

Performance of Chemically and Mechanically Stabilized Granular Road Test Sections in Four Iowa Counties

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Granular-surfaced roads routinely experience extensive damage during spring thawing due to the effects of water, frozen subgrade soils, and frost boils. To study the performance of several chemical and mechanical stabilization methods for granular roads under a range of Iowa climate and subgrade conditions, 31 test sections were constructed in four counties around Iowa. The construction and performance of the test sections was documented from fall 2018 through spring 2019, and will be monitored through another winter-spring cycle. During winter and early spring of 2019, a period of historic snowfall followed by rapidly warming temperatures resulted in extensive flooding and extreme damage to granular roads throughout Iowa. Most of the stabilized test sections were observed to perform much better than the control sections and nearby roads. Details are presented on the construction and performance of the field test sections, and insights gained during construction of the test sections are offered.

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