

BUILDINGchicago




AIA Chicago



EXPO AND CONFERENCE



September 9 - 11, 2013
Holiday Inn Chicago Mart Plaza
www.BuildingChicagoExpo.com



The LEED Platinum 120,000-sf Lewis and Clark State Office Building, Jefferson City, Mo. Design firm BNIM (architect/interior design) led the Building Team of Rumsey Engineers (mechanical design engineer), Smith & Boucher (MEP EOR), Clanton & Associates (lighting design), ENSAR Group (daylighting consultant), and Professional Contractors and Engineers (GC). The \$18.1 million project won a Building Team Award (Platinum) from *Building Design+Construction* (www.BDCnetwork.com/BNIM/LewisAndClark).

BUILDING*Chicago*/Greening The Heartland

WHAT WE CAN ALL LEARN FROM THE WORLD'S GREENEST BUILDINGS

A renowned green building author—and BUILDING*Chicago*/Greening the Heartland keynoter—offers five valuable lessons for designers, contractors, and building owners, based on a study of 55 high-performance projects from around the world.

BY JERRY YUDELSON, PE, LEED Fellow

For two years, my colleague, architect Ulf Meyer, and I worked on a book, *The World's Greenest Buildings: Promise vs. Performance in Sustainable Design* (Routledge), published last January. We were particularly interested in reviewing high-performance green buildings from the U. S. and Canada, as well as those from Europe and the Asia/Pacific region, to see if we could discern some universal goals for green building projects.

We aimed at getting operating data from LEED Platinum (or equivalent) buildings completed since 2003 that represented nonresidential typologies and were at least 50,000 sf in size—in other words, the typical commercial/institutional building type.

In many respects, this work was a follow-up to my 2009 book, *Green Building Trends: Europe* (Island Press), which looked specifically at European examples and focused on green building

technologies and design approaches. What I found in the course of researching that book was a series of great examples of sustainable design and a lively tradition of such buildings that went back 15 years or more.

DATA, DATA, WHO'S GOT THE DATA?

But what was lacking in my study of European green buildings was solid information on actual performance—verifiable data based on real-world field performance that would help link design approaches with actual energy and water use. That was the deficiency that Ulf and I sought to remedy in our research for *The World's Greenest Buildings*.

The most surprising result of our two years of research: how few owners of so-called “high-performance” buildings were actually

willing (or even able) to share their operating results with us. We ran into this roadblock even with structures built on university campuses or for government agencies—the very owners that should, in theory at least, be open to collecting and dispensing such information.

In fact, nothing in law or professional practice compels building owners to share such data. Without feedback from actual operating data, though, how are designers and their project partners supposed to do a better job? (To my mind, it's a scandal that the standard AIA contract does not *require* building owners to disclose operating data to their Building Teams and allow them to publish it, a change that the AIA could easily make in support of its commitment to the 2030 Challenge.)

Fortunately, the landscape is shifting dramatically, partly as a result of a number of local initiatives in cities like New York, Seattle, San Francisco, Austin, Texas, and Washington, D.C., that require owners of buildings of more than 50,000 sf to disclose operating data in publicly accessible databases. (California's AB 1103 law now requires energy use disclosure, but only when a *whole* building is sold or leased, so it's going to be a while before we have any significant data from that mandate.) Fast-forwarding to 2015, we're likely to have much more data to feed back to building designers, contractors, owners, and operators.

In *The World's Greenest Buildings*, we did our best to locate and solicit data from 55 high-performance projects from the three major regions of the world where sustainable design has taken off: North America (15 from the U.S., three from Canada), Europe, and Asia/Pacific (including five from Australia). The lone Latin American project, the Transoceánica office building, in Santiago, Chile, was actually among the lower energy users in the world, which taught us that there are surprises everywhere!

Of the U.S. projects we studied, four were located in the Midwest: Great River Energy Headquarters, Maple Grove, Minn.; Lewis and Clark State Office Building, Jefferson City, Mo.; Regents Hall of Natural & Mathematical Sciences, St. Olaf College, Northfield, Minn.; and Johnson Controls Campus, Glendale, Wis. In the end, we were able to gather building operating data from projects in 18 countries and compare the data within a region as well as across regions.



DON F. WONG / COURTESY HOLABIRD & ROOT

Holabird & Root Architects and Engineers and The Weidt Group worked with contractor Boldt Construction on the \$63 million Regents Hall of Natural and Mathematical Sciences at St. Olaf College, Northfield, Minn. The 190,400-sf lab building uses a heat-recovery loop, a so-called “cascade” air system, and a low-flow, variable-air-volume fume hood exhaust system to control energy use.

SET YOUR ENERGY TARGET FROM THE START

Here are a few key lessons that can be derived from the book:

1 In your next building project, you should be able to achieve the same energy and water use as LEED Platinum buildings around the world, because there is nothing magical or geographically specific about good design. What is required is a specific (and early) intent by the entire Building Team to meet clear numerical targets for energy and water use. We found that an energy use intensity (EUI) of 35 (35,000 Btu/sf/year) before adding contributions from renewables can be achieved.

2 What makes high-performance projects stand out is the commitment of owners and their Building Teams to achieving “best-in-class” results. The projects we studied were all LEED Platinum, which means they started with high-performance energy-efficiency goals. What also stands out is the commitment to an integrated design process; it's almost always the case that without the right process, you can't get the best outcome.

3 Most surprisingly, high-performance green design uses about the same energy everywhere in the world, from Northern Europe to the tropics. Typically, once you have a good building envelope and efficient HVAC systems in place, half the remaining energy use comes from plug/process loads and lighting, which tend to be geographically about the same in office buildings, leaving only about 15-20% for heating/cooling loads. In the northern latitudes, most loads are devoted to heating in winter, while in the tropics, most loads are devoted to cooling; these more or less balance out over the course of the year.

4 Great green buildings are just as beautiful, if not more so, than buildings with ordinary energy and water performance. Perhaps it is beauty itself that should be our goal in sustainable design. One of the core tenets of our book is that there is no inherent conflict between buildings with architectural merit and those with high-performance green characteristics (such as those with LEED Platinum status) and low-energy outcomes.

5 The last lesson from our research is that there are no standard definitions of building energy use, no good ways to tease out core energy use from special operations such as onsite data centers. In fact, in Australia, we were surprised to find that building energy use is typically reported only for the base building, leaving out tenant loads in commercial offices, a practice that dramatically understates actual energy use. (This is also the case in many European countries.) We hope that researchers in this field will make sure that we can arrive at common definitions, so that comparisons across countries will become much easier in the future.

What does this mean for the U.S. design and construction community—especially those attending *BUILDINGChicago/Greening the Heartland*?

First, you should aim at having every office and academic building you work on use less than 35,000 Btu/sf/year for “core” uses (i.e., excluding data centers and special process loads such as wet labs), before adding any contribution from renewables.

Second, there are plenty of great design strategies from around the world that are available and that will work in the cold winters and hot/humid summers of the Midwest.

Third, and perhaps most important, an integrated design process is essential for achieving great results.

AUTHOR ID: Jerry Yudelson, PE, LEED Fellow, is CEO of Yudelson Associates, a green building and sustainability consultancy in Tucson, Ariz., and author of 13 books on green building, green homes, sustainable development, and water conservation. He has keynoted more than 50 green building conferences since 2007 and will deliver the keynote address on Wednesday, September 11, at *BUILDINGChicago/Greening the Heartland*.



PAUL CROSBY / COURTESY PERKINS+WILL

Great River Energy Headquarters, Maple Grove, Minn., uses underfloor air distribution and generous daylighting, as well as a lake-source geothermal system. Perkins+Will (architect/interior design) led the Building Team of BKBM Engineers (SE), Dunham Associates (MEP), RLK Inc. (CE), and McGough (GC) on the \$65 million, 166,000-sf office building for the second-largest electric power supplier in Minnesota.



ERIC OXENDORF / COURTESY JOHNSON CONTROLS, INC.

For the 384,700-sf Johnson Controls Headquarters campus in Glendale, Wis., the Building Team—Gensler (architect), Ring & DuChateau (mechanical/plumbing), Leady & Petzold (electrical), and Hunzinger Construction (GC)—reduced water use by 77% through rainwater recapture and low-flow and dual-flush plumbing fixtures. A solar thermal system supplies more than 30% of the hot water needs for two buildings in the complex.



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AIA CES AND GBCI ACCREDITED COURSES

→ Monday, September 9

8:30 a.m. to 9:30 a.m.

Opening Keynote: Next Steps for the U.S. Green Building Council and LEED

Al Skodowski, Chair, USGBC, and SVP, Transwestern



Al Skodowski, Jr., Chair of the U.S. Green Building Council's Board of Directors, is Senior Vice President of Sustainability at Transwestern Sustainability Services, with more than 20 years' experience in commercial real estate facility management. His company has more than 65

certifications using LEED EB:O&M, notably the LEED Platinum Chicago Transit Authority headquarters. Skodowski is active in the USGBC's Board Mentorship Program and Project Haiti, a USGBC effort to build the first LEED-certified orphanage and children's center in Haiti. In his keynote, Skodowski will update Greening the Heartland attendees on the latest developments at the USGBC.

9:30 a.m. to 10:30 a.m.

Healthy Housing: Balancing Comfort, Air Quality, Energy Efficiency and the Bottom Line

Chauncey Hoffmann, Harley Ellis Devereaux; Ted Krasnesky, Pepper Construction; Sanyog Rathod, Sol Design & Consulting; Laura Weyrauch, Pathway Senior Living

The Role of Advocacy, Alternative Power & Incentives in the Era of Clean Energy

Susan King, Harley Ellis Devereaux; Robert Kelter, Environmental Law & Policy Center; Steve Kismohr, MEEA; Mike Waldinger, AIA Illinois

Adaptive Reuse as Sustainable Development — Strategies for Blending Historic Structures, Sustainability, and Revitalized Communities

Paul Alessandro, Hartshome Plunkard Architecture; Sachin Anand, dbHMS; Michael Roane, Brinshore Development, LLC

Materials Matter — Innovative Design With Wood

Cheryl Ciecko, Woodworks/The Wood Products Council

Sustainable Chicago 2015 Action Agenda

Nootan Bharani, Shaw Group E&I

11:00 a.m. to 12:00 p.m.

LEED Tax Abatement for Homes and Commercial Building Projects in Cincinnati

Chuck Lohre, Green Cincinnati Education Advocacy; Michael Cervey, Laura Quinlivan, City of Cincinnati City Council

Eye on Equity: Embracing Social Agendas at the Local Level

Ryan Evans, Jeremy Knoll, Historic Green

The Value of Energy Modeling During the Bidding Phase

Paul Todd Merrill, Clayco, Inc.; Benjamin Skelton, cycloneENERGYgroup

Post-occupancy Performance of LEED-Certified Buildings in Minnesota: A Statewide Analysis

Peter Dahl, Sebesta Blomberg & Associates

21st Century Chicago: Jobs, Energy, Transport, Water, Waste, Open Space, and Climate Change

Luke Leung, Skidmore, Owings & Merrill, LLP; Jamie Ponce, Karen Weigert, City of Chicago

1:30 p.m. to 2:30 p.m.

Piloting the STAR Communities Index in Indianapolis

Ashlee Mras, City of Indianapolis — Office of Sustainability

Street Reconstruction and Integrated Stormwater Management in Lafayette, Ind.

Neil Myers, Williams Creek Consulting; Jennifer Leshney, City of Lafayette, Ind.

Smart Buildings and Sustainability

Leo O'Loughlin, Jones Lang LaSalle; Larry Bridge, Procter & Gamble

Verification of Sustainable Building Envelopes Through Building Enclosure Commissioning

Brian Erickson, Pie Consulting and Engineering

Regional Indicators Initiative: Utilizing Citywide Metrics to Create Sustainable Cities

Rick Carter, LHB; Debbie Goettel, City of Richfield, Minn.

1:30 p.m. to 5:30 p.m.

LEED EDUCATION PROGRAM

Discovering Innovative Solutions for Designing Net-Zero-Energy Buildings Today: An Immersive Prairie Lab Experience

Instructors: Joseph Clair, Amy Coffman-Philips, Michelle Halle Stern, Prairie Lab, LLC

2:45 p.m. to 3:45 p.m.

An Introduction to the Passive House Standard
Mark Miller, Passive House Alliance United

**Setting Your 'Sites' on Green Building:
The Contractor's Approach to Sustainable
Construction**

Jackie Mustakas, Robins & Morton; John Kemp, Big-D Construction; Terrell Hoagland, Flintco, LLC

**Realizing Daylighting Controls Savings
Through Commissioning**

Scott Hackel, Scott Schuetter, Energy Center of Wisconsin

Code Dread: Keeping up With ASHRAE and LEED

Jeff Boldt, Stormy Shanks, Scott Bowman, KJWW Engineering Consultants

**The Chicago Commercial Building
Retrofit in Action**

Lucas Tryggestad, Luke Leung, Skimore, Owings & Merrill, LLP; Susan Heiking, VOA Associates; Travis Soberg, Goettsch Partners

4:15 p.m. to 5:45 p.m.

**Sustainable Infill Housing — A Case Study in
Kansas City, Mo.**

Ryan Warman, Dominique Davison, DRAW Architecture + Urban Design, LLC

**Sound, Hearing, and the Built
Environment — Listening for Better Architecture**

Carl Giegold, Threshold Accoustics, LLC

**Building Airtightness: Managing Moisture,
Durability and Energy for High-performance
Buildings**

Ryan Dagleish, Air Barrier Association of America

Dual Benefit Sustainability Strategy: The Water-Energy Nexus

Michael Berning, Heapy Engineering; John Hazlett, Williams Creek Consulting; Daniel Hellmuth, Hellmuth & Bicknese Architects; Richard J. Michael, Butler University

**Economic Revitalization, Midwest Style: Program
Strategies to Boost the Midwest Economy Through Energy
Efficiency & Sustainability**

Marge Anderson, Energy Center of Wisconsin; James Jerozal, Nicor Gas; Ric Cochrane, Preservation Green Lab; Jacob Corvidae, WARM Training Center



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6:00 p.m. to 7:30 p.m.

Net Zero Energy Buildings in Midwest Climates

Manus McDevitt, Sustainable Engineering Group, LLC; Sherrie Gruder, University of Wisconsin Extension

**Navigating the World of Existing Building Certifications: LEED
EB: O&M, Green Globes CIEB, and BOMA 360**

Jenny Carney, YR&G; Ben Bischmann, Colliers International; Ari Kobb, Siemens Building Technologies

**Retrofitting Engagement: Using Buildings as
Springboards for Creating Sustainable Communities**

Jennifer Hirsch, Terry Bergdall, The Institute of Cultural Affairs, USA; Richard Alton, Euclid Avenue Methodist Church; Angela Hurlock, Claretian Associates; Orrin Williams, Center for Urban Transformation

AIA CES AND GBCI ACCREDITED COURSES

→ **Tuesday, September 10**

8:30 a.m. to 10:00 a.m.

Integrated Life Cycle Analysis for an Integrated Design Approach: Costs, Benefits, Synergies and Choice
Sachin Anand, Anna Morton, dbHMS

Balancing Energy Efficiency and Durability
Maria Spinu, Benjamin Meyer, DuPont

Local Food Production and Urban Agriculture as LEED Credit
Joyce Lee, FAIA, LEED AP; Kate Bakewell, Biocities; Norman Christopher, Grand Valley State University; Keith Winn, Catalyst Partners

ICA Energy Star Benchmarking Pilot Project
John Albrecht, ChicagoGreen LLC; Jamie Ponce, City of Chicago; Benjamin Skelton, cycloneENERGYgroup; Lesley Showers, ICA-USA

IECC Training: New Illinois Energy Construction Code (Part 1: Architecture, Building Envelope, Air Barriers, Daylighting)
Darren B. Meyers, PE, International Energy Conservation Consultants
Note: Part 2 continues at 10:30 a.m.

Using New Construction to Inspire Energy Retrofits: Comparing Two Projects at Loyola University Chicago
Ralph Muehleisen, Argonne National Laboratory; Mike Stopka, Solomon Cordwell Buenz; Kana Wibbenmeyer, Loyola University Chicago

9:00 a.m. to 10:00 a.m.

Sustainable Design Uses for Large Opening Wall Systems
Matt Weber, NanaWall

10:30 a.m. to 12:00 p.m.

Healthcare Best Practices for Construction in Occupied Facilities
Vince Sticca, Gary Vogt, Peter Dinschel, Chicago Regional Council of Carpenters
Note: This session is also certified by the ASID.



IECC Training: New Illinois Energy Construction Code (Part 2: Mechanical Systems & Controls and Building Commissioning)
Darren B. Meyers, on behalf of the Illinois Department of Commerce & Economic Development

11:00 a.m. to 12:00 p.m.

Continuous Insulation Systems for Exterior Walls
DJohn Broniek, Icynene Inc.

A New Post-occupancy Evaluation Process at Advocate BroMenn Medical Center, Normal, Ill.
Susan Heinking, Patty Looker, VOA; Tim Bassett, Advocate Healthcare

An Owner's Experience With BIM: The Crate & Barrel Story
Joan Adamczyk, Jinyoung Jang, Crate & Barrel

Two Net Zero Projects, One Conclusion: From the Yannell Residence to Harmony House Animal Shelter
Jonathan Boyer, Farr Associates; Sachin Anand, dbHMS; Ann Dieter, Harmony House

Innovation in Green School Design, Development + Operation: Case Studies of Successful K-12 Implementation
Stuart Brodsky, Cannon Design; Joseph Clair, PE; Doc Kotecki, Energy Systems Group; Kristine Chalifoux, Smart Energy Design Assistance Center (SEDAC)

1:00 p.m. to 2:00 p.m.

Keynote: Current Directions, Future Trends in the AEC Industry
Robert Ivy, FAIA — The American Institute of Architects



Robert Ivy, FAIA, CEO of the American Institute of Architects, served as Vice President/Editorial Director of McGraw-Hill Construction and Editor-in-Chief of *Architectural Record*. He received the 2009 G.D. Crain Award from American Business Media for lifetime contributions to editorial excellence in business media.

For detailed biographies of all of the conference speakers and presenters, visit www.BuildingChicagoExpo.com.

2:00 p.m. to 3:00 p.m.

Operable Glass Walls for Flexible Interior Space Division
Chuck Braun, NanaWall

2:15 p.m. to 3:45 p.m.

Managing the Liability Risks of Sustainable Design: Advice From the Experts
Karen Erger, Lockton Companies; Eric Singer, ICE Miller LLC

Measuring Building Performance, User Satisfaction and Financial Value Across Energy, Carbon, Water, Waste, and Materials
Pat Thibaudeau, D'Andre Willis, HGA; Gary Kusnierz, MSEM VP, Performance Excellence, Ministry Health Care, Appleton, Wis.

Improving Stormwater Management at a Major Midwest Technological University
Mark Hieber, Arthur Smith, Harley Ellis Devereaux; Terry Croad, City of Southfield, Mich.; Joseph Veryser, Lawrence Technological University

Infrastructure and Building Automation Systems in Chicago Park District Facilities
Ellen Sargent, Daniel Dust, Patrick Levar, Chicago Park District; Ryan Stickney, Steve Rosner, AMI Automation

Making the 'AIA Practice Guide to Integrating Energy Modeling in the Design Process' Work for Your Projects
Rand Ekman, Cannon Design; Norman Strong, Miller Hull Partnership

3:00 p.m. to 4:00 p.m.

Code Considerations in Fire Rated Glass
Tim Nass, Safti First

4:00 p.m. to 5:00 p.m.

Daylighting With Electrochromics
Tim Finley, SAGE Electrochromics, Inc.

4:00 p.m. to 5:30 p.m.

Regenerative Design and the Living Building Challenge: An Interactive Discussion With Bob Berkebile, and Ralph Bicknese
Robin Randall, ED lab INC; Robert Berkebile, BNIM; Ralph Bicknese, Hellmuth + Bicknese

Implementing LEED for Healthcare: Inpatient Expansion at St. Vincent Fishers (Ind.) Medical Center
Lois Sechrist, Ascension Health; William Fenton, St. Vincent Health; Carl Johnson, BSA LifeStructures

Integrating Environmental Analysis Into BIM Workflow: Utilizing the HOK Design Analysis Methodology
Colin Rohlfing, Dave Ivey, HOK; Peter Marchese, Microdesk; Boyd Black, University of Chicago

Sustainable Senior Housing in South Chicago: Combining LEED With Active Green Environments at Victory Centre
Laura Weyrauch, Pathway Senior Living; Geoff Diegan, WRD Environmental; Chauncey Hoffmann, Harley Ellis Devereaux

Achieving LEED Gold for an Iowa Prison: A Unique Glimpse Into the World of Sustainable Correctional Facilities Design
Michael Morman, Ryan Larson, Shive-Hattery; Mickel Edwards, Iowa Department of Corrections

Conference attendees can earn AIA CES learning units and GBCI credits for these courses. For an expanded description of topics and to register for sessions, visit www.BuildingChicagoExpo.com.

AIA CES AND GBCI ACCREDITED COURSES

→ **Wednesday, September 11**

8:30 a.m. to 9:30 a.m.

**Keynote: What Do They Know That We Don't?
Lessons From Beyond the U.S.**

Jerry Yudelson, PE, LEED Fellow



Jerry Yudelson, PE, one of the first group of LEED professionals to be named a LEED Fellow, is the author of 13 books on green building. Yudelson has keynoted nearly 100 green building conferences in 14 countries. His keynote speech is based on his latest book, *The World's Greenest Buildings: Promise vs. Performance in Sustainable Design*.

For detailed biographies of all of the conference speakers and presenters, visit www.BuildingChicagoExpo.com.

10:00 a.m. to 11:30 a.m.

Transforming Medicine at the Community Level: Creating a Healthcare-based Mixed-use Development in Southwest Chicago
Abigail Clary, HDR; Guy Medaglia, St. Anthony Hospital and Greater Southwest Development

Sustainable Campus Master Planning at a Community College: Harnessing the Opportunities
Vuk Vujovic, Jeffrey Sronkoski, Legat Architects; David Agazzi, College of Lake County, Ill.

Renovation, Modernization, and Building Performance Enhancement in Two GSA Reconstruction Projects: The Dirksen U.S. Courthouse and the Klucynski Federal Building
Kurt Karnatz, Environmental Systems Design; Linda Grabert, David Mazzolini, GSA; Dan Fagan, David Swain, Cannon Design

Conference attendees can earn AIA CES learning units and GBCI credits for these courses. For an expanded description of topics and to register for sessions, visit www.BuildingChicagoExpo.com.

Energy Optimization in a Performance-driven Culture: Lessons From the New Electrical & Computer Engineering Building at UIUC

Coty Ekhoft, SmithGroup JJR; Kirk Fernandes, Illinois Capital Development Board; Philip Krein, University of Illinois at Urbana-Champaign; David Bodenschatz, KJWW Engineering

AIA 2030 Commitment: Creating a Culture of Change

Zurich Esposito, Marya Graff, Keelan Kaiser, Leonard Sciarra

1:00 p.m. to 2:30 p.m.

Informing the Design + Construction of Healthcare Facilities Through Simulation: BIM + VDC at Lurie Children's Hospital of Chicago
Peter Rumpf, Jeff Gruhn, Mortenson Construction; Eric Hoffman, Ann & Robert H. Lurie Children's Hospital of Chicago

From Energy Hog to Energy Miser: Transforming the U.S. Bank Building, Madison, Wis.

Kurt Karnatz, Environmental Systems Design; Matthew Darga, Urban Land Interests

Chicago Lakeside Development: Bringing LEED for Neighborhood Development to the U.S. Steel Works Site

Douglas Voigt, SOM; Nasutsa Mabwa, McCaffery Interests

Assessing Building Energy Costs: The Benefits of Energy Modeling to Building Owners

Keith Schwartz, Energy Center of Wisconsin; Sandra Hall Henry, Commonwealth Edison; Sumit Ray, University of Chicago

How a Sustainability Program Can Benefit Municipal Stakeholders in Terms of Resilience and Performance

Deeta Bernstein, Cotter Consulting; Terri Haymaker, Public Building Commission of Chicago; Cathy Breitenbach, Acting Director of Green Initiatives, Chicago Park District



3:00 p.m. to 4:30 p.m.

Supertall Buildings: The Evolution of Architecture + Structural Design in the Next Generation of the World's Tallest Buildings

Juan Betancur, Alejandro Stochetti, Adrian Smith + Gordon Gill; Dennis Poon, John Peronto, Thornton Tomasetti

Guiding Principles of Highly Effective K-8 Design: A Case Study at the University of Chicago Lab Schools

Randall Mattheis, Sheri Andrews, Valerio Dewalt Train; Alicia Murasaki, University of Chicago; Andrew Neal, UC Lab Schools' parent

Blue Island/Blue Water — Greening the Urban Core: Green Infrastructure Improvements and Redevelopment in a Forward-looking Chicago Suburb

Jason Berry, Jodi Prout, City of Blue Island, Ill; Eric Neagu, John Talbot, Weaver Bros. Construction

Understanding the Latest ADA Standards for Accessibility — and What They Mean to You

Stacy Campbell-Viamontes, Hinshaw & Culbertson; Laurie Rudolph, Joseph Russo, Mayor's Office for People With Disabilities, City of Chicago

Preventing Failure in Exterior Walls: Fewer Repairs, Longer Building Service Life

Martin Maingot, CTL Group; Christopher Haite, Metropolitan Water Reclamation District of Greater Chicago



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ABOUT THE PHOTOGRAPHER



Darris Lee Harris, a native of Wichita, Kan., has lived in and photographed Chicago and environs for over 20 years. He holds a BA from Columbia College Chicago, retains a national roster of commercial clients, and is represented by several art galleries. His work will be on display at BUILDINGChicago/Greening the Heartland.

More information:
www.darrisharris.com;
312-718-4469.

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www.icynene.com

Circle 777

Course Schedule

Tuesday, Sept. 10
11:00 a.m. to 12:00 p.m.

Continuous Insulation Systems
for Exterior Walls

John Broniek, Icynene Inc.



SAGE Electrochromics

SageGlass® is electronically tintable glass that improves the way people experience daylight in buildings. SAGE is the world's leading manufacturer of dynamic glass for windows, skylights and curtain walls. SageGlass glazing can be tinted or cleared to optimize daylight and improve the human experience in buildings. SageGlass manages the sunlight and heat that enter a building, significantly reducing energy consumption while improving people's comfort and well-being.

www.sageglass.com

Circle 779

Course Schedule

Tuesday, Sept. 10
4:00 p.m. to 5:00 p.m.

Daylighting With Electrochromics
Tim Finley, SAGE Electrochromics, Inc.



NanaWall

With more than 25 years of experience and more than a million opening glass panels installed worldwide, NanaWall Systems is the industry leader, trusted by architects, design professionals and homeowners. Providing precision-engineered opening glass wall systems, the NanaWall product line offers countless style options, unsurpassed durability and superior performance — all based on a foundation of rigorous testing, research and innovation. Engineered for both residential and commercial use, NanaWall opening glass wall systems provide a sound economic and environmental investment while redefining the boundaries between indoor and outdoor spaces.

www.nanawall.com

Circle 778

Course Schedule

Tuesday, Sept. 10
9:00 a.m. to 10:00 a.m.

Sustainable Design Uses for
Large Opening Wall Systems
Matt Weber, NanaWall

Tuesday, Sept. 10
2:00 p.m. to 3:00 p.m.
Operable Glass Walls for Flexible
Interior Space Division
Chuck Braun, NanaWall

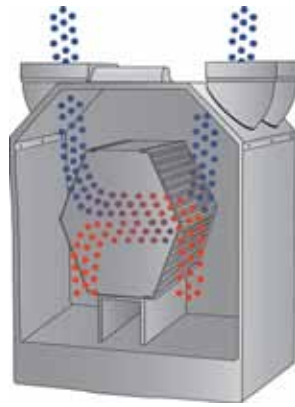


Rightsize Facility

Rightsize is a nationwide provider of office interiors and facility services. Its team creates cost-effective turnkey solutions for office environments through the creative blending of pre-owned, remanufactured, and new furniture to meet every customer's functional and aesthetic needs. Other services include furniture buy-back, facility decommissioning, and nationwide delivery and installation.

www.rightsizefacility.com

Circle 785



Zehnder America, Inc.

Zehnder specializes in high-performance ventilation solutions to promote comfortable, healthy, and energy-efficient indoor living. As an important component of an energy-efficient home or multi-family building, Zehnder's heat and energy recovery ventilation systems recover over 90% of the room temperature and ensure fresh filtered air for the inhabitants year-round.

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Circle 783



Air Cycle

At Air Cycle, our products, services, and resources are all geared toward helping you select an environmentally friendly solution for your facility. Air Cycle is a leading sustainable solutions and technologies provider specializing in fluorescent lamp, ballast, battery, and electronic waste recycling. We provide our customers with solutions for recycling, food waste diversion, cleaning and sanitizing solutions. To watch demo videos and learn more, visit:

www.AirCycle.com

Circle 782



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www.forbo-flooring.com

Circle 781



NetZero USA

NetZero USA is a company that specializes in permanently lowering, even eliminating, costly electrical expenses for industry through energy management. NZUSA's Industrial Lighting Division has become one of the largest lighting retrofit and conversion companies in the country through the use of T5 and LED solutions. NetZero USA is a Trade Ally in the ComEd Smart Ideas for Your Business program.

www.netzerousaindustry.com

Circle 784

Firestone
BUILDING PRODUCTS
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Firestone

Firestone Building Products is a leading manufacturer and supplier of a comprehensive "Roots to Rooftops" portfolio of products for commercial building performance solutions. By taking the entire building envelope into consideration, Firestone tailors solutions to individual customer and project needs for roofing, wall and specialty product systems. For additional information, contact Firestone at info@firestonebp.com, or 800.428.4442, or visit:

www.firestonebpco.com

Circle 780



Boral — Versetta Stone

Versetta Stone® panelized stone veneer is a nonstructural, cement-based, manufactured stone veneer that delivers the beauty of stone, but with a modern installation method. Versetta Stone's embedded galvanized steel nail strip allows installers to use nails or screws to adhere the product without using mortar.

www.boralna.com

Circle 786



Thermo-Scan Inspections

Thermo-Scan Inspections (TSI) has been providing energy efficiency services for over 30 years. We help utility companies and local governments implement demand side management (DSM) programs and work with the residential and commercial building community to achieve maximum energy savings. TSI specializes in residential and commercial energy audits, air barrier testing, building performance contracting, quality control inspections, as well as building code and energy efficiency education. TSI has experienced building science professionals and thermographers servicing customers across the country.

www.thermo-scan.com

Circle 787



WoodWorks

WoodWorks provides education, resources and free design, technical and engineering support for commercial and multi-family wood buildings. Expertise includes building types such as schools, mid-rise, commercial, franchise, retail, recreational, institutional and industrial projects. For project support, email help@woodworks.org. WoodWorks is a non-profit initiative of the Wood Products Council.

www.woodworks.org

Circle 791

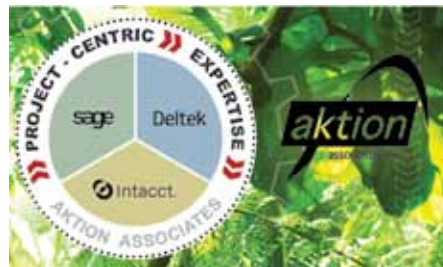


InPro Corporation

Since 1979, InPro Corporation® has been making and servicing products with an obsessive commitment to protecting the appearance of buildings and the health and safety of the people who use them. Based in Muskego, Wisconsin, InPro is the nation's premier manufacturer of door and wall protection, washroom systems and commercial surfaces, expansion joint systems, privacy systems and architectural signage.

www.inprocorp.com

Circle 790



Aktion Associates

Aktion Associates has improved productivity for thousands of construction, architecture/engineering, and professional service firms. We understand the complexities and challenges related to managing project resources and have developed a portfolio of solutions to address these situations. **Don't just survive — THRIVE — with Aktion's project-centric solutions.** For more information, visit:

www.aktion.com

Circle 789



Crossville

Crossville is your domestic source for porcelain tile collections and new Sureclad Porcelain Stone® ventilated facade systems. U.S.-owned and operated, we are renowned for our Hydrotec coating with self-cleaning, air purifying properties, as well as the award-winning, certified, sustainable practices of our Crossville, Tenn. manufacturing facilities.

www.crossvilleinc.com



Circle 788



Kawneer

Kawneer's Traco division has expanded its OptiQ™ Ultra Thermal Window offering with the new AA™5450 Series Single- and Double-Hung Window. The result of a continuing partnership with the U.S. Department of Energy, the innovative window reaches new levels of thermal performance, thanks to unique features integrated into its design.

www.kawneer.com

Circle 792



Rockfon

Rockfon has been a leading ceiling tile manufacturer in Europe for over 50 years. We are now prepared to stand above the rest in North America because of performance advantages made possible by a raw material only found in Rockfon products. Stone wool features numerous performance characteristics and attributes.

www.rockfon.com



Circle 793



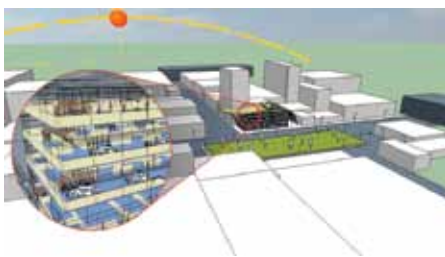
SAFTI FIRST

SAFTI FIRST is the leading single-source, USA manufacturer of fire-rated glass and framing systems for more than 30 years. Its products are listed and labeled by UL and Intertek/Warnock-Hersey for up to two hours and can be customized to also protect against hurricane, ballistic attack, blast, forced entry, noise and UV.

www.safti.com



Circle 794



IES

Integrated Environmental Solutions (IES) is a leading global innovator of integrated 3D performance analysis — for measuring and managing energy-efficient, healthy and affordable buildings. Our technology and consulting supports smarter sustainable choices for new-builds, operation and refurbishments. We deliver unique tools to assist regulatory/rating agencies, building owners/facilities managers, sustainability/energy managers, architects and engineers with their performance objectives.

www.iesve.com

Circle 796



Build, LLC

The Sports Collection of Windows & Doors was created exclusively for the fans who LOVE it...PLAY it...LIVE it. It is "your game in clear VIEW™." Founder Pat Smith, owner of Build, LLC, encourages you to imagine these extraordinary designs for stadiums, schools, sports-themed restaurants, clubhouses, offices and homes.

www.theselectionzone.com

Circle 797

Honeywell

Honeywell

Honeywell Building Control Systems is part of the Honeywell Environmental & Combustion Control (ECC) business. ECC provides integrated product solutions in heating and heating processes, ventilation, cooling and refrigeration, building controls and controllers. Honeywell Building Control Systems are found in 10 million buildings and a multitude of manufacturing plants around the world.

www.specifyhoneywell.com

Circle 795



SERF

The Society of Environmentally Responsible Facilities (SERF) was founded by industry professionals in 2010 to offer a more **affordable, streamlined** and **accessible** path to green building certification. Founded in East Lansing, Mich., in close collaboration with Michigan State University School of Planning, Design & Construction, SERF is now headquartered in Chicago.

www.SERFgreen.org

Circle 799



Daltile

We are committed to doing things in a way that can only be defined as the best in its class. As the country's leading manufacturer and distributor of ceramic tile and natural stone, our vast resources allow us to be a true single-source supplier for the flooring industry, and our amazing palette of products makes us a convenient and knowledgeable choice for any design. Combined with our parent company, Mohawk Industries, we manufacture nearly 700 million square feet of floor covering per year. For more information, contact:

www.daltileproducts.com

Circle 800



Panda

At Panda Windows and Doors, we have developed a complete line of Window and Door Systems to fit any needs your commercial or residential project has. With more than seven Lift & Slides to choose from, Panda remains the Lift & Slide expert in the nation.

www.panda-windows.com



Circle 798



Connor Co.

ClimateMaster geothermal systems from Connor Co. tap the constant temperature of the earth to provide heating, cooling and hot water. The consumer's home stays comfortable year-round while energy use is trimmed. Now, with new federal tax credits, consumers will save an additional 30% on the total installation. For more information, contact Dave Buss, Certified Geothermal Designer, at 217.242.2262 or e-mail dbuss@connorco.com.

www.climatemaster.com
www.connorco.com

Circle 801

GRAPHISOFT®

GRAPHISOFT

GRAPHISOFT® ignited the BIM revolution in 1984 with ArchiCAD®, the industry's first BIM software for architects. GRAPHISOFT continues to lead the industry with innovative solutions, such as its revolutionary BIM Server™, the world's first real-time BIM collaboration environment, and EcoDesigner™, the world's first fully BIM-integrated "GREEN" design solution.

www.graphisoft.com

Circle 802



Heat and Frost Insulators

Our more than 40 partner contractors can conduct a comprehensive audit of your mechanical insulation system and pinpoint exactly how much energy you can save through pipe insulation upgrades. Using DOE-approved 3E+ software, we can quantify energy losses, greenhouse gas emissions, as well as other issues related to your system performance. Even the smallest insulation enhancement can provide a high and quick ROI compared to most energy upgrades. Our team also specializes in safe and secure asbestos/lead removal, as well as firestopping services. Contact us at 708.468.8000, or fax 708.468.8017.

www.local17insulators.com

Circle 803



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Q: What did this facility in the Midwest do to cut their energy costs by \$300,000 annually?

A: They completely retrofitted their facility inside and outside with LED lighting from Seesmart Inc.

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www.LEDSavingsReport.com

Circle 806



Tremco Roofing

Tremco Roofing and Building Maintenance provides sustainable roofing systems, including vegetated, white reflective/cool and photovoltaic roofs; has numerous LEED-certified experts; and provides the industry's leading warranty. We are committed to bringing our customers roofing and weatherproofing peace of mind by delivering sustainable facility solutions that can last for decades.

For information on our roofing and building envelope solutions, call us at 800.562.2728 or visit:

www.tremcoroofing.com

Circle 807



IT Supplies Inc.

IT Supplies, Inc. is a national provider of wide format printers and supplies for the AEC, CAD, digital printing and creative community. We are an authorized reseller of HP, Epson, Canon, and dozens of other manufacturers. We have been in business since 1998 and are headquartered in Rolling Meadows, Ill.

www.ITsupplies.com

Circle 805



Portland Cement Association

Concrete plays a vital role in creating and preserving stronger communities through better-built, more sustainable buildings. Visit us at Table 102 and learn more about Chicago's first certified Passive House in suburban River Forest, built with high-performance insulated concrete exterior walls, providing energy efficiency and lasting durability.

www.cement.org

Circle 808

Architectural & Specification Consulting Services

ASSA ABLOY

The global leader in door opening solutions

The ASSA ABLOY team of professional specification consultants will help create complete doorway solutions.

Schematic Design Phase:

- Integrated design and BIM

Design Development Phase:

- Assistance selecting aesthetic products and solutions for sustainability, energy efficiency, safety, security and convenience

Construction Document Phase:

- Non-proprietary Division 8 and 28 specification assistance

Construction Administration Phase:

- Review of shop drawings and submittals

Dewain Peterson CSI, CDT
630.338.5610 | dwpeterson@assaabloydss.com

Mikey Foley AHC, CSI
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Circle 804

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BUILDINGChicago



BUILDINGChicago/ Greening the Heartland

The second annual BUILDING Chicago/Greening the Heartland Conference and Expo is scheduled for September 29-October 1, 2014. The number of conference accredited sessions and exhibitors is expected to surpass the outstanding participation witnessed in the 2013 event. We look forward to seeing you in 2014. Save the dates!

www.buildingchicagoexpo.com