



Rapid Set® DOT Cement & Concrete Mix GW Bridge ramps (NY, NJ)

KEEPING HIGH-TRAFFIC INFRASTRUCTURE SMOOTH and CRACK-FREE

Maintained by the Port Authority of New York & New Jersey, the George Washington Bridge stands high above the Hudson River to link New York City and New Jersey. The eastern end of the bridge rests on the shores of Manhattan and the western end is embedded in the wooded bluffs of Palisades, N.J. The double-decked suspension bridge carries more than 106 million vehicles a year, making it the world's busiest motor-vehicle bridge.

As with most of the nation's aging infrastructure, the 84-year-old bridge—as well as the infrastructure that connects to it—has experienced a good deal of wear and tear over the years. An extensive, multi-year rehabilitation project that ended in June 2015 extended the bridge's life another 15 to 20 years. As that project wound down, the Port Authority contracted Paul J. Scariano, Inc. (PJS) of New Rochelle, N.Y., to repair the pothole-riddled north- and south-bound access ramps that connect the bridge to New York State Route 9A.

Because the Port Authority needed to reopen the busy ramps in a timely manner, so as not to disrupt traffic patterns, CTS Cement's Rapid

Set® cement products were specified for their high early strength gain. The products' ability to quickly reach specified strengths can shave days and weeks off of highway, bridge and airport construction schedules.

PJS ripped out large, approximately 12-foot by 300-foot sections of cracked, pitted and worn-out concrete and replaced the old pavement with Rapid Set® DOT Cement concrete. The contractor used a mobile, onsite volumetric mixer to blend DOT Cement with aggregates and water to produce the large quantities of product needed.

The mix produced a very fast-setting, high-quality concrete repair material with exceptional workability characteristics. DOT Cement is formulated for high sulfate resistance, low shrinkage and long life in freeze-thaw regions.

The contractor also replaced smaller sections of damaged concrete with Rapid Set Concrete Mix. The high-performance blend of hydraulic cement and quality aggregates is similar in appearance to Portland cement concrete and may be applied using similar methods from two to 24 inches thick. For this multipurpose repair material, the contractor used a drum mixer.

Non-metallic with no chlorides added, Concrete Mix provides fast strength gain, high durability and low shrinkage. It is durable in wet environments, sets in 15 minutes and is ready for traffic in one hour.

PJS met the project goal of performing work with minimal impact on traffic patterns. Each ramp lane was opened to vehicle traffic within three hours, thanks to the contractor's material choices.

