



**SOUTHEAST CEMENT  
PROMOTION ASSOCIATION**



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## Full-Depth Reclamation (FDR) with Portland Cement Revives Couchville Pike in Nashville, Tennessee



**1** Couchville Pike prone to daily semi-truck traffic



**2** Mixing commences



**3** Project completed in 5 days

The Southeast Cement Promotion Association (SCPA) held a day-long Full-Depth Reclamation (FDR) Conference in Nashville Tennessee on March 22. The 125 attendees consisted of Tennessee and Kentucky Department of Transportation employees, design engineers and consultants, geotech testing firms, employees of Tennessee State Public Works and cement company members. This FDR conference was the first of its kind in Tennessee. The morning session began with several speakers presenting topics ranging from FDR savings and technical aspects, to case studies on city and county roads and airport runways. Presenters were Stan Bland, PE, SCPA Pavement Applications Director Carolinas/Virginia; Andy Johnson, PhD, PE, SCPA Pavement Design Engineer; Dale Cronauer, President of Blount Construction; Barry Wilder, President of Roadworx, Inc; Matt Koss, PE, Aviation Team Leader at Garver; Don Reid, Paving/Right of Way Manager with Metro Nashville; Chad Collier, PE, President of Collier Engineering.

The conference concluded with all attendees visiting a live field demonstration of FDR on Couchville Pike parallel to the Nashville Airport. Metro Nashville Public Works chose to use FDR to fix the heavily-traveled 1.6 mile stretch of road as it contained well over 15% failure and was prone to daily semi-truck traffic. The

field demonstration was conducted by Roadworx, Inc. with cement provided by Buzzi Unicem USA. Collier Engineering designed the mix and performed all the testing, and Power Equipment provided transportation to and from the demo site.

Couchville Pike was a perfect candidate for a live demonstration as it was easy for the City of Nashville to set up a detour route and close both lanes of traffic. This allowed for the conference attendees to watch the operation safely.

The existing pavement and base were reclaimed to a depth of 8 inches using 38 pounds of Portland cement per square yard. The reclaimed base was designed to achieve 400 psi unconfined compressive strength in seven days. The job started on Monday and was finished on Friday. Due to rain, the project was delayed by a day, but the City of Nashville was able to begin paving using a double bituminous surface treatment on Friday.

"Considering the client's time constraints, FDR was the only logical option on Couchville Pike. This road is under a lot of pressure from not only high volume of traffic but over-sized loads too. Bringing in base stone and removing existing pavement would have only prolonged the job and been more expensive," said Road Worx Inc. President Barry Wilder.

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