

Roof taking root on UIS building

Ground cover provides superior insulation

By **CHRIS DETTRO**

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When 132 freshmen move into their new residence hall at the University of Illinois at Springfield next week, they'll find new beds, new desks, construction workers and a whole lot of vegetation just outside their windows.

Workers this week were installing an environmentally friendly, energy-saving "green" roof on all three levels of Founders Hall, the new \$16.8 million on-campus living quarters for freshmen.

The roof is one of the first such structures in the Springfield area, although at least one private residence has a green roof.

"It is part of UIS's strategic goal to create more energy savings and increase environmental sustainability," said university spokeswoman Cheryl Peck.

UIS has even established an Office of Sustainability that will be coordinating other efforts at energy savings and environmental friendliness as the year progresses.

The green roof, supplied by Weston Solutions of Chicago, is made up of a 4-inch layer of soil and sedums that covers a total of 26,000 square feet of roof on the three-story residence hall.

Sedums are hardy succulent plants that handle dry conditions well because of their water-holding capacity, Peck said.

Insulation provided by the roof is expected to reduce overall heating costs in the building by 8 percent and cooling costs by 16 percent.

The floor directly below the roof should realize heating cost savings of 25 percent and cooling cost savings of 50 percent.

A green roof has been shown to make a difference of 12 to 15 degrees in temperature compared with regular insulation on the floor directly below it if no internal heat or air conditioning is provided, said John Ringle, UIS director of housing and residential life.

It also will reduce storm water runoff. The retained water will help to nourish the plantings.

Pavers have been placed at strategic locations to allow for weeding, watering and removal of dead plant material.

Students can leave their putters and lounge chairs at home, however.

Peck said the roof isn't designed to be accessible for leisure activities, and there will be no additional landscaping, such as trees or shrubs.

The green roof system will protect the waterproof roof membrane — which keeps the roof from leaking — from solar deterioration and will extend its useful life.

"The growing medium is designed to be as lightweight as possible," said Jordan Richie of Green Roofs for Healthy Cities, the North American trade organization for the green roof industry. "The growing medium is made up of both organic and inorganic materials and six inches or less. A lot of existing structures can support it.

"If your material is more than six inches deep, you need a structural engineer to come in and make adjustments," he said.

Richie said many older buildings are capable of supporting more weight than newer ones.

"The waterproof membrane underneath is something not to skimp on," he said. "That can protect your roof for 20 to 30 years before it will need replaced."

"It means less pollution, less runoff and is a positive factor for the environment," said Barbara Wheatley, the resident director for Founders Hall.

She thinks incoming freshmen will care that their dorm is environmentally friendly.

"Students here tend to be more in tune to what's happening around us," she said.

Peck said UIS already has replaced 90 percent of its less energy-efficient light bulbs and has gradually raised the temperature in campus buildings this summer. It will be a little cooler in the winter, too, she said.

"More things will happen as the Office of Sustainability becomes more active," she said. "There will be more recycling, and we have established an

energy task force.”

“The green roof is really going to be a focus of the program,” she said.

Ringle said he anticipates establishing an environmental studies community in Founders Hall that will have as part of its directive taking care of the green roof.

Chris Detro can be reached at 788-1510.

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