

RAP Chip Seal

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A RAP chip seal test project was constructed in 2019 on ND 3 between Napoleon and Dawson. The RAP material came from a stockpile of micro-milled material. This material was in a stockpile for 2 years before it was processed to make RAP chips. The contractor screened the material through a power screen, which resulted in about 1 lb. of chips for every 5 lb. of material screened. A crushing operation would have been more efficient, but the cost of mobilization was too high for this small quantity of chips.

The contractor used a roller spreader to place the chips. Several application rates were tested, and we chose 0.32 Gal/SY of CRS2P oil and 21 lb./SY of RAP chips as our preferred application rate. A typical chip seal for NDDOT is 0.40 Gal/SY of CRS2P and 23 lb./SY of CI 43 Chips as application rates. That meant an oil savings of about 20% and a chip savings of about 10% using RAP.

Pros: Oil savings, utilizes recycled material, ease of application, equal performance

Cons: Processing the RAP chips, minor ride issues at overlaps

Conclusion:

- Use when RAP material is available.
- Viable alternative to Chip Seal



Screening the RAP Material



Placing the RAP Chips



RAP Chip Seal