

CITY OF ST. CHARLES ELEVATED WATER TANK

Located 40 miles west of Chicago on the picturesque Fox River, the award-winning 1.5-million-gallon water tank in St. Charles, Illinois, features a “foxy” exterior graphic design that used a fluoropolymer coating system from Tnemec.

“Although the city has used Tnemec coatings to repaint its older water storage tanks, this was the city’s first use of a fluoropolymer coating system,” explained the project’s coating consultant Erik Otten of Taylor Coating Sales, Inc. “The coating system is recommended on structures where extremely long-term maintenance cycles are desired.”

The 1.5-inch thick steel was fabricated at CB&I in Clive, Iowa, where it was shop-primed using Series 94-H₂O Hydro-Zinc, a single-component, moisture-cured, zinc-rich urethane.

The 167-foot-high welded-steel tank was erected at the intersection of Illinois Route 25 and the Red Gate residential neighborhood and coated by a four-person crew from CB&I in Plainfield, Illinois. Exterior steel received an intermediate coat of Series 73 Endura-Shield applied over the primer at 2 to 3 mils DFT to provide additional film thickness for corrosion resistance.

A finish coat of Series V700 HydroFlon, a low-VOC fluoropolymer coating, was applied at 2 to 3 mils DFT for outstanding resistance to ultraviolet (UV) light degradation and long-term gloss and color retention.

Interior steel received two field-applied coats of Series N140 Pota-Pox Plus, a polyamidoamine epoxy, which is certified in accordance with NSF/ANSI Standard 61 for use on interior potable water tanks.

Exterior colors consisted of dark blue-green bands, red lettering and two large red fox illustrations against a bright white background. Coating crews followed the tank’s weld seams when applying the bands and used templates for the lettering and fox illustrations. All exterior coatings were brush- and roller-applied to avoid overspray from falling on nearby homes and vehicles.

“The project’s design and construction engineering firm has been using this fluoropolymer coating system since its introduction more than 10 years ago,” Otten added. “They use it on all their potable water tank projects.”

The St. Charles water tower was named first place winner in the 2017 Annual Product Award for Elevated Tank by the Steel Tank Institute/Steel Plate Fabricators Association.

FEATURED PRODUCTS

Series 73 Endura-Shield
Series 91-H₂O Hydro-Zinc
Series 94-H₂O Hydro-Zinc
Series N140 Pota-Pox Plus

Series V700 HydroFlon



PROJECT INFORMATION

Project Location
St. Charles, Illinois

Project Completion Date
August 2016

Owner
City of St. Charles

Engineer
Engineering Enterprises, Inc. - Sugar Grove, Illinois

Fabricator / Applicator
CB&I - Plainfield, Illinois

The elevated water tank in St. Charles, Illinois, was coated using a high-performance fluoropolymer finish coat from Tnemec Company Inc.

