Building Officials Conference of North East Ohio









April, 2012

B.O.C.O.N.E.O. Officers

President

Paul Kowalczyk South Euclid, Ohio

First Vice President

Dave Smith Ashtabula County Building Department

Second Vice President

Jerry Flanik Lake County Building Department

Secretary

Dave Hocevar Village of South Russell

Treasurer

Mike Skvasik Village of Glenwillow

Past President

Ray Sack Wickliffe, Ohio

President's Message

I had the opportunity to attend the OBOA Joint Conference in Cincinnati. It is always a pleasure to network with other code enforcement individuals from around the state. Most jurisdictions in other areas of the state are in the same situation as us: asked to do more with less. More than ever, it is important that we begin to build relationships with departments outside our areas. With a decrease in staff size, we don't always have the personnel on hand to handle different situations we come across. By building relationships we have the opportunity to lean on others in times of need. I spoke with the Building Official from Clermont County who was just completing a two week clean-up endeavor caused by a tornado that damaged a large portion of his county. When something like this happens, where do you turn? As our budgets are cut and our staff size decreases, alliances with other departments are critical to have in place to get you through situations like this.

We are still experiencing a number of members who are signing up for the meeting and not showing up. At the March meeting I took a quick accounting of the no-shows for that event. I came up with 52 individuals that had signed up but did not bother to contact someone and cancel their registration. At eleven dollars a meal, that cost our organization \$572 that had to come out of our treasury. To put that dollar amount into perspective, that could have been an additional scholarship for a prospective college student.

Continued...

This Month's Meeting

Remember this months meeting will be at the Normandy Party Center - NOT in Independence

Wall Bracing Presented by Weyerhaeuser BBS2012-065 2 hours for BO, MPE, BI, RBO, RPE, RBI

> Register Here or at the website www.boconeo.org

Plumbing Roundtable
@ 10:15 am
&
Electrical Roundtable

@ 10:15 am.

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Ray Sack Wickliffe, Ohio If you have signed up for the meeting and know that you cannot attend, please contact the board so that we can pull your name off the list. It's as simple as sending an email to boconeo@gmail.com. I received only three messages from individuals that could not make the meeting. The Board does not want to be in the position to begin adding a penalty fee to a membership for those individuals that continually sign-up and fail to attend. We are also incurring additional printing charges for extra handouts and certificates. Every little expense adds up and it's money that could be saved and put to better use for the organization.

Starting in April, you will need your printed receipt for entrance into the room and for your meal ticket. If you come to the meeting and are not pre-registered, you will not be guaranteed a seat in the room and you will be required to pay \$10.00 for the cost of the meal. Remember that beginning in April, we will be holding the meeting at the Normandy Party Center in Wickliffe, Ohio. We will remain there for the months of May and June and will return to the Independence Community Center in September. There are no meetings in July or August.

We have begun planning our golf outing for July. I asked at the last meeting for the members to reach out to contractors, vendors, or businesses in your community to sponsor a hole or make a donation. I charge the organization with the task for each member to get just "one" sponsor. That is not asking a lot and if each member secured a hole sponsor, that would generate over \$16,000. In February we had some of the students and their parents that were the recipients of this year scholarships attend the meeting. In speaking with them it was really nice to see their appreciation for this financial award. I would like to be able to hand out more than five scholarships and increase the amount of each scholarship. I can't do this alone and I need your help. This scholarship money goes to help educate the next generation. Let's show we care by doing our part and soliciting hole sponsors and donations. It only takes a phone call or a simple letter to reach out.

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Village of South Russell

Treasurer *Mike Skvasik Village of Glenwillow*

Past President Ray Sack Wickliffe, Ohio The month of May is Building Safety Month across the nation. It is our job to get out and promote the importance of what we do. In an effort to perform public awareness, a group of members will have a booth set up at the Home Depot at Steelyard Commons on Saturday, May 19^{th.} We will interact with the public and hand out important information on building safety. Everybody knows and likes the police and fire; it's time to show that code officials play just as an important part in the community. I would also ask you to have your City Council adopt a resolution supporting Building Safety Month. You can download the sample proclamation prepared by the International Code Council and present it at a council meeting in May. Just go to the following link:

www2.icc-foundation.org/bsm-proclamations-intro

Again, please step forward and give back to your organization. We have a lot of talented individuals. You can write an article for the newsletter, you can ask to moderate one of the roundtables or provide the topic for discussion, you can help the board in finding educators to speak at our meetings and you can contribute by drumming up sponsorships for the golf outing. When I attend OBOA meetings in Columbus on a monthly basis, BOCONEO is recognized as the top notch chapter in the state and it is my goal to make it even better!



Warmest regards,

Paul Kowalczyk President

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Code Corner Brain Teaser

This month you need to supply the correct multiple choice answer AND the specific code section supporting your pick.

Email your answers to:

boconeo@boconeo.org

The first received correct answer will win a <u>free</u> entry in the next month's 50/50 drawing. The second received correct answer will win a "buy one, get one" 50/50 ticket. Winners <u>must</u> be present at the meeting to win.

Question:

See the next page. Good Luck



Dave Smith
First Vice President
Master Code Official

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Ray Sack Wickliffe, Ohio The owner of a property submitted plans for a building that will contain an office area, a meeting room and a storage area for clothing apparel. The office, the meeting room and the storage area are utilized for his business only. The proposed total size of the one-story building will be 11,750 square feet, and the construction type 3B. The wall partitions separating the three areas are constructed out of 2x4 wood studs, 16 inches on center with ½ inch drywall wall covering. The building is not fire suppressed and does not qualify for open area increase. The storage area is 10,000 square feet in size, the office area 1,000 square feet, and the meeting room 750 square feet. The meeting room contains chairs only that are not fixed. The plans examiner reviews the overall concept and makes some initial corrective comments to the owner. Which answer is correct and why?

- (A) The building is designed with nonseparated mixed use groups. The most restrictive use group applies to the whole building; therefore, the total permitted square footage does not comply with Table 503 for A-3 use groups.
- (B) The office and meeting rooms are considered accessory occupancies to the storage area and meet the requirements of Section 508.2 of the Ohio Building Code (OBC).
- (C) In order to comply with the Ohio Building Code (OBC), the meeting room is required to be separated from the storage use by fire barrier walls in accordance to Table 508.4 and Table 707.3.9 of the OBC. The total building area cannot exceed the allowable building area as calculated in accordance with Section 508.4.2 of the OBC.
- (D) In order to comply with the Ohio Building Code (OBC) and to create two buildings with neither one exceeding a total of 9,500 square feet, a fire wall shall be constructed in accordance with Table 706.4 of the OBC.
- (E) The overall concept of the proposed building is in compliance with the Ohio Building Code (OBC).

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Jerry's Update

Mechanical Ventilation at a Glance - Part 2

Reflecting upon the information indicated in last month's article, the following example will give you an understanding regarding the benefits according to Section 403.3 of the 2011 OMC in comparison to the previous 2007 OMC. Based on Section 403.2 we will proceed through Section 403.3 in order to determine the required rate of outdoor airflow to serve the breathing zone.

2011 OMC- Section 403.2 Outdoor air required.

The minimum outdoor airflow rate shall be determined in accordance with Section 403.3. Ventilation supply systems shall be designed to deliver the required rate of outdoor airflow to the breathing zone within each occupiable space.

Example: Single Zone Recirculating System

Given:

Single story 5000 sq. ft. gambling casino within a hotel.

Area is served by a single RTU.

Air distribution is ducted with ceiling supply air diffusers and ceiling return grilles.

Find:

Required outdoor air intake flow rate (V_{ot}) for the gambling casino.

The gambling casino with a single rooftop unit is considered a <u>single zone</u> <u>system</u>. In order to determine the outdoor air intake flow rate (V_{ot}) for a single zone system using Equation 4-3, the breathing zone airflow rate (V_{bz}) of the occupied space must first be determined using Equation 4-1. Then, the zone airflow effectiveness (E_z) must be determined in accordance with Table 403.3.1.2. Next, the zone outdoor airflow rate (V_{oz}) must be determined using Equation 4-2. The outdoor air intake flow rate for a single zone system is simply $V_{ot} = V_{oz}$, Equation 4-3.

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<u>Don't Panic!</u> <u>Let Flanik show you how to solve this in 3 easy steps.</u>

Step 1: Determine occupant load (P_z) for the gambling casino using Equation 4-1.

No specific occupancy criterion is given for the gambling casino. Therefore, from <u>Table 403.3</u> for a gambling casino, the default occupant density is used (120 occupants/1,000 sq ft):

P₂ = 5,000 sq. ft. X 120 occupants/1,000 sq. ft.

P, =600 occupants

$V_{bz} = R_p P_z + R_{a} A_z$ (Equation 4-1)

where:

Zone floor area: the net occupiable floor area of the space or spaces in the zone.

P_z = Zone population: the number of people in the space or spaces in the zone.

 R_p = People outdoor air rate: the outdoor airflow rate required per person from Table 403.3.

 R_a = Area outdoor air rate: the outdoor airflow rate required per unit area from Table 403.3.

Step 2a: Determine the breathing zone outdoor airflow (V_{bz}) for the room.

<u>First</u>, the outdoor air rates for people (R_p) and area (R_a) must be obtained for the gambling casino from Table 403.3.

 $R_p = 7.5 \text{ cfm/person}$

 $R_a = 0.18 \text{ cfm/sq. ft.}$

Step 2b: Equation 4-1 (OMC 403.3.1.1) can now be solved.

Equation 4-1 $V_{bz} = R_p P_z + R_a A_z$

 V_{bz} = [7.5 cfm/person x 600 people] + [0.18 cfm/sq. ft. x 5,000 sq. ft.]

 $V_{hz} = 5,400 \text{ cfm}$

<u>Step 3a</u>: Determine the zone airflow effectiveness (E_z) in accordance with <u>Table 403.3.1.2</u>.

It is given that the zone is served by a RTU with air distribution ducted to ceiling supply air diffusers and ceiling return grilles.

Cooling mode $E_z = \underline{1.0}$

Heating mode $E_z = 0.8$

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<u>Step 3b</u>: Equation 4-2 (OMC 403.3.1.3) can now be solved for the gambling casino. Determine the zone outdoor airflow (V_{oz}). <u>Note</u>: The most <u>restrictive value</u> of (E_z) must be used.

Equation 4-2
$$V_{oz} = V_{bz} / E_z$$

Cooling $V_{oz} = 5,400 \text{cfm} / 1.0 = 5,400 \text{cfm}$
Heating $V_{oz} = 5,400 \text{cfm} / 0.8 = 6,750 \text{cfm}$

Lastly, Equation 4-3 (OMC 403.3.2.1) states $V_{ot} = V_{oz}$ for a single zone system. Therefore, the required outdoor air intake flow rate (V_{ot}) for the gambling casino to serve the breathing zone is <u>6,750 cfm</u>.

In comparison, the amount of outdoor air required using the $\underline{2007 \ OMC}$ would be based on the same occupant load. However, the outdoor air ratio is $\underline{30 \ cfm \ per \ person}$, consequently the required outdoor air intake flow rate is 600 occupants x 30 cfm/occupant = $\underline{18,000 \ cfm}$ of outdoor air required.

Therefore, 6,750 cfm calculated from the 2011 OMC is far less than 18,000 cfm calculated from the 2007 OMC.

By simply comparing the ventilation methods between the previous 2007 OMC and the current 2011 OMC, you can clearly recognize the benefits of not having to condition an additional 11,250 cfm of outdoor air. The load capacity of the proposed HVAC equipment will be drastically reduced along with a <u>remarkable savings</u> in energy, not to mention the reduction in duct sizes, labor and equipment costs.



Jerry Flanik Second Vice President Master Code Official

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Technically Speaking...

This month Paul has requested that we all print out the registration tickets available after sign up for the monthly meeting. You will have the option to print and the end of the sign up process and once again from the conformation email sent to you. Please bring this ticket with you to the lunch/meeting.



Gregory Fort Webmaster

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Other News and Announcements

City of Maple Heights

Multiple Certified/Building Inspector

Perform residential and commercial building inspections for buildings and structures during all phases of construction, alterations, repairs, or maintenance to verify and document compliance with approved plans, Ohio building codes, local zoning, and property maintenance ordinances. Additional duties include property maintenance and zoning inspections for all use groups to assure compliance with municipal zoning regulations. Click Here For More Information