SHOW-ME STATE

Asphalt NEWS

Fall 2010

Missouri Asphalt Pavement Association

MAPA Rewarding Experience for Executive Director, David Yates

Use the Highway Trust Fund to Pay Only for Highways

Stop, Look, & Register: Annual Conference & Equipment Exhibit

Missouri Contractor Exemplifies Environmental Excellence

This was the tag line of the September 2010 edition of Asphalt Pro magazine relating to an article about NB West Contracting Company (*www.nbwest.com*). The article highlights the environmentally sound paving practices that NB West utilized while building a project on Route 47 near Washington, MO. The project was also one of the first projects that the Missouri Department of Transportation has allowed the use of polymer modified asphalt and recycled asphalt shingles in the mix design. MoDOT has begun testing the mix in their lab to evaluate the properties of the asphalt mix using the Asphalt Mixture Performance Tester.

The surface mix on Route 47 was a SP125CLP with PG 70-22 which contained 5% recycled asphalt shingles and 10% RAP. The mix was designed by NB West to push the envelope on shingle usage in a Superpave mix containing PG 70-22 while meeting the less than 30% virgin binder replacement criteria established by MoDOT. The addition of a high percentage of shingles did seem to stiffen the mix and called for an increase in compactive effort. NB West utilized Evotherm 3G M1 Warm Mix Additive in the mix to offset the increased stiffness of the mix, allow for longer haul times, and allow paving early in the spring at night. The warm mix additive permitted NB West to reduce their mix production temperature by 60° Fahrenheit compared to a similar hot mix produced SP125CLP, which corresponds to approximately a 35% reduction in greenhouse gasses at the plant. The reduction in temperature allowed for less burner fuel to be used as well, even with the above average rainfall in the spring. Some of the reduction in burner fuel consumption stems from NB West paving their stockpile areas to allow their aggregate to drain. Providing dryer aggregates into the drum reduces the amount of burner fuel consumed to drive off any moisture in the aggregates, RAP, and shingles. Like many Missouri contractors, NB West uses #4 recycled fuel oil at its asphalt plants. The recycled fuel allows for a cost savings and increased BTU's over #2 diesel.

Overall the MoDOT project on Route 47 completed by NB West Contracting incorporated many "green" technologies to provide a cutting-edge Superpave asphalt pavement. The utilization of RAP and shingles with a polymer-modified PG 70-22 will allow MoDOT to study the performance of the pavement and develop future policy based on these findings. The incorporation of warm mix asphalt allowed the project to start earlier, reduced emissions at the plant and on the job site, and increased workability at lower temperatures. NB West has also incorporated many of the best practices outlined in NAPA publication "101 Ways to Reduce Cost and Increase Revenue" by paving their stockpile areas and utilizing recycled fuel oil. This project once again shows that Missouri is a leader in the technological advancement of the industry and resource sustainability.

Quotable QUOTES

"A man begins cutting his wisdom teeth the first time he bites off more than he can chew."
– *Herb Caen*

"The art of being wise is the art of knowing what to overwork." – *William James*