

THIN-AIR BULLETIN

American Society of Heating, Refrigeration, and Air Conditioning Engineers NM Chapter Region IX Albuquerque, NM

March Meeting 2015

Measuring Air-Tightness of Non-Residential Buildings

Speaker: Brad Turk, Environmental Building Sciences

Uncontrolled air leakage in buildings can lead to energy waste, occupant discomfort, poor control of air pollution sources, and possible moisture and mold problems. Air tightness testing, using calibrated blower doors, has long been used in single and multi-family residential structures to identify and quantify this leakage. The technology has evolved and been adapted over the years for testing in larger buildings. The US Army Corps of Engineers and federal GSA are now beginning to require this testing of the air barrier and air leakage as part of the commissioning process, for verification of compliance with their maximum air leakage requirements. Information will be presented on the testing process, equipment and instrumentation used, application and interpretation of results, and the recent ASHRAE research project, 1478-RP "Measuring Air-Tightness of Mid- and High-Rise Non-Residential Buildings."

WHEN: March 17, 2015, 11:30 – 1:00pm
COST: \$25 Members, \$30 for Guests
WHERE: Pappadeaux Seafood Kitchen (Chicken and Vegetarian Options are available)
5011 Pan American West Fwy NE, Albuquerque, NM

RSVP to Joseph Higham by Monday March 16th at jhigham@climatec.com or online at newmexicoashrae.org

Monthly Meeting Signup
Choose Option
Member \$25.00 USD ▼
First and Last Name
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Add to Cart

About the Speaker:

Bradley Turk is a building scientist and president of Environmental Building Sciences, Inc. in Las Vegas, New Mexico, with over 35 years of experience in indoor environmental quality and energy management. He has performed investigations in "problem" buildings, conducted basic research in building air quality and energy efficiency, and developed training materials and programs for building investigations for a variety of governmental, academic, and private clients. Brad has served as a staff scientist at the University of California Lawrence Berkeley National Laboratory where he directed field research on indoor air quality, ventilation and radon in residences, schools, and commercial buildings. He performed some of the founding research in radon measurement, diagnostics and mitigation; and participated in the ASHRAE research project on air tightness testing in mid- and high-rise buildings. Brad is an author, reviewer, and presenter on numerous IEQ topics.

Upcoming Events

2015 New Mexico ASHRAE Golf Tournament

September 11th, 2015, 7:30 am
UNM Championship Golf Course

More info and more upcoming events on next page



Upcoming Events

ASHRAE will sponsor an Engineering Ethics class this year. The class will be held **November 17th**. Please reserve this date on your calendar.

Save the Date

2015 New Mexico ASHRAE Golf Tournament

Date: 9/11/2015 Time: 7:30AM

The 2015 New Mexico ASHRAE Golf Tournament will be held at the **UNM Championship Golf Course** this year! The tournament will feature a shotgun start with a picnic and awards ceremony afterwards. More information to follow. Contact Rich Love for sponsorship information or questions. richl@mpswinc.com or 505-938-7693

New Mexico Chapter of ASHRAE

Shaping Tomorrow's Built Environment Today

Date	Event	Location/Contact
March 12	Student Activities – UNM Science Fair	Jerry Hine: wjhine@hotmail.com
March 17	Lunch Meeting with Speaker Brad Turk	11:30pm – 1:00pm at Pappadeaux jhigham@climatec.com
TBD	YEA Bowling	TBD
April 21	Lunch Meeting	11:30pm – 1:00pm at Pappadeaux jhigham@climatec.com
May 19	Dinner Meeting and Award Ceremony	11:30pm – 1:00pm at Pappadeaux jhigham@climatec.com
July 22 – 26	CRC Conference	https://www.ashrae.org/membership--conferences/conferences/crcs
Sept 11	Golf Tournament	UNM Champions Course Rich Love: mailto:mrchl@mpswinc.com
Nov 17	Engineering Ethics Class	TBD

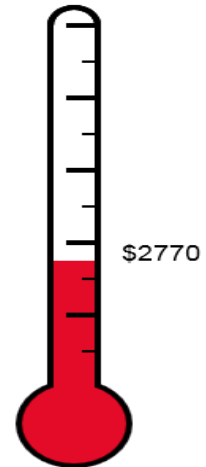
Research Promotion

I would like to thank all that have already contributed to ASHRAE Research for the 2014-2015 Year. Thanks to you we are at 35% of our Chapter Goal

Thank you!!

Hanna Plumbing and Heating
Bridgers and Paxton Consulting Engineers
James Cooke & Hobson Inc.
Mr Stephen Forner
Mr David Graham
Mr Richard Reif
Mr Morgan B Royce
Mr Terry L Walker
Mr Gary E Grange
Mr Joseph B Higham

Target: \$7800



The 2014-2015 RP Campaign is in full swing. Please contact me if interested in providing new or continued support.

I bet you didn't know that your contribution will go to directly support Research being conducted in our own Region. Over all, your support and the support from thousands of members like you, is helping to fund more than \$14million worth of research worldwide this year.

If you'd like a list of research projects being conducted in the region or about specific topics, please let me know.

Thanks again for all your support and I look forward to seeing you at the next New Mexico Chapter Meeting.

Morgan Royce
New Mexico Chapter RP Chair
mbroyce@comcast.net –

From Membership

Hi All, we are still looking for 3 new members to join ASHRAE this year. We really need some involvement from our younger people as you are our leadership of the future. Hopefully your company helps you with the cost. If not, please let me know. As an additional thought: the actual membership cost is almost the same cost as the standards book you will receive.

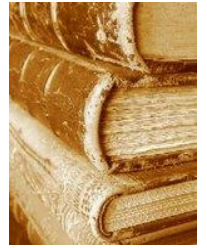
Also, I am looking for someone who might be willing to pick up the membership chair next year. Contact me or any other member of the board if you are interested.

Allen Anaya
aanaya@climatec.com
505-385-7338

From the History Books

March 2001

President: Nick Nellos
President-Elect: Tom Watters
Secretary: Jim Asperger
Treasurer: Mike Dunavant



On March 19, 1991, the monthly meeting speaker was Robin Ramsey who spoke about Ventilation Engineering and the phenomenon of airflows around buildings. The 10-foot rule regarding exhaust ducts was shown to be not acceptable and that more technical evaluation must be done to adequately locate exhaust and intake ductwork. Special cases such as complexes of buildings, geography, etc. were reviewed. These design considerations apply to employee safety and product contamination and not to environmental concerns.

The New Mexico Chapter of ASHRAE participated in the Architectural Trade Show in Albuquerque. The Chapter had a booth as well as conducting seminars on evaporative cooling, 1989 model energy code and refrigeration. Speakers included Mr. John Noble, Mr. Harold Trujillo and Jim Martin.

Job Postings

Find up-to-date postings or how to post at www.newmexicoashrae.org/jobs/

Job Title: Commercial Inside Sales Engineer
Company Name: Sigler, Inc
Contact Information: John Pope, jpoppe@siglers.com)
Link: [Full job description](#)

Successful candidate will provide inside sales support to sales engineers/ contractor sales associates, internal employees and customers; submittal preparation, preparing quotes, selecting mechanical equipment to fit engineering and architectural designs, assist consultant engineers, assist automation division with proposals and pre-qualification of Building Automation systems, other clerical and administrative duties consistent with supporting daily business

Job Title: Mechanical Engineer
Company Name: Bridgers & Paxton
Website Link: www.bpce.com
Contact Information: Tammy Gomez, Employee Services Manager (send resumes to employment@bpce.com)

Bridgers & Paxton is seeking a Mechanical Engineer for our Albuquerque office with 5-10 years of experience in the design of building mechanical systems. Candidate must be capable of obtaining and maintaining a security clearance. Design experience with office and laboratory systems desired. Work may include new facility design, major renovation, and operations and maintenance type equipment replacement. Energy modeling, LEED, and REVIT/Microstation experience a plus.

New Mexico Chapter Board of Governors

Welcome **Rex Stockwell** to the Board of Governors as the Awards Chair! Anyone interested in becoming more involved in ASHRAE, contact our Membership Chair.

<i>Position</i>	<i>Name</i>	<i>E -mail</i>
President	David Graham <i>T&D Services</i>	DGraham@t-d-services.com
President-Elect CTTC Chair	Joe Higham <i>Climatec</i>	jhigham@climatec.com
Treasurer Secretary	Stephen Forner <i>Trane</i>	Stephen.Forner@trane.com
Membership Chair	Allen Anaya <i>Climatec</i>	Aanaya@climatec
Historian – Regional Vice Chair	Gary Grange <i>Climatec</i>	ggrange@climatec.com
Golf Tournament	Rich Love <i>Mechanical Products SW</i>	richl@mpswinc.com
Student Activities Chair	Jerry Hine <i>Sigler</i>	jhine@sigler.com
Research Promotion Chair	Morgan Royce <i>Beaudin Ganze Consulting Engineers</i>	mbroyce@bgce.com
Young Engineers in ASHRAE (YEA) Chair	Gordon Dixon <i>AC New Mexico</i>	gdixon@acnewmexico.com
Communications Chair (Website / Newsletter)	Stacey Chan <i>Bridgers & Paxton Consulting Engineers</i>	skchan@bpce.com
Awards Chair	Rex Stockwell <i>Bridgers & Paxton Consulting Engineers</i>	rostockwell@bpce.com



News

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Mar 3, 2015

Contact: Jodi Scott, Public Relations
678-539-1140, jscott@ashrae.org

ASHRAE Publishes Revision of Ground Source Heat Pump Book

ATLANTA – When ASHRAE’s original book on ground source heat pumps was published 17 years ago, such systems were used mainly in residential settings and designers who used them were seen as risk takers.

Today, the technology is much more widely used having been recognized for its benefits. The lessons learned during that time are incorporated in a newly published book from ASHRAE, “Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems (GSHP).” The publication is a complete revision of “Ground-Source Heat Pumps: Design of Geothermal Systems for commercial and Institutional Buildings,” published in 1997 and recognized as the primary reference for non-residential GSHP installations.

The new book was written by Steve Kavanaugh, professor emeritus at the University of Alabama, and Kevin Rafferty, a consulting engineer, Klamath Falls, Ore. Both have spent the last 25 years focused on geothermal/GSHP work.

“One of the realities of the GSHP industry is that, to some degree, it has been a victim of its own success,” Rafferty said. “Years ago the struggle was to simply get design teams to consider using the technology. Though this is still an issue in some areas, nationally it is far less of an issue than 20 years ago. There is now fairly wide recognition of the benefits of GSHP systems, particularly on the part of building owners in the schools and office building sectors, where the technology has achieved its highest penetration rates. However, there also is a widely held view that anything bearing the name ‘geothermal,’ ‘ground source’ or ‘earth energy’ will produce the desired high efficiency/low operating cost. As a result, poorly designed systems are often installed and building owners expectations are unmet.”

The book provides benchmarks, design strategies and information necessary for engineers to configure the most efficient and cost effective systems and avoid problems such as inefficient pumping, high cost ground loop designs, inadequate outside air provisions, unnecessarily complex control schemes and other common design errors.

In addition to cost and performance data, Kavanaugh provides building owners and their architects the information necessary to ask the right questions and accurately evaluate potential engineering consultants. The net effect is a more cost effective and efficient design and satisfied building owners.

“GSHP produces superior HVAC system performance and when properly implemented can be cost competitive with many (but not all) conventional systems,” Rafferty said. “They can be operated with far simpler controls than traditional HVAC systems, and also can reduce

equipment building space requirements, reduce duct work requirements and eliminate the need for external building mechanical equipment.”

As part of the revision, seven of the original eight chapters and appendices were completely rewritten and now include coverage of close-loop ground (ground-coupled), groundwater, surface water, GSHP equipment and GSHP piping. Additional information on site characterization has been added including a new hydro-geological chapter. The final chapter was replaced and the new section contains results of recent field studies, energy and demand characteristics and updated information to optimize GSHP system cost.

The cost of “Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems” is \$128 (\$109, ASHRAE members).

To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 678-539-2129, or visit www.ashrae.org/bookstore.

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its more than 50,000 members worldwide focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow’s built environment today. More information can be found at www.ashrae.org/news.

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