



Throughout the renovation process, the historic character of the buildings was balanced with the green building renovations. The reuse of salvaged materials was critical to achieving this balance. Salvaged brick was used to fill existing holes, joists were used to fill old stair openings, and wood was re-milled and used for trim. Steel-braced frames and compound beams with massive connectors were also repaired and retained. In addition, many materials were preserved and restored in place, such as the painted and finished concrete and original foundation, and the re-cast replica column capitals. Many creative elements of the renovation process were not dictated by LEED™ certification.

### **Windows**

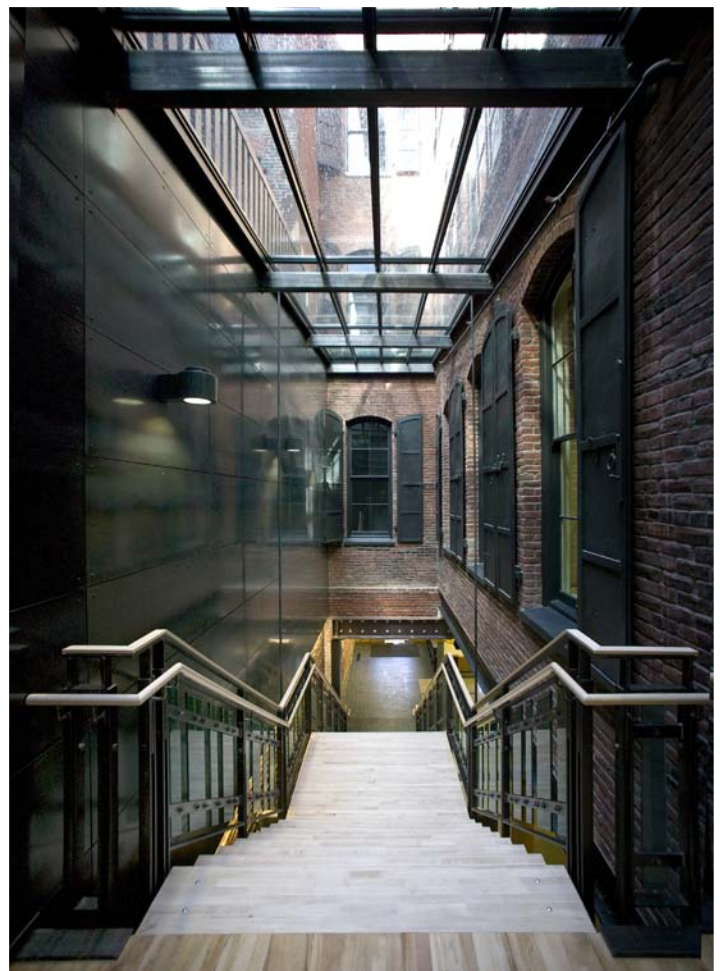
An involved dialogue between sustainable development and historic preservation stakeholders occurred regarding building apertures. The developer wanted to add additional windows to the northeast corner of the Bickel Building. Windows were added to the spaces on the façade where “blind” windows were originally built, which was permitted within the guidelines for the federal rehabilitation tax credits. However, the addition of windows to other flat surfaces of the building was prohibited. The window frames themselves were also a source of contention. Historic preservation guidelines specify that original windows can only be replaced if significantly damaged. Because of this, the developer was able to replace steel sash windows on the south facade of the White Stag building with low-emissivity (or low-E) windows. The new windows provide a higher R-value (a measure of insulative capability) than the original windows and help the building regulate indoor temperature and operate more efficiently.

### **Rooftop Light Monitors**

In the University of Oregon in Portland’s Architecture and Allied Arts space, the original light monitors on the 5th floor of the White Stag building were preserved. These monitors were

retrofitted so that they could be renovated in the future to allow for their easy opening and closing, which can aid with building ventilation. In addition, the University of Oregon in Portland elected to sacrifice square footage in order to remove a section of flooring between the 4th and 5th floors. This space has been converted to a stairwell that allows daylight to penetrate deeper into the building. The use of daylighting helps to increase efficient building operation by reducing the need for artificial lighting.

Other compromises were brokered between the goals of sustainable development, historic preservation, and construction logistics. Rather than reinforce all the brick walls with concrete, some historic brick surfaces were left exposed while others were encased in plaster, a historic



preservation requirement. All the mechanical components of the buildings had to be located in the basement because the historic roof profiles prevented the placement of mechanical components there. Also in the basement, an entirely new electrical transformer vault had to be built to house the significantly larger electrical transformer currently required for the modern uses of the building. This transformer vault projects beneath Naito Parkway.

## Rooftops

The rooftop signage for which the White Stag is best known also tells a story. In 1940, the roof space was rented to the White Satin Sugar Company for the placement of a sign promoting that company's name. In 1959, the sign was changed to read 'White Stag' to reflect Hirsch-Weis' new status as a division of White Stag. The sign was re-worded again in 1997 to read 'Made in Oregon' under the patronage of the Made in Oregon Company, a retail chain of Oregon foods and crafts. Now, the sign itself and its style are considered historic and must remain intact, but the exact wording is not considered historic, and so can be changed.

Although the roofs of the three White Stag Block buildings are incongruous and not designed to support the weight of green roofs or photovoltaic (PV) panels, those involved in the project are making efforts to incorporate these components. The roof profiles are important historic features of these buildings, making the installation of PV panels an even greater challenge. Building tenants United Fund Advisors (UFA) will help finance PV panels on the roof of the White Stag building, expected by the fall of 2008. And because the views are so beautiful, University of Oregon in Portland Architecture Director, Hajo Neis, is hopeful that "one day we will find a way to incorporate a roof garden onto the building."

## Lightwells

The two existing lightwells between the four buildings that make up the White Stag Block were used in creative ways that promote both historic preservation and sustainability. Most notably, the basement level of the lightwell between the White Stag and Skidmore buildings had previously been open to the sky and was home to many pigeons. In the renovation process, this lightwell was lined with concrete to create the 10,000 gallon water storage tank that collects rainwater from the roof and is used to flush the buildings' toilets. In addition, a concealed lightwell between the Bickel and Blagen buildings houses the ventilation systems for all four buildings. This has significantly reduced the amount of floor space needed for ventilation shafts.

~ Casey Kleinhenz, Michael Wilson, Diana Fischetti, and Nancy Cheng

Photos: Andre Chinn, Interface Engineering, Jessica Engeman

Graphic Design: Ray Neff

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