



# ASHRAE NATIONAL NEWS

## American Society of Heating, Refrigerating and Air-Conditioning

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### **ASHRAE and BOMA International Sign Memorandum of Understanding**

*Partnership will promote mutual interests of engineering and building operations and management*

ATLANTA – ASHRAE and the Building Owners and Managers Association (BOMA) International are pleased to announce the signing of a Memorandum of Understanding (MOU) in recognition of shared technical interests to foster superior building performance. Both organizations will work together to achieving, among others, the following goals:

- Identify opportunities for shared operation services
- Identify opportunities to collaborate on product development, and to give presentations at each other's conferences
- Where mutually beneficial, jointly promote educational programs to members and jointly identify, create and identify new products and services
- Encourage continuing dialogue between ASHRAE and BOMA at national, regional and local levels on issues of importance to engineers and building professionals
- Encourage collaborative and cooperative activities to promote continuing professional development
- BOMA and ASHRAE commit to support each other and fully participate in standard development areas, initially centering around ASHRAE standards 62.1, 90.1, 180P and 189.1P working within the ANSI consensus standards development process.

"We are pleased to collaborate with ASHRAE and work toward our shared goal of promoting superior building performance," said BOMA International Chairman and Chief Elected Officer Brenna S. Walraven, RPA, CPM, executive managing director, national property management, USAA Real Estate Company. "ASHRAE and BOMA are on the forefront of developing standards that significantly impact building owners and managers, and we look forward to working more closely with them on these matters."

"BOMA and ASHRAE share many of the same objectives and we are excited to strengthen our relationship" says ASHRAE President Kent Peterson, P.E., vice president and chief engineer of P2S Engineering. "We are all working toward optimal performance of both new and existing buildings and this partnership will be beneficial for both ASHRAE and BOMA members."

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

Founded in 1907, the Building Owners and Managers Association (BOMA) International is an international federation of more than 100 local associations and affiliated organizations. The 17,000-plus members of BOMA International own or manage more than 9 billion square feet of commercial properties in North America and abroad. BOMA's mission is to enhance the human, intellectual and physical assets of the commercial real estate industry through advocacy, education, research, standards and information. On the Web at [www.boma.org](http://www.boma.org).

Editors Note: Photos of the MOU signing are available.

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### **ASHRAE Provides Support for National Engineers Week Feb. 17-23**

ATLANTA--Engineers don't just shape our buildings and infrastructure; they help shape our world.

The Atlanta-based American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is a partner in the National Engineers Week program (Feb. 17-23), a celebration of the contributions that engineering makes to our society and encourages engineering as a career path among young students by promoting pre-college literacy in math and science. For specific information about the program, please visit [www.EWeek.org](http://www.EWeek.org).

"National Engineers Week showcases how our profession engineers the world we live in," says ASHRAE President Kent Peterson. "From buildings to manufacturing and transportation, engineers have been behind so many modern-day marvels. Mankind also faces many engineering challenges today and in the future on how to improve sustainable life on earth. ASHRAE is proud to be involved in this program and celebration."

ASHRAE has twice served as lead organization in National Engineers Week. The last time, in 2003, ASHRAE launched the New Faces of Engineering recognition program as part of the weekly celebration, which has continued each year. The New Faces program promotes the accomplishments of young engineers across various disciplines by highlighting their engineering contributions and the resulting impact on public welfare. The program targets those age 30 and younger. Engineering associations, societies and government groups nominate candidates each year, from which 15 are selected for recognition in USA Today. ASHRAE's nominee this year is Molly F. McGuire, a mechanical designer at Taylor Engineering, Alameda, California.

McGuire's projects include variable-air-volume retrofits of two chemistry labs at Stanford University, which markedly reduced building energy consumption by more than 50 percent. She serves on the committee writing Standard 189.1P, Standard for the Design of High Performance Green Buildings Except Low-Rise Residential, which will be the nation's first standard for sustainable buildings. Through this committee, she has advanced aggressive energy and indoor environmental quality targets.

McGuire and all of the New Faces of Engineering will be featured in a full-page ad published in USA Today during National Engineers Week.

Several events will take place in conjunction with National Engineers Week, including Introduce a Girl to Engineering Day (Feb.21) and the Future City Competition. Now in its 16th year, the competition attracted 30,000 middle-school students this year from a record-breaking 1,111 schools in 40 regions across America to work with teachers and volunteer engineers to envision the future in large, tabletop models of cities of tomorrow. The teams present their Future Cities before engineer judges at regional competitions in January. First place teams from qualifying regional competitions win a trip to Washington for the Future City National Finals, February 18-20. Visit [www.futurecity.org](http://www.futurecity.org). ASHRAE will be presenting special awards for sustainability and indoor air quality.

In addition, ASHRAE's National Capital Chapter participates in and supports the Family Day event at the National Building Museum in Washington, D.C., on February 16. Some 6,000 local K-12 students try out hands-on projects, meet with engineers, and discover the ways engineers make a difference in the world.

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### **BACnet Unplugged: Updates Made to Building Controls Standard**

ATLANTA – Advances related to the BACnet standard, including recommending public review for an addendum that would tunnel BACnet over ZigBee wireless networks, were made during ASHRAE's recent Winter Meeting.

Proposed Addendum q would lead to a significant reduction in the cost of installation at the sensor and controller level by reducing the amount of wired networking required in a building automation system, according to Jerry Martocci, convener of the BACnet committee's Wireless Networking working group.

"Marrying these two technologies seemed obvious," said Martocci. "BACnet already had the object and services model designed specifically for building automation but no wireless network, and ZigBee had the wireless capabilities but no object model for building automation. We just had to put the two together to benefit from the synergies."

The addendum recommendation began about two years ago with meetings between BACnet and ZigBee experts. "During this time we learned about ZigBee's data communications, and they learned about BACnet's networking and objects and services model," said BACnet chairman Bill Swan. "Together, we looked at a number of approaches and discussed the pros and cons of each."

For various technical reasons, battery-operated devices, including sensors, will probably be ZigBee only, but powered controllers would have BACnet/ZigBee capability. Martocci notes that the "mesh" networking among ZigBee nodes leads to self-healing networks, so that even if a link between two nodes is obstructed, the "mesh" network can route around the obstructed link, leading to reliable networks.

In other developments, the BACnet committee worked toward approval of nine additional addenda during the meeting. "Only a few of these are going out for first public review," said Swan, "but it is our expectation that these are all likely to pass without significant comments."

One such addendum is Addendum j, support for physical access control. This was drafted by the Life Safety and Security working group, comprised of BACnet and experts from the physical security industries. Public reviews of Addendum j have been announced in journals and other media serving the security industry, with long review periods to help ensure it gets the most complete review possible.

Another addendum being prepared for public review is Addendum i, support for lighting applications. This addendum was drafted by the Lighting Applications working group, comprised of representatives from lighting controls manufacturers and BACnet experts.

The BACnet committee continues to work on a broad range of other items, such as integrating buildings and the energy utilities, developing standard profiles for various building automation devices, CCTV control, and elevator monitoring.

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## **ASHRAE High-Performance Building Design Professional Certification Now Available**

ATLANTA – ASHRAE's new certification program provides the necessary training and tools for the design of high-performance buildings that live up to their performance capability.

Registration is now open for ASHRAE's high-performance building design professional certification. The first exam will take place June 25 at ASHRAE's 2008 Annual Meeting, June 21-25, Salt Lake City. Exams at testing centers around the world will become available in the fall. For more information or to register, visit [www.ashrae.org/certification](http://www.ashrae.org/certification).

"This new certification program will allow practitioners to demonstrate a well-rounded understanding and knowledge of how HVAC&R design is integrated into high-performing buildings to achieve the overall goal of sustainable practice used in green buildings," Kent Peterson, P.E., ASHRAE president, said. "The program combines the criteria of ASHRAE Standards 90.1 (energy efficiency), 62.1 (ventilation) and 55 (thermal comfort) with the innovative approaches included in the *Advanced Energy Design Guide* series in an integrated design approach that strives to achieve practical, cost-effective high-performance building designs."

The content of the exam includes sustainability concepts, HVAC and sustainable processes and environmental improvement programs and rating systems; energy analysis; indoor environment; controls and monitoring; benchmarking with performance metrics; water conservation, commissioning in sustainable construction; and operation and maintenance of high-performance buildings.

The high performance design professional certification is renewable every three years, and those certified must earn 45 professional development hours during that time.

"This program has been designed so that it is inclusive of global design approaches and tools," Peterson said.

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*Standard 189.1P's Second Public Review*

**Proposed Standard for High-Performing Buildings Open for Public Review**

ATLANTA – A proposed standard that will essentially define high-performing buildings in code-intended language is one step closer to completion. Proposed Standard 189.1, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, is now open for its second public review.

Proposed Standard 189.1 will provide minimum requirements for the design of high-performance new commercial buildings and major renovation projects, addressing energy efficiency, a building's impact on the atmosphere, sustainable sites, water use efficiency, materials and resources, and indoor environmental quality. It is being developed by ASHRAE, the Illuminating Engineering Society of North America (IESNA) and the U.S. Green Building Council (USGBC).

"This standard is an energy-saving stepping stone toward ASHRAE's goal of net-zero-energy buildings," says John Hogan, chair of the committee that wrote the standard. "This is a goal that IESNA and the USGBC support as well as partners in this standard's development. It also gives building owners or jurisdictions that voluntarily choose to adopt the standard a tool for constructing truly high-performing buildings that provide energy-efficient, safe and comfortable environments for occupants."

By applying the minimum set of prescriptive recommendations, Standard 189.1P leads to site energy savings ranging from 10 to 41 percent over Standard 90.1-2007, including plug and process loads and all other energy consumption for the building, with an average of 24.9 percent for all climates.

The proposed standard also provides indoor water savings of 35 percent for an office building and 26 percent for a multifamily building.

The indoor air quality criteria have been coordinated with ASHRAE's IAQ Design Guide (under development), and the commissioning criteria have been more-closely aligned with ASHRAE's commissioning guidelines.

The first public review generated 900 comments.

Proposed ASHRAE standards, guidelines and addenda to standards are available only during public review periods. To read the draft standard or to comment, visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews). The public review began Feb. 22 and ends April 7, 2008.

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