Case Study

HEALTHCARE RETROFIT SUSTAINABLE EDUCATION

Leprino Office Building University of Colorado Hospital Anschutz Medical Campus

AURORA, CO

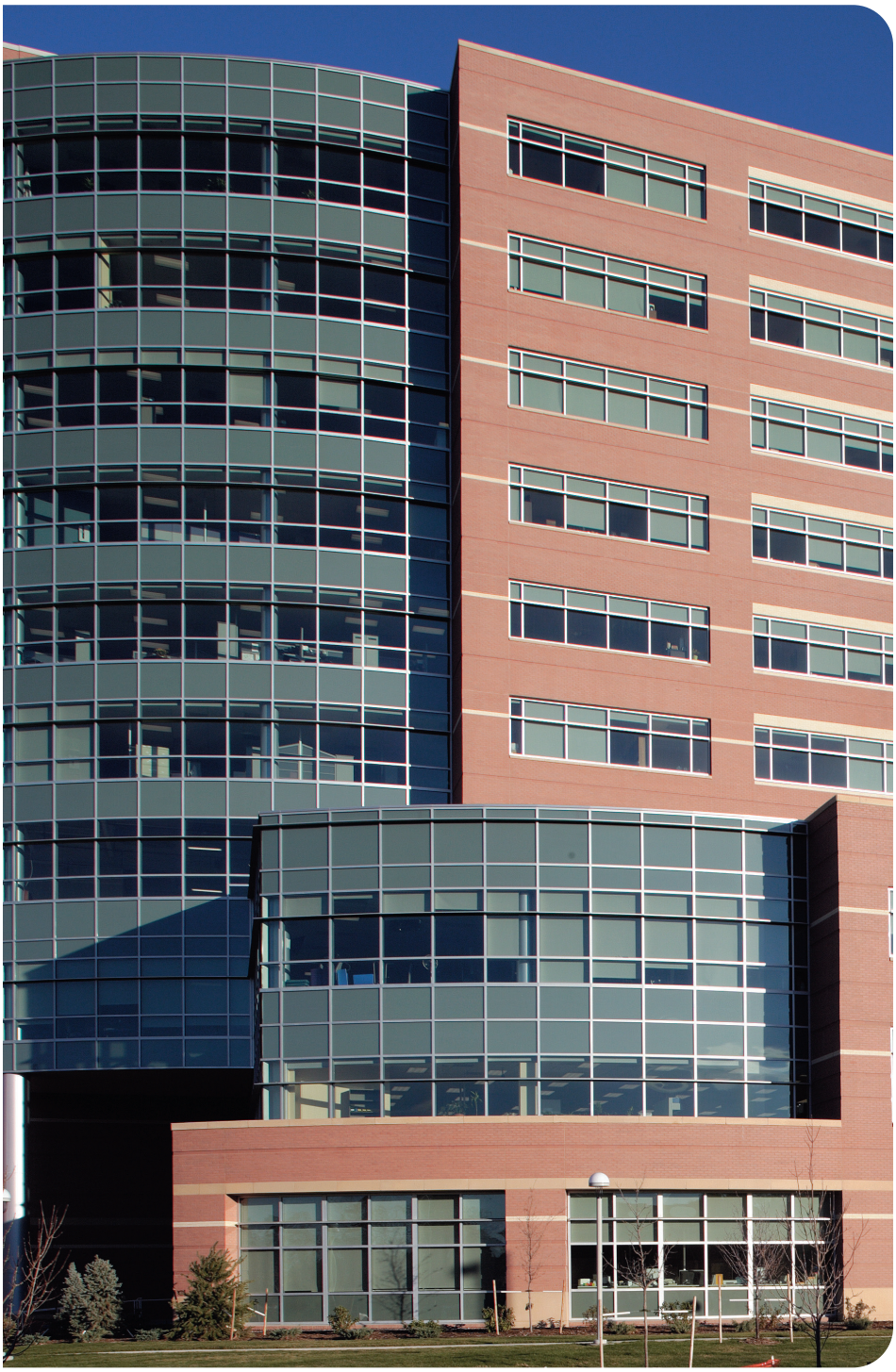
Owner
University of Colorado Hospital (UCH)

Architect/Designers
Davis Partnership Architects
Denver, CO

Vitro Products
Solarban® 70 glass

Glazing Fabricators
Northwestern Industries, Inc.
Seattle, WA

Glazing Contractor
A-1 Glass, Inc.
Denver, CO



The Leprino Office Building at the University of Colorado Hospital is glazed with *Solarban*® 70 glass by Vitro Architectural Glass (formerly PPG glass).

PROJECT BACKGROUND

The Leprino Office Building is located on the Anschutz Medical Campus in Aurora, the newly relocated home of the University of Colorado Hospital (UCH). The structure's ten floors and 260,000 square-feet of space contain executive and administrative offices, clinical laboratories, on-call sleep rooms, classrooms and maintenance offices. The building is connected to the campus' main hospital through two glass-enclosed walkways, which also access a 1,500-car parking garage.

Curtis Cox, a senior associate with Davis Partnership Architects, says the Leprino Office Building was part of an ambitious effort to transfer an entire university hospital and its operations to a new location. Because of the project's scope, his firm was encouraged to pursue design strategies that would lower immediate construction and long-term operational costs.

Vitro® Architectural Glass

Leprino Office Building, University of Colorado Hospital, Anschutz Medical Campus | Aurora, CO

To achieve these ends, Davis Partnership focused heavily on integrating sustainable design into the building's development. Green components were incorporated in dozens of ways, including high-output, low-energy fluorescent light fixtures; low-water plumbing fixtures and landscaping; variable frequency drives for air-handling and pumping systems; premium-efficiency motors; low-VOC paints and adhesives; and numerous others.

One of the most visible statements of the building's sustainability was made with its curtainwall system, which was glazed with *Solarban*® 70 (formerly *Solarban*® 70XL) glass, a solar control, low-e glass manufactured by Vitro Architectural Glass (formerly PPG glass). The product was recommended to Davis Partnership by A-1 Glass, their local glazing contractor, after a competing product was deemed too reflective by the campus architect and design review board.

In addition to fulfilling the school's aesthetic requirements, *Solarban*® 70 glass was selected for its potential to reduce costs both before and after construction. Because of its dual ability to transmit natural light and block solar heat, *Solarban*® 70 glass was expected to lower the building's initial HVAC equipment requirements and generate on-going energy cost savings after the building was occupied.

The potential energy-saving benefits of *Solarban*® 70 glass had been previously documented by a Colorado consulting firm. By energy modeling a prototypical, eight-story Denver office building, researchers found that its initial HVAC equipment requirements could be lowered by nearly $400,000 when *Solarban*® 70 glass was specified for its window walls instead of dual-pane tinted glass. The study also showed that the building's annual cooling-related energy costs fell by more than $60,000, and that its related carbon emissions were cut by almost 500 tons per year.

Solarban® 70 glass was specified for its clear glass appearance and energy-saving characteristics.

Along with these green attributes, Cox said the clarity of *Solarban*® 70 glass was a positive factor in its selection. "The University wanted to establish a character for the building that communicated transparent, progressive, contemporary, sophisticated, high-quality public health care," he said.

Cox added that *Solarban*® 70 glass is particularly well-suited to architectural design in the Denver region, where maximizing views and access to daylight are conventional standards in the commercial office market.

As a result of his experience, Cox intends to specify *Solarban*® 70 glass for other projects.

The glass "represented a significant cost savings with higher performance values than the original specification," he explained. "That allowed us to keep the project on schedule and under budget, which was critical to fulfilling the University's commitment to fiscal responsibility. We were also very pleased with its performance and appearance."

As a member of the U.S. Green Building Council, Davis Partnership Architects is committed to promoting environmentally responsible buildings that are healthy places in which to live and work. The firm, which employs more than 100 people — including 29 LEED® certified architects — has completed more than $3 billion in commercial, health care, research, educational and mixed-use projects over the past decade. The company has offices in Denver and Vail, and has been in business for 115 years.

To learn more about *Solarban*® 70 glass and other high-performance glass products by Vitro Architectural Glass, visit vitroglazings.com or call 1-855-VTRO-GLS (887-6457).

Vitro® Architectural Glass