



HISTORIC TEXACO HEADQUARTERS MAKEOVER



Texaco Co. Headquarters – Houston, TX

One of Houston's most historic buildings is also bringing the Texas city into the future. A \$95 million redevelopment project is transforming oil giant Texaco Co.'s original headquarters into a mixed-used luxury apartment complex—and in the process, reshaping downtown Houston's image as a place to live and not just work. The historic restoration project includes converting the 1915 concrete-and-brick office building (which has been vacant since the late 1980s) into 300 apartments, 10,000 square feet of retail space, and a 500-space parking garage. A 28-story tower also is being added behind the structure.

As part of the project, developer Provident Realty Advisors contracted Color Cap Concrete Coatings, Inc. of Richardson, Texas, to repair the underside of more than 100 exterior balconies as well as reinforce and recoat dozens of interior foundation pillars. Project specifications for these vertical and overhead applications called for low-shrink concrete repair materials with high bond strength.

For this reason, the owner and contractor decided on CTS Cement's Rapid Set® products: Mortar Mix, V/O Repair Mix, and WunderFixx® concrete patching compound. These specialized hydraulic cement mixes are formulated to set very fast, minimize shrinkage, and have great bond strength.

Creating high-strength pillars

The original pillars, located at ground level and below grade for the underground parking level, were essentially stacked brick columns that needed to be reinforced to increase stability and support. To do this, the Color Cap crew wrapped rebar cages around the columns and built each up by applying 3 to 6 inches of Mortar Mix. They allowed the material to wet cure and troweled it smooth with steel trowels.

Designed for vertical and overhead applications, Mortar Mix is used as a high-strength structural repair mortar. The high-performance blend of hydraulic cement and quality sand sets in 15 minutes to achieve rapid strength gain.

Restoring balconies

Several balconies are located on each floor, and all exhibited spalling and required cosmetic repairs. The crew first used V/O Repair Mix to quickly and easily repair the damaged concrete. Ideal for overhead applications like the underside of these balconies, V/O Repair Mix is equipped with self-curing technology that eliminates the need to wet cure. The polymer-modified blend of hydraulic cement, additives and fine aggregates also bonds



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Featured Image: An in-progress image of the method for using original pillars as a base to be reinforced for additional strength, support, and stability. Mortar Mix is the best material to be used in this situation as it is designed for vertical and overhead applications. While Mortar Mix does require a wet cure, it was formulated with strength, minimal shrinkage, and especially fast drying in mind, meaning that after Mortar Mix is applied, the material will be set in 15 minutes.

Below: Up close of the balconies that are in the process of being restored with V/O Repair Mix and WunderFixx due to cosmetic and structural damage. As opposed to Mortar Mix, both WunderFixx and V/O Repair Mix are best suited to repair balcony damage due to the self-curing aspect of V/O Repair Mix and the smooth formula used in WunderFixx. While V/O Repair Mix and WunderFixx differ from Mortar Mix in some ways, all three have the quick drying formula, which can be very helpful when working with high-strength pillars underground. However, when working outside, this is yet another instance where construction in extreme weather conditions can be detrimental to proper construction.





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well to existing concrete. It can be applied full-depth with a single coat, from ½ to 6 inches, and reaches structural strength in 2 hours.

To create a smooth finish, the crew then hand-troweled a coat of WunderFixx. The one-component concrete patching material is fast-setting and durable. WunderFixx is formulated with premium-grade hydraulic cement, high-performance polymers and a finely ground aggregate. It is ideal for patching and detailing on tilt-up panels, precast concrete, concrete block, and other concrete surfaces.

Working around the heat

The biggest challenge of this project was working in summer temperatures that often surged up to 110 degrees Fahrenheit. In addition to scheduling work overnight and during morning hours to avoid the heat, the working crew also used iced water and SET Control® when mixing materials. This additive can be added to CTS Cement's Rapid Set products to slow down the hardening of cement, giving working crews more time to place and finish materials. All materials were mixed via bucket and drill



This image highlights the challenges workers are facing due to the Texas heat and sun beaming directly on the building. While working overnight and during early morning hours can help with many of the obstacles that can be associated with extreme heat, doing so is not a situation that is always feasible. In an instance when construction would need to be done during afternoon hours when the sun and heat is at its prime, the SET Control will be added into CTS Cement's Rapid Set to slow down drying time and ensure that the worker has enough time to complete the job without the work being rushed due to quicker hardening of the cement.

For More Information:

CTS Cement Manufacturing Corporation manufactures Rapid Set professional-grade cement products for concrete repairs and new construction projects. Contractors, owners, engineers, and architects choose Rapid Set to eliminate problems they have with other concrete repair materials, to save time and money, when superior durability is required and results need to be aesthetically pleasing. For more information about CTS Cement and Rapid Set, visit www.ctscement.com.