

ASSET REINVESTMENT PROGRAM CASE STUDY

Connecticut College
New London, CT

Even the best-maintained buildings and facilities need an upgrade or repair every now and then. Like all problems, the sooner maintenance issues are addressed, the less likely they'll snowball into larger, more costly problems. This is particularly true for colleges and universities with campuses constantly filled to capacity with thousands of students. Repair projects become all the more challenging when factoring in the need to protect students, faculty and staff during construction – while keeping vital buildings fully operational throughout the duration of the repair work.

KBE Building Corporation (KBE) has developed expertise in helping colleges and universities and develop and implement a maintenance/repair construction program that minimizes disruptions to academic and campus life. KBE works with the institution's facilities staff and administration to plan and manage a master schedule and budget that addresses the institutions' long-range planning, capital requirements and immediate repair needs.

One example of this innovative approach is **Connecticut College's ASSET REINVESTMENT PROGRAM**. This multi-year campus renewal plan spells out a \$53 million program for renovating and preserving the College's most important asset – its physical facilities and campus. The program is designed to enhance technology in learning environments, revitalize student life, boost energy efficiency, and update staff and faculty office space .

THE PROJECT TEAM

CLIENT

Connecticut College

PRECONSTRUCTION MANAGER AND
CONSTRUCTION MANAGER AT RISK

KBE Building Corporation

ARCHITECT | ENGINEER

Noyes Vogt Architects

Payette

Einhorn Yaffee Prescott

Du Bose Associates

Van Zelm Heywood Shadford

General Drafting & Design

Schwartz-Silver



Each year since 2005, Connecticut College, KBE Building Corporation, the design teams, trade contractors, and vendors have spent each nine-month school year meticulously planning an impressive scope of work that is then implemented over the following 12-week summer break.

The KBE team leads an in-depth preconstruction phase during the winter months to ensure all design work, estimating and subcontracts are in place for a rapid project start. Value management opportunities were fully explored with not only the design team and the construction manager, but also with input from the major trade contractors and major suppliers. Every facet of project planning and phasing was exhaustively addressed to allow the precision timing needed to make the schedule once construction started.

The project's operating goal is to remain a year ahead of design efforts, so as to avoid a situation where plans would not be ready for the tight summer construction schedule. The team has taken this idea to the next level by planning two and even three years ahead of schedule.

Since 2005, more than 300 projects have been completed, and our work continues.

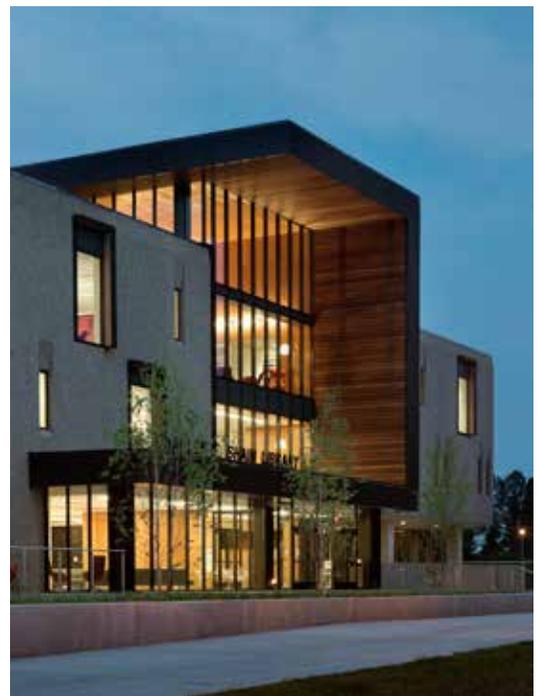
SUMMARY OF YEAR-TO-YEAR WORK

ASSET REINVESTMENT 2005: \$1.5 million. Replaced the roof on the College Center and renovated a residence hall and snack shop.

ASSET REINVESTMENT 2006: \$4 million. Rebuilt two residence halls. Renovated four classrooms. Rebuilt a bank of bathrooms in one dorm. Installed a sprinkler system in several dormitories. Completed work on electric infrastructure. Using LEED criteria, implemented a waste management program and utilized low VOC adhesives and sealants. Completed the first phase of the Hamilton Marshall renovation projects.

ASSET REINVESTMENT 2007: \$9 million. More than 100 projects that encompassed exterior and interior renovations, repairs, and maintenance at 30+ separate campus buildings; major interior renovations to two residence halls; replacement of a major campus roadway and significant scope of road repair projects; campus-wide installation of new site lighting and wayfinding signage and extensive ADA access improvements. Some of the statistics associated with the College's summer 2007 renewal projects include: 100 projects - 42 miles of electrical wiring - 245 construction drawings - 75 days - 500 tons of asphalt - 3.75 miles of piping- \$125,000/day - 450 cubic yards of concrete - 67,000 work hours logged- 30 subcontractors - 400 gallons of paint - 8,000 bottles of CT College water- 500 people involved - one mile of landscape protection fencing.

ASSET REINVESTMENT 2008: 45 projects, including 11 bathroom renovations and three classroom upgrades, renovations of



Jane Addams and Plant Residence Halls; a new roof, windows, siding and internal heating controls in Winthrop Hall; renovation of the tennis courts; structural work on historic New London Hall, that houses the botany and biology departments; new curving walkway in front of Shain Library; upgrade and expansion of the Shain Library's 2nd-floor Special Collections room.

ASSET REINVESTMENT 2009: \$1.4 million. Eighteen projects that included exterior restoration, electrical infrastructure, ADA compliance, Life safety, and site walkways. KBE also constructed the award-winning, LEED Silver Certified Fitness Center, a 14,000 sf renovation and addition in 2009, in addition to the AR Program .

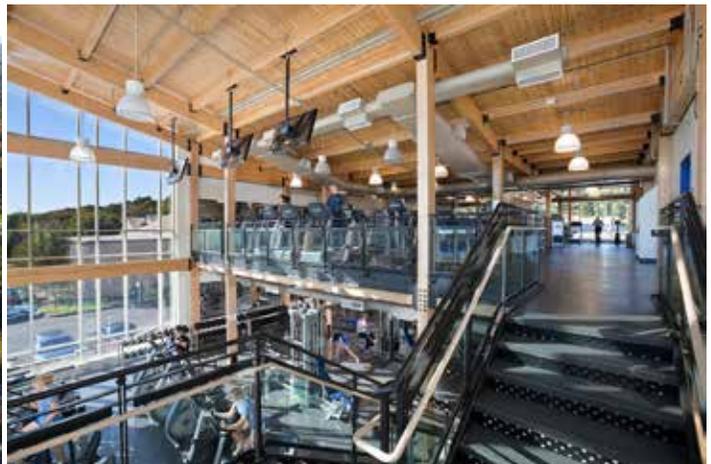
ASSET REINVESTMENT 2010: \$1.9 million initiative included interior and exterior renovation and upgrade projects in seven separate buildings and on the roadways and walkways campus-wide.

ASSET REINVESTMENT 2011: This \$2 million phase included the reconstruction and addition of nearly a mile of roadway around campus, roofing replacement, reconstruction of building facades, a cosmetic renovation of the main dining facility, construction of a new plaza area and life safety upgrades to a student apartment complex. For example, the 2007 construction program tackled 100+ projects over the course of the summer - \$9 million in construction value.

ASSET REINVESTMENT 2012: The \$1.7 million summer program included renovations to the Luce Locker Rooms, athletic field lighting, roof repairs at Blackstone Hall, code upgrades at River Ridge, a new bathroom at Fanning Hall, and the River Ridge Road reconstruction.

ASSET REINVESTMENT 2013: Exterior renovations to numerous campus buildings, parking lot repairs, upgrades to the Student Center bathrooms, renovations to the specialty student housing known as the Winchester Houses, and refurbishment of the 1950's period Steel House.

ASSET REINVESTMENT 2014: Installation of a new humidification system in the Cummings Art Center, roof repairs to both the Dayton Arena and the Plant House, new wood siding and trim on the 360 Mohegan Apartments, and repairs to the pedestrian bridge that crosses Route 32. Major projects included replacement of the College's Central Steam Heating Plant, including a new electrical infrastructure to support the new systems, and renovation of the 41,000 sf Shain Library and construction of a 4,600 sf addition to house a new 3-story entrance.



ASSET REINVESTMENT 2015: Work included roof replacements on two different buildings, exterior repairs and window replacements to the Cummings Art Center, site drainage improvements, interior upgrades to the 360 Mohegan Apartments, and construction of a new salt shed.

ASSET REINVESTMENT 2016: Work projected includes grading and top course of asphalt for numerous roads, work at Oliva Hall, Cummings Plaza, Becker House, Holmes Hall Playground, and the West Parking Lot.

In addition, KBE has completed the award-winning addition and renovation of the new Fitness Center, which is pursuing LEED Silver certification. The new Science Center addition and renovation is scheduled for completion in August 2012, and is also pursuing LEED Silver Certification.

What's most exceptional about the Connecticut College Asset Reinvestment Program has been the depth and breadth of the collaborative approach established by the College and embraced by every member of the project team. From the very start, the team has incorporated a unique hybrid planning strategy that blends Critical Chain Project Management, a project management methodology adapted from the Microsoft Project software, and Partnering, a collaborative and collegial approach to managing projects through team-building, cooperation, and encouragement.

The success of Partnering is more than evident in the fact that, over the course of six years and counting, and more than \$35 million in construction work to date, ***not one single trade contractor claim has been filed.***

