



Case Study

application Double Application of Chip Seal over TruPave® Engineered Paving Mat
location Dry Piney Road (CR 23-198), WY
product TruPave® Engineered Paving Mat

job owner
engineer
distributor
contractor

Sublette County, WY
Rio Verde Engineering, Pinedale, WY
Geotec Industrial Supply, Casper, WY
Lewis & Lewis, Inc.

TenCate™ develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

THE CHALLENGE

Part of the 2010 road improvement for Dry Piney Road in Sublette County, WY, consisted of widening, stabilizing and applying a chip seal surface treatment to the road base surface. A test section of the roadway was covered with TruPave® Engineered Paving Mat. TruPave® is a fiberglass polyester paving mat that delivers high tensile strength and creates a water barrier membrane when applied with a hot asphalt tack coat. Approximately 10% of the overall area was covered with TruPave® in order to obtain performance results under the chip seal surface treatment. Geotec Industrial Supply, a distributor of TruPave® Engineered Paving Mat in Casper, WY was the selected supplier and worked closely with Lewis & Lewis, contractors for the project construction.

THE DESIGN

In order to provide an improved riding surface, the Sublette, WY County Engineers included TruPave® Engineered Paving Mat. They wanted to observe the short and long term effects that the high tensile strength paving mat material would have on slowing down pavement deterioration by pavement cracking and moisture penetration issues. In addition, a control section was constructed without using TruPave® to compare short and long-term performance results.

THE CONSTRUCTION

The roadway was first widened and ditching re-established along the road alignment. The road was then chemically stabilized in place to contribute to the strength and durability of the pre-



Figure 1: Road base preparation.



Figure 2: First layer of stone applied to TruPave® Mat.

pared base, by making the granular material more dense and allowing the aggregate to bind together under compaction.

Once this work was completed, installation began on the TruPave® Paving Mat and chip seal surface. TruPave® Engineered Paving Mat is applied using a hot applied tack coat adding PG

64-22 asphalt to the surface at a rate of 0.25 gallons per square yard. This ensures complete mat saturation providing a water barrier along with the physical attributes of high tensile strength and flexural reinforcement to the roadway. In addition, the asphalt tack material did not “bleed” through the paving mat, avoiding pick-up by construction equipment tires. It is noted that if wrinkles occur during the lay down process, they should be cut and laid flat prior to the chip seal application to provide a smooth surface for the stone surface application.



Figure 3: PG 64-22 Asphalt tack coat applied.

Once the TruPave® material installation was complete, the first application of MC3000 emulsion was applied at a rate of 0.60 gal/sy. Then the first layer of chip stone was applied at a rate of 55 lbs./sy, compacted in-place.

The final step in the process is to apply the second application of emulsion and stone for the finished surface. The emulsion was applied at a rate of 0.80 gal/sy and the stone at a rate of 65 lbs/sy, then rolled in place.

THE PERFORMANCE

A small control section of the outbound lane (approximately 12' x 30') was not covered by TruPave® to show a comparison of performance of the chip seal surface treatment “with and without” the interlayer. The installation of TruPave® Engineered Paving Mat is a test in progress, as TenCate engineers look to expand the market application of TruPave® using alternative surface treatment applications, such as chip seals.



Figure 4: TruPave® installed over PG 64-22 tack application



Figure 5: Emulsion applied over TruPave® & first layering of stone applied

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