

RMGA Proposes "Problem Home" Study to UHBA

THE UTAH HOMEBUILDERS Association (UHBA) is working to pass HB39, **State Construction Code Amendments** that proposes changes in the IRC, IPC, Fire Code and the IMC, where the proposed changes include how Manual J type calculations are prepared.

ACCA is troubled by the legislation currently under consideration that would remove the requirement of a Manual J load calculation from the Utah Mechanical Code. Utah's Mechanical Code Commission has also recommended to the Legislature that the Manual J section not be changed

until the issue has been studied by UHBA and RMGA.

To that end, RMGA hopes to work with UHBA builders and their HVAC contractors to study several comfort and/or efficiency related "problem homes" and see what is causing the deficiencies. RMGA and ACCA each have agreed to provide funding for the study.

Using independent testing companies, each "problem home"

would have initial plans and load calculations reviewed, as well as a REScheck analysis, followed up with a duct pressure test, air balance test and blower door test.

RMGA wants to focus on the real problems with HVAC in new construction, and what went wrong or could have been done differently in the process from design through installation. ■



RMGA Tech Training continues online!

THIS YEAR, RMGA IS OFFERING more FREE Technician Training Classes, beginning with a three-part course on **"How to Read Electrical Diagrams."** Make this training part of your company's morning routine... Technicians will learn how to read diagrams and to convert a pictorial diagram into a ladder schematic. **Part one was held in February and parts two and three will be held on Zoom on March 16 from 7:00 – 8:00 a.m. and on April 20 from 7:00 – 8:00 a.m. ■**

Jamie Schumacher
jamie@gunthers.com
801-756-9683 ext 230



**MESSAGE
FROM OUR
PRESIDENT**
JAMIE SCHUMACHER

Dear RMGA Members & Friends,

I had an experience over the weekend where I was needing some customer support with some electricians in my home. I reached out to the help line and found that there was a long wait, their recording suggested using the chat function on their website to get quicker help. I had time so I decided to give it a try. I got on the website and went through the first round of automated questions and answers, once through all of that without a resolution I received a response that a "live agent" would be with me shortly. That was what I needed in the first place, but their system required me to spend about 15 minutes letting them know I had already done all the simple things. I was next asked if I wanted to wait for the agent as they were "experiencing higher than normal service requests" with an indication of a possible "up to an hour" of wait time. At that point I had time so I decided to wait. After a solid hour I asked the chat-bot how much longer I would have to wait, to which the bot responded that I was number 9 in the queue. I thought I'd see how long this takes. Long story short, after 4 1/2 hours of continual chatting and slowly moving up the queue I finally gave up. Needless to say my problem is not resolved and this company has absolutely lost my confidence.

I understand that when you are busy it can be very difficult to serve your customers properly. Just always keep in mind that without customers you have nothing!

Best,

BOARD BRIEFING JAN & FEB 2022

In January, the board approved Construction 360 Services as a new contractor member.

The big issue both months was a discussion about the Problem Home Study, which ACCA and RMGA are each supporting with up to \$25,000 to employ independent inspectors to perform tests on homes around the State to determine why the HVAC systems are underperforming their specifications; is it more an air balancing issue or having to follow ACCA Manual requirements that is causing Utah homeowners to have comfort issue? Creating a checklist of tests and criteria to perform on the problem homes, and getting the UHBA (and their builders) on board are the next steps.

Scott Carpenter, a member of the Uniform Building Code Commission, mentioned that the commission met on 2.9.22 and decided to send a letter to the Senate Business and Labor Committee, and the bill sponsor, asking them to take out the proposed changes to Manual J requirements currently in HB39, and wait until the Problem Home Study has been conducted to consider further changes in law.

The board approved the plan to make the RMGA

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WELCOME OUR NEW RMGA MEMBER CONSTRUCTION 360 SERVICES LLC

Edward B. Welsh
5577 Day Lily Drive
Mountain Green, UT 84050
801-829-8518
<https://construction360Utah.com>

Referral Program a member benefit for all active members that want to participate, and to eliminate the cumbersome zip code segmenting of the market and relying instead on a County-by-County designation.

The RMGA Exam Review Committee chair is working on a date for an in-person Exam Review and when it is set, he will invite all contractor board members to participate.

Dean Dyatt reported that he is developing objectives for the Curriculum Alignment Committee, which when adopted will lead to a draft of core HVACR courses to be presented in 30-hour increments across all technical colleges in the state.

We then heard a recap of the Pathways to Professions job fair and how attendees noted how young (Freshmen and Sophomores) the students were and their complete lack of understanding of what HVACR is. It was recommended that RMGA work more closely with high school counselors and teachers who have an on-going relationship with students to help explain HVACR as a career option equivalent to plumbing and electrical work.

Our next board meeting will be on Zoom at 11:00 a.m., on Wednesday, March 9th.

Everyone is invited to attend, ask to be invited: john@utrmga.com. ■



RMGA GAS CERTIFICATION CLASSES

CALL 801.521.8340
OR EMAIL
RMGAUTAH@GMAIL.COM
TO REGISTER

March In-Person class sold out. Zoom available!

Take your Pre-Test to evaluate your readiness for the exam!

MARCH IN-PERSON (And on Zoom)

Salt Lake City

Thursday, March 24

Friday, March 25 &

Saturday, March 26

8 a.m. - 5 p.m.

Hercules Industries

475 N Billy Mitchell Road

Salt Lake City, Utah 84116

MAY IN-PERSON (And on Zoom)

Salt Lake City

Thursday, May 12

Friday, May 13 &

Saturday, May 14

8 a.m. - 5 p.m.

Hercules Industries

475 N Billy Mitchell Road

Salt Lake City, Utah 84116

JULY IN-PERSON (And on Zoom)

Salt Lake City

Thursday, July 14

Friday, July 15 &

Saturday, July 16

8 a.m. - 5 p.m.

Hercules Industries

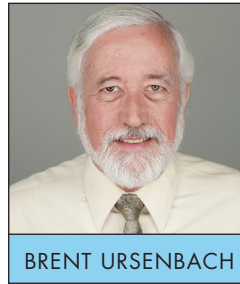
475 N Billy Mitchell Road

Salt Lake City, Utah 84116

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 have been provided by the Division of Occupational & Professional Licensing from the 1% surcharge funds on all building permits.

MECHANICAL CODE DISCUSSION

ACCA Manual D – Friction Rate Worksheet – Coils



BRENT URSENBACH

HVAC EDUCATOR/
EXPERT WITNESS
bursenbach@gmail.com
801-381-1449

THE TITLE OF THIS DISCUSSION is a repeat from thirteen years ago, in my third Pipeline Code discussion, where I reviewed the overall application of the friction rate worksheet. This discussion will focus on the first device typically listed in the worksheet – *Direct Expansion Refrigerant Coil*. I would be naive to suggest every new construction or retrofit residential installation includes a complete design in accordance with ACCA Manuals J, D, and S. I will suggest every installation absolutely should include at a minimum, an analysis of the device pressure losses. Failure to ensure there is available



static pressure for a duct system will result in system which will never operate as intended.

Assuming we are basing our design on a blower at 0.70 IWC (inches water column), selecting a coil with a 0.30 or higher loss will result in a system which never produces full capacity. Following the coil, we must account for the filter, registers, grills, and any other devices, hoping we have something left for the duct system. Too often, the wrong coil is selected, followed with a restrictive 1" filter, and finally with a poor duct system. Fan horsepower cannot fix that.

Let's consider the wet pressure drop across several coils from a major manufacturer, where our target airflow is 1200 CFM.

- 14" wide 3-ton coil @ 1200 CFM: 0.335 iwc
- 17" wide 3-ton coil @ 1200 CFM: 0.231 iwc
- 21" wide 3-ton coil @ 1200 CFM: 0.160 iwc

- 17" wide 3.5-ton coil @ 1200 CFM: 0.204 iwc
- 21" wide 3.5-ton coil @ 1200 CFM: 0.165 iwc

- 17" wide 4.0-ton coil @ 1200 CFM: 0.185 iwc
- 21" wide 4-ton coil @ 1200 CFM: 0.150 iwc

Obviously, selecting an oversized coil with the correct TXV lowers the pressure drop across the device, improves

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Friction Rate Worksheet

Step 1) Manufacturer's Blower Data
 External static pressure (ESP) = IWC CFM =

Step 2) Device Pressure Losses

Direct expansion refrigerant coil	<input type="text"/>
Electric resistance heating coil	<input type="text"/>
Hot water coil	<input type="text"/>
Heat exchanger	<input type="text"/>
Low efficiency filter	<input type="text"/>
High or mid-efficiency filter	<input type="text"/>
Electronic filter	<input type="text"/>
Humidifier	<input type="text"/>
Supply outlet	<input type="text"/>
Return grille	<input type="text"/>
Balancing damper	<input type="text"/>
Other device	<input type="text"/>
Total device losses (DPL)	<input type="text"/>

Step 3) Available Static Pressure
 ASP = ESP - DPL = (-) = IWC

Step 4) Total Effective Length (TEL)
 Supply-side TEL + Return-side TEL = (+) = FEET

Step 5) Friction Rate Design Value (FR) $\frac{ASP \times 100}{TEL}$
 FR value from friction rate chart =

airflow, increases efficiency, and improves customer comfort.

Please be cautious in selecting third party manufacturer's coils, especially when you notice the coil is shorter than the OEM coils. You must verify the coil pressure drop. My opinion/recommendation is you only select split system components which you can certify system performance through manufacturer's expanded data or through AHRI.

Lastly, many of you know my opinion regarding the installation of a 5-ton residential split system, if not, here it is: **Don't install 5-ton systems, at our altitude and in our dry climate with very little latent load, you simply cannot get enough air through the devices, filters, and duct systems to attain full capacity.** Look up your

furnace and air handler blower data, then compare it to this coil data:

21" wide 5-ton coil @ 2000 CFM: 0.488 iwc

24" wide 5-ton coil @ 2000CFM: 0.342 iwc

The pressure drop across these coils is simply too high, especially with the less than desired furnace/air handler airflow. A key issue here is the manufacturer's design equipment based on most of the country where there is humidity and latent loads. Lower airflows provide increased latent capacity. Not our problem here where we are high and dry.

Please continue your comments and questions. These discussions are based on comments I receive from you.

Thank you — **Brent** ■

45 Lessons Life Taught Me, in Celebration of Growing Older – Part 2

BY REGINA BRETT WITH THE CLEVELAND PLAIN DEALER

22. Over prepare, then go with the flow.

23. Be eccentric now. Don't wait for old age to wear purple.

24. The most important organ is the brain.

25. No one is in charge of your happiness but you.

26. Frame every so-called disaster with these words: "in five years, will this matter?"

27. Always choose life.

28. Forgive.

29. What other people think of you is none of your business.



30. Time heals almost everything. Give time time.

31. However good or bad a situation is, it will change.

32. Don't take yourself so seriously. No one else does.

33. Believe in miracles.

34. God loves you because of who God is, not because of anything you did or didn't do.

35. Don't audit life. Show up and make the most of it now.

36. Growing old beats the alternative of dying young.

37. Your children get only one childhood.



38. All that truly matters in the end is that you loved.

39. Get outside every day. Miracles are waiting everywhere.

40. If we all threw our problems in a pile and saw everyone else's, we'd grab ours back.

41. Envy is a waste of time. Accept what you already have, not what you need.

42. The best is yet to come...

43. No matter how you feel, get up, dress up and show up.

44. Yield.

45. Life isn't tied with a bow, but it's still a gift! ■



Ask the Expert. . . Calculate Your Benefits

By John Hill, Attorney at Law

IF YOU ARE LIKE MOST PEOPLE, you will work an entire lifetime to accumulate assets: a home, cars, savings, retirement accounts, stocks and other property. Creating an estate plan will ensure that your assets are passed on to the people you want, in the way that you want and with a minimum of cost.

What is an Estate Plan?

An estate plan includes:

(a) arrangements for the accumulation, administration and disposition of your assets not only in the event of your death but during your life; **(b)** may involve one or more trusts to manage your assets during your life or to provide for your spouse and children after your death; **(c)** often it employs life insurance to provide liquid cash to your beneficiaries soon after your death; and **(d)** may include lifetime gifts to your beneficiaries, either directly or in trust.

Why Choose a Living Trust?

To ensure that an heir(s) is provided for materially is the most common reason for creating a Revocable Living Trust. In the case of minors or mental impairment, a trust allows a parent to provide for a child without giving the child control over the property. It can even protect

property from an heir's spendthrift nature as well as from creditors.

Why Choose a Revocable Living Trust?

Revocable Living Trusts provide uninterrupted management of your assets by your trustee if you become incapacitated, and at your death, the trust assets may be administered and distributed according to the terms of the trust, without the procedures and fees of probate. Additionally, you may change or revoke the terms of the trust at any time and may designate anyone you like as trustee.

Can I avoid Probate with a Trust?

Among the most popular benefits of a Living Trust is the avoidance of probate. Because property in the trust is not considered part of an estate, it does not have to undergo this sometimes lengthy process. The property is instead administered and distributed by the trustee, according to the specific terms of the trust. And a Living Trust keeps your estate private and out of the public eye, generally making it much more difficult for the estate to be consumed by creditor claims or unscrupulous con artists.



What are the Disadvantages of a Living Trust?

Living Trusts require that all property is transferred into the trust, because property outside the trust is part of the estate, and will trigger the probate process you hoped to avoid by creating the Living Trust. Formal transfers of property into the trust are required even when you and the trustee are the same individual.

If these seem like minor disadvantages, you're right. For most people, the initial expense of a Living Trust is worth the huge benefits for family and other heirs later on, which include the avoidance of probate, tax advantages, and the preservation of privacy and independence.

**Call John at 801.521.8340
and find more information at
www.johnhillattorney.com ■**

Customer Service is Key: I am the customer — respect me

— BY MATT MICHEL, CONTRIBUTING WRITER

WHEN YOUR PHONE RINGS, it is me who is calling. I start the process that drives the needle. I am the customer. I'm calling because I have a problem. It is a problem that I either do not want to fix myself or cannot fix myself. Usually, it's the latter.

I am anxious when I call. If I'm calling you for the first time, I'm especially anxious. I want to trust you, but I do not know if I can. Until you prove yourself to me, I will be cynical. I fear you will take advantage of me.

I worry if you will be able to respond as fast as I want. I worry that you will make me sit around the house all day waiting. I have things to do.

Most of all, I worry about my problem. How serious is it? What is involved in fixing it? How long will the repair take? What kind of mess will I face? And, of course, how much will it cost?

All of these things pass through my mind before I pick up the phone. When you answer you are talking to a bundle of anxiety. When I call, I want to hear a friendly voice, a pleasant disposition and be reassured. I don't want to hear a machine. I do not want to hear a distracted voice on a mobile phone, interrupted while solving someone else's problem.

I don't want you to promise something you cannot deliver, but I also don't want you to sound vague and evasive. If you do, red flags will

be raised and I may call your competitor.

If I have to wait for the Certified HVAC Technician to be dispatched, I want you to keep me informed. Ask me if I prefer to be updated by phone or text. If texting is less invasive to me, I will be happy to give you my mobile phone number.

When your Certified HVAC Technician arrives, I want his truck to look professional. I want your

I rarely think about my home's furnace. It's just there. I expect it to be there and to work. I don't think about improving it because I'm not aware it can be improved. If there are improvements or enhancements I could benefit from, I appreciate learning about them, even if I am not ready to take action right away.

It's okay to talk with me about zone systems, air purifiers, humidifiers and more. But don't be surprised if I pass. You are planting seeds for me to think about.

Above all, I want the respect I deserve. I am the reason your company exists. I buy what you sell. I pay your bills. I am not an irritant. I am not unreasonable. I am not stupid, even if I am uninformed (and it's your job to inform me). I want to buy from you. It's why I called. I want to give you money to solve my problems. If you treat me well, I will call you again. I will tell my friends about

you. If you let me know about the other things you offer that could improve my life, I will buy them . . . some of the time.

I want to call you "my Certified HVAC Technician." Treat me right and I will. Treat me wrong or indifferent, and I'll call your competitor.

This is a reprint from CONTRACTOR, the Newsmagazine of Mechanical Contracting. Matt Michel is CEO of Service Roundtable. Call 877-262-3341 ■



Certified HVAC Technician to look professional. I want him to be clean and presentable.

He should smile, look me in the eye when I'm explaining things, and act like what I'm saying is important . . . even if he's heard the same thing from a hundred other customers. My problem may be an old hat to him, but it's not to me. If he finds other problems besides the one I called about, he should share what he found and give me options. I like options.



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