South Dakota DOT Foundations Lab
Geocomp Lab Systems Equipment

**Background & Project Challenges**

Faced with an increasing number of transportation projects and the increasing quality and complexity of state projects, SDDOT needed to upgrade its efficiency and technical capabilities.

With the State’s Foundations Lab conducting testing on projects such as retaining walls for new bridges, more advanced testing capabilities were required including some unconfined tests and direct shear tests.

To supply SDDOT’s Foundations Lab with timely and accurate geotechnical lab tests and test reports and to comply with state guidelines mandating comparative shopping based on quality, price and ease of use, Geocomp recommended three geotechnical testing units.

**Geocomp Role & Accomplishments**

The SDDOT Foundations Lab purchased two LoadTrac II machines and one ShearTrac unit from Geocomp. The Lab planned to use one LoadTrac II to conduct one-dimensional consolidation tests on undisturbed samples, and the second LoadTrac II to test the unconfined strength of soils, and the ShearTrac for direct shear testing to determine the shear parameters of soils. Having up-to-date soil testing equipment has made it easier for the Foundation Lab to meet increasing demand. The lab can now run two to three samples, increasing its automation and reliability.

The lab’s direct shear unit runs 24/7 without disruption.