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**Hill Central School**

Increasing Sustainability  
for New Haven Public Schools

# Hill Central School

## Increasing Sustainability for New Haven Public Schools

Produced by Hanim Samara & Written by Camila Osorno

Mayor John DeStefano Jr. made a major commitment to the public schools of New Haven, Conn., in 1995 when he created the Citywide School Construction Program. The program has since built or rebuilt 38 of New Haven's 44 total schools, representing roughly \$1.5 billion of work. That investment continues to pay off, not only because the Citywide School Construction Program now serves as a national model for investment in education infrastructure, but because the ongoing improvements ensure New Haven's public schools continue to

reflect the standards set by the state, the Board of Education and the specific needs of the school in question.

School officials reinforced their commitment to improving the state's learning environments at a state budget meeting in 2010, defending the choice to move forward with school construction projects at the risk of compromising additional funding from the State of Connecticut. Both the state and New Haven share the cost of these improvements, with the city matching roughly



20 percent of the costs. Of the \$476 million budget proposed from the state Finance Committee in 2010, roughly \$23 million went toward capital improvement in the education sector of \$45 million total allocated for citywide capital improvement projects.

New Haven’s Hill Central School (Hill Central) was included in the budget, with Hill Central being the 36th school to be built under the Citywide School Construction Program. The city tapped local Kenneth Boroson Architects (KBA) for the design and Giordano Construction Co. Inc. (Giordano Construction) as construction manager.

Giordano Construction’s history stretches back more than 80 years and recent projects in the education market include the construction of New Haven’s Roberto Clemente School – which lies next door to Hill Central – and the Cooperative Arts & Humanities School, a liberal arts magnet school also in New Haven. Giordano Construction and KBA teamed up for Hill Central, breaking ground in April 2011.

**Ultimate Efficiency**

“Hill Central was our eighth project for the New Haven School Construction Program, and we’re happy to say it went very smoothly,” reflects Chris Malerba, project manager at Giordano Construction. The Hill Central construction team had its work cut out for it from the very beginning, as the school district absolutely needed to have the school open for the 2012 and 2013 school year.

KBA designed the building to meet the CT High Performance



Standards, which are comparable to the requirements of LEED Silver certification. However, the school doesn’t plan to formally pursue certification, according to Malerba. The emphasis on energy efficiency is part and parcel of the school construction program’s objectives, as increased efficiencies lead to lower operating costs. Hill Central’s design aims to flood the interior with as much day light as possible to cut back on indoor lighting needs, while a rainwater collection system stores water to be reused to irrigate the school’s lawns.

Additionally, the school district made history in 2010 when it became the first district in the state to invest \$2.8 million in a 400-kilowatt fuel cell supplied and designed by Connecticut-based UTC Power.

Hill Central and the adjacent Roberto Clemente School share electricity generated from the natural-gas powered fuel cell, which supplies the two schools with supplemental power to help cover

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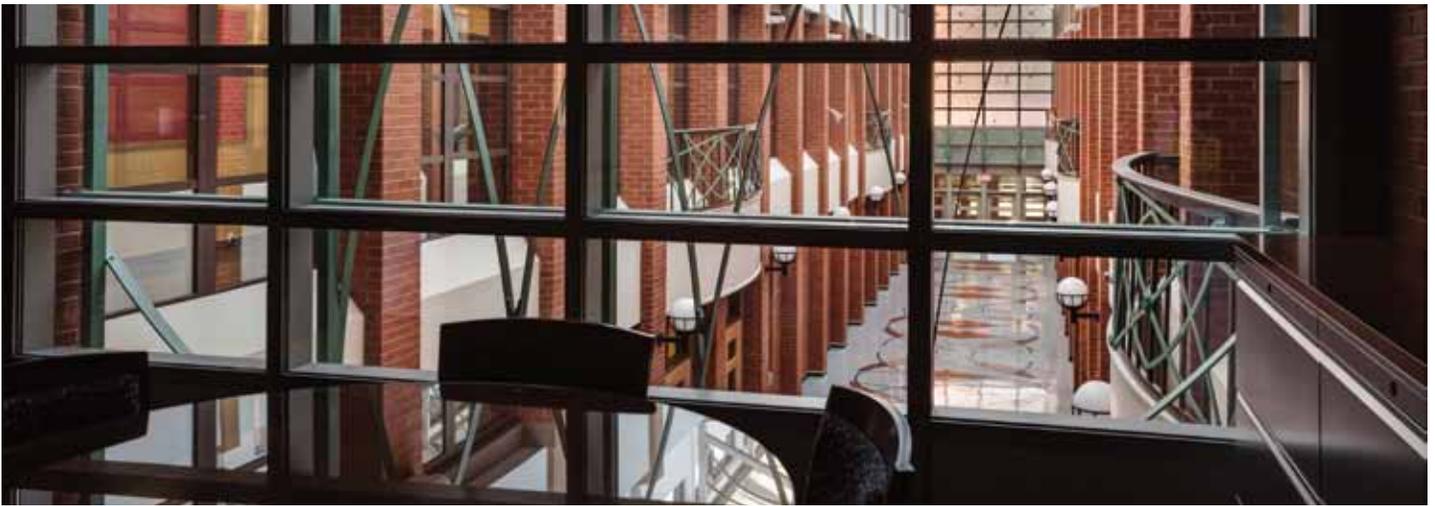
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the schools' electricity, heat and hot water needs. The fuel cell also has the ability to provide grid independent power to both schools in the event of an outage.

### The Future of Educational Environments

Other sustainable features include chilled beams that use less energy to heat and cool classrooms, while also reducing the amount of ductwork and maintenance required. High-efficiency fluorescent lighting, a daylight dimming system and radiant flooring systems also ensure the building remains comfortable and energy efficient.

Inside, the architectural highlight of the school's design is the three-story Main Street, which serves as the main corridor and separation between classrooms and common spaces. A glass skylight and exposed ornamental metal trusses cap Main Street, while decorative architectural balconies and street lamp-styled lighting fixtures create the illusion of an outdoor promenade. The new school also provides a central courtyard with a play structure for students, as well as a modern science lab complete with an active weather station, a media center, a Mac lab and interactive smart boards in every classroom.

Giordano Construction also managed to deliver the project ahead of schedule, giving the school time to settle into the new space before classes resumed in the fall. "We implemented BIM technology to produce 3-D coordination drawings, which expedited the installation schedule," explains Malerba. "We introduced this technology to the New Haven School Construction Program, and it was used successfully at Hill Central."

The software allowed Giordano Construction to collaborate directly with KBA and also the project's mechanical and electrical contractors to sort out potential issues during shop drawing development. "This process eliminated delays and extra costs typically caused by spatial conflicts and unforeseen

field conditions," says Malerba.

Ultimately, the all-new Hill Central provides a well-equipped space for students, teachers and families to take an active role in the student's education. Thanks to those in New Haven, Kenneth Boroson Architects and Giordano Construction Co. Inc., Hill Central School serves as a model for the ways sustainability and state-of-the-art educational amenities enhance learning environments. •

## JKF AND ASSOCIATES

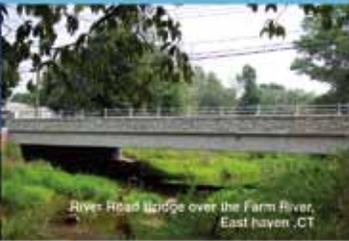
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