



PROBLEM

The Ontario Ministry of Transportation is planning to upgrade and reconstruct Highway 69 northward from the existing four lane Highway 400 north of Port Severn, to Highway 637, approximately 50 km south of Sudbury. To prepare for the work, the Ministry required the visual inspection and reassessment of all sand, gravel, and bedrock sources recorded in their filing system. The Ministry also required a preliminary survey of bedrock aggregate potential to identify rock units potentially capable of producing aggregates for road construction.

APPROACH

The available pit and quarry data contained in the Ministry files were compiled in preparation for the field program. Ministry staff, the Ontario Geological Survey, the Geological Survey of Canada, and several universities were consulted. The objective of the field program, which involved site visits and visual resource assessment, was to verify and update the existing information. The field work was subdivided into a granular survey and a bedrock survey. The granular survey examined 450 sand and gravel source locations, and the resulting information base included pit dimensions and face heights, granular material descriptions, site access, and recent activity. The bedrock survey examined 19 quarry sites, and 134 selected bedrock outcrops. The bedrock resource information base included rock type, texture, mineralogy, variations, structure, exposure dimension, uniformity, and site access.

RESULTS

The study concluded that few areas contain sufficient resources of sand and gravel, and that bedrock sources will be required to meet construction requirements. Selected sand and gravel plus bedrock sources were recommended for detailed investigation. Approximately 600 site files were updated, or created, with detailed visual observations and photographs.