by requesting document number 100 from the BBS Faxback service (614-728-1244), or by requesting document 100 on the BBS Web Document Catalogue @ www.com.state.oh.us/ODOC/dic/dicbbs.htm. The matrix has recently been updated and lists the examination requirements for both NCPCCI and NCS. At the bottom of the matrix you will find notes explaining the categories of exams and a list of each examination for both testing groups. All examination for NCPCCI start with a numeric character and end with an alpha character (eg. 1B – Building General). All examinations for NCS start with an alpha character and end with a numeric character (eg. B2 – Commercial Building

Inspector). Before the Board approved the use of the NCS as an approved testing agency, a task analysis was completed to determine equivalency with the exams already approved by the Board through NCPCCI. It should be noted that when NCS developed their tests, they did not design a fire protection test similar to NCPCCI. However, they did incorporate the fire protection testing information into other exams. The key to determining what exams are required is to simply review the Board's matrix.

In order to fully understand how to register for and take exams you must contact either NCPCCI or NCS to receive a copy of their Candidate Information Bulletin (CIB). The CIB contains information on FAQs, how to register, appeal procedures, practice questions, and an application packet.

NCPCCI can be contacted by calling (800) 864-5309 or through their web site @ www.experioronline.com and NCS can be contacted by calling (877) 783-3926 or through their



New York City Mayor Accepts Recommendation By Commission To Adopt International Building Code

New York City Department of Buildings Commissioner Patricia J. Lancaster today announced that Mayor Michael Bloomberg has accepted the recommendation of the Mayoral Commission to Study the Feasibility of Adopting a Model Code. After four months of deliberations, the Commission recommended the adoption of the International Code Council's International Building Code, or IBC. The Commission featured an array of members from the public and private sectors, and had examined the benefits of both the IBC and NFPA 5000. "I would like to applaud the

Commission for the thoroughness with which they undertook this critical task," said Commissioner Lancaster. "As it stands now, our Building Code is the most stringent set of construction regulations in the nation, yet its complexity is seen by many as an impediment to progress. The IBC will allow us to streamline the construction process while not sacrificing the effectiveness of these regulations in keeping our City a safe place to live, work and build."

The Commission extensively examined both the IBC and the NFPA 5000 for their formats and also for their ease of adaptability to the pro-

visions of the City's needs. As stated in the Commission's final report, "The premise is that the intent and high standards of the existing code should be preserved either by integrated language change or by separate amendments, while a new format is adopted." The Commission also held a public forum in February 2003, giving weight to input from the public at large during their deliberations.

In its 42-page final report (not including appendices), the Commission outlined its criteria for selecting the IBC over the NFPA 5000 and the existing code. Among those code criteria were comprehensive-

Ohio Board of Building Standards Calendar

JUNE 2003						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

2—Electrical Safety Inspector Certification Examination

13—Board of Building Standards Public Hearing & Conference Meeting

JULY 2003						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

4—Independence Day



AUGUST 2003						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

1—Board of Building Standards Conference Meeting and Public Hearing

NYC & IBC

(Continued from page 9)

ness, ease of understanding, flexibility of upgrading, ease of adaptability to the unique requirements of New York City, as well as the training provided under each code. In every category of measurement, the IBC received higher margins of preference over the NFPA 5000.

Mayor Bloomberg first announced the Commission's formation in November 2002. Among its members were representatives from the Department of Buildings, the New York City Fire Department, Housing Preservation and Development, the City Council's Housing and Buildings Committee, the ICC, NFPA, the Building Construction and Trades Council, the AIA, the New York Assoc. of Consulting Engineers, the Real Estate Board of New York, and the Association for a Better New York.



Up in smoke!

(Continued from page 5)

fire will generate so that the quantity of smoke can be adequately accounted for and managed in accordance with the objective. Adding to the variable assumptions and complexity, the designer must further assume a type of fire (fast growing, medium growing, slow growing, etc.) Unfortunately, many commodities and materials have not been tested and evaluated to know exactly how the fire will behave or how much smoke will be generated. Most people are quite surprised at the large quantities of smoke that even a small fire can produce! As previously mentioned, space geometry and configuration near the point of fire origin also play a key role in how the fire plume and the resulting smoke behaves.

Hopefully, this gives you a better understanding of how very complex the task of designing a smoke control system can be. It is no

wonder, given all of the assumptions that must be made, that these systems are such a mystery. This is one case where "technical design analysis" is certainly involved and the plans must be sealed by a registered design professional. Ideally, the design professional should be competent in and have experience in the fields of fire protection and mechanical engineering. As the science of fire protection engineering evolves and matures, the design of these systems will surely become less mysterious. One of the best resources and references for those interested in learning more about smoke control system design is "Design of Smoke Management Systems" by John J. Klote and James A. Milke. It can be purchased from the Society of Fire Protection Engineers (SFPE) or American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE). In the mean-



Memphis Earthquakes

(Continued from page 6)

more a nuisance than a catastrophe. Still, large (low magnitude 7) earthquakes occurred in 1811 and 1812, and geological records suggest that similar or slightly smaller earthquakes occur about every 500 years.

Memphis and many other communities currently have building codes for earthquake-resistant construction. Now states, counties and municipalities in the NMSZ are considering a much stronger code developed under the direction of the Federal Emergency Management Agency (FEMA). This code, International Building Code (IBC) 2000, would increase the earthquake resistance of new buildings to levels similar to those in southern California. The code would suggest the need to retrofit existing critical buildings, including schools, hospitals, fire and police stations, and infrastructure such as highways and bridges.

“Surprisingly,” said Stein, a professor of geological sciences, “the new code has been proposed with almost no consideration of the costs and benefits. We’ve looked at the numbers and they don’t make economic sense.”

“They’re not even close,” said Tomasello, who has studied the costs of designing buildings with the new guidelines. “FEMA estimates that, averaged over hundreds of years, Memphis faces about \$17 million in earthquake damage per year, which the new code might cut in half.

“The problem is that since the Memphis metropolitan area has about \$2 billion in construction each year, and the new code would

(Continued on page 12)

OBC Use Group Selection Guide for Child or Adult Care

While this table is not assumed to be comprehensive, it can be a guide for initial evaluation after which further code review should be done.

Age of Population or Resident	Capable of Self-Preservation	Hours of Care	Occupancy Classification for Number of Individuals or Residents Served		
			1 to 5	6 to 16	Over 16
2 ½ Years or Less	No	Less Than 24	R-3	I-4 ^a	I-4 ^a
Over 2 ½ Years	No	Less Than 24	R-3	I-4	I-4
Over 2 ½ Years Through Grade 12	Yes	Less Than 24	R-3	E	E
Over Grade 12	Yes	Less Than 24	R-3	A-3	A-3
2 ½ Years or Less	No	24 Hours	R-3	I-2	I-2
Over 2 ½ Years	Yes	24 Hours	R-3	R-4	I-1
Over 2 ½ Years	No	24 Hours	R-3	I-2	I-2

^a See Exception to OBC Section 308.5.2. This exception will allow up to 100 individuals 2 1/2 years or less of age, to be classified a Group E if all rooms where care is provided to this age group and has an exit door leading directly outside at grade.

See the code for specific criteria.

See OBC Chapter Three for complete occupancy definitions.

Madden v. City of Eldridge, Iowa

Appeal from the Iowa District Court for Scott County, James E. Kelley, Judge.

AFFIRMED: Opinion by Streit, J. Twenty-four years after an apartment building was constructed, the ceiling of an apartment collapsed killing a tenant. The estate sued the City of Eldridge claiming it failed to properly inspect the building and failed to enforce the Uniform Building Code when the building was constructed in 1975, resulting in the tenant’s death. The district court found the city was immune because its actions were protected by the discretionary function immunity of Iowa Code section 670.4 (3) (1999). The estate appealed.

OPINION HOLDS: The trial court had authority to rule on the city’s untimely motion for summary judgment, even though it had previously been denied by a differ-

ent judge. The court could revisit the motion to ensure the issues were suitable for a trial on the merits.

The city is not immune under the discretionary function immunity because there is no evidence to show the inspector’s decision to not require compliance with the building code and to not conduct a required inspection was susceptible to a policy-based analysis.

The city is nevertheless immune under Iowa Code section 670.4 (10) (1999) for its actions or omissions pursuant to inspection. The city did not control or supervise the contractor or building owner as contemplated by that section. We affirm the trial court’s grant of summary judgment in favor of the city but base our decision upon immunity pursuant to section 670.4(10).



Memphis Earthquakes

(Continued from page 11)

raise costs about 10 percent, we'd be spending about \$20 for every one dollar we'd save. On top of that, we would want to upgrade important existing buildings, costing 25 to 33 percent of the cost of a new building. The economic impact, including reduced new construction, job losses, and reduced housing affordability, is likely to be significant." Buildings in California are much more likely to be shaken seriously during their useful life of about 50 years. "FEMA accepts that; their estimate shows that the risk of earthquake damage in Memphis and St. Louis is about one-fifth to one-tenth of the risk in San Francisco and Los Angeles," said Stein. "Therefore we shouldn't use the same building strategy unless it's justified by careful analysis. If we think this through,

we can probably do a lot better." "The bottom line," said Tomasello, "is not to rush into this." Instead, the study recommends that communities carefully consider the costs and benefits of alternative strategies and decide on a level of earthquake-resistant construction that makes political and economic sense. "I think that the proposed code illustrates the old line that every problem has an obvious, simple, solution -- and it's often wrong," said Stein. "Given the large sums at stake, time spent getting this right would be well spent."

The article by Seth Stein, Joseph Tomasello, and Andrew Newman, "Should Memphis Build for California's Earthquakes," appears in Eos, Volume 84, number 19 (13 May

2003), page 177.

For results of Northwestern's study of the New Madrid seismic zone, go to:

http://www.agu.org/sci_soc/prrl/prrl0310.html

<http://www.earth.northwestern.edu/people/seth/research/nmsz.html>

Author contact information:

Seth Stein: +1 (847) 491-5265 or sstein@northwestern.edu

Joseph Tomasello: +1 (901) 761-2016 or joet@reavesfirm.com

Andrew Newman: anewman@lanl.gov



Ohio Board of Building Standards

6606 Tussing Road
P.O. Box 4009
Reynoldsburg, Ohio 43068-9009
Phone: 614-644-2613
Fax: 614-644-3147
Email: dic.bbs@com.state.oh.us

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