

KAWNEER

PROJECTPROFILE



Colorado State University Engineering II Building

Fort Collins, Colorado, USA

ARCHITECT

SLATERPAULL Architects, Inc.
Denver, Colorado, USA

GLAZING CONTRACTOR

J.R. Butler, Inc.
Denver, Colorado, USA

FEATURED PRODUCTS

Trifab™ 451UT (Ultra Thermal) Framing
1600UT System™1 Curtain Wall
Versoleil™ SunShade –
Outrigger System for Curtain Wall
GLASSvent™ Windows



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ENGINEERING A SMART, SUSTAINABLE FUTURE THROUGH HIGH-PERFORMANCE DESIGN AND CONSTRUCTION

Home to five academic departments – chemical and biological engineering, civil and environmental engineering, electrical and computer engineering, mechanical engineering and atmospheric science – the Colorado State University College of Engineering has a clear vision: “to create a better world for future generations.” And when the university decided to build a new engineering building, it was created with that vision in mind. Located in Fort Collins, Colorado, the 122,000-square-foot building, known as “Engineering II,” is a significant presence on the campus, housing classrooms, research facilities and administrative spaces.

Denver-based SLATERPAULL Architects, Inc. designed Engineering II, taking into account the university’s desire to not only achieve high levels of sustainable performance, but also to give the College of Engineering a “new image for the future.” The building was funded through a private donation from Colorado State alumnus Walter Scott, Jr. and his wife, Suzanne, as well as through increased facility fees from students.

Both the school and design team not only wanted to achieve a high level of Leadership in Energy and Environmental Design (LEED®) certification, but also ultra thermal performance. To provide daylighting, sun control, high thermal performance and energy efficiency as well as superior aesthetics, several products from Kawneer were used throughout the building. J.R. Butler, Inc. in Denver was selected as the glazing contractor and was tasked with the final fabrication and installation of approximately 32,000 square feet of curtain wall, storefront and sunshades, which included custom back pans and various sunshade sizes.

Engineering II brings students, faculty and researchers together under one roof, encouraging collaboration. With its intricate aesthetics and high performance, the building is a showcase for the university to help attract new students and make the university, as a whole, stronger.

Design Highlights

The building’s façade incorporates large expanses of glass to allow increased daylight and visibility. In addition to Kawneer’s ultra thermal products and systems, the Engineering II building, which is seeking LEED® certification, incorporates several other sustainable features including natural ventilation in the atrium space; daylighting controls; evaporative cooling; heat recovery; 33 percent lighting power density savings; and hot and cold water provided by a high-efficiency central plant. And, according to a study conducted by Ambient Energy, the three-story building is predicted to save 50.3 percent in energy usage and 43.5 percent in energy costs.

Challenges

- To create a design that was sustainable and could achieve a high level of LEED® certification.
- To provide daylighting, sun control, high thermal performance and energy efficiency as well as superior aesthetics.

Solutions

- Kawneer’s Trifab™ 451UT (Ultra Thermal) Framing, 1600UT System™1 Curtain Wall, Versoleil™ SunShade – Outrigger System – for Curtain Wall and GLASSvent™ Windows were used throughout the building.
 - + The Trifab™ 451UT framing system, which employs a dual IsoLock™ lanced and debridged thermal break, also enhances the thermal performance of Engineering II and meets the project’s U-factor requirements.
 - + Built on the success of Kawneer’s flagship 1600 curtain wall platform, the 1600UT System™1 curtain wall delivers the utmost in energy efficiency with high thermal performance, versatility, reliability and value. Because the curtain wall features an engineered polymer thermal separator and can accommodate double or triple insulating glass, it provided the team with options for performance ranges that would suit the project.
- Versoleil™ SunShades were used on the exterior of the building and deliver shading capabilities that reduce solar heat gain, which helps maximize energy savings and reduce glare. Not only did the sunshades help the university achieve energy goals for the building, they also helped earn LEED® credits.

Featured Products

Trifab™ 451UT (Ultra Thermal) Framing; 1600UT System™1 Curtain Wall; Versoleil™ SunShade – Outrigger System for Curtain Wall; and GLASSvent™ Windows

Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092

kawneer.com
770 . 449 . 5555

