

GUIDELINES FOR SUBGRADE TREATMENT

Introduction

Many areas of the state, especially in Districts 6, 7 and along the Fall Line, contain predominately marginal or poor quality soils that must be used at subgrade due to lack of better available soils. To ensure a stable pavement system in these areas, the recommendations listed below should be made in the soil survey report to either provide a minimum thickness of graded aggregate base (GAB) or to stabilize the soils in place using lime or cement. Note that in most cases, the recommendation for minimum GAB thickness will only be required on projects in the Piedmont Region. When making recommendations for in-place stabilization, the following factors should be considered:

- Project length and type (minor widening vs. major realignment)
- Number and frequency of driveways, cross streets, etc.
- Urban area (dust issues) vs. rural or new location
- Type of soils- micaceous silts and sands or plastic clays
- Time (will project schedule allow for set-up of stabilization?)
- Amount of poor soils throughout the project

Soil Types and Recommendations

- Class IIB3 and better- No minimum GAB or stabilization needed.
- Class IIB4- Use a minimum of 8" GAB in mainline, minimum 6" in shoulder.
- Class IIIC1- Use a minimum of 8" - 10" GAB in mainline, minimum 6" in shoulder.
- Class IIIC2- Use a minimum of 10" - 12" GAB in mainline, minimum 6" in shoulder or stabilize with lime or cement.
- Class IIIC3- Do not use within 5 feet of subgrade, or stabilize with lime or cement.