

CASE STUDY

JOHNSON MIDDLE SCHOOL IRVING, TEXAS





Johnson Middle School has withstood the test of time as one of the largest Net Zero schools in the United States. Located in Irving, Texas, the building produces more energy than it consumes.

The 152,000-square-foot institution features a large canopy that wraps around two sides of the building to protect staff and students from the Texas heat, while the long-standing Kawneer curtain wall systems and sun control products continue to improve energy efficiency and flood learning spaces with natural light. The building is LEED Gold®-certified.

Architects: Corgan Associates, Dallas, Texas
Client: Irving Independent School District, Irving, Texas
Glazing Contractor: Alliance Glass and Mirror, Keller, Texas

Photography: ©Perzel Photography Group

A LANDMARK BUILDING

Could a school generate more energy than it uses and create an ideal environment to enhance the performance and well-being of its students? That was the question posed by Irving Independent School District, which led to the construction of Johnson Middle School. Taking an innovative and bold approach, the 152,000-square-foot project utilized both an impressive and durable architectural design of green technology to achieve carbon neutrality from project origin and long into the future.

Johnson Middle School employs geothermal heating, solar panel technology, wind turbines, rainwater harvesting techniques, smart solar management and cutting-edge efficiencies to ensure it creates more energy than it uses every 12 months. The open spaces are flooded with natural light with the use of Kawneer 1600 Wall System®1 Curtain Wall and Trifab® VersaGlaze® 601/601T Framing System. 500 Heavy Wall™ Entrances were specified to handle high traffic and InLighten® Interior Light Shelves were used to help the project meet its dual aims of sustainability and student well-being, delivering an inspiring environment in which students and staff can flourish for generations.





CHALLENGES

- The task was to construct a school that could generate as much energy as it consumed from the electric grid.
- Creating an inspiring learning space where students and staff could flourish was essential.
- The structure had to protect occupants from the outside elements.





SOLUTIONS

- Kawneer's 1600 Wall System®1 Curtain Wall provides design freedom by maximizing natural light and views while minimizing energy costs through the reduced use of artificial lighting systems.
- Trifab® VersaGlaze® 601/601T Framing System offers enhanced aesthetic and thermal capabilities to meet performance and efficiency goals.
- InLighten® Interior Light Shelf reflects sunlight deeper into the building's interior, reducing reliance on artificial lighting systems and increasing energy savings.

PRODUCTS USED

- 1600 Wall System®1 Curtain Wall
- Trifab® VersaGlaze® 601/601T Framing System
- 500 Heavy Wall™ Entrances
- InLighten® Interior Light Shelf