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Permanent modular construction: A desirable alternative for healthcare, education and retail

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Builders and developers in New England have a valuable option available to them when it comes to erecting quality, sustainable, cost-competitive buildings on an efficient timetable. Factory built commercial modular construction has become one of the most innovative solutions in addressing the great challenges facing the industry.

Dramatic improvements in construction methods coupled with the traditional core benefit of speed to occupancy are making permanent modular construction a desirable alternative, especially in industries that are the backbone of the New England economy-health care, education, and retail. The most critical developments within permanent modular construction are drastic improvements to the structures' sustainability. Whole buildings delivered to site are comparable to site-built construction in terms of design and architectural quality, while providing eco-friendly benefits that are inherent to the modular process.

Modular construction naturally lends itself to sustainable construction methods - techniques that commercial real estate clients are often looking for. In short, less time on site and more time in an indoor controlled manufacturing plant produce material, time, and energy savings. The Modular Building Institute (MBI), one of the leading international trade organizations for the modular building industry recently distributed a report highlighting how modular construction may be applied to fit the U.S. Green Building Council's (USGBC) LEED rating system's criteria. The white paper, available at www.mbinet.org, indicates that industry practices produces less waste, creates less site disturbance, and exposes less material to inclement weather, among other green benefits.

Recently, Triumph Modular was responsible for designing and installing one of the first moveable modular classrooms in the country that was designed to meet LEED standards. Triumph SmartSpace classroom, now in use at the Carroll School in Lincoln, Mass., incorporates a superior building envelope, enhanced use of natural daylight, the latest in energy reducing HVAC systems, and renewable materials to provide a healthier learning environment for the students there.

Triumph also recently oversaw the relocation of a 26,000 s/f modular building from a central Mass. community to the Francis W. Parker Charter Essential School in Devens, Mass. to provide the school with an additional classroom space. While this particular space is not a SmartSpace classroom, it does demonstrate one element of sustainability that modular buildings can provide through the reuse of a structure. That building would have likely ended up in a landfill but because modular structures can be more easily transported, it was able to be reused.

The MBI report also notes that a major factor in the modular industry's ability to promote its sustainability is in the speed with which modular buildings can be constructed and installed. Construction timelines can be cut nearly in half through the use of modular buildings because of off-site construction concurrent with on-site development. Equally important is the fact that modular

construction is cost-competitive with site-built construction. Contractors and developers are spending no more on modular buildings than they are on conventional site-built construction, and they are able to complete their projects in as little as half the time.

Not long ago Triumph designed and installed a 4,300 s/f building that houses a digital mammography center for Cambridge Hospital/Cambridge Health Alliance. The completed facility includes a reception area, waiting rooms, and three labs with the latest digital mammography equipment and technology. The modular building was utilized to use all of the space available to the hospital. It was craned into place with inches to spare on either side of the existing hospital. Completed in four and a half months, it met the need to accommodate more patients in the space available to the facility.

Building green buildings is moving rapidly from an ideal to a necessity. The development and construction industry would be wise to consider learning about off-site construction, to help them meet the revolutionary changes around sustainability facing commercial development and construction. Permanent modular construction may be one of the most effective solutions available today.

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