



NH forum

AIA New Hampshire

For those who shape the built environment



Awards Gala Set for January 20



SAVE THE DATE!

On Friday evening, January 20, 2017, AIANH will host the annual Design Awards Gala at the Manchester Country Club in Bedford, NH. This special occasion gives us the opportunity to come together as a Chapter to recognize recent, outstanding design achievements of New Hampshire architects, patronage of committed clients, and masterful building techniques of the broader project teams.

This year's jury was moderated by immediate past president Paul Bourbeau AIA, who travelled to South Carolina where deliberations were held at the offices of AIASC. Jurors saw a wide array of projects in the 44 submissions from across the state. Tom Savory AIA, LEED AP BD+C, from Watson Tate Savory, chaired the jury and will join us at the gala to share the jury's comments. This is a wonderful opportunity to broaden the conversation with insights from beyond our borders.

Voting for the People's Choice Award is now active at: www.aianh.org/vote-design-awards. This is your chance to review all the design submissions and choose your favorites in two categories, Commercial and Residential.

Results of the Emerging Professionals Design Competition will also be announced at this event. Other awards bestowed at the Awards Gala can include the Rick and Duffy Monahan

Continued on page 11

Inside View

Perspective	2
Architects Give	2
Emerging Professionals Network	3
ARE 5.0 Launched	3
AIANH-Kahn Family Fund Enables Student Research in Africa	4
A World Heritage City With Unique Monuments <i>by Bruce Hamilton AIA</i>	6
Energy Matters: Storage is the Key <i>by John Hession</i>	8
Education Day Covers Codes, Accessibility, and Inclusive Design	9
Construction Summary	15
Photo of the Month	16
Calendar	16



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NH Forum Editorial Board:
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This issue of the NH Forum is produced by Carolyn Isaak Hon. AIANH

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The editors of the NH Forum seek to encourage a lively discussion of design and other topics of concern to designers. Opinions and proposals presented in the newsletter are those of the writers to whom they are attributed and are not a statement of official policy by AIANH, unless so stated.

AIA New Hampshire
PO Box 784
Portsmouth, NH 03802
Tel: 603-501-1881
E-mail: bkastel@aianh.org
Visit our Website at www.aianh.org

Perspective

Point of view from the President of AIANH
Jay L. Purcell AIA



Back in September I wrote an article that listed many of the organizations dedicated to helping architects expand their involvement, knowledge, and commitment to sustainable design. One of these groups of concerned professionals was created under the umbrella of our AIA national organization more than 25 years ago. It exists as one of the knowledge committees officially established under the AIA's structure of committees that focus on particular topics of architectural practice. Seeking to bring these design issues to the forefront of a national discussion of design priorities, this national committee was founded in 1990 by a group of architects dedicated to improving the environmental performance of the built environment. Its members were instrumental in providing some of the initiative that helped spawn other organizations such as the US Green Building Council.

Architecture has always been the integration of art and science in the built environment. And in my opinion the best buildings need to excel in both realms.

In addition to establishing the national committee, state AIA chapters were invited to form state committees to address these issues locally, with the idea of aligning state chapters to a common agenda. As some of you may have guessed, I am speaking of the AIA Committee on the Environment, also known as COTE. (Our AIANH chapter committee is known as the NH Environmental Guild, but more on that later.)

Throughout the early years COTE National established its mission and developed its agenda. It also developed criteria to evaluate architectural projects with exemplary environmental performance. And in 1997 (three years before the USGBC LEED rating system

Continued on p. 10

Architects Give



The New Hampshire Architecture Foundation is embarking on its annual fundraising appeal. This campaign is vital to the continuation of offerings that are funded in full or part by the NHAF. A wide range of programs have been created to instill in near and future generations the importance of excellence in design and sustainability in our built environment. The AIANH Learning by Design initiative offers hands-on opportunities to K-12 students in their schools and communities. Scholarship assistance is given to university level students to pursue studies in architecture and design. NHAF supports Emerging Professionals with networking, study-guides, and an annual design competition.

Unlike many other professions, architects remain committed to their time-honored

model of apprenticeship, a responsibility for inspiring and fostering the next generation. This working framework preserves vitality of the design community and ensures that future architects offer the highest qualifications to their clients and communities. Your collective contributions allow NHAF to continue this investment beyond your firms and across the state.

Please consider making a year-end, tax deductible donation to NHAF.

You can make a one time gift or become a sustaining supporter with a recurring donation through our online portal: <https://npo.justgive.org/nonprofits/donate.jsp?ein=22-3974726>. Or go to the AIANH website, www.aianh.org, and click on the Donate Now button.

Thank you for your support! ■

Emerging Professionals Network

Point of view from the AIANH Associate Director & EPN Chair
Tony Nazaka



Goals

One of the most important lessons (see: goals) in the architecture field is developing yourself as a valuable asset. My very first boss taught me a great lesson in how to excel in the architecture field, which was to try and think three steps ahead of him on what he might ask me to do. If you need to have everything explained, the job is ultimately done, and your job would simply be to execute. Not quite what it means to become an architect.

The goal is to make yourself into a person who can be plugged into a field of individuals and easily collaborate, multitask, and problem solve with a specific skill set to get a job done. Designing a building requires an unmeasurable amount of decision making. No one person, architect, builder, designer, etc. can really make them all. Nor should they. Not only does this require having skills to help advance a certain task, but to have cognizance that there are other players on the team, some of which can and will bring something you cannot offer.

The goal is to make sure you don't become an employee who thinks your job is to simply show up and do what you are told. Not only does that create a boring job or career, but it creates a lack of enthusiasm, interest, and concern in a creative field that desperately requires those. You should also question a

job that asks of you to simply show up and do what you are told, as it can pigeonhole you into a position that can stunt your career development, as well as accelerate feelings of apathy. Furthermore, if you are not helping, or being asked to help in the overall process, you start to become more and more irrelevant.

The goal should not be striving to become the next Wright (although that can be the mind-set), but rather honing in on and sharpening your skill set to become a more manageable employee, a more open minded boss, more transparent to a client, more knowledgeable on a construction site, and so on. Success isn't measured in how many of your projects make it to *Architectural Digest*, or how huge a profit was made. It is measured in the quality of a building designed, combined with a satisfied client and how well the team worked together.

And finally, the goal should be to evolve into a type of person who doesn't feel the need to tell a person everything. Egos should not be so large or fragile that you are unwilling to recognize that there are talented people out there with something to offer. Make it a point to try and listen to those people as much as possible. Steve Jobs famously said, "It doesn't make sense to hire smart people and tell them what to do; we hire smart people so they can tell us what to do," which I think resonates in a creative and technical field such as architecture. The goal is to become someone who can balance both. ■

ARE 5.0 Launched

After four years of development, the latest version of the Architect Registration Examination® (ARE®), ARE 5.0, launched on November 1. The updated exam incorporates new testing technologies and features six divisions that align with current practice and the progression of an architecture project. ARE 5.0 was developed with the help of practicing architects who volunteer their time and expertise, and reviewed by experts who ensure the exam is fair, reliable, and meets national testing standards.

Developed and administered by NCARB, the ARE assesses the knowledge and skills of all candidates seeking a license to practice architecture in the United States. NCARB periodically updates the exam to ensure it continues to reflect the demands of professional practice.

"We are excited to announce that candidates can now begin taking ARE 5.0," said NCARB President Kristine A. Harding, NCARB, AIA. "With updates to both the exam structure and supporting technology that allow for a more real-world demonstration of architectural ability, we think candidates will find ARE 5.0 to be a more enjoyable testing experience."

Candidates looking for insight into the new exam have access to several free study tools developed by NCARB. These include the ARE 5.0 Handbook, the ARE 5.0 Guidelines, the ARE 5.0 Community, the ARE 5.0 Demonstration Exam, and the ARE 5.0 Test Prep video series. In addition, as an incentive to take the new exam, the first 600 candidates to test on each division will receive a \$100 gift card.

NCARB will continue to administer ARE 4.0 until June 30, 2018. This 20-month period of dual delivery will enable current candidates to finish the exam in a way that best suits their needs.

For more information about ARE 5.0 visit www.ncarb.org/ARE5.



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Job Opportunities, Positions Sought

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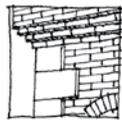
To submit an ad, please email ad text to bkastel@aianh.org. Job opportunity listings are free for AIANH members and \$320 for four months for non-members. Listings for Positions Sought are free for everyone. Please include your contact information with your ad listing.

Submit Your Details...

Do you have an interesting job on the boards or one that is newly completed? How about a new hire, a promotion at your firm, or someone had a baby? Maybe you've recently received an award or had your project featured in a magazine?

Send us the information and we'll print it in our "Details..." columns. Email to bkastel@aianh.org. Photographs can also be used (300 ppi).

New Architecture Scholarship Enables Two Students to Research Projects in Africa



Designing a public building includes tackling a set of unique challenges. And when the building site is 7,000 miles away in Africa, those challenges take on a whole new dimension. A new endowed scholarship has enabled Architecture majors Rachel Lamica and Connor Bell to overcome some of those challenges by funding their travel to Africa, where they visited a couple of proposed building sites and gained critical understanding of the physical and cultural realities of the project.

Each year, students in the Keene State Architecture Department's Communicorps class create design plans for underfunded community organizations that need to build new structures or modify existing ones. It's a perfect opportunity for students to work in a team and get real-world design experience while offering something of value to the community. In 2013, the Communicorps class moved in a daring new direction when it accepted the task of designing a much-needed vocational school in Haiti. Since that time, its partnership with the Boston chapter of Architects for Humanity has brought other important projects to the drawing board, including a health clinic in Rwanda and

[This project] challenged me to really think outside of the box, and do a lot of research on commercial spaces. In the end I felt it brought my architectural abilities to another level....

– Rachel Lamica

now a peace center in that country and a pre-kindergarten school in Uganda.

You can imagine that designing buildings in Africa presents problems that are quite different from designing for the Keene area, and the architect has got to be on site to really understand them. There are the obvious physical considerations, such as the slope and orientation of the building site, the availability of construction materials and resources, and weather and environmental factors. But there are also cultural and social aspects that can be just as important. Creating a sense of ownership among the local community members is just as important as creating a functional building. "Architects sometimes design beautiful buildings for Third World communities, but when they visit them a few years later, they often find them not being



Architecture majors Rachel Lamica and Connor Bell with professors Donna Paley and Peter Temple at Father Robert's home in Bucundura, Uganda. The woman in the white shirt and dark pants in the front row is a member of Father Robert's congregation at St. Bernard's Church, Ann Ball.



KSC students Rachel Lamica and Connor Bell with the architectural models they prepared for the sites they visited in Rwanda and Uganda.

used,” said Associate Professor of Architecture Peter Temple.

“One serious problem is sustaining the services and getting the local people to buy into it,” said Professor of Architecture Donna Paley. “It has to do with problems at a basic cultural level. ... The local people need a sense of ownership for the school to succeed.”

The new scholarship, the AIA New Hampshire-Kahn Family Fund for the Advancement of Architecture, named for AIANH and for Jay Kahn, a long-serving vice president of Keene State College and Honorary Member of AIANH, was created to support KSC Architecture program-related student travel and study away.

Lamica and Bell are leading Communcorps teams designing the peace center and pre-K school, and the AIANH/Kahn Family Scholarship helped them spend three weeks in Rwanda and Uganda, gathering important information about the physical and cultural aspects of the building site that they could only get by being there in person.

“I learned a great deal from working on this project,” said Lamica. Her team designed the peace center in Rwanda. “First, I learned how to design for a part of the world that is very different from New England, and has very different design needs. Since this is a big project, with a huge site and a rigorous slope, it challenged me to really think outside of the box, and do a lot of research on commercial spaces. In the end I felt it brought my archi-

tectural abilities to another level.”

Connor Bell and his team worked on the primary school in Bucundura, Uganda, to be built on land bought by Father Robert, a native of the village and former priest at St. Bernard’s Church in Keene, with help from the Keene-based non-profit, AfriCAN Educate. “This project meant a lot to me,” Bell said. “I was able to use my design skills to accomplish a project with two other students, and we created a functional and yet very aesthetic design. We wanted to have this village feel a sense of ownership of their school. The program included six classrooms with a central play space, a kitchen for serving meals, and a building for a headmaster’s office and teachers’ area. I will carry this experience with me always, because I have never felt more of a sense of accomplishment than I did with this project. I learned to be both compassionate and very practical during my design work. I used my knowledge to lead a team to create an effective design, and now that design is set to become a reality. I couldn’t be more proud.” ■

Ed Note: This article was written by Mark Reynolds, Staff Writer/Editor, Keene State College and is printed with permission.

You can support the AIANH/Kahn Family Fund by sending your check, made out to KSC with the memo field indicating AIA New Hampshire-Kahn Fund. Send to: Keene State College, Office of Advancement, 229 Main St., Keene, NH 03435-2701.



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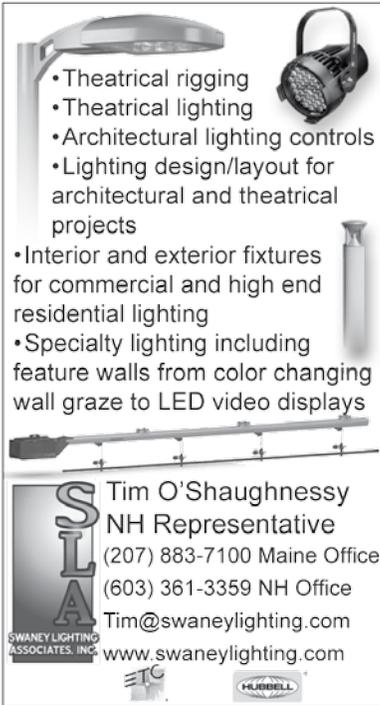
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A World Heritage City with Unique Monuments

Text & Photos by Bruce Hamilton AIA



Segovia, Spain is a medieval “ship” in the autonomous community of Castile and Leon. On September 24, 2016, our tour group’s journey started at the stern, in the Plaza del Azoguejo where the Roman aqueduct is located, with a stroll up to Calle de Cervantes and Calle Juan Bravo to the prickly Gothic masts of the Cathedral Segovia. We continued our walk through the tangle of narrow streets around playful Plaza Mayor and then descended to the Alcázar at the bow.

According to legend, the city of Segovia was founded by Hercules Egipcio, a grandson of Noah, around the year 1076 BC. It was not until the arrival of the Roman armies that the city took its place in history.

Segovia stands on the height of a mountain stretching from east to west, at some one thousand meters above sea level. It is surrounded by two rivers, the Eresma to the north and the Clamores to the south, which

meet to the west of the city, at the foot of the Alcázar.

In 1985 the old city of Segovia and its Roman aqueduct were declared World Heritage Sites by UNESCO. The aqueduct of Segovia, located in Plaza del Azoguejo, is the defining historical feature of the city. The 2000-year-old Roman Aqueduct, which cuts through the very heart of the city, is remarkably well preserved. A feat of engineering, the aqueduct was constructed from approximately 20,400 granite blocks without any cement and contains rows of 167 arches.

Our tour group climbed the grand staircase from the base of the aqueduct to the top where it reaches its maximum height of 28 meters – offering close-up views of the imposing work. Not far from the Roman Aqueduct, are a number of establishments that Segovia is famous for, where we enjoyed succulent roast lamb and pig.

From the Plaza Del Azoguejo, our journey continued through the narrow streets along



Segovia Cathedral



Roman Aqueduct/Plaza del Azoguejo

Calle de Cervantes and Calle Juan Bravo to the Segovia Cathedral, known as the “Catedral de Segovia” in Spanish, located in the Plaza Mayor. This beautiful 16th century Cathedral is known for being one of the last Gothic Cathedrals built in Europe. Upon entering the Cathedral, we were able to view impressive altar pieces, artwork and numer-



Street vendor

ous chapels with their individual unique architecture.

As we continue our journey from Plaza Mayor through the tiny narrow streets of Calle de Daoiz, we arrived at the Segovia Castle, better known as the Alcázar Segovia. Originally built as a fortress, it was later used as a royal palace and a military academy. It is one of the most famous castles in Spain due to its distinctive architecture. It almost appears as if the Alcázar is sailing toward you, cutting through the arid plains of Spain, perhaps in search of the New World. A visit to the Alcázar is most interesting, allowing the imagination to take flight back over history.

Upon entering the Alcázar, our tour began at the Ajimeces Room decorated with horse armor and knights. On the walls, there are canvases depicting monarchs and battles. Further on, we entered the Fire Place Room with its enormous chimney with decorated paintings of monarchs. In the Monarchs Room, a frieze extends throughout the space as ashlar with 52 polychromatic images of kings and queens. It also has extraordinary wood paneling based on hexagons and gilded rhombus. In addition, there are two interesting Gothic retables.

UNESCO World Heritage listed Segovia as

Continued on p. 14

Details...

Rob Reno AIA is announcing his retirement after 35-plus years of architectural practice. His firm, Reno Design Group will cease doing business effective December 31, 2016.

Rob has been a member of the AIA New Hampshire Chapter since he and his wife Nancy moved back to his home state in 1984. Prior to this he had graduated from the University of Oregon and Rhode Island School of Design in Architecture, after which he worked in New York City for a period prior to founding the Connecticut firm of Shope Reno Wharton Associates. After moving to New Hampshire he became a partner in the firm McGowan Brook Reno Associates in Concord until 1991. Since that time he has practiced as sole proprietor of Reno Design Group in Concord and later Hopkinton, focused primarily on private residential design projects.

Rob served on the Board of AIANH for eight years, from 1985 through 1993, and was Chapter President in the year 1991-92. He was also one of the five designated founders under the Articles of Incorporation of PlanNH and served on the Executive Committee of Plan during its first five formative years. He looks back on all those fruitful years with fond gratitude and the observation that time flies when you're having fun!



Rob Reno AIA is retiring after 35 years of practice.

Details...

JSA Inc. has launched a new website page to assist people with disabilities in navigating Portsmouth. Their goal is to raise awareness where it's lacking, inspire a spirit of inclusiveness, and influence other communities to do the same throughout New England and beyond.

Portsmouth is beloved, and the accolades continue to grow. From the *New York Times*: "Portsmouth and its pleasures are smaller scale. They're also best approached on foot..." That's great for most, but for some of us, centuries of charm create challenges of accessibility. And on foot is not exactly how we all travel.

Access Portsmouth helps people of all abilities know what to expect when they visit Portsmouth. A team of 'investigators', led by JSA Principal **Todd Hanson AIA**, visits local businesses with the goal of determining the:

- Accessibility of the front entrance
- Usability of the table/surroundings
- Ability to use a restroom
- Most convenient place to park

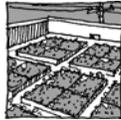
They look for access-friendly because sometimes, in our old buildings, accommodations are not quite fully ADA compliant. With some effort, most Portsmouth businesses do what they can to give people of all abilities a warm Portsmouth welcome.

Buildings change and staffs fluctuate, both playing a big part in your personal experience. JSA requests visitor input; if you see something that can use an edit, give them a shout. For business owners, JSA emphasizes that they are architects, with a leader on accessibility in the firm. Sometimes even a small fix makes a difference in customer experience. Hopefully the website will inspire more businesses to become access-friendly.

View the website at: www.jsainc.com/access-portsmouth.

Energy Matters Storage is the Key

by John Hession



We have the tools to design sustainably, but where are we going to put all that solar energy? Storage is the key.

These are exciting times to be working in the design community. The days of having to choose between good design and creating a sustainable healthy building are largely in the past.

With today's high performance envelope design, modern glazing, and evolving building systems, design decisions are no longer constrained when setting ultra high performance energy goals and powering even energy intensive buildings from on-site renewables is possible.¹

As more and more Net Zero Energy projects are commissioned here in New England clients can see for themselves the benefits of sustainable design. With AIA National as well as AIA New Hampshire committing to the 2030 Challenge, ultra high performance buildings are becoming the new norm. This

These are exciting times to be working in the design community. The days of having to choose between good design and creating a sustainable healthy building are largely in the past.

means we are going to have lots of renewable power on rooftops across our region.

One of the forces opposing the design community's goal of making all new buildings renewably powered by 2030 are arguments coming from the electric utilities that the grid won't be able to handle the fluctuations in output from renewable sources if they keep growing as a percentage of generation.

In addition, the fossil fuel industry contends that renewables will never really be "base-load" power, because the sun doesn't always shine, and the wind doesn't always blow, requiring us to stabilize the grid with on



Massachusetts Fisheries and Wildlife Field Headquarters in Westborough, MA. Architerra was the architect and Solar Design Associates provided energy system design and engineering.

Photo Courtesy Steven Strong.



New Allied Health Sciences Lab at North shore Community College, in Danvers, MA. It was the first net-zero-energy facility commissioned by the Commonwealth of MA and immediately followed the conclusion of the 'Net Zero Task Force' convened by Governor Patrick. Energy System and Design by Solar Desing Associates. Photo Courtesy Steven Strong.

demand generation from gas turbines or other sources that can be quickly brought on line.

But the reality is that across the world electric utilities are finding that the percentage of renewables can be grown quickly when existing technologies for grid stabilization are deployed.

Hans Albee, Engineer with Revision Energy sets up the big picture: “The next energy economy will need to incorporate a wide variety of distributed energy resources (DER)² as fossil fuel generation is replaced by renewables. The smart grid of tomorrow will be bi-directional, and achieving anything close to 100% renewables will require utilizing a whole suite of large and small scale storage mechanisms to provide the services necessary to maintain the stability and reliability of the grid. These services range from simply providing a source for additional energy and a sink for excess energy to help match system-wide supply and demand to more technical services like frequency regulation, voltage support, reserve power capacity. Compensation for those services is not yet available in the northern New England market, but states like Hawaii, California, New York, and Massachusetts are beginning to provide a framework.”

One way to store electricity generated during the day by a solar powered building is an on-site storage battery located behind the meter. A potential benefit of this kind of distributed storage as we move to a smart grid

...across the world electric utilities are finding that the percentage of renewables can be grown quickly when existing technologies for grid stabilization are deployed.

would be reducing the need for additional transmission infrastructure upgrades to deal with peak demand.

According to Hans Albee: “With the cost of residential scale storage batteries dropping,³ the most appealing feature for customers in northern New England is providing emergency solar power during a utility outage. A combination of solar and storage can compare very favorably with a fossil fuel generator, as long as the expectation is clear from the beginning that the intent is to provide power indefinitely for the most important loads, not power all loads in the building, which of course a generator can only do until the fuel runs out. For businesses, in addition to the simple energy supply offset, installing solar and storage can be a powerful way to control peak demand and the often high utility charges associated with those peaks. Solar and storage systems installed now for battery backup will position the owner well to benefit from additional revenue streams as they become available.”

Continued on p. 12

Education Day Covers Codes, Accessibility, and Inclusive Design

This annual AIANH Education Catch-up Day on December 1 was so much more than looking back at the year and making sure you have all your required credits. It was a very forward-thinking day, filled with fresh perspectives and experiences.

The morning session was devoted to an in-depth study of the, hopefully, eminent transition from the 2009 to 2015 Building Code in New Hampshire. **Jerry Tepe FAIA**, has a breadth of knowledge about the Building Code that comes from years of participation in its development at the state and national levels. He is a champion for adoption of the 2015 code that will come before the NH legislature again in 2017. Jerry has offered to keep the chapter informed of the schedule for deliberation so we can voice support for the bill to our representatives. Be on the lookout for updates, as there is often very short turnaround time from introduction of the bill to the vote.

The afternoon of Ed Day was a thought-provoking session about Accessible and Inclusive Design. **Jim Warner FAIA**, introduced a documentary created by the BSA Design for Aging Committee, “Celebrate the Voices,” showcasing challenges and benefits of aging in multi-generational cities. In the film, a diverse range of seniors are interviewed about their hopes to remain resident and involved in their communities and the barriers that often prevent this. **Todd Hanson AIA**, gave a presentation about how he has changed as an architect since he has become physically impaired and the obstacles in the built environment he has discovered. Todd also introduced an initiative he is part of, “Access Portsmouth,” a guide to reliable accessibility for visitors to Portsmouth (see side bar, page 8). Finally, **Valerie Fletcher**, Executive Director, Institute for Human Centered Design, described her organization’s dedication to Universal Design as enhancing the experiences of people of all ages, abilities and cultures through excellence in design.

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PURCELL Continued from p. 2

actually gelled), it established its own awards program to recognize projects that stood out as excellent examples of architecture that spoke to these issues. (See aiatopen.org)

I found this to be an important milestone in celebrating the projects that were incorporating this value system. Considering the seriousness of these issues, and the evolving understanding of the need for architectural design to include these performance criteria in an assessment of quality, this noble award program arrived. It became an annual juried competition to recognize projects and firms producing this kind of work, and to suggest to others in the profession and the public at large what we should be celebrating as quality architecture for our time.

The Ten areas of evaluation (as recently relabeled and enhanced by COTE national) may sound familiar and are listed below: (details on the AIA website, aia.org)

1. Design for Integration
2. Design for Community
3. Design for Ecology
4. Design for Water
5. Design for Economy
6. Design for Energy
7. Design for Wellness
8. Design for Resources
9. Design for Change
10. Design for Discovery

So why do I think this was a milestone in 1997? I would suggest that it is time to include this value system (in the general sense) in the assessment of all architectural projects for their level of quality, and in all juried evaluations that seek to award kudos to architectural projects deserving praise. Conversely, I would suggest that it might be time to acknowledge that projects that neglect or ignore these issues in their design solution have missed an important part of the *quality* design criteria of good architecture. They may be interesting works of architectural sculpture or artistic expressions, but if they neglect a high standard of environmental performance, then are they architecture deserving praise, or rather criticism, or at least some of each? Too often media-driven fashion, seeking the latest visually 'cool' example of the 'form du jour' ignores important things that give real meaning to an architecture that resonates with the issues of our time, and the

people it serves.

Architecture has always been the integration of art and science in the built environment. And in my opinion the best buildings need to excel in both realms. Buildings for human occupancy have always needed to address a plurality of issues and synthesize them into an integrated, expressive whole, while celebrating key aspects specific to their individual circumstances, whether that be program, site, form, detail, environmental performance, etc. to create a project worthy of recognition.

Recently you may have seen the call for entries for the 2017 COTE awards program and might have wondered just what this specific award program is about. I believe it is about encouraging thoughtful teams of individuals who are dedicated to seriously addressing these important holistic issues in the projects they design. It is not about exact metrics to achieve this or that *point*, but the integration of important overall environmental and human goals in the finished project. Some mandatory metrics are required in the latest criteria, and participation in other rating systems is considered, but the submission

Continued next page



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requests written <200 word descriptions for each category. It attempts to evaluate holistic criteria in an understandable responsible manner, rather than just a scorecard.

In our own local AIANH chapter, the COTE committee is referred to as the NH Environmental Guild, and includes AIA Affiliate members and other members from the NH community at large. As many of you know the IDID conferences and the 2030 seminars have been some of the signature events coordinated by this group. Locally, we have an active COTE chapter, but only recently have we begun to connect to the National COTE organization, and think about how we might develop connections to more state chapter COTE committees. There is a long legacy of great work by COTE AIA National (beyond the awards program) that I believe we need to keep abreast of, and perhaps get more involved in. An example of this is a statement from some long standing COTE members who felt they needed to send something out to other kindred spirits and express their thoughts in this time of important national and world events.

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That open letter, which appears below, recently went out in an email to the AIANH membership. But with the amount of spam being broadcast these days cluttering up many members email boxes, I thought it important to pass this along here in the *Forum* as well.

The text of the open letter follows:

“Architects play a critical role in creating a healthy, beautiful, inclusive and environmentally responsible built environment. For the last quarter century, the AIA Committee on the Environment has represented the leading edge of this movement and sets an example for others to follow. We have no intention of stopping now.

“Architects are required by law to protect the health and safety of the public.

“Architects work under a broad set of principles, which include cultural, social, religious and environmental rights. Our duties encompass the right of equal access, housing rights, worker’s rights and the protection of open spaces.

“We have an ethical duty and know from experience that it is possible to make buildings that are better for public health and safety while reducing or eliminating their contribution towards climate change—the ultimate public health threat.

“Government plays a complementary role to architects in the protection of public health and safety by enforcing minimum standards through building codes and environmental and safety standards on the materials and methods used to construct buildings. Government can also ‘lead by example’ by setting performance standards well above code minimum, helping American building practices stay competitive with those around the world and lowering operational costs for taxpayers for government-owned buildings.

“We will work to enable fact-based decision making, advancing policies to help make our buildings the healthiest, the safest, and the greatest in the world.

“We are deeply committed to achieving these goals in our practices, our work and with our communities. This commitment is more important now than ever. Now is the time to recommit to the AIA 2030 Commitment. Now is the time to create another net-positive building. Now is the time to become engaged with our local communi-

ties. And, now is the time to involve yourself with your Chapter’s COTE Committee as we continue to work toward a healthy, beautiful, equitable, and environmentally responsible built world. Working together we will make a difference.”

American Institute of Architects
Committee on the Environment
2016 Advisory Group
Paula McEvoy FAIA (Chair)
Mary Ann Lazarus FAIA (Vice Chair),
and many others have signed
on to this open letter”

Should you feel this also expresses your sentiments about the importance of environmental issues in the design of the built environment, they invite you to sign on. You can do that by going to: www.ipetitions.com/petition/open-letter-from-aia-cote.

Should you feel differently about any of this, you can express your opinion in an upcoming edition of the *NH Forum* or the AIANH Facebook page. ■

Ed. note: The AIA New Hampshire Environmental Guild meets regularly the second Tuesday of the month, usually at Sheldon Pennoyer’s office in Concord. You are invited to become part of this effort. You can email Sheldon, skp@spennoyerarchitects.com or Executive Director Bonnie Kastel, bkastel@aianh.org, to get on the mailing list for meeting notices and updates.

AWARDS GALA, *Cont’d from p. 1*

Award for Design Excellence in Architectural Restoration and Preservation, the Clinton Sheerr Award for Excellence in New Hampshire Architecture, Honorary AIA New Hampshire Memberships, and Outstanding Service Awards.

So, save the date, invite colleagues and friends, and join our community on January 20 to celebrate excellence in architecture in New Hampshire. Online registration can be found via our website, aianh.org. ■

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STORAGE IS THE KEY

Cont'd from p. 9

Another method of storing excess solar through the grid is pumped hydro storage. Just as in conventional hydro power, pumped hydro storage allows power to be quickly brought on line or absorbed from the grid in a matter of minutes, which can transform varying output from renewables into stable base load power.

In conventional hydro power a river is dammed and the pressure difference between the top of the dam and the bottom is used to drive turbines that in turn generate electricity. In pumped storage, water is pumped uphill during times of surplus energy on the grid, and that same water is released and used to power turbines, which generate electricity during times when the grid needs energy.

Historically there has been opposition from environmental groups to pumped storage when it draws water from lakes because of its potential to disrupt the habitat of species sensitive to water level changes. Those concerns are lessened when the water supply for the pumped storage consists of two cisterns. Water is pumped to the higher cistern to store energy and is released through a pump/turbine to the lower cistern when power is needed thus natural bodies of water



Behind the meter storage, such as this sonnenBatterie eco10 system in Concord, NH, is becoming more user friendly and cost effective. It has a capacity of 10 kilowatt hours. Lithium-iron phosphate (LiFePO4) battery technology is one of the most popular technologies for stationary storage systems because of its high chemical stability. The battery system is guaranteed to last for 10,000 cycles or 10 years. *Photo Courtesy of ReVision Energy.*

are not disturbed.

Because most pumped storage use multiple turbine/pump in series or more recently variable output turbine/pumps, pumped storage can provide many benefits to the grid over short to long time scales. On the scale from seconds to minutes pumped storage can provide frequency and voltage stabilization and on the scale from minutes to hours can soak

Continued next page



The Northfield Mountain Pumped storage has four reversible pump/turbines with a total capacity of 1143.0 MW. Photo Courtesy of First Light

Pumped hydro storage is a mature technology that can help integrate the renewable power from Net Zero buildings with the grid. It is time that this technology is re-examined and utilized in our region.

up or provide additional energy as needed. Pumped storage can also be brought on line during times of peak electric demand, replacing high cost spot energy with electricity stored during the day when solar panels are generating in excess of demand.

Most people in New England don't realize this, but much of the eastern region's grid stability is provided by existing pumped storage in Massachusetts⁴ and Virginia⁵. But there has not been any substantial new construction of pumped storage in New England over the past 20 years. Recent federal legislation has helped centralize the permitting process but more needs to be done.

Pumped hydro storage is a mature technology that can help integrate the renewable power from Net Zero buildings with the grid. It is time that this technology is re-examined and utilized in our region.

As we transition from the age of fossil fuels with their enormous environmental cost, we must build a robust electric grid that can accommodate both distributed energy resources and grid scale storage of renewably generated power. ■

Footnotes:

1. www.solar design.com/SDA_Today/north-shore-community-college-aiming-for-zero-net-energy/
2. Distributed energy resources (DER) are smaller power sources that can be aggregated to provide power necessary to meet regular demand. As the electricity grid continues to modernize, DER such as storage and advanced renewable technologies can help

3. www.utilitydive.com/news/tesla-started-shipping-cheaper-powerpack-20-grid-battery-in-september/429291/
4. The Northfield Mountain pumped storage provides 1,080 megawatts. For comparison Seabrook Nuclear plant has approximately 1,244-megawatt capacity.
5. The 3,003-MW Bath County facility, which was completed in 1985 in Virginia, is the largest pumped-storage plant in terms of generating capacity in the world.



— *John Hession is the photo editor at New Hampshire Home magazine and a freelance photographer/filmmaker. He is a Professional Affiliate member of AIANH and active with the Environmental Guild. John has had a life long interest in energy and sustainability dating from the construction of Millstone and Seabrook Power plants. In 2015 AIANH presented him with an Outstanding Service Award. He is currently working with the Guild and the NH Architecture Foundation to document on film successful Net Zero Energy projects across New England. He can be reached at JohnWHession@gmail.com. (Photo credit Morgan Karanasios)*

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Details...

The Associated Builders and Contractors NH/VT Chapter honored **Eckman Construction** with The Chairman’s Award, which recognizes “The Best of the Best” of construction projects throughout the region, for their work at the NH Job Corps Center. Eckman qualified for this award by winning an Excellence in Construction Award in the Industrial/Public-Over \$10M category for the NH Job Corps Center. The firm also took home a Sustainable Building Award.

The NH Job Corps Center project was contested multiple times for having a project labor agreement (PLA) attached to its solicitation. After multiple iterations and protests, the project was bid out without a PLA and Eckman put together the winning bid, roughly \$6 million less than the winning bid of the previous PLA-mandated solicitation.

The NH Job Corps Center provides educational programs and career training in advanced manufacturing, electrical, nursing, clinical medical assistant, facilities management, hotel and lodging, culinary arts and security for up to 300 students ages 16-24 that often come from challenging backgrounds.

The United States Department of Labor was the project owner and the architect was Miller Dyer Spears of Boston, MA.

North Branch Construction was recognized at the NH/VT Chapter Annual Excellence in Construction Awards, with an Excellence in Construction Award for the University of New Hampshire Holloway Commons Dining Hall Expansion and Renovation project in the ‘Institutional/Public \$5-10M’ category. The University of New Hampshire’s Architect and Director of Campus Planning **Douglas Bencks FAIA** and Project Manager II Richard Rouleau joined North Branch’s Project Manager Bruce Blazon and Project Superintendent Chuck Acevedo to accept the award.

North Branch also received an Award of Merit for the Laconia Central Fire Station Addition and Renovation project in the ‘Institutional/Public \$2-5M’ category. Project Architect **Jonathan Smith AIA** of **Warrenstreet Architects** joined North Branch’s Project Manager Bruce Blazon and Project Superintendent Mike Regan to accept the award. This project also won a Community Service Award.

SEGOVIA *Continued from page 7*

a whiff of legend, not least in the myths that the city was founded by Hercules or the son of Noah. It may also have something to do with the fact that nowhere in Spain has such a stunning monument to Romans Grandeur (the soaring aqueduct) surviving in a vibrant modern city. Or maybe it’s because, according to our local tour guide, where art really has imitated life Segovia style – Walt Disney is said to have modeled Sleeping Beauty’s castle in California on Segovia’s Alcazar. Whatever it is, we all agreed the effect is stunning; a magical city of warm terracotta and sandstone hues set amid the rolling hills of Castilla.

Segovia is a picturesque old city with twisting alleyways and pedestrian-only streets that are bordered by a medieval wall and two rivers. The historic ensemble of Segovia constitutes a unique artistic realization – it comprises an array of monuments which in terms of beauty and exemplary historical significance are truly outstanding. ■



Partial photo of Alcazar

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Construction Summary

Project Type: Jenness Bathhouse Replacement & Parking Lot Improvements
Cost: \$999,670
Location: Rye, NH
Owner: State of NH-DOT
Architect: Samyn D'Elia Architects
Engineers: Vanasse Hangen Brustlin Inc., CPB & Associates, Foley Buhl Roberts & Associates
Gen. Cont.: Smart Assistive Technologies

Project Type: Edna McKenna Facility Renovations
Cost: Not To Exceed \$5,000,000
Location: Boscawen, NH
Owner: Merrimack County Department of Corrections
Architect: Warrenstreet Architects
Const. Mgr.: Bauen Corp.

Project Type: Library West Wing Renovations
Cost: \$468,913
Location: Nashua, NH
Owner: City of Nashua
Architect: Tennant / Wallace Architects
Gen. Cont.: Project Resource Group

Project Type: Barton Hall - B119 Renovation
Cost: \$569,937
Location: Durham, NH
Owner: University of NH
Architect: Harriman Associates
Engineers: Harriman Associates
Gen. Cont.: JW Danforth

Project Type: Accessibility Upgrades (Paul Creative Arts Center)
Cost: (Base Bid) \$2,972,550
Location: Durham, NH
Owner: University System of NH
Architect/Engineer: Harriman Associates
Gen. Cont.: Charters Brothers

Project Type: Airline Terminal Building Wayfinding & Room Signs
Cost: \$635,805
Location: Manchester, NH
Owner: Manchester / Boston Regional Airport
Architect: Lavallee/Brensinger PA
Cont.: Design Communications Ltd

Project Type: Cooling System Replacement (Spaulding Hall)(UNH)
Cost: \$252,500
Location: Durham, NH
Owner: University of NH
Architect: HL Turner Group
Gen. Cont.: Careno Construction Co.

Project Type: Merrimack County Savings Bank
Location: Hooksett, NH
Owner: Merrimack County Savings Bank
Architect: Warrenstreet Architects
Engineers: Nobis Engineering, Swiftcurrent Engineering Services, Design Day Mechanicals, TF Moran
Gen. Cont.: CCI Inc.

**Construction Summary is provided by
 Construction Summary of NH, Inc.
 734 Chestnut St., Manchester, NH 03104**

Details...

A new two-story bus terminal for Dartmouth Coach on Labombard Road in Lebanon has recently been completed. Design for the project was provided by **Sheldon Pennoyer Architects, PLLC**, and **North Branch Construction** built the project.

The steel and wood-framed terminal on the site of a former auto dealership includes offices for management on the second floor and an architectural steel clear story with post and beam trusses over the waiting room. An initial blower door test of the structure resulted in an impressive rating of 0.13CFM50/SF. As it currently stands, the building is already a very tight building and well within the range considered to be high performance. The final blower door test is expected to put the building within ultra-tight performance standards.

This new facility will provide expanded parking and service options to Dartmouth Coach passengers in addition to the company's existing location on Etna Road.



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Calendar of Events

Jan 19 Cold Climate Heat Pumps, Pellet Boilers & Other Renewable Thermal Heating Systems, Marlboro Graduate Center, Brattleboro, VT, 8:30 am-5 pm. There is considerable uncertainty as to which technology to use/recommend for different construction projects. This is an opportunity for professionals to learn of the specifics, the applications, the strengths, and shortcomings of these thermal systems. Hosted by SEON: Sustainable Energy Outreach Network. \$150, or SEON members \$100. Registration deadline January 9. Info and registration: www.seon.info/programs. **6.5 AIA LU/HSW; 3.25 BPI CEUs.**

Jan 20 AIANH Awards Gala, Manchester Country Club, Bedford, NH, 6:00-9:45 pm. Don't forget to vote in the People's Choice Awards program. See more on page 1.

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Photo of the Month



Interior stairs at Harpa Concert Hall Reykjavik, Iceland,
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Photo by Curtis Boivin AIA, Lassel Architects, So. Berwick, ME

Do you have an interesting photo? Why not send us one to print? 300 ppi jpegs, approximately 4 x 6 inches, BW or color. (photos are also posted on the website at www.aianh.org/news/photo-of-the-month.) Send along a title, caption, and your name, to bkastel@aianh.org.



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