the SHAPE of THINGS to COME: a PHOTO ESSAY

Think of New England higher education and you probably think of ivy-covered brick. Or if you're feeling cynical, perhaps 1950s concrete. But the built environment of New England's college campuses is far more diverse, more complex, more daring, more educational than the stereotype. And it's changing fast thanks to profound forces such as consumerization among students, town-gown relations, historic preservation and sustainability. Following are a few examples of recent campus building projects that together offer some sense of the shape of things to come …

Learning Resource Center, Manchester Community College, Manchester, Conn.

Completed: August 2000
Architect: Centerbrook Architects and Planners, LLC, Centerbrook, Conn.

Manchester Community College's 113,000-square-foot Learning Resource Center is at the new heart of the campus. A two-story glass bridge connects the Learning Resource Center to the Lowe Building's administrative offices and classrooms. The shiny glass and modernistic details of the two-story oval gallery express Manchester's commitment to high-tech education in support of Connecticut's economy. Splaying out from the two-story gallery are two rectangular wings in traditional red brick, containing a library, classroom and lab space, as well as faculty offices. Their flat roofs are punctuated by large clerestory windows that raise ceilings and brighten walls with natural light. Classrooms and labs contain teacher workstations equipped with state-of-the-art video and audio presentation systems, Web access, cable television, document camera and a user-friendly, touch-screen control panel. A theme throughout the facility is that every space is a potential learning space. Main pedestrian passageways are art galleries. Nooks, crannies and lounge spaces are furnished with comfortable study furniture.

The entrance tower from the courtyard in the early evening. Photo copyright © by Jeff Goldberg/Esto.

Special thanks to the Society of College and University Planning (SCUP), especially Solutions Designer Marc Johns, who generously aided CONNECTION in collecting examples of interesting campus architecture. SCUP used the exercise of gathering information for CONNECTION via the World Wide Web as a test of a pilot project for collecting and sharing information about projects at higher education institutions worldwide. SCUP is online at www.scup.org. Thanks also to Capelin Communications of New York City, which helped initiate CONNECTION's arrangement with SCUP.

Barus & Holley Addition and Renovation, Brown University, Providence, R.I.

The new entrance to the engineering complex clarifies the axial strength of Manning Walk. Photo copyright © by Jeff Goldberg/Esto.

Completed: September 2000
Architect: Payette Associates, Boston, Mass.

The infill addition and renovation of Brown University's Barus & Holley building and development of a campus's central pedestrian walkway, Manning Walk, fills the courtyard formed by three existing buildings to form a coherent engineering complex. The project integrates disparate building elevations, creates a unifying entry lobby linking adjacent buildings, allows handicapped-accessible passage between existing lecture halls and applies consistent fixtures and finishes to coordinate spaces stylistically. The project also creates a "front door" for engineering while developing Manning Walk. Landscaping and an entry plaza form a focal point elevating department identity and clarifying overall campus circulation. The project's delicately inserted form increases density on a central campus while reinforcing the formal campus plan. In keeping with the Americans with Disabilities Act, a gracefully integrated ramp scheme allows access to every teaching and lab space.

Arbonies King Vlock Architects was inspired by the campus's collegiate Gothic doorways to create a playful, contemporary, skylit space in the lobby. Photo by Timothy Hursley.

Wilbur Cross Building, University of Connecticut, Storrs, Conn.

Completed: July 2001
Architect: Arbonies King Vlock Architects, Branford, Conn.

Intent on applying standards of efficiency and accessibility to the delivery of student services, UConn challenged the architects at Arbonies King Vlock (AKV) to come up with an innovative design solution for the four-story, 110,000-square-foot Wilbur Cross Building. AKV's workshops with the university community identified businesslike accessibility, efficiency, flexibility and a friendly attitude as the desired improvements to the gold-domed landmark at the center of campus. Inspired by the collegiate Gothic doorways throughout the campus, the architects created a playful and contemporary space with perforated stainless steel arches. A skylit, two-story entrance lobby replaces a labyrinth of narrow, windowless hallways. Moveable wood, fabric and glass walls can be easily reconfigured for future needs. The building was transformed into an entirely wired center, where students take care of business quickly and efficiently. Once time-consuming, disheartening experiences with student services have been eliminated by individualized, consumer-friendly systems.

International Center for Finance/Skinner-Trowbridge House, Yale University, New Haven, Conn.

The east facade of the mansion shows the restored ceremonial stairs and double-height Ionic columns of the east portico. To the left, the south portico features fluted Doric columns and stone steps with an iron balustrade. Photo copyright © by Peter Mauss/Esto.

Completion: August 2000
Architect: Helpern Architects, New York City, NY

University-sponsored institutes organized around world-class professionals and lecturers are often housed in gracious mansions that confer heritage and status on the programs. The Yale School of Management established the International Center for Finance to consolidate its prominent role in research of global finance and economics and acquired the 170-year-old Skinner-Trowbridge House for the institute's home. Originally the home of New Haven's mayor, the Greek Revival house had fallen into disrepair when Yale acquired it. The university commissioned Helpern Architects to restore it for a new mission as headquarters of the center and a grand home for distinguished visiting dignitaries. Helpern reclaimed much of the original interior, recreating and refurbishing prominent historic features on the main floor and grand staircase. The architects also extended the basement, reconfiguring portions of the house to yield offices and meeting rooms, and created an ADA-accessible entrance and elevator. Outside, the firm rebuilt the monumental steps on the streetside portico and recreated a century-old knot garden.

Williams College Unified Science Center, Williams College, Williamstown, Mass.

The state-of-the-art Unified Science Center marries new and century-old structures to bring Williams science programs into the 21st century. Photo by Frank Giuliani, courtesy of Gilbane Building Co.

Completed: December 2000
Architect: Einhorn Yaffee Prescott Architecture & Engineering, P.C., Albany, N.Y.

Complex multidisciplinary research projects like mapping the human genome sequence require adaptable, automated and spacious laboratories that simultaneously meet the needs of the biochemist and physicist. Flexible laboratories feature mobile workstations. Sophisticated infrastructure is necessary to maintain this state-of-the-art environment. Teaching and research laboratories must accommodate educators and students with private offices for professors and classrooms and libraries that complement research activities. When science faculty at Williams College compared the laboratory space in their century-old buildings to that of peer institutions, they knew changes were needed to remain competitive. Nine academic science departments and libraries were spread across four buildings. This system did not support the college's interdisciplinary programs in fields like biochemistry. Williams officials undertook the largest project in the college's history and consolidated the laboratories and libraries of all the science departments into the Unified Science Center. A 119,000-square-foot addition marries new and old buildings that house offices, classrooms and lecture halls.

Marine Science Center, University of New England, Biddeford, Maine

Completion: August 2002
Architect: Van Dam & Renner Architects, Portland, Maine

Interior hall with clerestory windows. Photo by Van Dam & Renner Architects.

Laboratory with overhead seawater system. Photo by Van Dam & Renner Architects.

The University of New England, located at the mouth of the Saco River, sought to integrate sustainable design practices in developing a state-of-the-art marine mammal rehabilitation facility combined with marine science education and research. The university's new 27,000-square-foot Marine Research and Education Center houses research and teaching laboratories with continuously flowing seawater (up to 350 gallons per minute), exhibits, a marine mammal rehabilitation facility, classrooms and faculty offices. The building was carefully sited to minimize disruption of existing trees and topography. Energy-saving elements include daylighting, sun shades, high-performance lighting and building envelope, solar pre-heat of make-up ventilation air and natural convective ventilation.

Laboratory for Complex Systems, Massachusetts Institute of Technology, Cambridge, Mass.

Completed: December 2001
Architect: Cambridge Seven Associates, Cambridge, Mass.

New hangar for large-scale and independent student projects. Photo by Nick Wheeler.

Teaching spaces are beginning to mirror modern corporate research facilities both in design and function. Barriers between faculty and students are breaking down, with open space and flexible teaching environments contributing to increased communications and opportunities for learning. At MIT, for example, a new Steelcase office system, modified for academic lab space, defines the labs, giving students and faculty the ability to quickly hang partitions, whiteboards and projection surfaces throughout the space, while providing overhead access to power and data. The renovation and expansion of the historic Guggenheim Aeronautics Laboratory resulted in new integrated teaching laboratories modeled after real-world technological and engineering processes. The highly flexible space allows students and faculty to work in modern team environments on projects of varying size and complexity. The design reorganizes the 50,000-square-foot building and its maze of corridors to ease communication between different teaching, research and lab activities as well as between students and faculty. A new 6,000-square-foot, two-story hangar and design loft supports work on unusually large-scale aerospace assignments and adds new connections to all three main student levels.

Searles Science Building, Bowdoin College, Brunswick, Maine

Completed: September 2001
Architect: Cambridge Seven Associates, Cambridge, Mass.

Much of the college and university learning experience happens in social settings. New campus buildings are facilitating these interactions by providing "unprogrammed" space outside the classrooms, fully networked for social interaction and informal learning. The infill addition at Bowdoin creates a common space and circulation spine where people from different disciplines connect with one another. The new space encourages interaction between faculty and students, creating far more space for informal learning, group work and social gatherings. The renovation of the historic 41,000-square-foot Searles Building demonstrates how older campus buildings can be successfully revitalized to accommodate the requirements of current technology, accessibility and function, while preserving their historic qualities. The renovation aims to increase classroom space, simplify circulation and integrate new technology. A 2,000-square-foot, three-story infill addition links the two wings and resolves multiple level changes within the building. By adding a new lobby at the base of the infill, and enlarging the bridge and landings, a myriad of open spaces are provided for informal gatherings, discussions and study sessions.

The new infill addition skillfully marries new to old, connecting the two wings of the building and creating and a new front entrance on Maine Street. Photo by Steve Rosenthal.

Pratt Hall, Mount Holyoke College, South Hadley, Mass.

Completed: March 2001
Architect: MDS/Miller Dyer Spears, Boston, Mass.

Main entrance facade with restored Gothic portal and sloped access sidewalk, and West facade with new connector addition. Photo by John Horner.

A comprehensive renovation of Mount Holyoke College's 1908 Music Building adds up-to-date teaching spaces while preserving the building's historic character. A glazed two-story addition provides large classroom and studio offices and presents a vibrant, contemporary image along a path to residence halls across a lake. The expanded library consolidates dispersed collections, with a wood-paneled reading room and computer areas overlooking a river landscape. The main entrance is redesigned to retain its neo-Gothic portal while providing universal access. The west entry opens into a new glazed two-story lounge outside the library and classrooms. Reorganized layout and circulation routes link detached program spaces and increase building functionality. The challenge was to meet the universal access standards of the Architectural Access Board of Massachusetts Executive Office of Public Safety while restoring the building's traditional character. The Gothic entrance portal is preserved with custom doors, the sill raised to main floor level to eliminate interior steps. A ramped corridor, divided by a half-height wall resembling a wave, connects split levels of the 1908 building and 1960 wing and provides handicapped access to an auditorium stage and backstage area. A new elevator cut through former offices serves all four floors. A program in high-tech music teaching uses state-of-the-art classrooms and studio offices with built-in media racks, audiovisual/data projection, motorized screens, sliding whiteboards and programmable lighting. A Virtual Practice Room simulates acoustics of diverse environments. New audiovisual systems, finishes, stage and window treatments complement the restored Gothic trusses and ornate woodwork of the auditorium.