

## SUMMARY

Samples of both recycled and nonrecycled asphaltic concrete were extracted in increments by the Abson Recovery Method and the penetration of the asphalt from each increment determined. The recycled projects were plantsite operations containing various amounts of virgin gravel. Cored samples were taken from the pavements on Kossuth County roads that were constructed as recycled projects in 1975, 1976, and 1977. Also cored samples were taken from a Kossuth County paving project done in 1975, that was not recycled. Comparison mix samples from 1978 construction projects in Marshall and Woodbury Counties of non-recycled projects are included.

## CONCLUSION

The test data from the penetrations of the recovered asphalt indicates that mixing of the old and new asphalt occurs very extensively in the hot recycling process. In laboratory controlled conditions it is difficult to coat aggregates with different penetration asphalts and prevent them from mixing.

## INTRODUCTION

Recycling of asphalt concrete began in Iowa in 1975 with a project in Kossuth County. Recycling projects have continued in the same county during 1976, 1977, and 1978. Kossuth County has stockpiled 80,000 tons for recycling during 1979. During the 1975 project, 85-100 penetration asphalt was used as the additional binder. In 1976, it was 120-150 penetration asphalt and in 1977, 200-300 penetration was used. For the construction during 1978, the penetration was restricted to 250-300. The addition of softening agents was never tried because it was believed the use of higher penetration asphalts would accomplish the same results as the softening agents.

An obvious question arose as to whether the new asphalt added to the recycled material actually mixed with the old asphalt, which had a penetration of about 20, or whether the old asphalt resisted mixing and more or less acted as an extension of the aggregate.

Our approach for attempting to solve this problem was to use the Abson Recovery and remove the asphalt in increments.