

January 17, 2025

NOT ALL CONCRETE IS THE SAME: Low Embodied Carbon Dry-Cast Concrete Masonry



**Nicholas R. Lang,
P.E.**

*VP Engineering & Advocacy,
Masonry CMHA*

Seminar Details

*Friday, January 17,
2025 2:30pm – 4:00pm*

*UH Campus
Classroom & Business
Building
Room CBB 108*

*Online via Zoom [https://
www.cive.uh.edu/
research/seminars](https://www.cive.uh.edu/research/seminars)*

ABSTRACT: The impact of construction materials on the environment continues to grow as a market driver. This presentation will cover the embodied carbon aspects of concrete masonry. Concrete Masonry Units (CMU) are made with dry-cast concrete which uses less water and cement than wet-cast. They also sequester more carbon. Mini embodied carbon cradle to gate Life Cycle Analysis (LCA) studies are compared for CMU, ICF, tilt-up, wood frame and steel frame. We will also look at additional strategies to lower embodied carbon during the manufacturing and use phase, including raw materials, efficient design, utilizing thermal mass, durability, resilience and End Of Life (EOL) sequestration.

BIOGRAPHY: HNick Lang represents CMHA as its Vice President of Engineering and Advocacy, Masonry. In this capacity, he oversees a variety of technical initiatives related to masonry products and systems, including association efforts in a variety of codes and standards forums, development and maintenance of technical resources, and oversight and management of CMHA's Research and Development Laboratory. Mr. Lang previously was the VP of Business Development, Director of Research and Development, and Laboratory Manager for the National Concrete Masonry Association.

Mr. Lang is a member of ASTM International and subcommittee chairman for C15.03 on Concrete Masonry Units. He is also a member of several other Technical Committees including C09 on concrete and concrete aggregates, and E06 on Performance of Buildings. He has received the ASTM Award of Merit from Committee C15 and he is a former member of ASTM's Committee on Standards (COS). He is a member of the Board of Directors of The Masonry Society. He is active at American Concrete Institute, a member of the ICC MHRCC Committee, and Vice-Chair of the Masonry Alliance for Codes & Standards.

Mr. Lang received a Bachelor of Science degree in Materials Science and Engineering from the University of Pittsburgh. He is a registered professional engineer in Maryland.