



LOWE'S
Home Improvement Warehouse



*Geotechnical Engineering &
Phase I Investigation*

The project focused on a site evaluation for a proposed home improvement warehouse in Murray, Ky. Initially, preliminary geotechnical and environmental assessments were performed for a site located northeast of the eventual building location. That property was found to be adversely affected by its proximity to an old waste dump and by the condition of fill placed on that site during the relocation of Bee Creek. The creek channel had been moved to the edge of the property a few years prior to our investigation. Subsequently, another nearby site was identified, and the 115,000 square feet Lowe's Store was eventually sited on that roughly 16-acre tract of undeveloped property that had been partly graded prior to our involvement. The topography involved as much as 25 feet of relief and the site was generally well-drained.

For the Phase I environmental assessment, the standard scope of work was modified to accommodate Lowe's specific requirements, and our personnel performed field reconnaissance and document research in an effort to identify *recognized environmental conditions*. Some minor dumping of solid waste was noted and was resolved by the property owner.

Clearing of the land had exposed the underlying sandy soils that were derived from Quaternary aged alluvial and loess deposits. Soil borings were extended to depths of 30 feet and encountered stiff to hard intervals of silty clay and dense to very dense sand that contained rounded quartz pebbles. Site grading was relatively straight forward and the recommended foundation design consisted of spread footings proportioned to apply unit loads not exceeding 3.5 KSF when contacting either the stable natural soil or engineered fill.

Construction Cost (est): \$5 million

**Owner: Lowe's Companies, Inc.
Location: Murray, Kentucky**



Alternate sites were investigated for the presence of recognized environmental conditions, wetlands and geotechnical factors. Exploration of Site 1 focused on the evaluation of the quality and composition of the existing site fill. Discovery of a random fill zone in the vicinity of the original creek alignment resulted in the subsequent evaluation of a second site.

