The longevity of Full-Depth Reclamation with Cement (FDR) is being demonstrated in Georgia as the Georgia Department of Transportation (GDOT) marks the 14th anniversary of its first FDR pilot project constructed in July 2004. Moody Bridge Road (Long County) near Hinesville, Georgia was a typical rural route designed as a thoroughfare for low-volume local traffic. However, once the timber and farming industry began using it as a shortcut to the neighboring town of Ludowici, it began to deteriorate quickly. Long County officials requested assistance from the GDOT State Aid Office and an evaluation was conducted in August 2001. The initial recommendation was to completely remove the existing asphalt pavement and underlying sand-clay base and then reconstruct it with a graded aggregate base and conventional asphalt pavement. However, even with State Aid funding, Long County was unable to cover the remaining cost of construction so the project was tabled until 2004.

As the condition of the road continued to decline, the GDOT Office of Materials & Testing (OMAT) was asked for a less expensive alternate solution. Being familiar with FDR construction, OMAT, in partnership with the Southeast Cement Association, drafted a special provision and developed GDOT’s first FDR project in July 2004. The project included stabilizing 16,320 square yards of the in-situ pavement and underlying base with six-inch deep FDR (277 tons of cement). Numerous quality control and acceptance tests were performed during and after construction which all met specification requirements.

The final cost of the FDR alternate solution ended up 42% less than the estimated cost of conventional reconstruction. Follow-up testing was completed one year later and details of the pilot project were published in the 2006 Transportation Research Board’s (TRB) Transportation Research Record. Based on the success of the Moody Bridge Road project, GDOT continues to utilize FDR throughout Georgia and will soon be releasing a FDR Standard Specification, Section 315 Cement-Stabilized Reclaimed Base (CSRB).

Moody Bridge Road has been recently renamed to Smiley Cross Roads honoring the late Charles Jefferson “CJ” Smiley who was a long-time resident of Moody Bridge Road. He and his wife were GDOT retirees and highly esteemed members of the community. Having worked as an engineer for the GDOT Office of Materials & Testing, Smiley believed in innovation and was instrumental in encouraging Long County officials to try FDR.

Long County Commissioner Mike Riddle, whose district includes Smiley Cross Roads, said, “The project has held up really well over the last fourteen years. Smiley Cross Road is one of the major tie-ins for both Tattnall County and Liberty County to Long County. Also that area has been one of the many areas in our county where we have seen a lot of residential growth. When you take all of this into consideration and the amount of traffic that goes down that road, this road with FDR has performed very well.”

By:
Dwane Lewis
Soil Cement Specialist - Georgia
Southeast Cement Promotion Association