



GESTRA ENGINEERING INC

Geotechnical Engineering -Highways & Bridges-

I-94 North South Corridor Widening

The I-94 north-south corridor, a 32 mile section of interstate in Kenosha, Racine and Milwaukee Counties, is being reconstructed. The project includes adding one lane in each direction, reconstructing the Mitchell Interchange and reconstructing most of the structures between the Mitchell Interchange and the state border with Illinois. GESTRA performed more than 800 borings for a total of over 40,000 lineal feet of drilling and monitoring well installation. In situ-testing included pressuremeter testing. Gestra Engineering also performed laboratory soil tests including moisture and organic content, gradation, unconfined compression, Atterberg limits, one dimensional consolidation and tri-axial tests.



135th Street Reconstruction

135th Street in the City of Lockport, Illinois, from New Avenue to Archer Avenue, was widened with new curb & gutters. The reconstructed section of 135th Street has been upgraded from a two lane to a four lane urban highway with a left turn median lane. Retaining walls have been constructed at several locations. GESTRA Engineering performed the field and laboratory soil testing and prepared the geotechnical engineering report.

Butterfield Road Widening, Lake County, IL

Butterfield Road in Lake County, Illinois, was widened with new curb & gutters. The total project length was about 10,250 feet. The reconstructed road has five lanes, including a center turn lane. Paved shoulders were added as an improvement from the existing condition. GESTRA Engineering performed the geotechnical drilling, laboratory testing of soil, and prepared the geotechnical engineering report.



I-43 Bridge Projects, Milwaukee, WI

Proposed improvements at Good Hope Road and Brown Deer Road bridges over I-43 in Milwaukee County, Wisconsin include reconstructing the existing bridges with longer spans to accommodate additional lanes to I-43. Mechanically stabilized earth (MSE) walls will wrap around the new bridge abutments. GESTRA Engineering performed the field and laboratory testing of soil and prepared the geotechnical engineering report following the Load and Resistance Factor Design (LRFD) method.

Humboldt Avenue Bridge, Milwaukee, WI

The Humboldt Avenue Bridges over the Milwaukee River and Riverboat Road in the City of Milwaukee, are being reconstructed. The project also includes several MSE walls to be constructed between the two bridges. Due to existing old foundations, cobbles and unsuitable fill materials, a deep foundation system using micro piles has been considered for the bridge over the Milwaukee River. The bridge over Riverboat Road will be supported on a caisson foundation system. GESTRA Engineering performed the field and laboratory testing of soil, pressuremeter tests, micro pile and caisson design review, and external stability analysis for the MSE walls.



Geotechnical – Structural – Pavement – Construction Materials

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