

1203 Independence 48 Bed Addition



Since the completion of the original 1203 Independence “Pods” residence which opened in the fall of '03, Central’s enrollment continued to grow to where the need for even more campus beds became apparent in June of 2004. Given the popularity of the original Phase I “Pods”, and maintaining alignment with the College’s Campus Master Plan, Central’s leadership made the decision to again retain RDG Planning & Design of Des Moines, IA to begin planning a 10,000 sq.ft., 48 bed addition to the north side of the existing facility, insuring that the architectural character of the addition would amplify and comply with the previously established aesthetics.



The project team conducted a design charrette on July 13, 2004, and a focused review of the design development drawings on Oct. 6, 2004 with students that currently occupied the phase I facility, as well as members of Central’s Facilities Team and Residence Life staff. These meetings were held to inquire about their likes and dislikes – seeking input that might change the design or improve the overall facility. These

comments are reflected in the new addition plans, as the improved design will better serve the current and future residents. The addition was crafted to look like it had been there “just as long” as the existing facility. The floor plan is basically a duplication of the existing, highly successful floor plan arrangement with an additional 6 workstation computer lab located on the ground floor that will serve the entire facility.



The project team is pursuing a LEED (Leadership in Energy and Environmental Design) Green Building Rating from the United States Green Building Council. There are several reasons why Central College is interested in pursuing a green building rating for this facility.

One reason is it follows the (good) directive of strategy 15 of the Central College Strategic Plan: "To promote and model appreciation of out

natural environment and stewardship of its limited resources." Consistent with the directives of the Campus Master Plan, builds on the successful venture that the College has undertaken with sustainable design like the Vermeer Science Center. Completed in 2003, it was the first LEED rated building in the State of Iowa, achieving a Silver Medal status. The hope is that the Pods Addition will be the first LEED rated residence facility in the state, provide better livability for the students that reside on campus, serve as a flagship for future sustainability initiatives and improvements, thus enhancing community and overall quality of campus life and lower operating and life cycle costs. The 1203 Independence Pod Addition will serve as a model to facilitate a commitment to campus sustainability. Listed per the environmental categories of the LEED rating system, green features of the addition include:

Sustainable Site Development

Building and site rain water run off is diverted to two rain gardens located on the west side of the facility that will naturally absorb and purify the storm water before releasing it to the local aquifer. An electric-charging station is located in the parking lot adjacent to the facility for the purposes of charging an electric vehicle. (EV) A covered bicycle storage facility is located on the building's south side to promote and encourage bicycle use by the residents. The exterior lighting surrounding the facility is designed to prevent direct-beam illumination leaving the building site, thus reducing night sky light pollution.



Water Efficiency

Ecoquantum dual flush toilets were installed to encourage less water consumption as were low flow faucets and showerheads. Neptune high efficiency clothes washers were chosen for this project. Native site plantings have been selected to eliminate the requirement for irrigation.

Energy Efficiency and Low Atmospheric Emissions

The building's energy consuming systems were commissioned and re-commissioned. Triple glazed Designer Series Smart Sash III Pella Windows were used. Icynene spray foam insulation was used in wall cavities and attic spaces. State of the art buildings automation controls that roll back thermostat set points during night and unoccupied periods, as well as individual window proximity switches that stop air-conditioning systems when windows are opened. Optimized energy performance that exceeds stringent energy codes (ASHRAE 90.1) by 33%. Measurement and monitoring of each pod's electrical consumption as well as overall energy consumption of the addition's mechanical equipment and systems. A block of wind power was purchased to provide 50% of the addition's electrical needs for two years.

Indoor Environmental Quality

CO2 levels are monitored to insure ventilation systems are providing adequate ventilation. A Construction Indoor Air Quality Management Plan was in place throughout construction to provide for the health of construction workers as well as the incoming residents. Low VOC (volatile Organic Compounds) adhesives, paints, composition wood, and carpet tile was used throughout the addition. Individual temperature controls are in all resident rooms and living spaces, including "return to occupied temperature" pushbuttons. A ventilation & humidification system insures human thermal comfort for all residents and there are enough windows to provide a direct line of site connection to the outdoors for 90% of all resident spaces.



Materials and Resources Used In Construction

Recycling collection closets and a student developed recycling plan is in place. A waste management plan was in place throughout construction to insure that a minimum of 50% of all construction debris was recycled or salvaged. Recycled content is used in building materials, such as carpet and ceiling tile, soundproofing materials used in walls and floors, kitchenette counters made from recycled paper **and** magazines, the fabric covering the pod sofas, and recycled currency used for the living area table tops. Rapidly renewable resources incorporated into building materials, such as the linoleum used in the vanity/ kitchenette areas, bamboo baseboard in the computer lab and corridors, resident room and lounge furnishings made from rubber wood, and corkboard poster pin-up walls. 20% of all building materials were manufactured regionally within a 500-mile radius of the jobsite. Sustainable Forest Initiative (SFI) wood products were incorporated throughout the addition's framing.



Innovation and design Process

A green-cleaning program is in place to insure the health and safety of the building occupants and custodians. This incorporates cleaning products which are non-toxic and biodegradable, as well as providing the required equipment and training to all building cleaning personnel and residents.

There is a covered bicycle storage facility which roof is covered with thin-film photo-voltaic panels that generate electricity with the sun and import in onto the building's electrical grid.



A 37" LCD screen located in the facility's main gathering space scrolls through screens that will educate residence and visitors about the addition's green features, as well as informing residents of the current (real-time) and accumulated energy consumption. It will also graphically display the real-time performance of the renewable energy features incorporated into this project. A homepage developed for the addition's residents (also available to the world via the Central College website), that provides the information listed above, as well as providing residents with the recycling and green-cleaning requirements of the facility. This homepage will also be the screensaver provided on the computers located in the facility's lab.

Five LEED Accredited Professionals were part of the project's design/ construct team.

Central College artwork will be displayed in the computer lab that symbolizes Centrals commitment to sustainability.