St. Alphonsus Church was built in the 1840s in downtown Baltimore, Maryland. Dubbed the German cathedral because it served the local German community, this striking example of neo-Gothic architecture is constructed of brick with a slate roof and sandstone column capitals. In 1917, the Roman Catholic Church bought the church and it was designated an Archdiocesan Shrine in 1994.

The original design by architect Robert Cary Long Jr. called for spires on all the columns. When rehabilitative work was required on the capstones, the Archdiocese decided to also add the spires to match the architect’s original vision.

**Why Cintec anchors?**

The inspection found that the deterioration of the sandstone capstones was caused by years of weathering and freeze-thaw cycles, as well as maintenance neglect. Cintec anchors were specified not only because they could stabilize the capstones, but also because they could handle the wind load requirements for the spires, they were compatible with the masonry, and they could anchor the base plate for the spires.
Cintec made 20 four-foot (1219 mm) stainless steel anchors designed to a 50 psf (2.39 kPa) wind load, wind shear of 600 lbs. (272 kg) per anchor and an uplift of 400 lbs. (181 kg) per anchor. The anchors are expected to provide a rust-free holding capability for at least 100 years, satisfying the client’s desire for a long-term solution.

The work
First the general contractor repaired and stabilized the capstones for the spire installation. Working on site from aerial lifts, the general contractor drilled a 1.5-inch (38 mm) hole in the centre of each column for inserting the anchor wrapped in the patented Cintec sock. The sock was injected with Cintec’s non-shrink cementitious grout to hold the anchor in place. Six inches (150 mm) of thread was left exposed above the base of the column for attaching the stainless steel base plate. The base plate then held the spire in place.

The architect’s vision
This historic structure now realizes the architect’s original vision and is solidly anchored for safety and posterity.

Photo courtesy of Chauncy Primm.