

UP FRONT



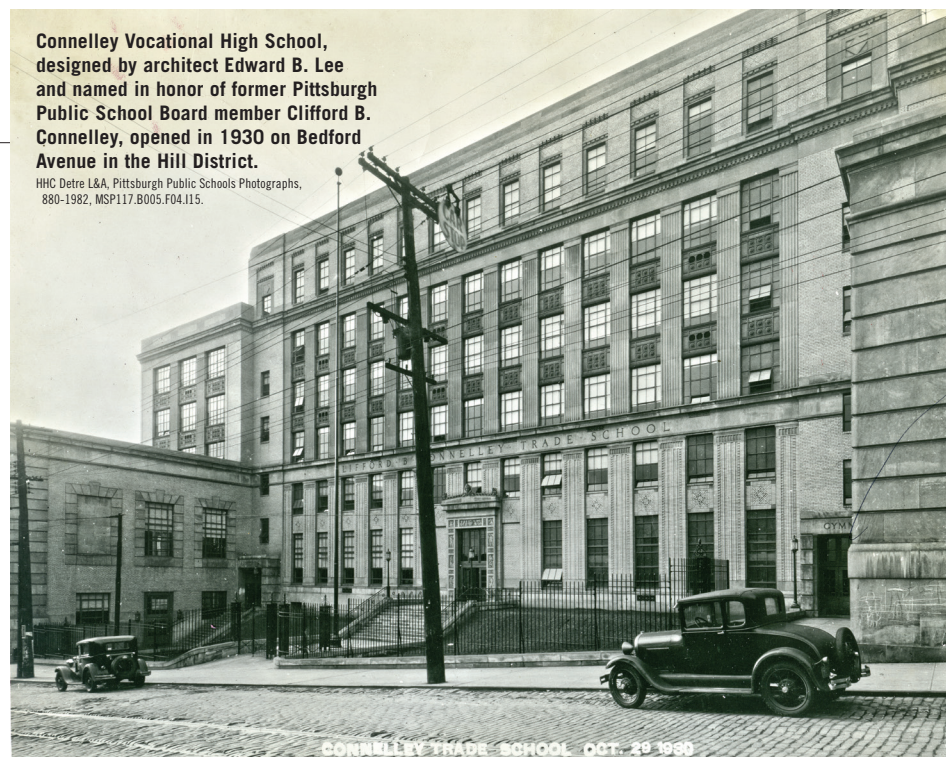
NEIGHBORHOOD STORIES

By Bette McDevitt

Reaching High

Many of us in Pittsburgh live in older homes, built before energy conservation was an issue. Transforming them or any building to be more energy efficient today presents many unique challenges. The task of renovating the 80-year-old, 180,000-square-foot Connelley Trade School in the Hill District into the Energy Innovation Center (EIC) serves as an example of the many challenges that are faced in the process.

The building, hunkered down on Bedford Avenue overlooking downtown, opened in 1930 and trained 1,800 students a year in building trades and other vocational careers until 2004. That year, Pittsburgh Public Schools transferred nearly all programs to local schools, with only the HVAC and welding shops operating at the location for the next seven years. In 2009, former state Senator Jim Ferlo and Congressman Mike Doyle formed a coalition to advance the idea for the adaptive reuse of the vacant building as a multi-tenant



Connelley Vocational High School, designed by architect Edward B. Lee and named in honor of former Pittsburgh Public School Board member Clifford B. Connelley, opened in 1930 on Bedford Avenue in the Hill District.

HHC Detre L&A, Pittsburgh Public Schools Photographs, 880-1982, MSP117.B005.F04.115.

facility with a variety of sectors offering education and job training for “green jobs.” With the support of numerous stakeholders, Pittsburgh Gateways Corporation, a local non-profit developer, took the lead to create the EIC.

The building’s listing in the National Register of Historic Places and designation as a historic landmark by Pittsburgh History and Landmarks Foundation provided both opportunities and challenges for renovating the building. The National Register designation made the project eligible for Federal Historic Preservation Tax Credits, provided that the renovation met specific design standards. Adding to the complexity, the team also registered the project for LEED certification

(Leadership in Energy and Environmental Design), the global standard for achievement in green building. After a substantial submission and review process and nearly two years after initial occupancy, they succeeded in securing a LEED Platinum certification in March 2017, receiving praise for achieving high levels of distinction for both historic preservation and energy and environmental performance.

With the support of 37 funders and partners—including foundations, local, state, and federal funding, universities, banks and businesses—plus five years of intense effort, the dark and cavernous halls of the Connelley Trade School became labs, classrooms, offices, and wide corridors filled with natural light. The historic building has now become

View of the new Energy Innovation Center (EIC).

evolveEA



A student in the Citizen Science Lab at the Energy Innovation Center.

Bette McDevitt.

a modern commercial model of energy efficiency, housing educational institutions, programs for the building trades, as well as environmentally conscious non-profits and businesses who focus on sustainable technology. “The energy technology and power generation of more than 120 local and national corporations have been developed within the Center,” said Dr. Robert Meeder, President and CEO of the corporations that manage, own, and developed the Center.

Marc Mondor, co-owner of evolveEA, the Center’s sustainability and LEED consultant had high praise for the work done with LEED standards in mind:

This building really hits on all cylinders, with site, water, energy, materials, indoor air quality, tremendous daylighting, and a desire to educate the community. The site reduces storm water runoff quantity by 95%. Water usage has been designed to save 35% over a comparable building. The building is modeled to save over 50% in energy costs over a comparable building, utilizing a series of innovative and highly efficient mechanical equipment, such as ice storage technology.

A comfortable and healthy interior environment was built using sustainable materials and systems, and the work was done by local teams, providing education and training in sustainable practices. The landscaping uses native plants, eliminates landscape irrigation, and reduces the environmental impacts of paving.

One of the many interesting building tenants is the Citizen Science Lab, affiliated with the national Citizen Science movement, whose goal is to involve the public in scientific research and speed innovation. The lab, sponsored by Duquesne University and Urban Innovation21, is open to citizens who want to carry out their own experiments. Students from local schools use the well-supplied lab on a regular basis as a classroom.

“This is where the magic happens,” said Andre Samuel, Ph.D., Director of the Citizen Science Lab. “Students learn to use all the equipment found in any traditional research lab. We cover things from microbiology to genetic manipulation to renewable energy.”

Carrienne Floss, Program Coordinator of the Citizen Science Lab, added, “It’s rather

like the TechShop located in East Liberty. We have expensive equipment here, that schools and ordinary citizens can’t afford to have, and anyone can come here and do experiments.” And it’s portable. “We go out to many schools, who can’t afford transportation costs to come here, and do after school workshops.”

Our city is among the leaders in the green and sustainable energy movement. According to the Pittsburgh Office on Sustainability, there are currently 39 LEED-certified buildings in the city and more than 59 in Western Pennsylvania, with more than 60 new projects in the city pursuing LEED certification. The shining building on the hill, the Energy Innovation Center, receiving LEED Platinum certification at this high level, is Pittsburgh at its best. 

NOTE: This article was written with significant help from Tom Bratnik, director of the Penn State Center Pittsburgh, located in the EIC; Marc Mondor, AIA, LEED Fellow, USGBC Faculty, co-founder of evolveEA; and Dr. Robert Meeder, all of whom labored long, among with others, to make the Energy Innovation Center a reality.

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Adult students in the furniture repair shop at Connelley in the 1940s learn upholstery skills. The school offered day and evening classes in many kinds of vocational training, including carpentry, plumbing, and automotive skills.

HHC Detre L&A, Pittsburgh Public Schools Photographs, 1880-1982, MSP117.B001, F01.J01.