



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



TECHNICAL SERVICES DIVISION
RESEARCH & DEVELOPMENT SECTION

DATE MAY 1993

EXPERIMENTAL CONSTRUCTION 92-34

FIELD TRIAL OF GRAVEL STABILIZATION METHODS
ROUTE 1 CYR-VAN BUREN, ME

1ST INTERIM REPORT

INTRODUCTION

This experimental construction project was developed, designed, and inspected by personnel from the University of Maine, Civil Engineering Staff. The experimental project was constructed on and as a part of Project #2586.00. This was a complete reconstruction project 2.2 miles in length. The experimental section contains 6 experimental base types and is 1020 feet in length. The 1020 foot experimental section began at Station 1028+00 and ended at Station 1038+20. The test section consisted of 200 foot segments of soil-cement, asphalt-stabilized, and calcium chloride-stabilized materials, as well as two control sections and one 20 foot untreated section. The stabilized and control sections were located as follows:

Soil-Cement Stabilized	STA 1028+00 to 1030+00
Modified Subbase Control	STA 1030+00 to 1032+00
Asphalt Stabilized Section	STA 1032+00 to 1034+00
Untreated Section	STA 1034+00 to 1034+20
Calcium Chloride Stab. Section	STA 1034+20 to 1036+20
Standard Subbase Control	STA 1036+20 to 1038+20

Work on this project started in September 1990 and was completed in the summer of 1991. A construction report "Experimental Construction 92-34" was written in Dec. 1991 which provided a background of stabilization agents, their uses, advantages and disadvantages. This report also provided preliminary design results as well as test results obtained during the construction phases. In addition to the test results a plan for long term monitoring was also included in Appendix G. Some of the features to be monitored are rutting, and serviceability such as roughness and overall performance. Strength measurements using a Road Rater was also suggested. Most of the evaluations can be performed with the ARAN vehicle and the Road Rater. Long term monitoring of the calcium chloride is specifically mentioned. For this phase they recommend that test pits be dug every 5 years in order to monitor the possible leaching away of the calcium chloride. A revised project monitoring schedule is shown at the end of the report in Table I.

RESULTS

This first Interim report also included initial data and results that were computed after the project and the construction report was completed. The Road Rater deflection data were taken at various stages during the