



Case Study – Milling asphalt in place to use as additional base material for new asphalt overlay (November, 2014)

(Union, MO) Cochran Engineering came to West Contracting for help with their existing asphalt parking lot. As one can see by the picture on the right, the lot was beyond simple repair and needed a complete reconstruction. Cochran wanted to remove the existing asphalt surface and then re-pave the existing base in mid-late 2014. Dave Laramore, project manager with West Contracting's Sullivan office, met with Cochran and gave them numerous options. One of these options was milling and pulverizing the existing asphalt in place, grading and compacting the crushed asphalt, and using this additional base material for the new asphalt surface.



Existing Parking Lot Prior to Milling (lots of spider cracking!)



Milling/Pulverizing Asphalt in Place

Cochran and West Contracting agreed this option was the most beneficial. The new asphalt surface would now have an additional two inches of 1" minus base material prior to the overlay and there was no cost to haul off material.

The first step was to pulverize the existing lot in place. This is completed by using a milling machine run at a slow speed, to insure the material is crushed to a 1" minus size. Shortly after the milling was completed, Dave Laramore had two grading machines on site to re-grade the lot to insure proper drainage, re-establish curb heights, as well as keep the job progressing as winter was approaching quickly approaching (Construction commenced December 8th & completed December 10th, 2014).

As the parking lot was being graded, West Contracting ran two vibratory, steel drum rollers over the material to compact it. After this compaction was complete, West proof rolled the base to see if any wet or soft spots existed. Luckily, there was only one minor soft spot due to wetness. Given the time of year, West dug down to good soil, and back filled the area with layers of clean rock in preparation of paving within the next few days.



Grading 1" minus pulverized material



Graded Lot before Paving

After the entire lot was pulverized, graded, and checked for proper compaction and drainage (left), it was finally ready to pave. Paving was set for December 10, 2014. The temperature was 28 degrees at West's Pacific asphalt plant at startup that morning. We decided to use Evotherm, a warm mix additive in the BP-1 surface asphalt mix.

Evotherm helps keep the asphalt warm for a longer period of time in cool weather and long hauls. The weather increased to approximately 42 degrees throughout the day. Dave Laramore placed extra men and trucks on the job to insure that there was plenty of help and hot asphalt on the job for it to turn out as planned. Even though the job was specified to be constructed late season, West and Cochran used best paving practices and completed construction in 3 days. The lot turned out as everyone had hoped and planned, perfect!

