

**Structural improvements of flexible pavements using geosynthetics for base
course reinforcement
Quarterly Progress Report**

January 2005 – March 2005

Next report due: June 30, 2005

PURPOSE AND SCOPE:

This study will provide missing data required to help determine whether geosynthetic reinforcement is beneficial at conditions typically experienced in state highway construction. If the geogrid does provide benefit, the study will develop an AASHTO specification for geosynthetic reinforcement of the aggregate base course of flexible pavement structures. Furthermore, the results will be published in a format to conform with future modifications to the AASHTO Pavement Design Guide.

The objectives of this study are:

1. To determine whether and under what conditions geosynthetics (geogrids and geotextiles) increase the structural capacity of pavements typically constructed by state DOTs.
2. To determine whether and under what conditions geosynthetics increase the service life of pavements typically constructed by state DOTs.
3. To measure in-situ stress/strain response of the reinforced material for use in current or future pavement design processes.

ACCOMPLISHMENTS DURING THE QUARTER:

All instrumentation has been purchased, and is present on-site. Most of the subgrade, with instrumentation, has been constructed. The geogrid sheets have been cut to size, and strain gages are now adhered to the grid at selected locations. The final subgrade layer before placement of the base layer is being finish-graded. Dataloggers are now collecting hourly data from the thermocouples and moisture sensors that are already installed in the subgrade.

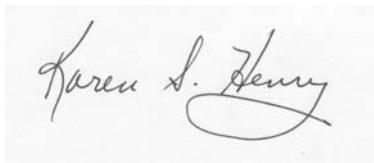
PROPOSED ACTIVITIES:

Finish wiring instrumentation. Place geogrid and base. Arrange for asphalt placement and testing of asphalt by Maine DOT. Test subgrade samples to determine resilient modulus.

UNRESOLVED OR NOTABLE ISSUES:

Respirators should be worn when working with the chemicals used to adhere strain gages to the geogrid and apply protective coating.

Respectfully submitted:

A handwritten signature in black ink, reading "Karen S. Henry". The signature is written in a cursive style with a large, stylized "H" and a long, sweeping underline.

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