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ARCHITECT

Perkins + Will
Seattle, Washington

OWNER

University of Washington
Seattle, Washington

GENERAL CONTRACTOR

Skanska USA
Seattle, Washington

GLAZING CONTRACTOR/INSTALLER

Mission Glass
Tumwater, Washington

KAWNEER PRODUCTS

2500 UT Unitwall® System (standard and custom)
Clearwall® Curtain Wall System
GLASSvent® UT Windows (standard and custom)
350/500 Heavy Wall™ Entrances
Flushline® Entrances
Trifab® 601UT Framing System
AA®3200 Thermal Sliding Doors

University of Washington Life Sciences Building

SEATTLE, WASHINGTON

University of Washington Life Sciences Building

SEATTLE, WASHINGTON

PROJECT PROFILE
EDUCATION

THE CONVERGENCE OF NATURE, TECHNOLOGY AND BIOLOGY

Located in Seattle on the University of Washington campus is the five-story, 169,000-square-foot Life Sciences Building. Designed by Perkins + Will Seattle, the state-of-the-art building focuses on the juxtaposition of nature, science and collaboration. The building features an open design plan for team cooperation, while modular and flexible research and teaching areas can be adapted to meet evolving needs. The Life Sciences Building also touts a unique elevator core, which is wrapped by custom-milled slabs from 200-foot Douglas fir trees.

DESIGN HIGHLIGHTS

A key design objective of the Life Sciences Building was to integrate nature and technology. With approximately 35,000 square feet of exterior glazing, and 13,000 square feet of interior glazing occupants enjoy enhanced views to the outdoors and increased daylight. A major component of the glazed systems is the incorporation of integrated vertical photovoltaic (PV) glass fins into the chassis and curtain wall system in order to capture heat from the sun and generate enough electricity year round to light all four floors of offices.

CHALLENGES

- The integrated vertical fins were first of their kind, requiring a custom façade solution, additional testing and complex wiring solutions.
- High thermal performance was essential as Washington State is continually striving to achieve better energy efficiency for new buildings.
- Due to the tight timeframe, it was essential that products arrived on time and were of the quality expected.
- Sustainability was at the forefront of the project conversation and was a key objective for the owners.

SOLUTIONS

- Kawneer's 2500UT Unitwall® System was selected for its ability to be fabricated in a controlled shop environment.
- Perkins + Will, Mission Glass and Kawneer worked closely to develop and deliver a custom unitized chassis and unitized curtain wall to effectively incorporate the PV fins.
 - + Integration of the fins into the 2500UT Unitwall® System required substantial customization and coordination. Not only did the mullions have to be wider than standard, but they also had to provide easy access to the wiring.
 - + The fins underwent rigorous testing and were also required to be UL certified. The wiring required precise coordination between Kawneer, Mission Glass, Skanska USA and electrical engineers.
- In addition the company's GLASSvent® UT Windows, the Trifab® 601UT Framing System and AA™3200 Thermal Sliding Doors were selected to meet state thermal performance requirements.
- Kawneer supplied stock lengths of products, which the customer shop fabricated.

Overall energy requirements of the building were approached in an interconnected, holistic fashion. The PV fins, high-thermal-performing products and access to natural light helped increase energy efficiency throughout, making the University of Washington Life Sciences Building a huge success and a key campus feature. All teams involved collaborated and communicated throughout the entirety of the project to create something completely new in product application and design.

The University of Washington Life Sciences Building is LEED Gold® and is also the first building on the university's campus to meet the Architecture 2030 Challenge. According to the architect, this was largely due to façade performance and mechanics.



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ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS