

# The Masonry Society

## Sustainability E-News

Achieving Energy Efficiency - Revised/Corrected Version

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### SPONSORED EDITION

#### From The Editor

As energy codes get more stringent the focus has shifted somewhat from adding more insulation to identifying and eliminating "weak points" in the building envelope. Solutions to thermal bridges, which allow for greater heat flow through the envelope, are the focus of the first article linked below. It is interesting to note that some of the solutions marketed as thermal breaks to reduce thermal bridging actually increased heat flow. Careful evaluation and more research on thermal bridges and thermal breaks is needed, as is holistic evaluation of building energy use. [Studies have shown](#) that energy savings can often be maximized by focusing on electrical and mechanical equipment efficiencies.

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#### GREEN BUILDING NEWS

##### **Thermal Breaks in Building Envelopes: Recent Research Findings**

##### **STRUCTURE MAGAZINE**

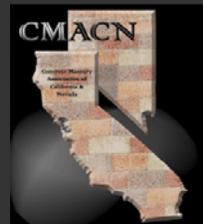
Thermal bridges occur when a component of high thermal conductivity causes excessive heat flow through the building insulation envelope. A large variety of conditions can cause thermal bridging, including cladding (shelf angles, grillage posts, canopy beams), metal wall studs, window mullions, and poor corner detailing. Thermal bridges through the envelope by structural steel frames are either linear penetrations, such as shelf angles, or point penetrations, such as cantilever beams or rooftop columns. [This article](#) reviews recent research that challenges some common assumptions.

##### **Dutch Architects Building Concrete Block 'Open Plan' House for Entire Family Tree**

[DESIGNBOOM.COM](#)

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## THE LONG ISLAND ADVANCE

S-Squared 3D Printers has introduced a concrete 3D printer that can produce a 1,490-square-foot home designed to last a century in just 36 hours at the fraction of the cost and using sustainable materials and practices. Structures built with the system can withstand many tornadoes and hurricanes and are resistant to fire and mold, according to chief safety officer Sal Pane. [Read more.](#)

## Sunconomy Introduces First Leasable, Permitted 3D Printed Home Tech

**CURBED (Austin, TX)**

To widen the availability of 3D printing in construction, Sunconomy has partnered with residential developer Forge New to introduce We Print Houses, the first 3D-printing home system that can be leased and licensed by builders and contractors. The system can produce energy-efficient, disaster-resistant, low-maintenance concrete residences in "a matter of weeks," and the construction on the first home will begin in February in Lago Vista, Texas according to [this article.](#)

## CODES and STANDARDS NEWS

As you know LEED v4.1 is here. If you have questions on what's new in the rating system, check out this [link](#) and the article in **EDUCATIONAL NEWS** at the bottom of this newsletter. ~Tina

## Illinois Led the Way in LEED Green Building in 2018

**USGBC.ORG**

Illinois topped the U.S. Green Building Council's list of [Top 10 States for LEED](#) for the first time since 2015, with 172 LEED-certified green building projects in 2018. Massachusetts, Washington, New York, Texas, Colorado, Hawaii, Virginia, California and Maryland rounded out the top 10.

## How to Approach the Dynamic Green Certifications Landscape

**METROPOLIS MAGAZINE ONLINE**

Setting company-wide sustainability targets, learning the history and purpose of sustainable building standards, and choosing the most appropriate standard for each project are the keys to navigating the ever-expanding green certifications landscape, Audrey Gray writes in [this article](#). Choosing not to get certified is also an option, as in the case of a dormitory project under construction at Bilkent University in Ankara, Turkey, that uses superinsulation and leverages the site's natural breezes to achieve energy efficiency.

## CASE STUDIES

One of the enduring benefits of masonry is its longevity. Adaptive reuse projects blend the appeal of the old with benefits of new



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...any, large, open, and masonry remains in place, built in 1869 and 1885, respectively, had been languishing for over half a century, vacant and disused. Now, nearly 150 years since their construction, the Empire Stores, as they were called, are thriving again as an integral part of New York's Dumbo neighborhood and the waterfront development in Brooklyn Bridge Park (record, January 2011). A thoughtful intervention by Studio V Architecture and S9 Architecture not only maintains the integrity of the existing structures—designated New York State landmarks in 1978—it knits them into a single entity, transforming the 350,000-square-foot timber and masonry facility (once largely used for warehousing coffee) into a lively blend of commercial and public spaces that includes a 100,000-square-foot roof addition, 50,000 square feet of green roofs, and a 7,000-square-foot extension of the park that climbs to the roof. Read more [here](#).

## EDUCATIONAL NEWS

Check out the free offerings from U.S. Green Building Council to learn more about the new LEED v4.1 rating programs. ~Tina

### Free LEED v4.1 Q&A Sessions USGBC.ORG

Registration is now open for LEED v4.1 Building Design and Construction (BD+C), Interior Design and Construction (ID+C) and Operations and Maintenance (O+M) beta projects. To help answer your questions, USGBC is hosting a series of live, online "[Ask the Experts](#)" sessions, where you will be able to connect directly with USGBC and GBCI subject experts and ask questions.

### Registration Open for 13th North American Masonry Conference TMS

The 13th North American Masonry Conference will be held June 16–19, 2019, in Salt Lake City, Utah. The Conference is hosted by Brigham Young University and is the latest in a series of quadrennial conferences sponsored by The Masonry Society. More than 150 papers from more than 20 countries are anticipated to be presented on a wide array of masonry topics. For more information and to register visit the conference [website](#).

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