

ST. ALPHONSUS CHURCH: BALTIMORE, MARYLAND U.S.A

Project Engineer:	Keast and Hood Company, Washington, DC
General Contractor:	Structural Preservation Systems, Elkridge MD
Owner:	Baltimore Archdiocese
Date:	2007

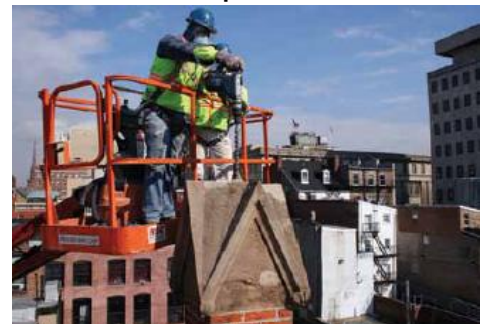


St. Alphonsus Church was built in the 1840s in downtown Baltimore, Maryland. Dubbed the German cathedral because it served the local German community, this striking example of neo-Gothic architecture is constructed of brick with a slate roof and sandstone column capitals. In 1917, the Roman Catholic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

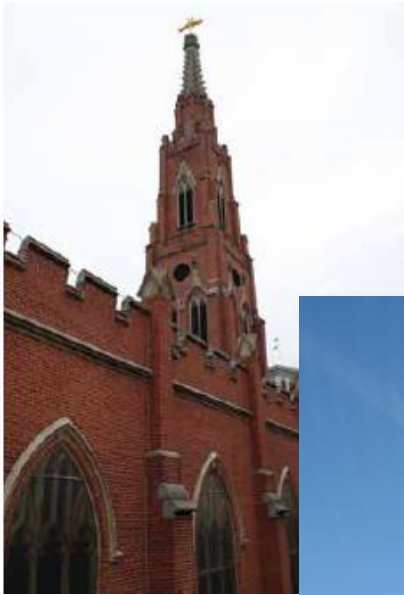
Why Cintec anchors?

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.



ST. ALPHONSUS CHURCH: BALTIMORE, MARYLAND U.S.A. CONTINUED

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.



Cintec's non-the anchor in the column for plate. The base



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 shrink cementitious grout to hold place. Six inches (150 mm) of exposed above the base of the attaching the stainless steel 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.

Telephone Americas : Canada +1 613 225 3381 ♦ USA 1 800 363 6066

Europe +44 (0) 1633 246614 ♦ Australasia +61 (0) 2 4929 4841

E mail solutions@cintec.com ♦ <http://www.cintec.com/cintec/case-studies.php>

CINTEC
WORLDWIDE