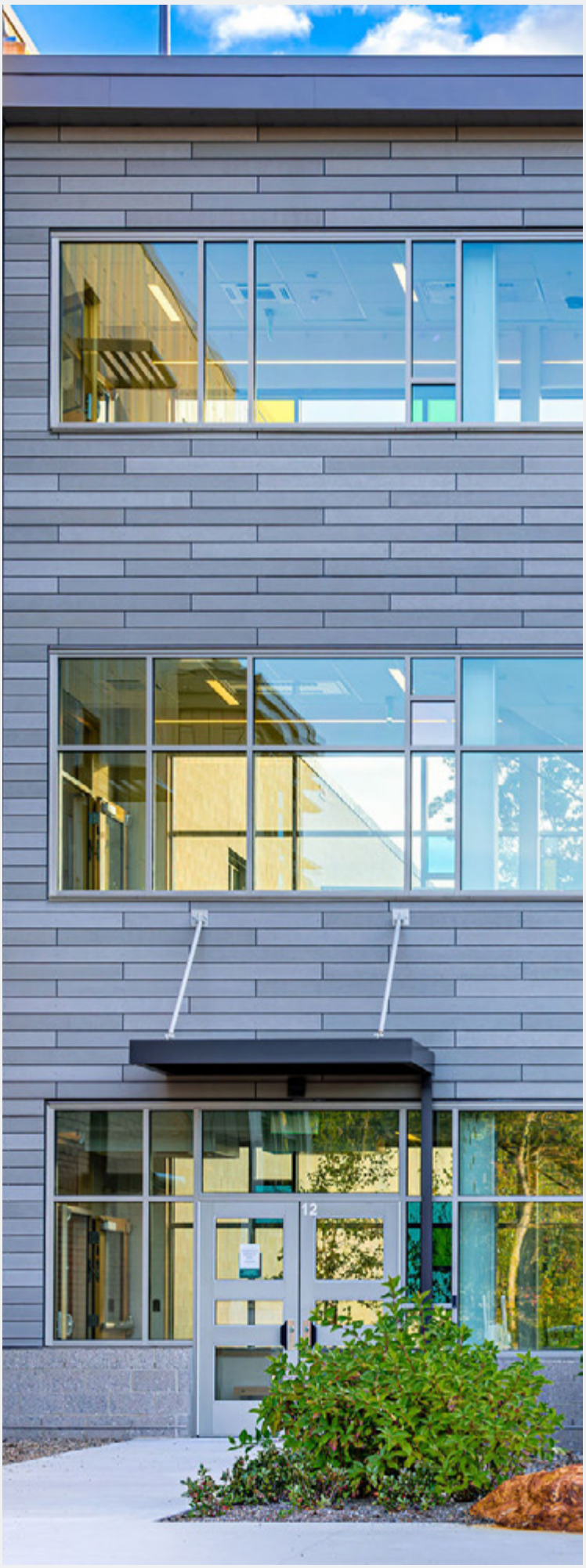
CASE STUDY

GARDNER ELEMENTARY SCHOOL
GARDNER, MASSACHUSETTS

KAWNEER



Situated on 16 acres of tree-covered hillside, the 145,000-sqaure-foot Gardner Elementary School (also referred to as 'The School in the Woods') was designed and built not only to provide a nurturing environment that fosters learning and growth but also to celebrate its surroundings. This setting provides beautiful views and emphasizes the connection between the built environment and nature.

The architect's primary goal for the project was to create a harmonious connection from the exterior to the interior environment while designing an energy-efficient learning space, which is reflected in the school's design as the facade showcases a variety of sustainability features and Kawneer's high-performing, energy-efficient architectural aluminum systems.

Kawneer's solutions help ensure lasting performance, improving the building's longevity and efficiency. Designed for performance, our 1600UT System™1 Curtain Wall, GLASSvent® UT (Ultra Thermal) Windows, Versoleil® SunShade System, 500 Heavy Wall™ Entrances and NX-3100 and NX-3800 Windows were specified to help create a sustainable learning environment for students and teachers alike.

Architect: Jones Whitsett Architects, Greenfield, MA
Glazing Contractor: Lizotte Glass, Holyoke, MA
General Contractor: Bacon Construction, Rumford, RI

MAKING A NATURAL CONNECTION

The architectural design of Gardner Elementary School required careful planning and execution to consolidate students from two schools—from Pre-K through 4th grade—into a new facility while preserving the natural surroundings of the school and integrating with the surrounding landscape.

Our architectural aluminum systems were installed to help create open and inviting learning spaces that allow natural light to enter the building. Kawneer's 1600UT System™1 Curtain Wall was chosen to provide energy-saving thermal performance and maximize natural light throughout the building while delivering uninterrupted views of the school's natural surroundings.

Complementing this system, our Versoleil® SunShade Single Blade and Outrigger Systems were installed to increase energy efficiency throughout the facade with minimal disruptive glare. Seamlessly integrating with the 1600UT System™1 Curtain Wall, our SunShades also contribute to the school's distinctive design.

To help bring natural light deep into the school's interior, our GLASSvent® UT and NX-3100 Windows were specified to help create a comfortable atmosphere for learning while minimizing the need for artificial lighting.

The front entrance's exterior features our 500 Heavy Wall™ Entrances combined with our Trifab® VersaGlaze® 601T Framing System. Further, 4.5" and 7.5" deep 1600 Wall System®1 Curtain Wall Systems with ¼" thick glass were installed throughout the interior of the building. The interior also features our non-thermal Trifab® VersaGlaze® 451 and 601 Framing Systems to provide a seamless connection between the school's classrooms and common spaces.

FOSTERING A SESNE OF COMMUNITY

With the goal of combining students from two separate schools together in a single building, the architects were tasked with designing a space that could accommodate a larger, diverse student body while fostering a sense of community. The Z-shaped building consists of two three-floor wings and a two-floor wing that allows for separate learning environments for the different age groups with community spaces, including the gym and media center, located in the central building.

A COLLABORATIVE CONSTRUCTION CHALLENGE

Kawneer's team-oriented approach to supporting the architects in selecting the right solutions for the project was a key strength. Seamless communication and coordination between our team and stakeholders including the architect, engineers and contractors was vital in keeping the project on schedule.

Due to construction delays, the school needed to become operational during the final stages of the school's construction as the facility opened for its first intake of students. Meticulous coordination was needed to ensure the safety of students and staff while having minimal disruption to the running of the school.

Kawneer's product knowledge and expertise were key factors in the success of the project, and our solutions helped provide the quality and sustainability needed for the architects to bring the design of the contemporary academic building to life.

DESIGNING SUSTAINABLE SCHOOLS

Integrating sustainable materials and energy-efficient systems into Gardner Elementary School was a critical goal for this project. From providing thermal performance to increasing the amount of natural light entering the building, Kawneer's architectural aluminum products support the educational facility's sustainable, yet distinctive, architectural design. Through incorporating sustainability features into the project, our team showed our commitment to supporting the architects in meeting these environmental initiatives and providing the solutions needed to meet their sustainability goals.

To maximize energy efficiency, the strategic placement of windows throughout the school was one of the many steps taken to minimize energy consumption and maximize the school's sustainability, as well as the use of sustainable building materials that enhances insulation throughout the facade. Our GLASSvent® UT Windows with 1" glazing and casement configuration were installed to provide ultra-thermal performance throughout the school.

Kawneer is renowned for our pioneering commitment to sustainability, which is reflected in our product range. Our commitment to holistic sustainability and providing sustainable solutions supported the architects in designing and constructing a long-lasting, energy-efficient facade.

CHALLENGES

- The architects sought to consolidate two aging schools into a single educational facility suitable to meet the various needs of students and teachers, including occupant comfort, accessibility and energy efficiency.
- Kawneer was tasked to deliver high-performing entrances to help the education facility withstand rigorous use.
- In line with many modern education projects, the architect envisioned a sustainable school building that would allow ample natural daylight to enter the interior.
- The architects desired to design an energy-efficient school that promotes occupant comfort and well-being.
- The construction schedule was interrupted due to the COVID-19 pandemic.
- Kawneer was chosen to deliver high-performing architectural aluminum solutions that matched the functional and sustainability goals of Gardner Elementary School.

SOLUTIONS

- With guiding principles established by the school district, the architects designed a sustainable, community-oriented, school in the woods to help nestle the building into its site. Our architectural aluminum systems were specified to help provide the secure and comfortable education spaces students and staff desire to flourish.
- Ideal for schools and educational facilities, Kawneer's 500 Heavy Wall™ Entrances were specified to help withstand rigorous use often experienced in schools.
- Kawneer's Versoleil SunShades were specified and installed to accompany our curtain wall systems, minimize reliance on artificial lighting and deliver light-filled interior spaces for classrooms and common spaces. Further, the architects placed emphasis on window placement, size, color and material to ensure the school maintains a warm, friendly environment.
- The ultra-thermal performance of Kawneer's 1600UT System™1 Curtain Wall helps deliver energy savings and occupant comfort for the building.
- Our team helped support the complex challenges of the school's construction in the face of tight deadlines and the impact of the pandemic.
- Our products were specified to help deliver the market-leading design aesthetics and functionality demanded by the project.

PRODUCTS USED

- 1600UT System™1 Curtain Wall
- 1600 Wall System®1 Curtain Wall
- Trifab® VersaGlaze® 451 Framing System
- Trifab® VersaGlaze® 601/601T Framing Systems
- GLASSvent® UT (Ultra Thermal) Windows
- Versoleil® SunShade Single Blade System
- Versoleil® SunShade Outrigger System
- 500 Heavy Wall™ Entrances
- NX-3100 Windows
- NX-3800 Windows

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Building Legacies

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