

BEST OF
2007
AWARDS

Yale University Art Gallery Kahn Building

AWARD OF MERIT: Rehab/Restoration/Renovation

When it opened in 1953, the Yale University Art Gallery created a striking contrast to the neo-Gothic architecture that characterized much of the campus.

Constructed of brick, concrete, glass and steel, the university's first modernist structure is renowned for its bold geometric forms, expansive light-filled spaces and structural and engineering innovations.

Designed by Louis Kahn, the 39,640-sq-ft gallery was the architect's first significant commission and is now considered to be one of his masterpieces.

Over the years the integrity of Kahn's original design was compromised by unsympathetic modifications. The loft-like galleries were partitioned, masonry walls painted and a sunken courtyard roofed over. Other design elements, such as the building's signature window wall system, needed to be replaced or repaired.

Now, a three-year, \$44 million renovation, designed by New York-based Polshek Partnership Architects, has restored Kahn's design while updating building systems to meet modern museum standards.

"Probably the biggest challenge of the project was replacing the glass window-wall system," says Steven Peppas, project manager for Polshek.

The distinctive steel and glass window wall, which graces the north and west facades, was one of the first uses of double-paned insulated glass. Considered innovative in its day, the system was plagued by structural and thermal problems.

Replicating the window-wall system using the same materials was impossible. The design team could not find a steel-framed system with thermal breaks, which dramatically slow heat loss and prevent condensation.

The new window-wall system employs thermally broken aluminum framing. Ex-



tensive frame customizations were required to match the original outside profile of the window wall. Interior dimension vary slightly to accommodate structural and wind loading requirements.

One of the major goals of the restoration was to reinstate Kahn's open-space layout of the galleries. In the 1960s and 70s, galleries were partitioned into smaller spaces and rooms were added for storage and conservation labs. Miniblock concrete walls were painted. A sunken exterior courtyard, located on the west façade, was roofed over to create additional interior space.

The renovation stripped the building of its additions, bringing the structure back to its original 1953 plan. Damage to the miniblock walls and terrazzo flooring was repaired.

Restoration of the interior refurbished the gallery's famous tetrahedron ceiling. Fashioned from poured concrete, the ceiling is configured to form a three-dimensional matrix of interlocking triangles.

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Key Players

Owner: Yale University, New Haven, Conn.

Architect: Polshek Partnership Architects, LLP, New York

General contractor: Barr & Barr, Framingham, Mass.

Structural Engineer: Robert Silman Associates, New York

Mechanical Engineer: Altieri Sebor Wieber, Norwalk, Conn.

Exterior Wall: Gordon H. Smith Corp., New York

Acoustics Engineer: Shen Millsom & Wilke Inc., New York

Lighting Consultant: Fisher Marantz Stone, New York

Media lounge design: Joel Sanders Architect, New York

Landscaping: Towers | Golde, New Haven, Conn.