

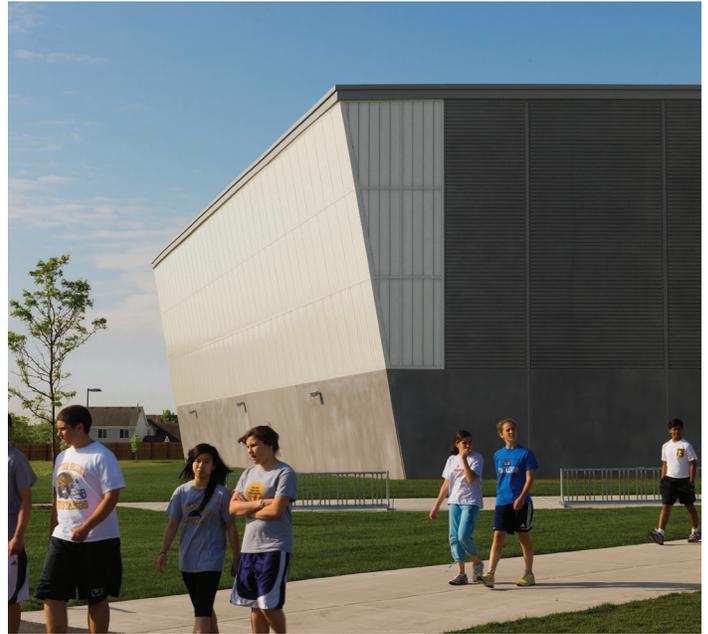
## Project Report

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### Metea Valley High School Natatorium

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Aurora, Illinois



Photography: James Steinkamp

Architecture: DLR Group

# KALWALL®

high performance translucent building systems

## KALWALL SPECIFICATION:

Panel: 4" | 100 mm

Grid core: Verti-Kal™

Exterior FRP: white

Interior FRP: white

System finish: bone white #21b

U-Value: .08 | 0.45 Wm<sup>2</sup>K

Solar Heat Gain Coefficient: 0.04

Visible Light Transmission: 5%

## WHAT IS KALWALL?

A translucent, structural sandwich panel that provides:

Glare-free, balanced daylighting

Superior thermal performance

Energy + electricity saving

Low maintenance life cycle requirements

Safety + security through visual privacy

Durability + graffiti / vandal-resistance

Hurricane, explosion venting + blast rated options



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For unparalleled thermal performance in translucent daylighting, consider specifying Kalwall with **CABOT's Lumira®** aerogel insulation. Available in 2.75" (70 mm) panel formats up to: 4' x 12' (1200 mm x 3600 mm) and 5' x 10' (1500 mm x 3000 mm) maximum.

## Metea Valley High School Natatorium

It isn't just the fresh outlook on learning that makes Metea Valley High School, in Aurora, Illinois, a special place. The massive, 464,000 ft<sup>2</sup>, 3,000-student campus is broken down into smaller teaching spaces and daylit throughout with Kalwall: classrooms, common areas, the media center, the gymnasium, even stairwells. Standard Kalwall shoji configuration panels appear in some areas, the more dramatic, vertical grid panels (Verti-Kal™) in others. But in the school's stunning natatorium, a third option was selected. Kalwall, ever the innovator, combined several products for a creative, never-done-before approach to the special concerns of an indoor pool environment.

The humid interiors of traditional natatoriums are subject to condensation buildup, especially as cold, winter temperatures permeate the structures. This can lead to mold and mildew growth. The air is also laden with chlorine and other chemicals that cause some building materials to corrode over time. And glare from glass is not only hard on the eyes of swimmers and divers, it can be dangerously disorienting as it glances off the water surface. In contrast, for Metea Valley High School, architects DLR Group designed a natatorium that was very different in a number of ways.

To begin with, the impressive facility comprises two pools, a diving area, spectator seating, and a wide swath of Kalwall Translucent Wall on one side that slants outward in a futuristic departure from more typical, box-shaped school buildings. DLR Group specified Kalwall 100™ – a 4" thick, thermally broken version of the sandwich panel – for greater structural strength and superior energy performance. To add visual interest, they opted for Verti-Kal, a design variation on the standard shoji or rectangular grid configuration of Kalwall Translucent Systems. The panels incorporate internal, continuous supports to provide a vertical emphasis and are available up to 5 ft. wide and 12 ft. high, minimizing the number of joints. Kalwall systems distribute diffused daylight throughout the natatorium, even on cloudy days, drastically reducing the amount of artificial lighting required and eliminating shadows and glare as well as stark contrasts of light and shade. The wall also faces east, making the most of available morning light.

Kalwall's non-conductive, structural thermal break composite sandwich panel system eliminates condensation (thereby inhibiting mold and mildew) and corrosion. The systems are shatterproof and offer a long life cycle as well as proven performance in every climate. The translucent yet highly insulating panels let light in while significantly reducing HVAC operating expenses.



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