



ARCHITECT

Lantz-Boggio Architects, P.C.
Englewood, Colorado

GLAZING CONTRACTORS

RGI/EPG Joint Venture
Ryan Glass, Inc.
Colorado Springs, Colorado
El Paso Glass
Colorado Springs, Colorado

PANEL SUPPLIER

Elward Systems Corporation
Lakewood, Colorado

FEATURED PRODUCTS

1600 Wall System™1 Curtain Wall
(blast and non-blast versions)
8400TL Horizontal Sliding Windows
(blast version)
500 Heavy Wall™ Doors (blast version)
AA™3900 Thermal Sliding Doors
(non-blast version)
Painted 339C1862 Fluoropon Classic II
Platinum
Reynobond® Aluminum Composite
Material (ACM) Panels

Vandenberg Hall, U.S. Air Force Academy

COLORADO SPRINGS, COLORADO, USA

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PROJECT PROFILE
EDUCATION

Astronauts, Rhodes Scholars, professional athletes, an Olympic medalist, members of Congress – the portfolio of past residents at Vandenberg Hall on the campus of the U.S. Air Force Academy (USAFA) in Colorado Springs, Colorado reads like the guest list of a Hollywood party. But after years of weather and natural wear and tear, the building needed a major overhaul.

Originally constructed in 1962, Vandenberg Hall houses 23 of the USAFA's 40 squadrons. The building spans over a quarter mile in length and includes 226,000 square feet of living space. With a renovation of such magnitude, the USAFA decided to break the multi-year project into nine phases. Lantz-Boggio Architects, P.C. secured the design bid, and the team forged ahead with planning the remodel.

The firm's strategy outlined a complex plan aligned with the USAFA's nine-phase approach. An initial exploratory phase would be followed by running two phases concurrently. The original projections called for each phase to be completed in a year. Because the same architect was selected for the entire project, the teams only had to deal with one set of shop drawings, which was the only way to make the remodel happen. Weston Solutions, a local infrastructure redevelopment firm, served as the primary contractor. The team at Ryan Glass joined forces with Colorado Springs-based El Paso Glass, forming a new company, RGI/EPG Joint Venture, to accomplish the installation.

DESIGN HIGHLIGHTS

Renovations to the dormitory included replacement of all curtain walls, operable windows, sliding doors and entrance doors, piping for heating systems, radiators, water pipes and electrical risers. All bathrooms were upgraded with new tile and fixtures. Rooms realized improvements in lighting, individual temperature controls and communications lines needed for modern electronics. Ceilings were lowered to allow for renovated fire suppression systems. Doors and interior woodwork were also refinished. Custom exterior panels were also replaced.

CHALLENGES

- Because of the size of the project, the USAFA wanted each phase to move as quickly as possible to lessen the disruption on campus.
- Because of the building's structural decline, the worn sills were so cold and drafty that cadets had to shove clothes, towels and blankets around the windows to keep out the weather. Some cadets shared stories revealing that the wind would whistle through the space so loudly that it sounded like a jet airplane taking off. In some cases, 3 to 4 inches of intrusive snow would pile up inside rooms.
- As a high-security site and government facility, the project had specific Department of Defense (DoD) blast mitigation requirements.
- The historic nature of the USAFA required specific design elements and product application to maintain the appearance.

SOLUTIONS

- The USAFA gave the team the resources they needed, and they ended up completing each phase in half the time.
- The design team specified the 1600 Wall System™1 Curtain Wall to provide clean, unbroken lines and a monolithic appearance. The curtain wall also improved thermal, air and sound performance while providing the blast protection necessary for the dormitory.
- The blast mitigation version of the 8400TL Thermal Sliding Windows, ideal for applications when added strength and security are critical, offered design versatility, strong, weathertight joints and superior thermal transmittance.
- The local historical society reviewed the project, which required window screens on the interior to meet specifications.
- The 500 Heavy Wall™ Doors (blast mitigation version) and AA™3900 Thermal Sliding Doors (non-blast version) provided durability in a space with high traffic and rigorous use.

