

HR-213 Improved Asphalt Surfaces & Resurfacing Performance Through Crack Maintenance

Key Words: Asphalt pavement, Crack maintenance, Crack cleaning, Crack sealing

ABSTRACT

In 1980, a Vanguard High Pressure Water Blaster capable of providing 10 gallons of water per minute at 2000 psi was purchased to evaluate water blasting as a crack cleaning method prior to crack filling on asphalt concrete pavements. After some initial trials demonstrated its effectiveness of removing dirt, debris and vegetation, it was included in joint and crack maintenance research on Iowa 7 in Webster County.

The objective of the research was to evaluate six crack preparation methods and seven "sealant" materials. The cleaning and sealing was performed in the spring of 1983. Visual evaluations of the performance were made in the fall of 1983 and spring of 1985. Compressed air and/or high pressure water did not adequately prepare cracks less than 3/8 inch wide. Routing or sawing was necessary to provide a sealant reservoir. The water blaster was more effective than compressed air in removing dirt, debris and vegetation but this did not yield significant improvement in sealant adhesion or longevity.

Periodic crack filling is necessary on ACC surfaces throughout the remaining life of the pavement.