

The Masonry Society

Sustainability E-News

Existing Buildings and Carbon

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From The Editor

When you hear about green buildings, the subject is often assumed to be new construction. However, as several of the articles in this edition note, the role of existing buildings in achieving sustainability goals is just as important. Because the existing building stock vastly outnumbers the amount of new construction expected over the next decade, these buildings offer an untapped opportunity to lower carbon emissions, not only through energy efficiency improvements, but more importantly by avoiding construction of new buildings. The lowest embodied carbon approach comes from repurposing existing buildings, and masonry buildings are great candidates for that. If you'd like to learn more about assessing, maintaining, and rehabilitating existing masonry buildings, check out TMS's newest [Night School](#) on that topic! It is a great way to learn from industry experts.

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GREEN BUILDING NEWS

As important as the focus on reducing the impacts from new construction is, the articles below remind us that existing buildings vastly outnumber those that will be built and, as such, improving their efficiency can have the biggest positive effect. Furthermore, as this [study shows](#), reusing an existing building is almost always a better environmental choice. ~Tina

Predicting building emissions across the US

MIT NEWS

About one-quarter of US greenhouse gas emissions from 2016 to 2050 will be attributable to embodied emissions from materials and construction, according to an MIT estimate. But an active approach to addressing regional priorities in building could cut these emissions by 30%, researchers say. "In both scenarios, the largest contributor to reductions was the greening of the energy grid," notes Vahidi.

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“Other notable opportunities for reductions were from increasing the efficiency of lighting, HVAC, and appliances. The remaining attributes, such as thermal insulation and low-carbon concrete, had a smaller impact on emissions and, consequently, offered smaller reduction opportunities. That’s because these two attributes were only applied to new construction in the analysis, which was outnumbered by existing structures throughout the period.” [Read more.](#)

Constructing new vs. adapting old

STEVEN WINTER ASSOCIATES

To meet the goals of the Paris Climate Agreement, we must make decisions that will result in the greatest near-term carbon savings. This means taking into account both embodied carbon—those upfront emissions associated with the extraction, manufacture, transportation, and assembly of building materials—as well as the carbon that’s emitted over the course of the building’s operational phase. Is it better to construct a new building or adapt an existing building for reuse? What are the implications for carbon emissions for both the near- and long-term? The results may surprise you. Learn more [here](#). [Editor’s note: This article neglects to mention carbon-reducing tips for new masonry construction, such as using units with reduced portland cement content, using thin brick, etc., but notes that repurposing existing construction is often the most sustainable option.]

Net-zero emissions a tall order for construction

REDSHIFT

The global goal of reaching net-zero emissions by 2050 will require the building industry to reach the halfway point by 2030, according to [this article](#). Part of the challenge is that true net zero involves both operational and embodied carbon.

CODES and STANDARDS NEWS

Architects have significant control over reducing the embodied carbon of buildings, from the building design to the material selection. But structural engineers can also play a role. The article below provides a good summary of the various green rating programs in the U.S. and the areas where structural engineers can have an impact. ~Tina

Report: Embodied carbon in North American green rating systems

SE2050.ORG

Recently published by the Structural Engineering Institute’s 2050 Committee, [this document](#) gives guidance on credits in 9 different green rating systems that can be affected by structural engineers, with a focus on embodied carbon.

Standards and extreme weather

ASTM INTERNATIONAL

In the wake of recent weather events such as the flooding in the northeast and wildfires in the west, new standards are being developed to help mitigate the impact of extreme weather at the local level. [Learn more.](#)

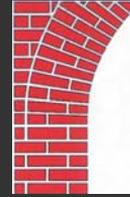
Boston aims for zero emissions from big buildings

ASSOCIATED PRESS

Boston’s acting Mayor Kim Janey is expected to sign an ordinance approved by City Council that will require all buildings larger than 20,000 square feet to eliminate all carbon emissions by 2050. The ordinance will apply to about 4% of the city’s building stock, which



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ACME Brick ***



Cast Stone Institute ***

accounts for about 60% of the city's building emissions. Read more [here](#).

EDUCATIONAL NEWS

It's not too late to Register for the TMS Annual Meeting in Nashville, but the early registration rates close today! Secure your spot now!
~Tina

Register Now for The Masonry Society Annual Meeting

MASONRYSOCIETY.ORG

Experience Southern Hospitality in Nashville, TN as TMS returns to in-person meetings! The Masonry Society's 2021 Annual Meeting will be held at the Millennium Maxwell House, in the heart of Music City, October 13 – 16. A number of educational programs will be presented in between business meetings and enjoyable social events. But perhaps of most importance, come back to see your TMS friends and to make new ones! We hope to see you there! Visit the [Annual Meeting page](#) for more information.

Night School returns: Assessment, Maintenance, and Repair of Transitional Masonry Structures

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TMS's Existing Masonry Committee (EMC) will be presenting seven (7) one-hour sessions weekly beginning October 27 to discuss the most common issues in assessing, repairing, and maintaining masonry cladding systems constructed in North America between 1880 and 1945. For more information, visit the [Existing Masonry Series Night School webpage](#).

Webinar: Achieving Resilience - How Masonry Supports Resilient Designs

MASONRYSOCIETY.ORG

[Register now](#) for this webinar on November 9th at 1 pm ET. Learn about resilient design and how masonry can be used to enhance the resilience of buildings. During this webinar, Christine "Tina" A. Subasic, P.E., LEED A.P. will review the use of 'above-code' standards to strengthen buildings and the role of masonry construction in meeting resilient design goals.

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