

# Shoring Up for the Future

Architects rapidly replace beach structures battered by Hurricane Sandy with buildings strong enough to withstand a superstorm

BY CLAIRE WILSON

It was around Christmas last year when the call went out: New York City public beaches needed new facilities at 15 beach locations to replace the ones lost to Hurricane Sandy in late October 2012. Another three or four that survived the storm in the Rockaways needed to be refurbished, with access to them reconfigured to make up for the boardwalk that washed away. The structures also had to be strong enough to endure the next superstorm.

And you want that *when?* Memorial Day. As in *next* Memorial Day. 2013.

Five months later, many were installed and open for business. Sage and Coombe Architects turned three battered buildings into bright, efficient comfort stations and lifeguard and maintenance facilities that act as colorful markers guiding bathers to the beach from the road. Garrison Architects devised stainless-steel prefabricated modules, perched high over the sand or boardwalk on networks of legs, stairs, and ramps that break away in a storm and leave the buildings unscathed. Mathews Nielsen Landscape Architects designed beach plantings and restored picnic areas for all sites.

Five months was short, but no one is surprised it got done. There was no time or room for politics with such a tight deadline and everyone on the same page. The pressure was extreme; the process was described as “collegial,” propelled forward by “the will to get this done,” according to Jennifer Sage, AIA, LEED AP, principal, Sage and Coombe.

But was it inherently political? Yes, says Jim Garrison, AIA, principal, Garrison Architects, who had people living at the factory to make sure all the pods got finished on time. “It is testament to an enlightened city government that takes public design very seriously,” he says. “We have a city that understands the value of these things, and that is political.”

Garrison knew prefab was the way to go, intending that the 35 units be delivered from Deluxe Building Systems, Berwick, PA, by flatbed truck. That plan was scrapped, however, when completed units were found to be too heavy for road permits. At 120,000 pounds each, they were delivered to Newark, floated on barges to their destinations, and hoisted into place on legs that put them 18 feet above sea level, and above the 500-year flood level.

The modular units, each 12 feet high and 47 or 57 feet long, are distributed among 15 locations in Coney Island, the Rockaways, and Staten Island. Two units make up most installations, which provide restroom facilities and lifeguard stations with a few maintenance and operations offices in the mix. A bridge links the two units; one side is accessible via staircase, the other via ramp so it is 100% ADA accessible.

The exterior is sand-blasted steel coated with salt-water-resistant finishes to prevent rust. The buildings have natural lighting and ventilation via skylights and windows, and there are photovoltaic panels on the roof. Inside are yellow, blue, and green recycled glass tiles; ceramic tiles; and non-slip flooring.

Pentagram Design did the brushed-aluminum ladies/gents graphics for the modular restrooms, and also created a comprehensive new signage program for all city beaches. This proved particularly important for the Rockaways where the boardwalk was destroyed, taking all bathers’ visual references with it. Each bright new vertical sign tells bathers exactly where they are – Beach 97th Street in the Rockaways or Cedar Grove Beach on Staten Island, for example – with a sunny photograph of the exact locale. At points where bathers can safely access the beach, the signs are placed atop bright yellow stanchions that once held the boardwalk. The color distinguishes safe entry points from the rest of the empty stanchions, which will eventually be covered by protective dunes.

Garrison Architects designed a series of stainless-steel prefabricated modules, perched high over the sand or boardwalks on networks of legs, stairs, and ramps at 15 locations in Coney Island, the Rockaways, and Staten Island.





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Sage and Coombe Architects' three beachfront "islands" are the same kind of beacon to bathers at the Rockaways. They opted for bright colors to help bathers get their bearings along the beach, in three buildings (Beach 86th, Beach 97th, and Beach 106th Streets) that were damaged but not destroyed by Sandy. Two measure 5,000 square feet and one is twice that size, and all are situated on island platforms that measure 17,000 to 25,000 square feet and stand between six and nine feet above street level. Each is accessed by a concrete walkway paved with green and blue glass aggregate to mimic beach glass, according to Sage.

What were once modest Robert Moses-era utility buildings are now painted, one blue and two green, with large graphic numerals on the sides denoting streets and abstract renderings of maps of the different locations. These are recognizable to people who know the area, according to Pentagram partner Paula Scher, who worked on the project. "A big 86 (street number) is about as simple as you can get," she says.

Bathrooms and concessions are on one level of the islands, while maintenance is below at beach level. Each structure has two canopies constructed of aluminum slats, with fabric stretched below for shade. Facing the beach is stepped seating constructed from reclaimed ipe wood, salvaged from the old boardwalk. Matte-finished aluminum rails throughout are informed by the rhythms of snow fencing, in place to help stabilize the beach, Sage says.

Signe Nielsen, FASLA, principal, Mathews Nielsen Landscape Architects, put riprap on either side of the curved poured-in-place walkway at each site, to add stability in the event of another storm. Beach vines and grasses will eventually clamber over the rocks to soften the walkway edges.

Like most working on the project, Scher credits Mayor Michael Bloomberg for finding pragmatic solutions to the emotional issue of beach destruction, and doing so with an eye toward the future. "By and large," she says, "his vision has been spectacular." ■

Claire Wilson writes for the *New York Times*.



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**Rockaways "Islands" at Beach 86th, 97th, 106th, and 115th Streets**

**CLIENT:** NYC Mayor's Office; Department of Design + Construction; Department of Parks & Recreation

**ARCHITECT:** Sage and Coombe Architects

**DESIGN TEAM:** Jennifer Sage, AIA, LEED AP, Peter Coombe, AIA, LEED AP, Kit Yan, Sam Loring, AIA, LEED AP, Allen Slamic, LEED AP, Andrew Kao, LEED AP, Christo Logan, Mark Long, Sara Murado, Charlotte Page, Skye Beach, AIA, LEED AP, William Bryant

**TEAM LEADER & STRUCTURAL ENGINEER:** McLaren Engineering Group

**LANDSCAPE ARCHITECT:** Mathews Nielsen Landscape Architects

**GRAPHICS/SIGNAGE:** Pentagram

**BUILDING INTERIORS & ENGINEERING:** Sabir, Richardson & Weisberg

(above) Sage and Coombe Architects turned three battered buildings in the Rockaways into brightly-colored "islands" on raised platforms that house comfort stations, concession stands, and lifeguard and maintenance facilities. (inset) Pentagram created a comprehensive new signage program for all city beaches.

**NYC Beach Restoration Modular Structures**

**CLIENT:** NYC Department of Parks & Recreation; NYC Department of Design + Construction

**ARCHITECT:** Garrison Architects

**DESIGN TEAM:** James Garrison, RA, AIA, Sal Tranchina, RA, LEED AP, Jason Buchheit, RA, Dan Lashmore, Maria Escalera, Marisa Ferrara, Azarnoush Nazari, Isobel Herbold, Carlyle Frasier

**LANDSCAPE ARCHITECT:** Mathews Nielsen Landscape Architects

**FOUNDATION STRUCTURAL & CIVIL ENGINEER:** McLaren Engineering

**MODULAR STRUCTURE ENGINEER:** Anastos Engineering

**MODULAR MEP:** Plus Group

**GRAPHIC DESIGNER:** Pentagram

**CONSTRUCTION MANAGER:** Jacobs Project Management

**GENERAL CONTRACTOR:** Triton Structural Concrete

**MODULAR COMPONENTS:** Deluxe Building Systems