



DOT CEMENT IS A SCDOT MATERIAL OF CHOICE

Project Type:

Bridge Deck

Application:

Partial-depth repairs

Location:

Myrtle Beach, SC

Project Dates:

March 16 – May 1, 2020

Project Owner:

South Carolina DOT District 5

Contractor:

Lee Carolinas

Project Size:

150 cu. yds

Product:

Rapid Set® DOT Cement

Located along South Carolina Highway 544 (SC 544) in Myrtle Beach, the Corporal Dennis Lyden Memorial Highway Bridge was in serious need of repairs. Portions of the four-lane deck and riding surface were cracked or deteriorated. In many places, the rebar was found to be too close to the surface, which in turn caused delamination.

In March 2020, South Carolina DOT (SCDOT) District 5 contracted Lee Carolinas, based in Charlotte, N.C., to perform partial-depth repairs on the bridge deck.

Using Rapid Set® DOT Cement for the repair work was an easy decision for the contractor. The fast-setting cement is on the transportation department's list of qualified products because it meets all SCDOT specifications. It includes air-entrainment for durability in regions where freeze-thaw cycles are more prominent, and a superplasticizer to provide better workability. In the case of the Dennis Lyden Bridge, DOT Cement was blended with SCDOT-approved sand and stone and achieved 3,500-psi compressive strength within three hours to meet the project requirement.

Rapid Set DOT Cement is fast setting and typically achieves structural strength in one hour. The material's rapid-hardening characteristics and quick strength gain were critical to the project, as the demolition and repair work had to be performed overnight so the bridge could be returned to service by 6:30 a.m. each morning.

PROJECT PROFILE

The size of the repair areas varied each night. The contractor averaged placing 2 to 2.5 cubic yards of material nightly, which was supplied by Superior Mobile Concrete of Greenville, S.C., via volumetric mixers. The Lee Carolinas crew then screeded level, hand-troweled the repaired areas, and applied a broom finish. They sprayed a curing compound over the repaired areas and covered them with a wet burlap for curing.

The concrete patching work was completed May 1, 2020. All parties are pleased with the results. Lee Carolinas continues to perform critical bridge deck preservation work for SCDOT using Rapid Set Cement products.



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, please visit www.CTScement.com.

ABOUT CTS CEMENT