

A SWIMMINGLY SUCCESSFUL SWEETHEART SOCIAL

SWEETHEART SOCIAL ATTENDEES

enjoyed a fun filled Saturday night, February 17 at Desert Star Playhouse. A group dinner for our 30 attendees was the warm up to the musical

comedy, "Pirates of the Caribbean." This year's sweetheart swag included a choice of red or blue boating-style totes with a nautical RMGA logo. ■



New RMGA Certification Study Guide and Exam is Here!

RMGA has a new Natural Gas Technician Certification Study Guide (in a hardbound and digital version), and the Technical College Testing Centers will now be offering a revised RMGA

Certification Exam in both English and Spanish.

The Certification Study Guide is being translated into Spanish and will be available later this year. ■

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MESSAGE FROM OUR PRESIDENT

SCOTT CARPENTER



Dear RMGA Members & Friends,

This month we were finally able to host Ed Janowiak with the ACCA for a three-day class of instruction on Manual J, S, and D. I would like to thank Ed for making the trip and for his passion for moving our industry forward. I would like to share something he mentioned "as an industry our main purpose is to move air, and the one thing we know the least about is the science of moving air." I believe the best solution is a collective effort to engage in the training and motivate each other to get out of our comfort zones and push for knowledge. I cannot tell you how exciting it was to be in a room with all kinds of people in our industry. We had material suppliers, contractors, and building officials from all over Utah, Wyoming and Idaho. They all came from every level of industry knowledge with an open mind, and it created a great learning environment. I would like to encourage you to reach out and let the board know what type of training you would like to receive or ideas you might have for the association. I would like to extend a thank you to John Hill for coordinating the event and putting together a great lunch for all three days. I would also like to extend a thank you to Ryan Rentmeister and his guys for setting up and stocking the class with snacks and drinks. As we look to the future, I would love to see this training happen again on an even larger platform. I am also encouraged by the news of more potential growth in Wyoming. I would encourage all of us to keep this momentum moving forward.

Thanks!

RMGA BOARD BRIEFING JAN/FEB 2024

In February, the board was briefed on the implementation of 2024 RMGA Certification Study Guides, Certification Exams available in two languages at the testing centers, and the Spanish language study guide undergoing its final editing.

Lance Ball provided an update on the RMGA Wyoming Gas Technician Certification Program: it was reported that meetings with a couple State Legislators were in the works to discuss a state-wide Gas Technician Certification requirement for HVAC Contractors.

Attendees from the ACCA Manual J,D,S classes spoke favorably about how the mix of contractors and building inspectors made for a more in-depth discussion of the basics, and there was interest from inspectors to take more RMGA classes. The board responded by passing a motion to offer building inspectors in the RMGA region (UT, WY, ID) certification training for \$100 and a free test voucher if they want to take the RMGA Certification Exam.

Under new business, the ACCA Leadership Conference was announced for March 11-14, in Orlando, FL. ACCA will pick up a board member's registration if they attend the leadership conference meeting.

Our next board meeting is in-person at Johnstone Supply, beginning with lunch at 11:00 a.m., on Wednesday, March 13th. Everyone is welcome. ■

WELCOME OUR NEW RMGA MEMBERS!

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RMGA GAS CERTIFICATION CLASSES

CALL 801.521.8340
OR EMAIL
RMGAUTAH@GMAIL.COM
TO REGISTER

You can now request registration on the new
RMGA website: <https://utrmga.org/certification>

MAR. IN-PERSON

(And on Zoom)

Salt Lake City

Thursday, March 14
Friday, March 15 &
Saturday, March 16
8 a.m. - 5 p.m.

Dominion Energy CTC Room
1000 West 100 South
Salt Lake City, Utah 84104

MAY IN-PERSON

(And on Zoom)

Salt Lake City

Thursday, May 9
Friday, May 10 &
Saturday, May 11
8 a.m. - 5 p.m.

Dominion Energy CTC Room
1000 West 100 South
Salt Lake City, Utah 84104

JULY IN-PERSON

(And on Zoom)

Salt Lake City

Thursday, July 11
Friday, July 12 &
Saturday, July 13
8 a.m. - 5 p.m.

Dominion Energy CTC Room
1000 West 100 South
Salt Lake City, Utah 84104

All Certification Classes are \$400. Price includes the RMGA Study Guide, IFGC, online video access, 24 hours of instruction, and 2 attempts at the exam (if necessary). Technicians should attend ALL sessions. In-person attendees should bring lunch or plan to visit a local restaurant during the lunch hour. **Take the Pre-Test to evaluate your readiness for the exam at <https://utrmga.org/pre-test/>**

Partial funding of RMGA training programs has been provided by the Division of Occupational & Professional Licensing from the 1% surcharge funds on all building permits.

MECHANICAL CODE DISCUSSION

Ventilation

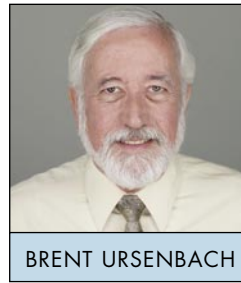
Introduction: This discussion, based on the 2021 IRC/IMC is an update to my November/December 2009 discussion, which was based on the 2006 IRC/IMC. Fourteen years later, ventilation remains one of the top subjects I receive request for guidance.

One of the common challenges in meeting the requirements of any of the International Codes is understanding the definitions in the various Codes. Ventilation as defined in the IRC and IMC is regularly misunderstood, leading to code violations and poor air quality in a structure. Focusing on this term we have:

2021 IRC/IMC: VENTILATION. The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, any space.

2021 IRC/IMC VENTILATION AIR. That portion of supply air that comes from the outside (outdoors), plus any re-circulated air that has been treated to maintain the desired quality of air within a designated space.

2021 IMC/IRC WHOLE-HOUSE VENTILATION SYSTEM. An exhaust system, supply system, or combination thereof that is designed to mechanically exchange indoor air for outdoor air where operating continuously or through a programmed intermittent schedule to satisfy the whole-house ventilation rate.



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Commentary Comment: Ventilation air is supplied to remove or dilute indoor air contaminants. In the context of Chapter 4, ventilation air is 100-percent outdoor air that is not re-circulated.

2021 IRC SECTION R303

LIGHT, VENTILATION AND HEATING (selected sections)

R303.1 Habitable rooms. All habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.

Exceptions:

1. For habitable rooms other than kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system or a mechanical ventilation system capable of producing 0.35 air changes per hour in the habitable rooms is installed in accordance with Section M1505.
2. For kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a local exhaust system is installed in accordance with Section M1505.

The key to understanding ventilation is introducing

outside air into a home or other building, to maintain indoor air quality. It is most often confused with circulation — the circulating of the indoor air around the house. Ventilation may be provided by opening windows, doors, or louvers or by a mechanical means. Ventilation requirements may be met by:

1. Opening windows, doors, and louvers to allow fresh outside air to enter the home.
2. Exhausting contaminated air from the home with ventilation air being provided from outside by 'leakage' into the home to replace exhausted air. Exhaust is especially effective when contaminants are exhausted at the source. Range hoods and bath fans are examples of at source exhaust.
3. Drawing fresh air into a home, by use of a duct introducing outside air into the return air system or a fan/ventilator blowing outside ventilation air into the house. Inside air will then 'leak' to outside at a rate equal to the rate outside air is introduced into the home.
4. Whole-house ventilation systems, including balanced ventilation with ERVs or HRVs. The balanced systems include exhaust and supply fans.

Building theater rooms, sport courts, craft rooms, and others under garages continue in popularity. These rooms typically do not have operable windows or doors, leading to the necessity to provide mechanical ventilation. Adding a supply air and return air from the typical HVAC system provides circulation, not ventilation. Two of the methods that may be used to provide theater room ventilation follow:

OPTION 1 – Approved Mechanical ventilation capable of producing 0.35 air changes per hour:

Several manufacturers produce very quiet high efficiency exhaust fans in the range that will work for a home theater. A ventilation fan can be installed with a switch in the theater to be turned on when needed, just as a window may be opened where available for ventilation when needed. If the home is forced air-then the supply air and return air to the room will

provide a path for replacement ventilation air back into the theater for air that is exhausted. If radiant heated, a transfer duct/grill will be required to let air into the theater.

Consider a 20' X 30' X 10' theater:

$$20 \times 30 \times 10 = 6000 \text{ cu. ft.}$$

$$\text{For 0.35 air changes in an hour: } 6000 \text{ cu. ft.} \times .35 = 2100 \text{ cu. ft per hour}$$

$$2100 \text{ cu. ft per hour divided by 60 min. per hour} = 35 \text{ cu. ft. per minute (CFM)}$$

An 80 CFM fan with a 4" discharge as available will move more than two times what is required. Infiltration will typically be able to provide this small amount of outside air to replace the air exhausted.

OPTION 2 – Whole house mechanical ventilation system capable of supplying outdoor ventilation air of 7.5 CFM per occupant computed based on two occupants for the first bedroom and one occupant for each additional bedroom.

Four-bedroom house-

Master bedroom: 15 CFM (7.5 X 2)

Other bedrooms: 23 CFM (7.5 X 3, rounded up)

Total: 38 CFM

Under this option, 38 CFM may be introduced into the return air duct from outside, with the ability on the thermostat to run the fan continuously.

Of course, there are other options such as using energy/heat recovery ventilators; however, the above 2 options are simple and relatively inexpensive. If the home is extremely tight construction, the HRV/ERV option may be necessary because there simply is not enough leakage for the other methods to work.

Please be aware of uses where excess humidity or other contaminant are added to the inside environment which will increase the required air changes.

Thanks again for your positive comments, suggestions, and questions. If you have a particular subject you would like me to address, please let me know.—Brent. ■

4 Ways to Safeguard a Contracting Business Against Embezzlement

Lisa McCarthy, COO of the Box Technology—anything and everything QuickBooks—was hired by a client who thought his books to be quite the mess.

So McCarthy asked to see his bank statements, implemented the use of Quickbooks, and immediately noticed that things were missing from QuickBooks that were on the bank statements.

“And other checks were adjusted by the exact same amount of the missing checks, so the amounts didn’t match.” McCarthy said. “So it just looked weird. It looked fishy,”

Less than a half hour in, McCarthy brought the owner into a room and told him that something was off. He shut the door and said, “I know what it is. I know who it is. It’s my mother.”

He had hired her to do bookkeeping to keep her out of trouble, but she was taking money from the business to help her daughter, the owner’s sister.

Embezzlement is something that can happen to anyone because oftentimes it’s the person no one would ever expect, perhaps an employee who has been with a company for a decade or two. They’ve gained a bunch of faith from others around them so people stop watching what they’re doing.

1. INTERNAL CONTROLS ON FINANCIALS

The steps McCarthy took to ensure her client’s embezzling mother could embezzle no further were similar.

“We put a plan in place to restrict her access,” she said. “He needed to maintain a relationship with his mother. He didn’t want her to go to jail, so he wasn’t going to report her. But he needed to put controls in place to not allow that to happen again.”

Steps like restricting the users access in QuickBooks, taking away the signature stamp that was floating around the office, and routing banking statements to the son’s home (instead of the office) ensured different sets of eyes on monthly bank reconciliations.

2. SOFTWARE SOLUTIONS

There are a number of software solutions out there that can help prevent embezzlement.

Things like having an approved list of vendors that’s listed in an accounts payable program. And so to be able to write a check to anyone outside of the set people, it has to get approved.

McCarthy shared an example of working directly with a bookkeeper. She would help the



bookkeeper with the reconciliation process, just being that second set of eyes and being

more involved in the process.

“I noticed that there were a lot of payments going out to credit card companies to pay a credit card bill” McCarthy said.

There were no expenses associated with it. So McCarthy asked for statements of those credit cards to see what the purchases were, in order that she could put together a process for the bookkeeper to start entering the purchases and reconcile the credit cards.

Come to find out, the bookkeeper was writing checks out of QuickBooks to pay her own credit card bills.

“Because I never saw a statement, and no one could reconcile a statement, there was no way to verify anything,” McCarthy said.

The bookkeeper went to jail. But having some simple practices in place would’ve helped.

“It’s not even actually doing the reconciliations. It’s looking at the uncleared transactions that are entered in to an accounting system,” McCarthy said. 🕶️🕶️🕶️

3. HIRE AN ACCOUNTANT

Though it can be costly, hiring an accountant to do periodic reviews or audits of the books or of the company's internal controls can be really helpful, the accountant can point out specific areas of risk for the particular business and suggest controls specific to those risks.

4. IF SOMETHING SEEMS OFF, SAY SOMETHING

Here is where having a good work culture at an HVAC company comes in handy. If somebody within the organization sees something concerning, they feel comfortable raising it.

"The biggest things are

separation of duties and looking at bank statements and credit card statements," McCarthy said. She also noted that having a business debit card is a really bad idea.

"We can't get complacent with people. Whether it's your cousin, brother, or somebody you've known for 20 years—That's when people get themselves into trouble. And nine times out of 10 with an embezzlement case, we say, 'I just can't believe it. She went to church, she did this ... How could she have been stealing?'"

2. express or implied authority and control over,
EMBEZZLEMENT fraud
property lawfully in his po
exist in common law beca

"Seems like it's always the people that you would never suspect. Because the reality is, if they got away with it, no one suspected it."

This is an edited reprint of an article by Hannah Bellou published in the April 3, 2023 issue of *AIR CONDITIONING, HEATING & REFRIGERATION NEWS* ■

ACCA Manual Class Series Snapshots





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