

# TECHNICAL REPORT TITLE PAGE

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MLR-90-4

**2. REPORT DATE**

September 1991

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**3. TITLE AND SUBTITLE**Permeability of Granular  
Subbase Materials**4. TYPE OF REPORT & PERIOD COVERED**

Interim Report, 7-91 to 9-91

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**7. ACKNOWLEDGEMENT OF COOPERATING ORGANIZATIONS**

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**8. ABSTRACT**

The purpose of this research was to evaluate the materials Iowa uses as a granular subbase and to determine if it provides adequate drainage.

Numerous laboratory and in-situ tests were conducted on the materials currently being used in Iowa. The following conclusions can be made based on the test results:

1. The crushed concrete that is used as a subbase material has a relatively low permeability compared to many other materials used by other states.
2. Further research and tests are needed to find the necessary parameters for crushed concrete to make sure it is providing its optimum drainage and preventing premature damage of the pavement.
3. We have definitely made improvements in drainage in the past few months, but there are many areas that we can improve on that will increase the permeability of this material and insure that the pavement system is safe from premature damage due to water.

The current gradation specification for granular subbase material at the start of this study was:

Sieve #	% Passing
1"	100
#8	10-35
#50	0-15
#200	0-6

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**9. KEY WORDS**Permeable base  
Granular subbase  
Drainage  
Drainable bases**10. NO. OF PAGES**

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**SUMMARY**

There has been many recent changes to improve the permeability of the material used as a granular subbase. We are on the right track for improving the pavement system and need to keep making improvements. Additional tests are needed to finish this research project. Most of the testing should be completed this winter and some additional test conducted next summer.