

"Sprinkle Treatment of Asphalt Pavements"

Iowa's Experience in 1977

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for

presentation at

Association of Asphalt Paving Technologists

53rd Annual Technical Sessions

Symposium on Pavement Rehabilitation, Maintenance & Economics

Lake Buena Vista, Florida

February 14, 1978

The Iowa Department of Transportation formerly the Iowa State Highway Commission, made its first attempts at sprinkle treatment of fresh asphalt concrete in 1974 on portions of old U.S. 30 near the Boone-Story County Line after having the procedure presented to us at the annual meeting of the Association of Asphalt Paving Technologists at Oklahoma City in February, 1971.

Increased emphasis on skid resistant non-polishing highway surfaces and the monitoring thereof precipitated an in-house "Skid Review Committee" in late 1972. Since that time, increased emphasis in mix design of asphalt mixes and aggregate selection of durable non-polishing materials has generated costly restrictions on the use of local materials, even to the point of importing trap rock and/or quartzite from Minnesota, Wisconsin and South Dakota.

During the summer of 1975, with the cooperation of our Office

of Maintenance, a dual spinner, tail-gate spreader was mounted on a standard departmental dump truck to attempt additional sprinkle treatment on a section of Iowa 7 west of Ft. Dodge. The dump truck equipment was marginally satisfactory since the lug tires of the truck left marks in the finished pavement and the uneven distribution of chips caused depressions in the surface and non-uniform surface texture. Results of increased surface skid texture and durability were well demonstrated.

During 1976, after pleading for a better spreading unit, a new, current order, dump truck was modified with an auxiliary transmission and a set of slick surfaced tires. The dual spinner spreader was mounted to again attempt surface sprinkle treatment. Precoated chips were ordered onto a test section of U.S. 30 about 15 miles west of Cedar Rapids, but because of lateness of the season and unseasonably cold fall weather, the project was delayed until 1977.

The work that Iowa has attempted in 1977 is rather extensive and I would like to regress and follow through with a slide presentation showing the chronological activities of our department in 1977 in the area of sprinkle treating surfaces for better skid textures.