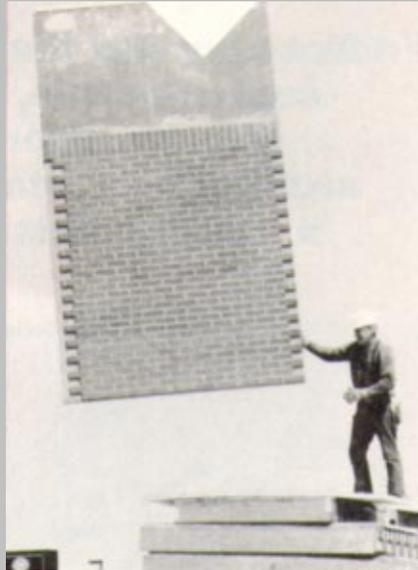


Panels Win the Cold War



Exterior Durock Panels being unloaded for Hungry Fox Restaurant.



Thin brick panels using Durock Exterior Cement Boards were set on footings for the Hungry Fox Restaurant.

Cold weather can be a major problem for both exterior and interior contractors. Low temperatures can slow down or halt construction of masonry or ceramic tile walls, effectively stopping installation of interior walls until the project is protected from ice, snow and rain.

However, two contractors working on two very different types of projects over the winter, found a common solution to this problem. Both were able to beat the winter cold through "panelization."

One project, a \$34 million five-story Federal Records Center in St. Louis, used ceramic tile panels. The other project, a one-story restaurant in Wheeling, IL used thin brick panels to install the walls in one day.

St. Louis Federal Record Center

"State of the art" describes the \$34 million, 402,000-square-foot addition built onto the Federal Records Center in St. Louis, MO.

When cold weather made field application impossible, prefabricated panels saved the day.

Even construction of the ceramic tile-faced panels installed on the exterior of the building's corner mechanical cores are state-of-the-art. The contractor, National Glass & Glazing Ltd., Inc. (NGG), used innovative construction methods and materials in constructing the 296 pre-fabricated tile panels required for the exterior of the project.

Using a vacant warehouse, exterior panels measuring approximately 8-by-21 feet were set up and aligned exactly as they would be on the building. This assured exact pin assembly alignment and precise tile joint accuracy.

The panelized system used approximately 32,000 sq. ft. of 4-by-4 ft. "Durock" Exterior Cement Board, plus Durock exterior tape and screws. More than 175,000 4-by-8 inch "Irish

green" ceramic tiles were attached to the panels using latex-fortified mortar and grout.

The specs from project architect called for either a cement board system or a metal decking system to serve as the substrate for the tile panels.

"The cement board system offered some distinct advantages over the other alternatives we looked at," explains Harry Konradt, NGG project engineer. "It was considerably more cost-effective and quicker to install than the metal

decking system. And since the Durock boards were available in large custom sizes, they were convenient to use.”

John Casey, project supervisor for the General Services Administration (GSA), is pleased with the benefits panelization provided. “I’m glad we went panelized,” he says. “By the time we were ready for the tile installation, it was too cold for conventional tile application. So, if we didn’t go panelized, it would have been a big problem. And by attaching the tiles at the factory, we now have better-looking, superior-performing walls.”

John Cullen, project manager for general contractor J.S. Alberici Construction Co., St. Louis, agrees with Casey’s assessment. “We achieved a much greater degree of control by handling the tile application in the factory. The tile joints are perfectly straight. And the cement board system provides a very rigid, very stable substrate wall. That’s critical.”

In addition to the tile panelization, NGG handled the fabrication, panelization and installation of the aluminum and glass curtain wall units around the total perimeter of the building.

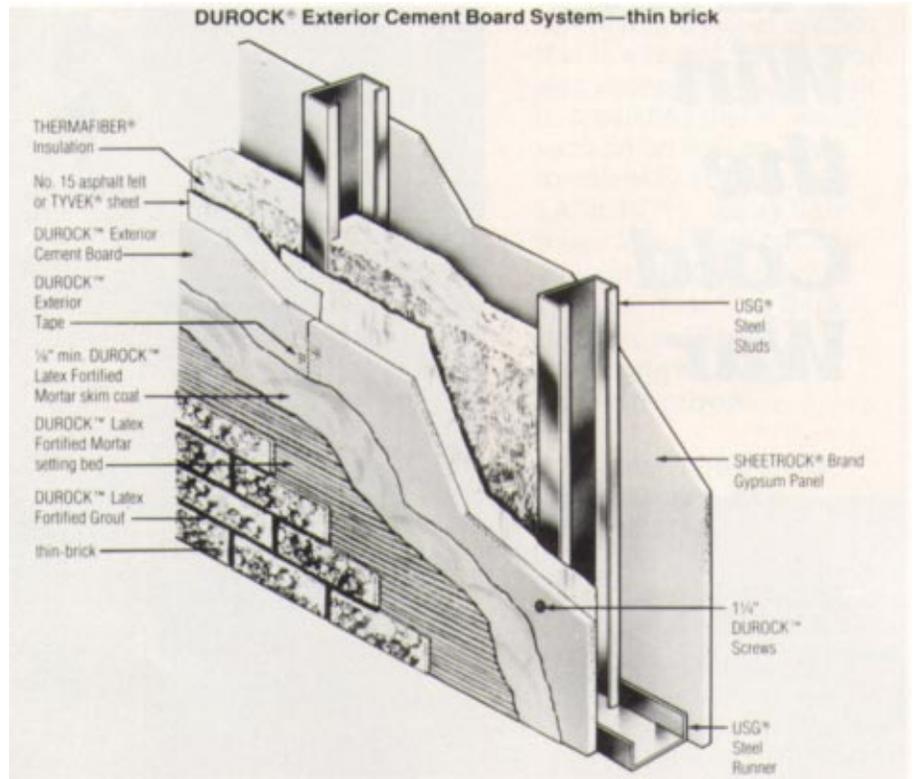
Panelized System Cuts Mustard

Earlier this year, Architectural Enclosure Systems (AES) of Grand Rapids, MI, was contracted to prefabricate thin brick exterior panels and provide on-site supervision of the panel assembly onto a one-story 3,556-square-foot restaurant in Wheeling, IL.

The architect’s original plans called for winter construction using solid load-bearing masonry walls. However, to make the cold weather construction feasible and meet the tight construction timetable, plans were modified to include a combination of masonry and panelized brick. The panelized construction not only allowed for quick enclosure of the building, but proved cost-effective in completing the exterior wall construction.

Lexington Development Corporation, owner of the restaurant, estimates the panelized system saved \$10,000 in comparison to conventional brick

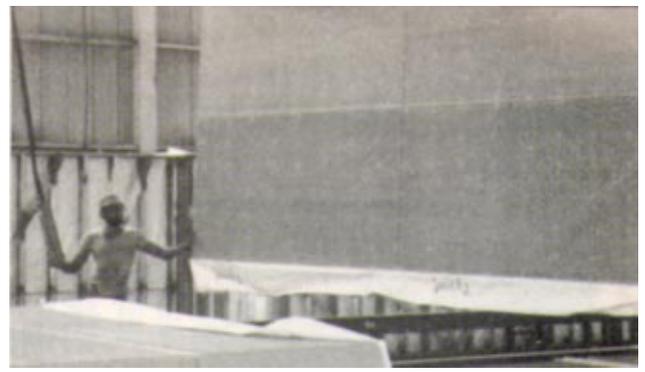
Not only did the system provide a cost-effective, timely means of construction, but from an architectural standpoint, it offered a quality, finished appearance.



The Hungry Fox Restaurant in Wheeling, Illinois was one of the first to use prefabricated panels of Durock Exterior Cement Board with thin brick veneer.



Center used 32,000 sq. ft. of Durock Exterior Cement Board Panels.



St. Louis Panelized Project using Durock Exterior Cement Boards from United States Gypsum.

masonry construction.

“The in-factory assembly cost for the Durock exterior wall system panels, including the thin brick finish, was approximately \$10 per square foot,” says AES president Fred Gebauer. “Other thin brick systems we’ve used usually come to about \$11 per square foot.” The savings, according to Gebauer, were realized in both material and labor costs.

The 20 thin brick panels (3,400 sq. ft.) used on the restaurant were assembled in-factory by AES over a 10-day period (40 mandays). Assembly included attaching the Durock exterior cement board panels to water-barrier-protected steel studs (spaced 16" o.c.); applying Durock exterior tape over all joints, and then skim-coating with Durock latex-fortified mortar; applying the mortar as setting bed for the thin brick; and applying and grouting the thin brick using Durock latex-fortified grout.

The panels were transported from Grand Rapids, to Wheeling by flat-bed truck, and were loosely assembled in place within four hours. Following completed wall assembly, on-site contractors were then able to begin construction on the mansard roof and front greenhouse area.

Not only did the system provide a cost-effective, timely means of construction, but from an architectural standpoint, it offered a quality, finished appearance. “When you drive by the building you can’t tell that it was not conventionally laid out brick by brick,” says Gebauer.

He also believes panelization allows “greater variety in the types of exteriors we can provide, in a cost-effective and easy-to-handle format.”

