

PREPRUFE®

Structural Waterproofing Solutions

A New World-class Music Center Employs An Innovative Waterproofing Solution



The Green Music Center under construction at Sonoma State University
Rohnert Park, California

When you think of a world-class music center, excellent acoustics and soundproofing may come to mind. With its smart design, the 1,400-seat Green Music Center at Sonoma State University more than meets those requirements. But perhaps surprisingly, one of the most innovative aspects of the concert hall isn't its soundproofing, but its waterproofing system.

That's because while the concert hall entrance sits at ground level, the hall slopes downward, below grade, toward the stage. In addition, several feet of space required for the building's air supply below the floor extend the depth even farther. With a high water table just a few feet below the surface, some clever design and construction was needed – to create both a temporary underground dewatering system during construction, and a long-term waterproofing solution to keep the concert hall dry for years to come.

“We specify Preprufe® and Bituthene® on pretty much all of our projects. It's an easy choice as far as we're concerned, because we've had so much success using Grace waterproofing.”

Bill Bussey
A.C. Martin Partners

“We knew that the water table would create a real challenge, so temporary wells were created around the perimeter foundation that collect water for pumping during construction,” explained Bill Bussey of A.C. Martin Partners, the architects for the concert hall.

During construction, with the high water table, water pumps were moving thousands of gallons of water per day and operating constantly. With energy and noise concerns, it became apparent that a more efficient long-term solution was needed. As a result, a sub-surface diversion system for the groundwater was created around the perimeter of the entire building.

In addition to the dewatering system, waterproofing was essential to the success of the project. With the guidance of their specialized waterproofing consultants, A.C. Martin Partners specified Grace waterproofing products based on the architectural firm's long-term track record using them in these types of applications. Grace's Preprufe® 300R was utilized in the sump pit, where despite muddy conditions, the pre-applied waterproofing membrane's aggressive pressure-sensitive adhesive formed a tight adhesive bond to the concrete to prevent ingress or migration of water around the structure. To waterproof the exterior basement walls, Bituthene® System 4000 was applied. A pre-formed waterproofing membrane, Bituthene® System 4000 incorporates a super tacky self-adhesive membrane with a latex surface primer to provide a long-term waterproofing solution.

"With the high water table presenting a challenge, a smart solution was proposed that supported our building design and enabled the project to move forward successfully."

Bryce Tanner, Arup

"We're pleased with the overall solution," said Bill Bussey. "The basement is dry with no complaints." To isolate the concert hall from any noise created by the water pumps, the facility is completely sound insulated to



Surrounded by scenic views, the world-class music center rising in Sonoma County.



Managing the site's high water table required some clever design and construction.

ensure the finest acoustics. And now, the entire hall is waterproofed just as effectively.

For all participants in this project, realizing a successful outcome to this unusual waterproofing challenge was music to their ears.

PROJECT CREDITS:

Owner: Sonoma State University, Rohnert Park, CA

Executive Architect: A.C. Martin Partners, Los Angeles, CA

Concert Hall Architect: BAR Architects, San Francisco, CA

Design Architect: William Rawn Associates, Boston, MA

Engineering: Arup, San Francisco, CA

Construction Manager: Rudolph and Sletten, Inc., Redwood City, CA

Waterproofing Installation: Lawson Roofing Company, San Francisco CA

Waterproofing: Grace Construction Products

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