School

Case Study | 012

Substituting for Fluid-Applied Results in a Credit Toward School Enhancements:

Anacortes High School

Challenge

Nestled on Fidalgo Island in Washington State approximately 60 miles north of Seattle, the city of Anacortes is home to nearly 17,000 residents who enjoy the majestic beauty and the unique combination of land and sea the island has to offer. Of course, a coastal location also poses unique challenges for builders, who must ensure that elements including wind and rain don't penetrate a structure's interior during and after construction. With rainy conditions a reality several months of the year, choosing a water-resistive and air barrier (WRB-AB) that's quick and easy to apply is essential. Add to the mix the need to be cost-conscious in order to stretch the available funds to provide the biggest bang for their buck, and the team of Hutteball + Oremus Architecture (H + O) and FORMA Construction had a significant challenge on their hands when they were awarded the Anacortes High School Replacement and Modernization project in the spring of 2017.

"We knew they wanted to replace the roller-applied barrier if at all possible. When we were able to offer a $100,000 credit for using DensElement® Barrier System, the owner was sold. We were confident that the substitution would result in time savings as well."

– Larry Rodenberger, GK Knutson

An Offer the Owner Couldn't Refuse

Both H + O and FORMA knew saving time and money on the project would both help ensure the new campus buildings were ready for Anacortes High's students and faculty on the first day of the 2018 school year and provide them with the budget to build in as many wish-list amenities as possible. That's why when their drywall subcontractor GK Knutson recommended the DensElement® Barrier System with AquaKor™ Technology in place of the originally specified combination of fiberglass mat gypsum sheathing coated with a roller-applied fluid water-resistive and air barrier (WRB-AB), they were intrigued. The DensElement® Barrier System features a proprietary formulation that integrates the gypsum core and fiberglass mat to form a hydrophobic, monolithic surface that blocks bulk water but allows vapor to pass through, eliminating the need for workers to apply a separate WRB-AB after installation.

"The subcontractor brought the possibility of substituting the DensElement® Barrier System to the owners and offered a significant credit to the job," explained Kevin Oremus, Founding Principal of H + O Architecture. After hearing that using DensElement® Barrier System could help the project move more quickly and save a significant amount of money,

Component Quantities:

85,000 MSF of DensElement® Sheathing

Key Companies:

Architect:
Hutteball + Oremus Architecture

General Contractor:
FORMA Construction

Consultant:
Wetherholt & Associates, Halliday Associates, Bush, Roed and Hitchings, Inc.

Drywall Contractor:
GK Knutson

Distributor:
GTS Interior Supply – Ferndale, WA

the owner took the substitution request and the credit."

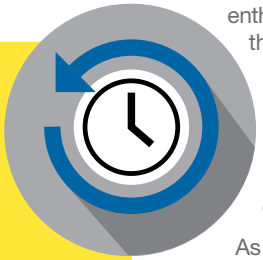
"We knew they wanted to replace the roller-applied barrier if at all possible," said Larry Rodenberger, Project Superintendent/Estimator at GK Knutson. "When we were able to offer a $100,000 credit for using DensElement® Barrier System, the owner was sold. And since we'd heard that applying the fluid barrier was both messy and time consuming, we were confident that the substitution would result in time savings as well."

Ease of Installation Equals Less Time and Labor

In the end, GK Knutson applied 85,000 msf of DensElement® Barrier System on the sides of the 90,000 sq. ft. two-story building and finished it off with metal cladding. The parties involved couldn't be happier with the results. For GK Knutson, the installation process was smooth and easy.

"We thought it installed like any other sheathing," Rodenberger said. "There were no issues whatsoever, and since the WRB-AB is integrated, it saved us the time and manpower using the DensElement™ Barrier System as opposed to rolling on a messy liquid barrier."

> "I would estimate using the DensElement® Barrier System saved us approximately 15 working days over the three months it took us to complete the building envelope. We were able to install in weather conditions that other products couldn't withstand, and we also used less labor"
>
> – Keith Michel, FORMA Construction



The DensElement® Barrier System only requires sealing joints, fasteners, openings, penetrations and transitions with PROSOCO R-Guard® FastFlash®, a flashing membrane that can be applied to damp surfaces. The scheduling benefit it provided—without compromising on quality—was not lost on Keith Michel, Senior Project Manager at FORMA Construction.

"I would estimate that using the DensElement® Barrier System saved us approximately 15 working days over the three months it took us to complete the building envelope," Michel asserted. "We were able to install DensElement® Barrier System in weather conditions that other products couldn't withstand, which helped us get the building dry faster—a huge benefit when you're building in the Pacific Northwest. We also used less labor in the process, so for us, it was all upside and no downside."

What's more, since the WRB-AB is integrated in the DensElement® Barrier System rather than applied on the jobsite, the types of issues that can result when other types of WRB-ABs are used are virtually eliminated.

"The nice thing about the WRB-AB is the quality control aspects," said Scott Williams, Architectural Project Manager at H + O. "Since it's all done in factory, there's a high level of quality control as opposed to doing it out in field with fluid applied methods. That really put our minds at ease."

Less Money Spent on Supplies Means More Project Features

But all parties agree the biggest benefit for the Anacortes High School project was financial, as the credit the owner received for using DensElement® Barrier System helped the school district add significant enhancements to the original project that both the students and faculty are sure to enjoy.

"The credit the owner received for using DensElement® Barrier System allowed us to add a beautiful concrete amphitheater to the project that students will love using for both learning and gathering during their breaks," Michel enthused. "They had wanted that feature originally, but they didn't think they could afford it, so it wasn't in the scope of the initial job. Now the tax dollars that would have gone toward general building materials are giving Anacortes High's students and staff a really cool bonus for their campus they wouldn't have had otherwise without having to make any compromises, which is fantastic."

As a result of the time and cost savings DensElement® Barrier System provided on this project, H + O are specifying it for a new 85,000 sq. ft. elementary school they're currently designing, as well as future projects.

"The Anacortes project showed us that using DensElement® Barrier System gives us both time and schedule saving benefits, as well as a recognized cost savings," Williams affirmed. "As a matter of fact, we have specified it because of cost savings for a project this spring. We even recommend it from a construction drawing and building envelope point of view, because the system is much simpler to detail and communicate, which saves time and makes things easier for everyone."

And the team at FORMA definitely agrees.

"At this point, we're recommending DensElement® Barrier System to all of our clients," Michel said. "When you look at its combination of cost and scheduling benefits, relative ease of installation and long-term performance—which are all the factors we take into consideration when we select materials for our projects—there's really nothing else like it on the market."

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Architecture photography taken by David W. Cohen

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Rev 08/18
Lit # 622931