

US Army Corps of Engineers New York District

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U.S. Army Corps of Engineers, New York District

Building Strong



In March 2010, a powerful nor'eastern swept across Long Island, battering the coastal regions with high winds and heavy rains. The Village of Asharoken wasn't spared the storm's fury and when a seawall responsible for securing its sole access road to the mainland was damaged, the Army Corps of Engineers, New York District was called in to address the problem. The Village of Asharoken is located on the North Shore of Long Island in western Suffolk County N.Y. The seawall, which was originally constructed in 1996, provides emergency erosion protection to a critical section of Asharoken Avenue by absorbing the wave action and securing the roadway. Without it, access to the mainland would be extremely difficult particularly during storms. Recent storm activity weaken the

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wall and put the road at risk.

"In November 2009, Tropical Depression Ida combined with a nor'easter storm and caused extraordinary high tides, severe wave conditions, flooding and gusty winds," said Ronald Pinzon, project manager, New York District. "These conditions weakened the seawall's integrity and were exacerbated by the March 2010 storm, which combined a slow moving track with level one hurricane gusts. This caused overtopping of the sheet pile seawall, resulting in a section of the wall being compromised and bowing of the concrete tie back wall."

Pinzon also noted that another section of the 225foot segment of seawall, which was repaired in 2007, did very well in the March 2010 storm event and sustained no major damages. The 2007 repair served as the basis for the Corps current project because portions of the wall, both east and west of the reinforced section were damaged during the March storm. Since the Corps already had a workable blueprint they were able to expedite the seawall rehabilitation.

This will include repairing/replacing the bowed section of the concrete tie back, repairing/replacing the damaged steel sheeting and placing armor stone weighing up to 7 tons in front of the seawall.

"The repair of the seawall will bring the project to the pre-storm conditions as per the 1996 project," Pinzon said. "The design level for the 1996 project was for a 22-year level event. A project that is well maintained can last, relatively speaking, indefinitely as long as future storm events do not exceed the seawall's level of design."

In designing the repair, New York District faced some unique engineering challenges. The Long Island Sound is a very dynamic environment, meaning the coastal engineers had to design a structure capable of absorbing large amounts of high wind and wave energy. Once the design was completed and approved, New York District's contractor was then faced with the prospect of working in a limited area, around the tide schedule, and all while handling seven ton stones. New York District broke ground on the project on August 23, 2010, weeks ahead of its original September timeline. The district's efficiency was heralded by the Village of Asharoken's mayor, Patricia Irvin and Rep. Steve Israel. This type of project requires a great deal of cooperation and collaboration between New York District and its state and local partners.

"We're working very closely with New York State Department of Environmental Conservation (NYS-DEC) as well as with the Village of Asharoken, to rehabilitate the seawall to pre-storm conditions." Pinzon explained. "We've kept our partners informed every step of the way and move quickly to resolve issues that crop up, such as amending the NYSDEC's existing 2007 Water Quality Certification."

Pinzon said he's very happy with the progress the Army Corps has made.

"The seawall rehabilitation at Asharoken is a shining example of how the Corps of Engineers works closely with our local sponsors and stakeholders to deliver quality projects in a timely and efficient manner."

The Asharoken seawall repair is slated to cost \$2.7 million. The contractor is Cutting Edge Group from Lake George, N.Y. Cutting Edge is the same contractor that performed repair work on the seawall in 2007. It was that portion of the wall that performed well during the March storm event. The project is scheduled to be finished in December 2010.



As part of the rehabilitation project a Corps of Engineers contractor places 5 to 7 ton boulders as part of the breakwater. Photo Credit: Dan Desmet, Public Affairs

