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ARCHITECT

Douglas A. Arnold
and Associates, PLC
Hot Springs, Arkansas

GLAZING CONTRACTOR

Valley Building Specialties
Hot Springs, Arkansas

FEATURED PRODUCTS

1600 Wall System™1 Curtain Wall
350 Medium Stile Entrances
with Paneline™ Exit Devices
1600 SunShade™
Custom vertical sunshade built from
190 Narrow Stile Entrance door rail
2000 Skylight
Trifab™ VersaGlaze™ 451T Framing System

Hot Springs Intermediate School

HOT SPRINGS, ARKANSAS

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PROJECT PROFILE
EDUCATION

HIGH-PERFORMANCE SCHOOL ENCOURAGING IMPROVED STUDENT PRODUCTIVITY

When the Hot Springs School District needed to alleviate overcrowding in its existing facilities, they decided to build a new, larger facility, designed to provide students with state-of-the-art resources. The school district also wanted the new school to serve as a place to unite the community and foster greater educational opportunities.

Like many K-12 school systems, the Hot Springs School District recognized the advantages of educational facilities built with high-performance products designed to allow maximum use of natural light. These facilities have been shown to improve student productivity and performance on cognitive tests while reducing energy costs. In designing and constructing Hot Springs Intermediate School, the objective was to create an energy-efficient building using the budget and materials available.

Many of the products selected for the project had numerous sustainable features, including built-in thermal breaks and custom sunshades. A geothermal heating system, insulated building envelope and additional roof insulation helped to exceed requirements of the energy code.

Upon completion, Hot Springs Intermediate School was occupied by approximately 700 fifth- and sixth-graders and featured a separate physical education building and auditorium for community events, as well as an elaborate arts wing. Its spacious, open floor plan, abundant natural light, reduced energy consumption and modern teaching resources helped make the school state of the art.

DESIGN HIGHLIGHTS

- The school district requested a greenhouse be incorporated into the school to enhance its science curriculum. The greenhouse featured Kawneer's 1600 Wall System™1 and 2000 Skylight for a smooth appearance that minimizes heat loss and condensation. The

school's entrance vestibules also featured sloped glazing to allow for increased natural light to enter the building.

- The Intermediate School also featured custom vertical and horizontal sunshades throughout the exterior of the building. These were designed to not only meet the school district's requirements for energy but also provide maximum sun control. Ultimately, the sunshades became the most remarkable aspect of the project and the best way to meet the needs of the school.

CHALLENGES

Many of the classrooms in the new Intermediate School faced west, which was not ideal for energy efficiency or daylighting. The challenge was not only to bring in more daylight and increase energy efficiency, but to do so within the project's budget and design guidelines.

SOLUTIONS

- Kawneer worked with Valley Building Specialties to develop a modified version of Kawneer's 1600 SunShade™ to control glare and maximize natural light during school operating hours. This included creating custom sunshades built from Kawneer's 190 Narrow Stile Entrance door rail and incorporated into the 1600 SunShade™. The outside perimeter of the vertical sunshade was built using storefront door rail materials, and the inside was glazed with perforated panels. The sunshades allowed the students, faculty and staff of Hot Springs Intermediate School to enjoy the benefits of daylighting, including a reduction in energy consumption and a healthier learning and working environment.
- 350 Medium Stile Entrances provided extra strength and durability for high-traffic areas and were used throughout the building. Incorporating Kawneer's Paneline™ Exit Devices at the entrances helped to ease exiting from the building, provided added security and discouraged tampering.
- The versatile Trifab™ VersaGlaze™ 451T Framing System provided additional thermal and high performance solutions.

