



SULLIVAN'S ISLAND ELEMENTARY SCHOOL

Multiple levels, planes break up mass of huge oceanfront school

Following the mantra of “learning by the sea,” the new Sullivan’s Island Elementary School in South Carolina is only a stone’s throw from the Atlantic Ocean. Perched above a beautiful beach, the 74,000 sq. ft. school is built on stilts, which raise the classrooms to nearly treetop level. Windows that open to the sea encourage exploration and inspiration inside the school, where instructors teach academic skills and environmental responsibility.

Given its beach-front location, the selection of Petersen’s PAC-CLAD aluminum roof and wall panels was an obvious choice to counter the corrosive environment and protect the school from frequent, punishing storms and occasional earthquakes. The opening of the new building marks the return of the school to its island namesake after being moved off-island for four years because of safety concerns.

Architectural design for the project was provided by Cummings & McCrady Architects in Charleston. The island primarily is residential with only a few commercial buildings. Architect Jerry English, principal, said, “The thrust of the design was to make sure we created a structure that was in keeping with the personality of the island. The design incorporated many different levels and planes to break up the mass and assure that we were sympathetic to the community and neighboring residences. And the Petersen ribbed metal roof definitely added a nice character element. Its constant exposure to the wind and beach necessitated the .040 heavy gauge aluminum.”

The design team at Cummings & McCrady held a series of community meetings to gather design input and keep the public informed. “We had a lot of meetings!” English noted. “And we incorporated many of

the ideas that emerged. For example, the inverted metal roof panels that slope inward atop the signature entrance tower offer a bit of design refinement to help the building relate to the island as community members wanted.”

More than 92,000 sq. ft. of PAC-CLAD .040 aluminum in several different profiles and applications was specified, including 51,000 sq. ft. of 18-in. Tite-Loc Plus panels finished in Champagne for the roof, and 18,000 sq. ft. of 12-in. Flush Panels finished in Almond and Champagne for wall applications. In addition, 22,000 sq. ft. of flat sheet was utilized.

Panel testing for the high wind uplifts was a significant factor in the selection of Petersen products, said Dave Landis, architectural/technical sales manager. “We used Miami-Dade NOA engineering information to show the architect that the .040 aluminum panels would exceed the 130 mph wind load requirements for the job.”

Petersen used a mobile roll-former to fabricate panels more than 80-ft. long at the job site. Some panels reached 110-ft. All other panels were manufactured at Petersen’s Acworth, Ga., plant.

English recommends that architects rely on the guidance and expertise available from manufacturers of various architectural products. “If you’re going to do something that’s a little bit out of the ordinary, contact the right people and bring their input into the design. The results will be better for everybody,” English said. “For example, in working with our Petersen technical sales manager Dave Landis, we worked through the design so that we would not have cross-seams.”

Installation of the panels was performed by Keating Roofing & Sheet Metal Co. in Charleston

Weather Protection

PAC-CLAD metal roofing is highly weather resistant and can withstand extreme weather conditions such as harsh sun, heavy rain, and high winds. Its durability and resistance to rot, insects and fire make it a long-lasting and low-maintenance roofing option that is well-suited for a variety of climates and environments. See the UL Classification, ASTM Tests, Florida Building, and Miami-Dade Product Approvals on each product page, or talk to one of our reps for more information.

Get more insight into weather protection and view other case studies in hurricane prone areas.

Petersen, a Carlisle company, manufactures PAC-CLAD architectural metal cladding systems in multiple gauges of steel and aluminum. PAC-CLAD products include hidden- and exposed-fastener wall panels, standing seam roof panels, flush- and reveal-joint wall panels, vented or solid soffit panels, perforated metal, coil and flat sheet, composite panels, column covers, plus fascia and coping. All are available in a Kynar-based 70% PVDF Fluoropon coating in 46 standard colors and 16 wood grain finishes that include a 30-year finish warranty. Most colors meet LEED requirements and are rated by the Cool Roof Rating Council. Custom colors and weathertightness warranties are offered. BIM and CAD documents are available for most products. Founded in 1965, Petersen's facilities are located in Illinois, Georgia, Texas, Maryland, Arizona and Washington. For information on the complete line of Petersen's PAC-CLAD metal products call 800-PAC-CLAD, visit pac-clad.com or write to info@pac-clad.com.

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