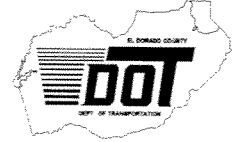




**COUNTY OF EL DORADO  
DEPARTMENT OF TRANSPORTATION**



**INTEROFFICE MEMORANDUM**

Date: March 25, 2009  
To: Gayle Erbe-Hamlin, Chief Administrative Officer  
From: Jim Ware, Director of Transportation  
**Subject: Purchase of Asphalt Milling Machine**

The Department of Transportation has been renting an asphalt milling machine for a period of four to eight weeks each year for the past nine years as an alternative to the saw cut and dig out method of performing asphalt repairs. Based on the positive results of using the asphalt milling machine, which includes greater efficiency, an improved product and reduced material and labor costs, the Department is proposing to purchase a machine at this time.

#### Efficiency

The asphalt milling machine is capable of removing 10,000 square feet of failed pavement at a depth of three to four inches in an eight hour shift. To accomplish the same task using the alternative practice of using a walk behind pavement saw and digging out with a backhoe would require between five and seven eight hour shifts. With the current cost of labor, equipment and fuel, the milling machine provides a cost effective alternative.

#### Better Product

Use of the milling machine provides a clean solid area for the paving machine to lay down a quality asphalt mat, The clean solid surface improves the smoothness of the asphalt and ride ability of the finished surface. Using the saw and dig out method produces an uneven bottom surface that requires a rock base material to be deposited and compacted to get an even surface similar to that produced by the milling machine. The need to add compacted rock adds another operator and piece of equipment to the operation. In addition, a motor grader is often used to replace the asphalt over a saw and dig out repair resulting in a rougher final product. Finally, the saw cutting and dig out method produces a slurry discharge that DOT staff will be required to vacuum up during and after the work is complete in order to comply with storm water runoff requirements. The Department of Transportation has received positive feedback from contractors and the general public regarding the workmanship and quality of the projects completed with the rental asphalt milling machine.

#### Recycling

With the saw cut and dig out method, the broken asphalt material is disposed of with an asphalt recycler. There is currently no fee for the disposal of the material on the West Slope, but a fee has been instituted in the Tahoe Basin. It is anticipated that fees will be

instituted and continue to increase for recycling of asphalt. The asphalt milling machine produces a useable by-product of finely sized ground asphalt material that is used for roadway shoulder repairs, back fills for road construction projects and is applied to the surface of over fifty miles of unpaved County roads. The amount of aggregate purchased by the County has been reduced over the years the Department has been renting an asphalt milling machine because the asphalt grindings are used in place of the aggregate.

The Department has spent over \$345,000 renting a milling machine over the last nine construction seasons. We calculate a ten year payback on the purchase of the milling machine compared to the rental cost. A marked increase in productivity will be realized if the equipment is owned and available for use throughout the year.