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## Triumph Modular builds relocatable classrooms for Newton middle school

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Triumph Modular Corp. built and installed four green, relocatable classrooms at Oak Hill Middle School, that have proven to be a cost-effective alternative to new construction.

In 11 weeks, Triumph Modular erected eight modules, which contain the four classrooms, and occupy 4,800 s/f in total. Designed by Raymond Design Associates, the Oak Hill Middle School modular classrooms meet the goals of Mass. High Performance Schools Protocols (MA CHPS), including the integration of 'air barrier' construction, daylight harvesting, minimized HVAC systems, and many other green features.

"The classrooms are spacious with ample natural light and easily controlled overhead lighting, soft on the eyes," said Oak Hill Middle School Principal Eva Thompson. "The heating and air conditioning systems work well, making the rooms comfortable throughout the year. Well sound-proofed, one cannot hear anything from room to room. This is crucial for us as we currently use the spaces for World Language classrooms where lots of conversation and activity occur daily. From the exterior, the modulares coordinate nicely with our original brick building."

The ability to relocate one or more of these classrooms will maximize their utilization and minimize the risk of what might have been four permanent classrooms that would go unused or be underutilized after this short-term enrollment 'blip' passes. If one or more of these classrooms is relocated to another city school in the future, the savings in capital construction will be significant. Foundations were poured below grade to accommodate the potential move and an air barrier was installed between each classroom so that these classrooms can be sealed up easily and it will not affect the integrity of the air tightness of the remaining portion of the modular building.

"With no change orders and no long-term commitments, modular classrooms offer speed to occupancy, environmental sensitivity, and flexibility," said Cliff Cort, president of Triumph Modular. "You can order what you want when you need it, and when you don't need it anymore, it goes away."

"High-Performance green schools are healthy and productive environments. They are also cost-effective facilities that conserve energy, use renewable resources, and have lower annual utility and operating costs," said project architect Gene Raymond, AIA, LEED AP, of Raymond Design Associates. "The City of Newton placed an emphasis on reaping the benefits of a sustainable, high-efficiency modular building for a classroom expansion at Oak Hill Middle School."

Modular classrooms are a cost-effective solution to traditional brick-and-mortar construction, giving cash-strapped school districts a sensible alternative in these tough economic times. Traditional school construction in Mass. is currently valued at \$290 per s/f, including site work, but the Oak Hill Middle School building and connecting corridor cost just \$189 per s/f. The classrooms will remain at the site indefinitely and are good for 20 years.

