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PROJECTPROFILE

Vandenberg Hall, U.S. Air Force Academy

Colorado Springs, Colorado, USA

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

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

PANEL SUPPLIER
Elward Systems Corporation
Lakewood, Colorado, USA

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 Fluropon Classic II Platinum
Reynobond® Aluminum Composite Material (ACM) Panels

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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.

The final phase of the project wrapped up last year, and the building has garnered rave reviews since. "I'd say that they are very pleased with their new facility," said Michael "Buck" Morrison, installation superintendent with Ryan Glass. "I've been told that there were immediate differences in sound and heat resistance. I've been on the site quite a bit over the period of the project, so the cadets know me. Several have personally thanked me for the difference we've made to their dorm."

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

- To accommodate the remodeling teams, the USAFA had to relocate squadrons of cadets to other areas of the building. Dorm rooms meant for single occupancy were converted into multiple-bunk spaces.
- The first phase took a year. The project team realized they were able to do things quickly. 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 Kawneer to put the 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.
- Elward Systems Corporation, one of the largest prefabricated wall panel suppliers in North America, supplied Reynobond® Aluminum Composite Material (ACM) panels. The RGI/EPG team then replaced the original aluminum plating that surfaced the dormitory with more than 90,000 square feet of aluminum panels in rich platinum and black finishes.

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 Fluropon Classic II Platinum; Reynobond® ACM panels

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