Introducing new concepts inherent to masonry and bringing the industry together were Belden Brick & Supply’s goals in developing and presenting a symposium for architects, facilities planners, general contractors, construction managers and mason contractors.

At the recent Masonry Institute of Michigan annual meeting, I heard Executive Director Dan Zechmeister tell of his commission to become a part of the group of masonry experts assembled by the Mason Contractors Association of America to study and compare various wall systems for the US Department of Defense. They were interested in comparing life cycle costs of various construction materials and methods for military housing, incorporating antiterrorism construction standards and sustainable design goals into new facilities.

A multi-wythe loadbearing masonry wall system was compared to a structural steel frame with brick veneer and metal stud infill. Topics discussed were:

- initial construction costs
- life cycle cost analysis comparison
- hygrothermal evaluation
- increased calculated R-values for masonry walls
- higher effective R-values for masonry walls
- masonry details
- structural modeling
- construction schedule requirements

We wanted to share this newly compiled information with the design and construction professionals of Western Michigan. As a father of a daughter about to select a university to attend, I am most concerned about her safety in the dormitory. College dorms are being constructed with wood stud that are not nearly as protective as a masonry building that simply will not burn. That, too, is a concern of the government in keeping the military safe. In the past, initial cost was the concern. After learning of the benefits of masonry’s life cycle advantages and short payback period, their attention has been refocused to consider operation costs or savings using a masonry wall system.

Doing things the way we have always done them will, of course, continue to provide the same results. If we want to reduce energy consumption, and the military does want that, they need to look at things differently. A well insulated masonry cavity wall structure simply provides the highest building performance at the lowest cost.

Jim Tann, president of Brick Institute of America Mid East Region, enthused the crowd with his presentation on how to achieve more LEED points using sustainable brick especially in the Innovation in Design category. What could be more sustainable than using brick for more than one purpose, thus eliminating extra materials that would need to be manufactured from more...
resources, transported to the site using energy at each stage? Innovation in Design points can be achieved by exceeding requirements such as brick for multiple functions of structure and finish, passive solar strategies and acoustics. Doing more with less. Innovation in Design allows architects to design using a system not already accounted for in the LEED programs. He encouraged the attendees to be a little creative. After all, designers are creative types.

One of his innovative ideas was to create a bike rack out of brick. How clever! LEED encourages bike riding rather than consuming more energy for fueling a car ride. One point for the bike rack. One point for Innovation in Design.

Tann also encouraged use of more brick on the interior of buildings. Not only is it a nice touch aesthetically, but brick do not off-gas. Zero VOCs. Another point. He was full of ideas. And sustainable strategies. Bringing more value to architects and owners.

He talked about reducing emissions during the manufacturing process with air scrubbers. For many years now, brick manufacturers have recycled waste heat from the kilns to fire the dryers. And they have used alternative fuels. Today, they are also taking advantage of recycling imperfect brick, manganese and sawdust into new brick, or crushing waste brick into landscaping chips or aggregate for concrete. A great number of manufacturers are very conscientious about reclaiming the land after mining.

Questions from the audience were focused on new products with recycled materials and what manufacturers are doing to reduce the carbon footprint. This was a great day for architects, to learn more and become more prepared to address the environmental challenges and concerns facing an age old industry, perhaps the most sustainable.

Todd Belden is part of the fifth generation of Beldens whose great, great grandfather founded The Belden Brick Company in 1885. After graduating from the University of Notre Dame with a degree in accounting and finance, and two subsequent years in New York City, he returned to Grand Rapids MI and joined his father’s business, Belden Brick & Supply, in 1992. Belden Brick & Supply supplies the architectural, residential and hardscape community throughout Michigan with brick, stone, pavers and materials for outdoor living spaces such as fireplaces, kitchens and grills. Belden is sales manager and a board member of the Masonry Institute of Michigan. 616.459.8367 tbelden@beldenbrickandsupply.com

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