



## PROJECT PROFILE



# OKLAHOMA DOT CHOOSES RAPID SET FOR PAVEMENT PATCHING

**Project Type:**

Highway

**Application:**

Panel replacement and road repair

**Location:**

I-40 Oklahoma

**Project Dates:**

January 2016

**Project Owner:**

Oklahoma DOT (ODOT)

**Contractor:**

Interstate Improvement Inc.

**Project Size:**

3,195 cu. yds.

**Product:**

Rapid Set® Cement, DOT Concentrate

When Oklahoma DOT (ODOT) awarded repair work for the four-lane Interstate 40 corridor in 2016, contractor Interstate Improvement Inc. of Faribault, Minn., faced a challenging schedule. The pavement patching project took place along a busy 6.6-mile stretch between Choctaw Road and the Pottawatomie County line, just west of Shawnee. Each weekday, the contractor had to ensure all westbound lanes were open from 6 to 10 a.m. and eastbound lanes from 3 to 8 p.m. to accommodate rush-hour traffic. Only one lane per direction could be closed over the weekends.

To ensure all timelines and incentives could be met, Interstate Improvement used Rapid Set® Cement and DOT Repair Mix Concentrate (also known as DOT Concentrate) for all patching and doweling work. This was the first major interstate patching project in Oklahoma using Rapid Set and volumetric mixers.

Rapid Set Cement's rapid-hardening properties make it an ideal solution for repairing or replacing highway pavement panels and quickly returning them to full service. It typically reaches a compressive strength of 3,000 within an hour and 4,500 psi within three hours, which allowed the contractor to easily meet ODOT's requirement of 3,000 psi to open and 4,000 psi after 28 days.

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Another fast-setting material, DOT Concentrate is a blend of Rapid Set Cement and high-performance additives that is mixed with water—and can be extended with aggregate—to produce a flowable repair material with fast strength gain, high durability and low shrinkage. Ideal for highway repair, dowel bar retrofit (DBR) and more, it is ready for traffic and loading one hour after placement, typically reaching 3,300 psi during that time.

Work included full-depth panel replacements using Rapid Set Cement. The contractor also performed slot stitching at longitudinal cracks and joints and DBR at transverse cracks and joints using DOT Concentrate. Once slots were cut across cracks and joints and the bars placed, the crew filled the slots with the repair material and leveled it off. The repaired sections were roller screeded, floated, broom-finished and sprayed with a curing compound. Diamond grinding the pavement was the final step.

Concrete producer George L. Throop Co., based in Pasadena, Calif., supplied the concrete, delivering a total of 3,195 cubic yards of material over the course of the project. The producer performed onsite checks to ensure proper air entrainment for the concrete was achieved.

Interstate Improvement completed the work in 45 days, thanks to an increased production rate during lane closures due to using Rapid Set materials. ODOT was pleased with the project's success, which paved the way for the use of Rapid Set products in future projects.

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](http://www.CTScement.com).

## ABOUT CTS CEMENT