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SUSTAINABLESCHOOLS



'Amazing Things'

Building a New School for Special Needs Students in Boston



By Christopher A. Miller

The William E. Carter School in Boston is a unique institution with a unique mission: to provide the City an accessible, developmentally appropriate educational environment for students with cognitive, communication, and physical disabilities. Since 1971, the Carter School has fulfilled its mission from a facility on the edge of Boston's Lower Roxbury and South End neighborhoods. The Carter School has enjoyed many talented faculty and staff members over the decades, but it was only recently that the school had the opportunity to realize a new space designed and built specifically to match its mission.

"Flexible, accommodating, and capable of serving student needs for the long-term," is how Senior Project Manager Inger Hamre-Foley, MCPPO, describes the new school. Hamre-Foley is part of the Hill International, Inc. project management team brought aboard by the City of Boston to work with designer Perkins&Will to deliver the new Carter School. The project is partially funded by the Massachusetts School Building Authority (MSBA). The new building will replace the existing William E. Carter School on the same site with a three-story, modern facility tailored to meet student needs, from a rooftop garden to a therapeutic pool.

"The building project itself has been an incredible experience for our community," says Carter School Principal Mark O'Connor. "The project team has helped us to dive deeper into envisioning the true educational experience that our students deserve by thinking about what is possible if we had a building that removes many of the barriers that our students and staff face in accessing their education." O'Connor continues, "This process, and the final design and construction of the building will transform our school into a place where our students can thrive and fully realize their amazing potential as learners and communicators."

Collaborative Delivery to Anticipate Challenges

The project is utilizing the CM-at-Risk delivery method, specifically approved by the Massachusetts Inspector General for the project. CM-at-Risk enables the contractor to join the team earlier than traditional design-bid-build delivery, offering invaluable insights into materials, staging plans, pricing, and other potential challenges. Currently, the school has selected a design and the team is preparing to begin construction in Fall 2022 with project completion scheduled for August 2024.

While the project team is well-versed in the nuances and opportunities of building public schools and other municipal facilities in Boston and the surrounding metro area, the Carter School is a truly unique project with unique end-users. Nearly all the school's students use a wheelchair, and four-fifths of students have a degree of visual impairment. In addition, many students require help with eating and other basic functions. These complex needs necessitate a very low staff-to-student ratio, with a class size of no more than five students supported by a certified special education teacher and two teaching assistants in each class, but with relatively larger teaching and support spaces to accommodate wheelchairs, audiovisual aids, and other equipment. Carter's staff also includes specialty instructors in a variety of special education curricula and full-time nurses, each requiring their own equipment and customized spaces.

Hamre-Foley notes that utilizing the CM-at-Risk delivery method should help the team anticipate and address any challenges long before they can impact project progress. "There are certainly areas of concern we are aware of," says Hamre-Foley. "The school is in a busy area at the edge of Lower Roxbury, with good access to public transportation. That's great for students and their families, but as far as staging goes, we were lucky to get our contractor on board during design, as they will assist the team with anticipating the logistics and staging issues we are likely to encounter."

Mission-Driven Visioning and Design

Hamre-Foley explains the programmatic requirements of the new school drive the team's decision making, from the choice to build a three-story building on the existing site to the selection of each finish and furnishing. "We selected Perkins&Will as our designer in large part because of their expertise in both educational and medical facilities," says Hamre-Foley. "They understand how to translate the school's vision into a viable design, which I think is clear from the educational program and design solution we developed."

The design integrates the broad range of sensory, cognitive, and communication differences of the students to maximize learning opportunities and support teachers and staff. Details of the design include adjustable lighting options so teachers can modulate light and provide darker, calming spaces for students when needed, while allowing for brighter spaces to stimulate attention and focus. The team also carefully placed windows so students are not visually overstimulated by too much direct



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sunlight or external stimuli, but also have a portion of the windows go all the way to the floor so the students can get close to the window with their wheelchair.

Hamre-Foley explains that capturing the school's needs, plans, and desires during pre-design is key to the success of the overall project. "A school like this is similar to other educational facilities, certainly, but the mission of the Carter School dictates a design that goes down to details," she says. "These students each have individual educational plans, and the new school has to accommodate each and every one." As examples, she cites wider corridors to facilitate mobility, classroom spaces with storage space for the equipment students need to stand and for other activities, and large elevators so groups of students can transition from space to space or, in an emergency, exit the building quickly.

"Right now, nearly all parts of the building are used programmatically and educationally as environments to learn specific skills," says Hamre-Foley. "This includes orientation and mobility skills in the hallways, daily living skills in the bathrooms and locker rooms, critical social emotional and communication skills in the cafeteria and sensory garden, and a host of other skills. We needed to capture all of those and then create spaces to enable and enhance these experiences." The team's multiple visioning sessions, she says, helped identify all the school's nuances and define what the new building had to achieve.

Visioning sessions are powerful tools, says Hamre-Foley. "Visioning is a participatory tool that brings citizens and stakeholders together," explains Hamre-Foley. "Sessions help stakeholders develop a shared vision of the project. We ask the group where they are now and where they can realistically expect to be in the future, then we develop a vision together tailored to and for their project, and we incorporate that into our Project Charter and Educational Program."

"At the sessions, we would talk through the school day with Carter School teachers, therapists and staff to identify the characteristics of each experience. For example, one of the school's laundry room doubles as a vocational space to teach life skills, so we needed to make certain the laundry facilities would be designed as a teaching space," says Hamre-Foley. "It was a truly creative process."

United in a Common Goal

Once complete, says Hamre-Foley, the project will give the teachers, therapists, and staff access to customized teaching spaces and enhance the educational experience. "As a parent of a special needs daughter, I think I understand something about the remarkable work that's happening at the Carter School and how the new facility will benefit the students," she explains.

"I'm extremely impressed with the staff here," she continues. "They constantly think outside of the box, from insisting on a cafeteria space to provide students with a real chance to socialize and have that school lunch experience, to being less focused on the administrative space for themselves to concentrate on opportunities for their students."

She concludes, "We asked at our visioning sessions, what do you need to do amazing things in your school? Because it's true, they are doing amazing things here every day."

Christopher A. Miller, with more than 15 years of technical and marketing writing experience, is responsible for providing writing and editorial support for Hill's projects. He interviews project managers, subject matter experts, and others to create persuasive and informative content for Hill's clients and industry colleagues. For the Carter School article, he worked with the Hill team quoted throughout to tell the story of this impressive project.