Case Study

SUSTAINABLE EDUCATION

University of Texas at San Antonio National Security Collaboration Center

SAN ANTONIO, TX

Owner
University of Texas

Architect/Designers
Overland Partners
San Antonio, TX

Vitro Products
Solarban® 70 Glass

***Vitro Certified*™ Fabricator**
Glasswerks

General Contractor
Whiting Turner Construction/Jacobs
San Antonio, TX

Overland Partners chose *Solarban*® 70 glass from Vitro Architectural Glass for the University of Texas at San Antonio National Security Collaboration Center as the highest value glazing option based on building performance, aesthetic criteria and overall cost.

PROJECT BACKGROUND

As the new home for both the National Security Collaboration Center (NSCC)—ranked as the No. 1 cybersecurity program in the nation by the Ponemon Institute—and the University of Texas at San Antonio (UTSA) School of Data Science, Overland Partners was challenged to design a new building befitting this stature.

In addition to the high-tech, prestigious look the University was looking to achieve, the facade design had two other important design objectives – blending in with historic downtown San Antonio and providing top security.

"Downtown San Antonio has an eclectic and beautiful mix of new and historic buildings with some dating back hundreds of years," explains Adam Bush, AIA, president, Overland Partners, San Antonio, Texas. A range of masonry, including limestone and terra cotta, are found throughout these historic buildings as seen on the neighboring San Fernando Cathedral and the nearby historic Bexar County Courthouse."

Incorporating spandrel and silkscreen glass with backlit color-changing LEDs, the large "Beacon of Learning" UTSA logo on the building's northwest corner serves as a defining façade feature and an important branding element for the building, which stands apart from UTSA's downtown campus.

Vitro® Architectural Glass

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To honor these historic structures while delivering a contemporary façade, the architects carefully selected a mix of red brick, limestone masonry, metal and glass for the 167,000 square foot, 6-story building sited next to the San Pedro Creek.

For the professors, students, researchers and cybersecurity experts occupying the building, daylight, views and occupant comfort were key. A number of high-performance glass products were considered, but *Solarban*® 70 glass from Vitro Architectural Glass emerged as the best option.

"We have found that *Solarban*® 70 glass is a cost-effective, high-performance glazing solution for our projects in the Texas region, especially combined with the robust design performance evaluations we conduct during design on every project," says Bush. "It has been a time-tested solution and for this project, it was determined to be a high-value option as we weighed requirements for building performance, aesthetic criteria and overall cost."

When coupled with conventional clear glass in a one-inch insulating glass unit (IGU), *Solarban*® 70 glass achieves a visible light transmittance (VLT) of 64% and a solar heat gain coefficient (SHGC) of 0.27 to produce a light to solar gain (LSG) ratio of 2.37, making it one of the industry's highest-performing glasses. With its transparent, color-neutral aesthetic and exceptional solar control and VLT characteristics, *Solarban*® 70 glass is ideal for vast areas of vision glass.

The windows with *Solarban*® 70 glass range between 2 feet x 8 feet, 8 inches and 4 feet x 8 feet, 8 inches, with the smaller window openings located on the east, south and west elevations which receive the most direct sunlight. For enhanced daylight, glare control and privacy, a combination of motorized and manual roller shades were installed throughout the façade.

The sizing and placement of the fenestration was based on the size and use of the different spaces within the facility. "The rhythm and patterning of the punched openings also relate to the high-tech functions and programs inside," adds Bush.

To fine tune the façade design, the design team utilized Revit and Rhino plug-ins, which helped optimize daylighting, reduce light and energy consumption, minimize heat gain and glare and enhance occupant comfort and well-being.

The most prominent aspect of the façade—the large "Beacon of Learning" UTSA logo on the building's northwest corner—is made from spandrel and silkscreen glass with backlit color-changing LEDs.

As UTSA's first stand-alone building outside campus, this architectural feature is an important branding element and provides a bold, illuminating downtown presence for the University.

"The lantern faces towards the existing downtown campus to support stronger connections and visual identity between the two campuses. The size and location have the added benefit of being readily visible both day and night from Interstate 35," he explains.

The School of Data Science comprises 86,000 square feet of classroom, laboratory and research space for the University's 6,500 data science students and the NSCC—serving as a hub for government, university and industry partners in the cybersecurity field—takes up 81,000 square feet. Co-located inside the NSCC is the Cybersecurity Manufacturing Innovation Institute which focuses on cyber secure, energy efficient manufacturing and supply chains in the U.S.

Also known as San Pedro 1, the new building is the first of a 10-year phased UTSA project to develop its downtown campus into an active, engaging space that integrates student life with the vibrant downtown environment.

To learn more about *Solarban*® 70 glass or to find a member of the *Vitro Certified*™ Network, visit **vitroglazings.com** or call **1-855-VTRO-GLS (887-6457).**

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