

Project Profile



USG® Cavity Shaft Wall System

Application/Building Type:

Entertainment Facilities

Project Name:

Williams Arena/Sports Pavilion
University of Minnesota

Location:

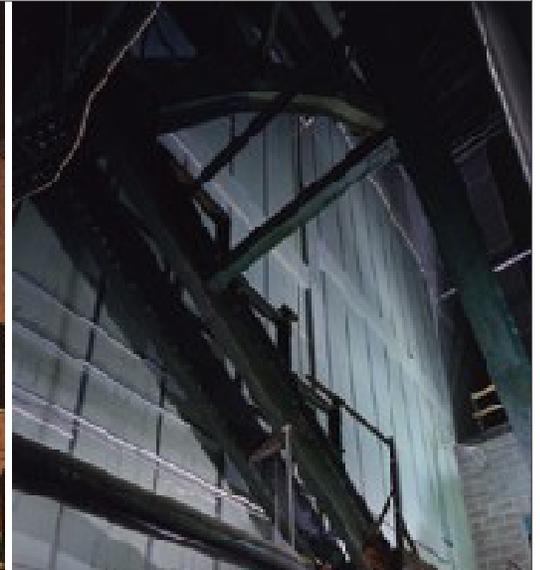
Minneapolis, Minnesota

Architect:

Hammel, Green & Abrahamson, Inc.

Featured Products:

USG® Cavity Shaft Wall System
SHEETROCK® Brand Gypsum Panels,
ULTRACODE® Core



usg.com

Sports Pavilion Scores

Modification of existing structures often results in significant additional alterations to satisfy special needs and updated building codes. At the University of Minnesota in Minneapolis, modernization of the Williams Arena/Sports Pavilion included erection of a new, highly efficient fire-rated wall to separate men's and women's athletic floors.

"There already was a wall separating the two areas all the way up to the roof, but it would not meet all the specs for a two-hour fire-rated wall," said David Howd, project architect at Hammel, Green & Abrahamson Inc., Minneapolis, Minn., architectural firm for the job. "The simplest solution for us was to build a new two-hour fire-rated wall in front of the existing one. The main consideration was to have a self-supporting wall that could be built on top of an existing club room on the women's side of the building."

To meet the need for a continuous wall that could rise six stories, Howd selected a [USG® cavity shaft wall system](#). The specially constructed C-H studs and channels lock panels in place for increased stability, while producing a lightweight, two-hour fire-rated system.

"We erected the wall 6 feet in front of the existing dividing wall to take advantage of a strong support beam already in place," Howd pointed out. "The space between the walls is accessible to maintenance people, but unused, so the back side of the wall could remain unfinished."

By using the shaft wall system, a considerable amount of material and labor was saved as well. "This system made it possible for us to handle virtually all the erection from just one side," said Tom Panek of Minuti-Ogle Co., Inc., Minneapolis, Minn., the drywall contractor.

Construction began with the installation of load-bearing steel stud columns at intervals ranging from 10 to 15 feet. Those columns were tied back to the original wall at several points for added stability. The shaft wall system was installed between the columns and beams.

[SHEETROCK® brand gypsum liner panels](#), 1-inch-thick, were installed, interlocking panel edges with USG C-H steel studs. The shaft wall system selected incorporates [ULTRACODE® Core](#), [SHEETROCK brand gypsum panel](#). This high-performance panel was installed across the entire face of the system to provide a smooth, uniform surface. The extra fire resistance offered by this specially formulated 3/4-inch-thick panel makes it possible to achieve the necessary two-hour fire rating with only one layer of panels on the finished side of the wall instead of two, reducing material and labor time to install panels on the finished side by about 33 percent.

The completed wall is faster and easier to erect than double-layer systems and is lighter in weight. Not only is panel installation time reduced using the [USG shaft wall system](#), but joint treatment requirements are also reduced since only the room side of these walls needs joint treatment.

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[SHEETROCK gypsum panels](#), [ULTRACODE Core](#), are 3/4 inch thick, 4 foot wide, and are available in 8-foot, 9-foot, 10-foot and 12-foot lengths (nonstandard and metric lengths available). Panel weight is 2.8 psf. The strength of 3/4-inch-thick ULTRACODE Core panels gives maximum protection with only a fraction of the time and labor needed in previous systems.

The ULTRACODE Core panels are easily cut, and permit decoration or trim installation almost immediately. Systems with [SHEETROCK brand gypsum panel](#), [ULTRACODE Core](#), also boast excellent Sound Transmission Classification (STC) ratings. The shaft wall system installed at Williams Arena/Sports Pavilion carries an STC rating of 52.