Minuti-Ogle Company, a veteran wall and ceiling contracting company in Oakdale, Minn., tells its clients that, “whether your project is large or small, complicated or simple, we approach [each project] with the same commitment to quality and excellence.”

And when the project is one of this country’s largest public high schools, nearly a half million square feet and costing more than $40 million, those promises are quickly put to the test—just like the performance of its building materials.

Yet Minuti-Ogle isn’t new to mega-scale projects. This 200-employee AWCI-member contractor has an impressive portfolio that includes the Hubert H. Humphrey Metrodome, the IDS Center and Mall of America, all in Minnesota.

The new state-of-the-art Wayzata High School, which opened its doors in October 1997, is also an exceptional achievement for the architect, contractor and building-product teams. Up to 3,200 students will have maximum access to the latest technology—from television in the classrooms to the internet, and the surrounding community gains a shared multi-purpose recreational facility.

Abuse Is Expected

From project onset, architect Armstrong Torseth Skold & Rydeen of Minneapolis and construction manager M. A. Mortenson Companies of Plymouth were challenged to create a very durable, tough building using an interior wall system that could withstand both normal and extreme student abuse. Unlike conventional concrete masonry, the walls had to be lightweight enough to
minimize structural framing costs and stay within the taxpayers’ approved construction budget. After all, taxpayers were already spending $87.50 per square foot, or $14,000 per student, for this new facility. Specifications architect Mike Swanson, AIA, of ATS&R, explained, “In designing a high-school building, the choice of materials is important because of vandalism and damage that occurs . . . Walls often receive the most severe damage from students gouging the surfaces or punching holes through the drywall systems.”

As he further explained, “An additional factor affecting the choice of materials for the wall system is the multi-story design. Lightweight wall systems were required to keep the steel structural framing costs within the budget. Heavier wall systems would have increased the sizes of the structural members, therefore increasing the costs.”

Put to the Test

To ensure that the highest quality products would be selected and that school district dollars would be spent wisely, Minuti-Ogle was asked to build a mock-up onsite of four competitive wall systems. Meanwhile, members of the construction team and school district custodians formed the Wayzata School’s “Impact Team” with a specific mission: to put the abrasion/impact-resistant wallboard systems to the test.

The first phase of physical testing involved tearing, scraping and chiselling walls with knives, screwdrivers and nails. The second phase tested overall impact resistance of the walls. So team members took a 32-ounce hammer attached to a 3-foot string and dropped the tool repeatedly from a certain point onto the wall surfaces. When only two competitive wall systems survived the abuse, the construction manager recruited his largest, strongest worker, weighing 300 pounds, to repeatedly kick the remaining wall systems with the heels of his work boots.

Minuti-Ogle Vice President Craig Pudas said, from the installer’s perspective, “We wanted to use a product that would give the school district the strength and durability they needed, and at the same time not end up with a product that was difficult or impossible to install. Those with fiber-
glass mesh are difficult to cut. The Wayzata schedule [also] did not allow enough time for a labor intense board.”

The final result — 150,800 square feet of National Gypsum’s new Lexan-backed Gold Bond 5/8” Kal Kore Fire-Shield Type X Hi-Impact 1000 and 1,200 bags of Gold Bond Uni-Kal Tough Kote Veneer Plaster were shipped to the jobsite.

The veneer plaster had proven 10 times more resistant to abrasion than regular veneer plaster or gypsum fiberboard. And the new Gold Bond Hi-Impact board had passed the abuse tests “with flying colors — no wall penetration and very little surface indentation,” confirmed National Gypsum Representative Mike Brown, who witnessed the testing.

According to Pudas at Minute-Ogle, “We liked the Gold Bond Hi-Impact board for the simple fact that it is standard drywall with a tough Lexan film on the back. This gave it kick-resistant strength and didn’t add a lot of time to the installation. We were able to save the school district money without taking away the strength or the durability they were looking for.” Wayzata High School was scheduled to open only 27 months after groundbreaking.

**Advanced Technology**

The Wayzata High School has a striking campus-like presence on its 160-acre site.
Its unique C-shaped building design was developed to maximize the site’s wooded and wetland areas and provides an ideal placement for athletic fields.

The four-story classroom cluster combines the traditional, departmentalized curriculum and tech-prep disciplines — from special-education and industrial tech to math, languages, business and computer technology. The connecting 3,000-seat gymnasium, athletic complex, 800-seat auditorium, 800-seat cafeteria and music/art department form adjacent sections.

Special provisions of Wayzata High School include advanced technology features such as a full-access telephone and cable TV system throughout, a full production TV studio, internet access from every classroom, and even wiring for video cameras throughout for both cable TV coverage and interactive teleconferencing.

Other key features have resulted from an enriching, cooperative agreement between the local school district and the city of Plymouth. There is a LifeTime Fitness Center housing the state’s second largest indoor pool, two additional gym stations funded by the city, shared use of playing fields and gyms, a shared city ice arena and the preservation of 27 acres of natural wetlands.