

## Project:

### Long-Term Benefits of Stabilizing Highway Soil Subgrades with Chemical Admixtures

KTC 02-19/SPR 196-99-1F

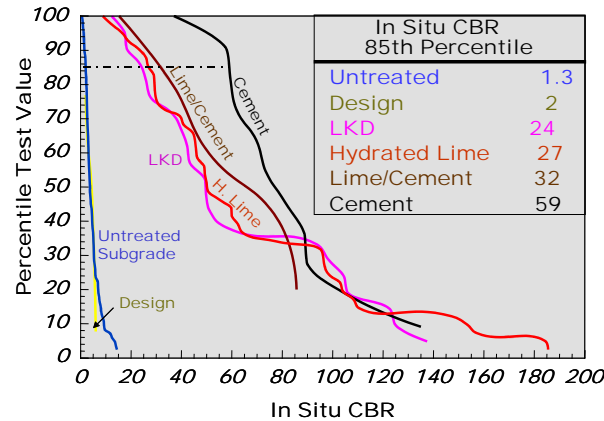
## Objectives:

The purpose of this study was to –

- Examine long-term benefits of stabilizing subgrades with chemical admixtures.
- Determine the long-term durability of chemically stabilized soil subgrades.
- Observe flexible pavement performance constructed on stabilized soil subgrades.



**For more information contact:**  
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## Results:

- Testing proved that stabilized subgrade strengths were much larger than non-stabilized subgrades after 7 to 30 years.
- Structural credit can be given to the stabilized subgrade as part of the pavement design.
- CBR strength of soil subgrades must be greater than 6 to prevent pavement failures during construction.
- Poor engineering properties of soils are vastly improved by chemical admixtures.



## Implementation:

- Stabilization of all newly constructed highway soil subgrades with a CBR value of 6, or less, is recommended by the Cabinet.
- Chemical subgrade stabilization is now a standard in highway pavement construction and is given structural credit in design.

## Benefits:

- Chemical stabilization is an economical means of improving the poor engineering strengths of Kentucky soils.
- Costly pavement failures during and after construction are prevented.
- Structural design credit is now given to stabilized subgrades which lowers cost.
- Longevity and subgrade strength durability are maintained for thirty years or more.
- Reduces soil subgrade swell that affects pavement performance and rideability.
- Cost benefit ratio of this research is greater than 20 and increases as more projects use chemical stabilization.