

Code Connection

The customer newsletter for the construction and development community.

CITY OF FOUNTAINS
HEART OF THE NATION



KANSAS CITY
MISSOURI

JULY 2003

DCA ENDS FISCAL YEAR WITH STRONG PERMIT ACTIVITY



Holiday Schedule:

The Department of Codes Administration (DCA) offices will be closed on the following dates:

Friday, July 4, 2003
Independence Day

As April 2003 wrapped up, the end of our fiscal year 2003, we looked back with amazement at the strong levels of permit activity and investigations that we administered during the year compared to the previous fiscal year. Some of the more significant data follows:

ACTIVITY	FY 02	FY 03	CHANGE
Construction Permits	18,900	23,248	+23.01%
Construction Value of Permits	\$779,675,106	\$823,508,849	+5.62%
DCA Revenue Collected	\$7,373,500	\$7,144,844	-3.10%
Construction Plan Reviews	12,671	11,846	-6.51%
One-and Two-Family Review Times (avg.)	1 day	1 day	0.0%
New Buildings Review Times (avg.)	3.6 weeks	3.4 weeks	-5.56%
All Other Projects Review Times (avg.)	0.8 week	0.7 week	-12.50%
Construction Field Inspections	65,082	75,438	+15.91%
3 rd Party Reports Received/Reviewed	5,325	8,736	+64.41%
Investigative Inspections	5,315	6,360	+19.61%
Elevator/Lift Device Inspections	3,305	3,561	+7.75%
Average Customer Satisfaction Score	9.35	9.02	-3.53%

In this issue:

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- Vergil Phillips Becomes C.B.O.
- Average Turnaround Times
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- DCA Staff Changes
- Tom Briggs Elected IPMA Secretary-Treasurer
- DCA Interpretations

FY 03 REPORT SUMMARY/ COMMENTS:

- The large increases in construction permits issued (+23.01%), construction field inspections performed (+15.91%) and 3rd party inspection reports received/reviewed (+64.41%) were mainly attributed to large increases in single family residential construction during the fiscal year.
- DCA exceeded all posted customer service guarantees on plans review turnaround times and inspection response times.
- DCA missed its revenue goal of \$7.4M by 3.45% but was able to make up the difference of \$255,156 by being proactive during the year in reducing department expenditures. Because of these proactive reductions, our budget, for the eighth consecutive year, was 100% paid for with user fees.

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JULY 2003**



Published by the City of Kansas City,
Missouri, Department of Codes
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NEW C.B.O. FOR DCA

DCA is pleased to announce that **Vergil Phillips**, Construction Code Inspector Supervisor in DCA's Permits Division, recently passed the Certified Building Official (C.B.O.) exam administered by the International Code Council (ICC). Becoming a C.B.O. is a significant professional accomplishment. Codes protect the public by regulating safe construction. Certification demonstrates a firm commitment to that public, and to the code enforcement profession, by confirming and recognizing knowledge and proficiency in the areas of management, technology and law as they relate to construction codes administration. The ICC C.B.O. program is a voluntary professional credential, though the credential is often recognized by local and state governments as a mandatory employment requirement. Mr. Phillips joins DCA associates **Barry Archer, Don Booth, Rick Usher, Greg Franzen, Wilson Winn, David Skaff, Bill Watson, Steve Ward, Jomy John, Sy Noorbakhsh** and **Charles Evans** as Certified Building Officials and can now proudly display "C.B.O." behind his name. Congratulations, Vergil!



DCA PLANS REVIEW AVERAGE TURNAROUND TIMES

Four-Week Averages as of June 15, 2003

New Commercial Bldgs. & Additions	3.3 weeks
One- and Two-Family Dwellings	1 day/plan
All Other Projects	0.7 weeks/plan
Quality Control Reviews (QCR)	2 days

CODE CHAT

by Gary Marker, R.A.
Division Manager of Plans Review

WHAT'S NEW WITH. . . ATRIUMS?

The recently adopted 2000 *International Building Code* (IBC) has many similarities with the *Uniform Building Code* (UBC) previously used for many years in KCMO. However, in the interest of creating a new standard acceptable to all member groups of the International Code Council, some changes have been incorporated. This article will attempt to highlight some of those differences as they apply to the subject of atriums. The comparison is made with the immediate past code (1991 UBC) adopted by KCMO.

Definition

The IBC (and UBC) defines an atrium as an opening through two or more floor levels other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall, assembly group balcony or mezzanine.

General

Both the IBC and UBC limit the use of atrium provisions to occupancy groups other than Group H. While the UBC required minimum opening dimensions for atriums (re: Table 17-B), the IBC does not.

Automatic Sprinkler System

As required in the UBC, IBC Section 404.3 also requires buildings with atriums to be provided with an automatic sprinkler system throughout. However, the IBC permits the omission of sprinklers in areas that are separated from the atrium by not less than two-hour fire barrier walls or horizontal assemblies. Also, the IBC recognizes the limited effectiveness of sprinklers within areas of great ceiling heights and permits the omission of sprinkler protection where the ceiling of the atrium is more than 55 feet above the floor.

Smoke Control

As with the UBC, IMC Section 404.4 requires atriums to be provided with a smoke-control system installed in accordance with Section 909. While the UBC specified the quantity of air to be moved based on the size of atrium under consideration, the IBC sets forth the minimum pressure and airflow requirements and requires an engineering design to verify the required performance. IBC Section 909.3 requires special inspection and testing. While special inspections were not specifically required by the UBC, acceptance testing was required. As with the UBC, the IBC requires both automatic and manual control of the smoke control system and that the system be provided with standby power.

Enclosure of Atriums

As with the UBC, IBC Section 404.5 requires the separation of the atrium from the remainder of the building by a one-hour fire barrier wall and similarly permits the omission of such separation for any three floors, provided the smoke control system is sized to include the area of the adjacent open floors. The UBC permitted open exit balconies within the atrium space, while the IBC has no such provision. Finally, both codes permit non-rated glazed walls as atrium separation, provided such walls are provided with sprinkler protection for the glazing. *(Continued on page 9)*

STEVE WARD RECOGNIZED DURING PUBLIC SERVICE RECOGNITION WEEK

On May 7, 2003, the City of Kansas City, Missouri, Jackson County, the State of Missouri, and the Federal Executive Board joined together to honor outstanding public service employees in their respective organizations. The awards ceremony was held in the Little Theater of the Municipal Auditorium, 301 W. 13th Street, Kansas City, Missouri.

Steve Ward, one of DCA's Construction Code Inspection Supervisors, received the **Distinguished Technical Service Award** for the City of Kansas City. Steve's contributions and accomplishments that were considered include:

- Possession of national certification as a Certified Building Official and as a Master Code Official. As a multi-discipline inspection supervisor, Steve is responsible for a vast amount of technical information.
- Conducts training based on the *National Electrical Code* for all new DCA associates.
- Active participation in the Missouri-Kansas Chapter of International Association of Electrical Inspectors (IAEI) at the local and national levels, and recently elected to serve as the 2003 Chairman.
- Supervision of the Inspection Division, South Branch, to ensure completion of 100% of DCA's inspections on the day scheduled.
- Active involvement in the testing of version upgrades for KIVA, the City's permit and inspection tracking database, and the development of more advanced uses.

Steve's work in the past year has resulted in a high level of service to DCA's customers and the public, and has enabled DCA to work in an efficient and productive manner. Congratulations, Steve!



FROM THE FILES...
REAL CODE MODIFICATION REQUEST CASE HISTORIES
MATERIALS OF CONSTRUCTION

**By Gary Marker, R.A.,
Division Manager of Plans Review**

The KCMO Code of Ordinances, Section 18-6, states that “The details and actions of granting modifications (to code requirements) shall be recorded and entered in the files of the Department of Codes Administration.” Doing so permits one to rationalize any apparent code discrepancies by investigating the files for the building in question. In order to facilitate this, DCA employs the Code Modification Request process wherein the applicant submits a form stating the location of the property, the applicant name and the proposed code alternate. Once this form is submitted along with the required application fee, the request is reviewed and either approved, conditionally approved or denied. The Code Modification Request process is outlined in DCA **Information Bulletin Number 101** (available on the web at www.kcmo.org/codes). However, I am frequently asked, “What makes a “good” Code Modification Request?” This is another installment in a series of articles to attempt to answer that question by presenting actual case histories of CMR’s that have been APPROVED by DCA

The subject of this request is a Group A-3, Type 1-B, fully sprinklered, two-story addition to an existing, four-story art museum. IBC Section 603.1 permits fire retardant treated wood within the nonbearing partitions in this building. The applicant indicates that plywood backing to the gypsum board is desirable in order to permit the hanging of art work. However, the applicant notes that, due to the special nature of the contents, off-gassing from fire-retardant treated wood is undesirable. Therefore, the applicant proposes to install regular plywood within the wall membrane, sandwiched between two layers of type x gypsum board. Staff believed this request met the intent of the code, and it was approved.

This approval recognized that this was an unusual condition in a fully sprinklered building. It was further believed that the sandwiching of the plywood between two layers of gypsum board provided an adequate degree of protection from ignition for the plywood, thereby eliminating the hazard of the combustible material. It was also recognized that the code would have permitted plywood to be installed in an exposed condition on the wall, thereby creating a much greater likelihood of supporting combustion in the event the wood was ignited. Be sure to watch future editions of the *Code Connection* for more informative and interesting tales from the CMR files. ◻

DCA STAFF CHANGES

D’Ann Clemmons was promoted from Customer Service Representative in the Business Services Division to Accountant I in the Business Services Division.

Roxanne Coates and **Scott Graybill** left DCA to pursue other opportunities.

TOM BRIGGS, IPMA-CERTIFIED PROFESSIONAL ELECTED IPMA CENTRAL REGION SECRETARY-TREASURER

DCA employee **Tom Briggs** continues to actively participate in the International Public Management Association (IPMA). At the recently held 67th Annual IPMA Central Region Training Conference on Public Personnel Administration, Tom Briggs, Division Manager of Business Services, was elected to serve as the 2003-04 Secretary-Treasurer.

The IPMA central region consists of the following states: Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

Tom was previously the 1999-2000 President of the IPMA Greater KC Chapter, and in 2001 he received the Thomas F. Lewinsohn Award for his outstanding contributions to the purposes and conduct of the IPMA Greater Kansas City Chapter.

In 2002, Tom fulfilled the criteria to receive the IPMA-Certified Professional (IPMA-CP) designation. Individuals who receive the IPMA-CP designation have met the professional standards set by the Public Human Resource Certification Council (PHRCC) and have demonstrated their commitment to the human resource profession to a panel of senior-level professionals.

“I know Tom will continue to represent the City of Kansas City, Missouri, and the Department of Codes Administration in a professional manner,” said DCA Director Barry Archer, “and I am always proud to see one our associates recognized, elected and serve at the local, regional, and national level of a professional organization.”

Congratulations, Tom!

BONDING OF SWITCHES REQUIRED

At your local hardware store, you may find two types of light switches available. One with a green screw for the attachment of an equipment grounding conductor, and one without. Which is the right one to use?

2000 International Residential Code (IRC), Section E3901.11.1, and *1999 National Electrical Code (NEC)*, Section 380-9, require that common light switches (‘snap’ switches and dimmer switches) shall be effectively grounded and provide a means to ground a metal faceplate. If the switch is mounted with metal screws to a properly grounded metal switch box, then the switch without a grounding screw may be used. In any other case (including installation in a nonmetallic switch box), the switch with the grounding screw is required – an equipment grounding conductor connection shall be made to the grounding screw.

This requirement applies whether or not a metal faceplate is currently installed. Metal faceplates shall not be used in existing installations that do not provide this means for faceplate grounding.

DCA INTERPRETATIONS

#/CODE	QUESTION	ANSWER
CI2003-101 2000 UPC Sec. 713.4	May a building employ a private sewage disposal system where the public sewer abuts the lot on which the building is located?	Yes. UPC Section 713.4 states that the public sewer may be considered as not being available when the building is located more than 200 feet from the public sewer.
CI2003-102 2000 UPC Secs. 704.3, 801.2.3	UPC 704.3 requires that pot sinks, dishwashing sinks, etc., be connected directly to the drainage system. UPC 801.2.3 requires that sinks used for food preparation, etc, be indirectly connected to the drainage system by means of an air gap. If a sink in a commercial facility is to be used for both purposes, shall this sink be connected indirectly or directly to the waste line?	<p>The requirement for the air gap for food preparation sinks is to ensure that there is not a direct path for bacteria from the drainage system to the food in the sink. This is the overriding concern, and therefore the indirect connection shall be used in this example.</p> <p>Note that UPC 804.1 requires that indirect waste receptors "...shall be of such shape and capacity as to prevent splashing or flooding...". The receptor and piping receiving the waste from dishwashing activities may need to sized larger to accommodate sudsing in the receptor.</p>
CI2003-103 2000 IBC Sec. 1003.3.3.12	When a stairway to the roof is required by IBC Section 1003.3.3.12, must the portion of this stairway leading to the roof be located within a vertical exit enclosure?	Yes. While IBC Section 1003.3.3.12 does not specify that the stair to the roof must be in an exit enclosure, it does state that <i>one stairway shall extend to the roof surface</i> . It is the intent of this section that the stairway to the roof be contained within the exit enclosure in order to facilitate access to the roof for fire department personnel. If the building has a complying exterior exit stairway, then that stair is also permitted to serve as the stairway to the roof.
CI2003-104 2000 IBC Secs. 707.12, 708.4	May the top of a shaft enclosure (including stair enclosures), that does not terminate at the underside of a floor or roof structure above, be constructed of a listed wall assembly laid horizontal?	<p>No. IBC 707.12 reads that the top of the shaft enclosure shall be constructed "...of the same fire-resistance rating as the topmost floor penetrated...but not less than the fire-resistance rating required by the shaft." The assembly used at the top of a shaft enclosure shall be installed in accordance with its listing, i.e., it must be listed for horizontal installation. As a wall is, by definition, a vertical element, wall listings are tested for vertical installation only unless specifically indicated otherwise.</p> <p>For corridor construction only, IBC 708.4, exception 3, allows the fire-resistance-rated corridor 'lid' to be constructed the same as the corridor walls (i.e., a wall laid horizontal). This is due to the minimal level of protection expected from a corridor, as also evidenced by the allowance of 20-minute door assemblies in the one-hour walls. Note that a corridor is not an exit, but rather is a part of the exit-access.</p>

DCA INTERPRETATIONS

#/CODE	QUESTION	ANSWER
CI2003-105 2000 IBC Table 704.8	<p>1) If a portion of an exterior wall is recessed, can the distance from the property line to the face of the recessed portion of the wall be used to determine the exterior wall rating (assuming the recessed portion is beneath an additional floor or roof above)?</p> <p>2) What if the recessed portion is a court (i.e. is not covered by an additional floor or roof above)?</p>	<p>1) No. The extent of the floor area of a building is established by the definition of AREA, BUILDING (IBC 502.1). A portion of a building without an exterior wall, but beneath a projecting floor or roof above, is by definition a part of the building area. The exterior wall plane of the building is established by that definition. As the floor or roof above would have exposure based on its setback, the setback shall be measured to the exterior wall plane established by definition.</p> <p>2) By definition, a court is not a part of the building area. The setback shall be measured to the actual exterior walls within the court.</p>
CI2003-106 2000 IBC Sec. 302.1.1.1	<p>IBC Section 302.1.1.1 states that, where Table 302.1.1 permits an automatic fire-extinguishing system without a fire barrier, the incidental use area shall be separated by construction capable of resisting the passage of smoke. This section further states that the partitions shall extend from the floor to the underside of the fire-resistance-rated floor/ceiling or roof/ceiling assembly or to the underside of the floor or roof deck above. Must the referenced fire-resistance-rated floor/ceiling or roof/ceiling assembly be installed throughout the building?</p>	<p>No. The referenced fire-resistance-rated floor/ceiling or roof/ceiling assembly need extend only to the surrounding partitions of the incidental use area. (However, note that if a fire barrier is provided, it shall extend to the deck above in accordance with IBC 706.4).</p>
CI2003-107 2000 IBC Secs. 508.2, 508.5, 508.8, 903.2.8	<p>2000 IBC Section 903.2.8 states that an automatic sprinkler system shall be provided throughout all buildings with a Group R-2 fire area where more than two stories in height, including basements, or where having more than 16 dwelling units. Does this requirement also apply to an S-2 occupancy within the same building as permitted by IBC Sections 508.2, 508.5 and 508.8?</p>	<p>Yes. The special provisions of IBC Sections 508.2, 508.5 and 508.8 do not permit the omission of automatic sprinkler protection for these spaces when it is required by Section 903.2.8.</p>
CI2003-108 2000 IBC Sec. 1003.3.1.3.4	<p>1) A 'sensor' is required to detect an occupant approaching the egress door. Must this be a motion sensor?</p> <p>2) If an electric lock is used that does not rely on a signal from a sensor (or otherwise on</p>	<p>1) No. Other hardware that 'senses' the approach of an occupant and does not require special knowledge or effort, such as an electronic push bar, may also serve as the sensor. Whether a motion sensor or a push bar are used, all other provisions of this section must be met.</p> <p>2) No. For example, a door with an electric strike but with egress hardware that mechanically releases the door independently from the electric strike would not be regulated under this section. Door hardware that directly interrupts the power to an electric lock, independent of any access control system electronics, would also not be regulated under this section. (In any arrangement where an electric lock prevents free egress, the lock shall release upon loss of power. Note that door assemblies required to have a fire-protection rating must remain latched when unlocked.)</p>

Automatic Fire Detection/Alarm

The UBC required smoke detection at designated locations within and around the atrium. The IBC, Section 404.6, requires smoke detection only at the top of the atrium; however, this section refers to Section 907.2.13, which further requires a fire alarm system in all occupancies with atriums connecting more than two stories. A fire alarm system was not required by UBC for atrium buildings.

Interior Finish

While UBC required not less than a Class I flamespread rating (0-25) for all atrium wall finish materials, IBC Section 404.8 permits a Class B rating (26-75).

Travel Distance

Where a required means of egress is through the atrium, IBC Section 404.9 permits a travel distance of 150 feet (in other than the lowest level, on the lowest level, normal egress travel distances found in IBC Section 1004.2.4 apply), whereas the UBC permitted only a 100 foot travel distance.

Means of Egress

While UBC prohibited exits for Group I occupancy sleeping rooms, other than jails, prisons or reformatories, from passing through the atrium, the IBC has no such prohibition.

While UBC and IBC methodologies for regulating atriums vary somewhat in specifics, the intent is the same--to achieve a high level of life safety while permitting flexibility in design. For questions regarding this subject or any other code requirements, feel free to call the DCA Plans Review office at (816) 513-1511, where helpful associates stand ready to provide assistance. □

DCA ENDS STRONG (*Continued from page 1*)

- Even though the score of 9.02 was down some from the previous fiscal year, DCA still maintained a very high average customer satisfaction survey score during the fiscal year – well above the DCA goal of 7.0 or higher.
- Significant reductions were achieved in plans review times in two categories.
- The optional 3rd Party Residential Inspection Program has been a tremendous success. Homebuilders originally said that they would probably not use the optional program because it would cost them additional money. The end-of-year number speaks for itself. It was used, in lieu of the free DCA generated inspection, 8,736 times during the year. The program has been tremendously successful and has saved the department considerable amounts of resources in manpower and vehicular costs and has given the customer the added flexibility in inspection scheduling.

As you can see, DCA has been busy. And we hope to be even busier this fiscal year while helping you achieve your construction and development goals. □

Code Connection

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Visit DCA on the Internet at www.kcmo.org/codes/

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Director's Office	513-1472
Deputy Director's Office	513-1478
City Hall Permit Center	513-1500 (option 3)
Plans Review Permit Center	513-1500 (option 5)
Commercial Plans Review	513-1500 (option 5)
One- & Two-Family Plans Review	513-1500 (option 5)
Inspections Division	513-1500 (option 2)
Special Inspections	513-1500 (option 2)
Investigations Division	513-1500 (option 2)
Business Services Division	513-1500 (option 3)
Contractor Licensing & Registration	513-1500 (option 6)

FAX Services/Numbers:

FAX Permit Process	513-1456
FAX Inspection Requests	513-1536
FAX Publication Purchases	513-1456
FAX One- and Two-Family Plans Branch	513-1505
FAX Plans Review Comments Call to request your comments	513-1500 (option 4)

Code Information:

Zoning, Floodplain, Airport Height Zone, Permit Application Information	513-1500 (option 3)
Code Questions, Plans submittal Information, Plans Review Status	513-1500 (option 5)

Publication Ordering Information:

The following publications are available at either DCA office.

You may also call 513-1500 (option 3) and request a credit card authorization form and then place your order via Fax.

1. **Chapter 18, Kansas City Building and Rehabilitation Code** and related ordinances. (Chapter 18 adopts the model codes by reference and identifies local amendments to the model codes.) Price: \$6.00
2. **Special Inspections Program Manual.** Price: \$5.00
3. **Fee Schedule.** Price: \$2.50

The following publications are available from the City Planning and Development Department (513-2846).

1. **Chapter 80, Kansas City Zoning Ordinance** Price: \$25.00
2. **Chapter 66, Subdivision Regulations** Price: \$6.00

The following publications are available from the International Code Council Regional Office (455-3330).

1. *2000 International Building Code*
2. *2000 Uniform Plumbing Code*
3. *2000 International Mechanical Code*
4. *1999 National Electrical Code*
5. *2000 International Residential Code*