

Problem:

Cracking and
base failure

Success Story: Full Depth Reclamation

Solution:

Full depth
reclamation

In San Antonio, the Texas Department of Transportation (TxDOT) was faced with a stretch of pavement that was rutted with moderate cracking and base failures. A TxDOT Kerrville Area engineer described the patch of road on FM 3240 as “the worst eight miles of pavement that I have.”

TxDOT engineers decided to rebuild the road using a Full Depth Reclamation (FDR) process. Engineers chose to use an engineered emulsion (EE-1), provided by Ergon Asphalt & Emulsions, rather than cement, the more traditional choice.

Using emulsion in a Full Depth Reclamation is cost-effective over the roadway’s lifecycle and therefore became the logical choice. The flexibility provided by the asphalt would mean less cracking in the future and therefore less maintenance in the long run. At one point during the construction, the area experienced an unprecedented 13.5 inches of rain over two days. Other projects in the area using conventional materials were impassable and required reconstruction; however, the emulsion-treated sections held up perfectly and continued to provide a safe and durable surface for the public.

An additional benefit to using the EE-1 was realized in that the roadway could be opened to traffic the same day the treatment was applied rather than the 5-7 days generally required with conventional materials. Not only a clear advantage for the traveling public, it also allowed the project to be completed in a much shorter timeframe, which resulted in significant savings for the agency.

Since construction, FM 3240 has held up well, with the exception of a few isolated areas that required some very minor repairs. The project went on to win an award from the Asphalt Emulsion Manufacturers Association, which further supports the strength of the product and its reputation within the industry.

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