California State Fullerton
Student Housing Phase III

The first LEED Platinum building on the CSU Fullerton campus, the Phase III housing project was completed three months ahead of schedule. It offers engaging public spaces that incorporate sustainable landscape design and site water management, and is expected to provide significant energy savings.

Student Housing Phase III at California State University, Fullerton was built to accommodate the university’s expanding student population, and to demonstrate CSU Fullerton’s commitment to energy efficiency and environmental leadership. The project consists of six buildings — five five-story high student housing buildings with 1064 beds and one dining and community building — surrounding a central public space. Every residential floor consists of 24 rooms divided into two ‘houses’ of 12 rooms with shared restroom facilities. The buildings complement the configuration of the previous housing phases, and they can be modified for double or triple occupancy, depending on future student population needs.

At almost 345,000 square feet, Phase III is the largest construction project built on campus, and makes a generous addition to CSU Fullerton's shared open space.

As part of its LEED certification, the project earned 16 out of 17 possible energy and atmosphere credits, with modeled energy efficiency that exceeds California’s Title 24 requirements by 31 percent. As the buildings' rooftops did not readily lend themselves to accepting photovoltaic panels, a PV array was installed on other campus rooftops in concert with the Phase III development. This creative approach allowed the project to still obtain all possible renewable energy LEED credits. Including PV generation, net energy use is estimated to be 49 percent below Title 24.

The project's building envelopes also contribute to this high level of energy efficiency. All six buildings have "cool roof" membranes to reduce cooling loads. The glazing systems throughout the complex include high-performance storefront glazing systems for larger glass areas, and high-performance windows with exterior shading devices in all dorm units. The glazing system was designed to take advantage of natural ventilation using operable windows, to filter daylight to interior spaces, and to provide ample views to the project’s central outdoor feature, the public “piazza” which unites the site. The piazza serves as an outdoor communal space and receives pedestrian traffic from three primary campus pathways. The site is planned to serve students and the campus community as a place for interaction, learning, and entertainment. It features a variety of seating and social spaces for small group conversations, outdoor lectures and campus events. To keep the space free of vehicles and to reduce congestion, all service access was consolidated at one corner of the site.

The site has been planted with drought-tolerant plants, using drip and subsurface irrigation.
However, if students conserve more water, the fountain will automatically send water higher, creating a striking and informative water showpiece.

An innovate and artful adaptation of the piazza water feature provides students with dynamic feedback about their water use.

Material aspects of the project were also given high priority by the project team. Over 95 percent of all construction and demolition waste was diverted from landfill, and preference was given to vendors who provided building materials that were harvested, extracted and/or manufactured within a 500-mile radius...
its construction was managed effectively so that it was completed three months ahead of schedule. This early completion allowed the university to make the residence units available for students one semester early and to be used for summer conference rental. While this was a welcome outcome, the greatest benefit from the project comes from CSU Fullerton demonstrating its commitment to providing healthy, high-quality living spaces for its students, and to showing leadership in terms of sustainable campus infrastructure.

LESSONS LEARNED

Stephen Chamberlain, Senior Project Manager in charge of Phase III, believes that bringing in commissioning agents early in the process is especially important in design-build projects such as this. He also explains that schedules are highly critical with student housing projects, as they must meet student move-in timelines. When the construction was expected to be completed several months ahead of schedule, the project team mobilized to implement a significant program change that would enhance the value of the project. The team reconfigured the group study areas, breaking them into smaller study rooms, allowing 23 private rooms to be added for resident assistants.

Chamberlain considers the project to be a “grand-slam” in terms of its sustainable features and its execution, and notes that all rooms were completely subscribed even before its completion. The project was also the first LEED Platinum student housing in California.

Best Practices case studies are coordinated by the Green Building Research Center, at the University of California, Berkeley.

The Best Practices Competition showcases successful projects on UC and CSU campuses to assist campuses in achieving energy efficiency and sustainability goals. Funding for Best Practices is provided by the UC/CSU/IOU Energy Efficiency Partnership.