CYPRESS POINT CLUB, PEBBLE BEACH, CALIF.

On the Edge

As the signature holes of Cypress Point threatened to fall into the Pacific Ocean, the club formed a new, stronger shoreline with sculpted concrete

BY FRANK H. ANDORKA JR., ASSOCIATE EDITOR

Problem

Wind, rain and salty ocean air eroded the shoreline that made the 15th through 17th holes at Cypress Point so memorable.

Solution

Sculpted concrete, artistically molded to blend in with the rest of the shoreline, saved the club's signature holes.

When the spectacular Northern California coastline serves as a backdrop for the signature holes of a course, it's important to keep the shoreline intact. Unfortunately for Jeff Markow, CGCS at Cypress Point Club in Pebble Beach, Calif., Mother Nature insists on a say in the matter.

A coastal survey done in 1991 showed erosion from the Pacific Ocean had weakened the substructure along the course's closing holes. In 1997, heavy winter rains caused two sections of walkways to collapse around the 15th and 16th holes.

"There was no way to move the walkways back any further from the holes," Markow says. "We had to find an alternative way to shore up the walls before an even more serious accident occurred."

The finished product (above) started with drilling tie backs into the shoreline to prepare it for the frame of the structure to be built.

The problem

The citizens living near Pebble Beach protect their coastline like parents protect a first-born child. Markow knew he would have to not only find a way to solve the problem from an engineering standpoint, but also one that would mesh well aesthetically with the cliffs.

On earlier coastline reconstructions, the club had employed the more traditional methods of shoring up shoreline, including both rip-rap and gabion baskets. Contractors fill gabion baskets with broken stone and

Continued on page 62

Continued from page 61

place them on top of one another to create a barrier. Rip-rap walls consist of big boulders stacked together which support the shoreline.

"Those two methods work fine, and they certainly reinforce the coastline," Markow says. "They're also cost effective. Unfortunately, they're not the most aesthetically pleasing way of doing this. We wanted to see if the engineers could find a new way to achieve our goals."

The solution

Markow heard about a shoreline reconstruction on the famed 18th hole at Pebble Beach Golf Links, up the road from Cypress Point. Markow discovered that Pebble Beach had used reinforced concrete, formed and shaped on a steel frame, to create the illusion of an unbroken rocky coastline.

CemRock Landscapes of Tuscon, Ariz., did the work for Pebble Beach in 1997. The company agreed to help Markow do something similar at Cypress Point after examining the property in 1998.

"It's expensive, but if you're going to protect the holes that make your course famous, you have to be willing to spend the money to do so properly," Markow says. "It was also important for our members to see that CemRock had a track record. If the company didn't have other projects for us to look at, our club members might have been hesitant to put out as much money as they did."

"We're just starting to do some golf courses now, but Pebble Beach was a coup for us," says Dan Allen, Cypress Point's project manager for CemRock. "It put us on the map."

Allen says CemRock has primarily focused on building animal habitats for zoos around the country. "It's not such a hard leap from there to recreate rock formations on golf courses," he says.

Continued on page 64

CemRock Landscapes built a steel anchoring system (left) into the side of Cypress Point's existing shoreline. Then the company built a scaffold-like structure, which provided a frame for the fiber-reinforced concrete.

Continued from page 62

The process

Granite Construction of Monterey, Calif., first excavated drainage channels and then drilled holes into the cliff to anchor the rock formation's steel framework into the side of the cliff. Then a base of 8 inches to 16 inches of structural concrete was sprayed in the holes to anchor it to the wall.

That's when the fun begins for CemRock, Allen says.

"We come in with fiber reinforced concrete and blow it onto the steel framework we've created," Allen says. "Before it's even dry, we send our artists in to shape it and create a natural rock look to it. That's the most exciting part of the project."

Allen says the process of dying the concrete to match the surrounding rocks and acid-etching the rock is painstaking, but the resulting wall looks as if it has always been there. Since the new structure is concrete, it is also stronger than normal rock, which means it weathers blasts of sea spray better.

The first layer of 8 inches to 16 inches of structural concrete anchors the structure to the existing seawall.

The project on the 15th, 16th and 17th holes cost $2.5 million and took four months to complete.

"We liked CemRock's work so much that we asked them to cover up the rip-wrap work we had done in the past with the new colored concrete," Markow says.

Markow says the club plans another phase of the coastline support this summer and perhaps another in 2001.

"We didn't lose any of the beauty of the holes and we're still able to keep the coastline looking beautiful," Markow says. "The best part is, unless you have a catastrophic event, that concrete is there to stay." ■

Get *Mow* Info...

...and *Safety* Info, *Renovation* Info, *Training* Info, *Environmental* Info, and so much more, from **EPIC of Wisconsin, Inc.**, the industry's leading full service communications company specializing in maintenance education and marketing.

Call us at 800.938.4330 find out why thousands of superintendents regularly turn to the *"Superintendent's Video Workshop," Golf & Environment* the videomagazine, and countless how-to videos produced by EPIC for leading industry suppliers.

PROMOTING SOUND ENVIRONMENTAL PRACTICES THROUGH EFFECTIVE COMMUNICATION

EPIC OF WISCONSIN, INC.

800.938.4330
f/262.338.9737
3014 East Progress Dr.
West Bend WI 53095

CIRCLE NO. 165