



## PROBLEM

The Ontario Ministry of Transportation is planning for the future needs of road construction on Highway 11 between North Bay and the Regional Boundary west of Hearst. All known sources of sand, gravel and bedrock recorded in the Ministry filing system were required to be visually inspected and reassessed. In addition, a preliminary survey of the bedrock was required to identify rock units potentially capable of producing aggregates for road construction.

## APPROACH

The available pit and quarry data contained in the Ministry files was collected and consultations with Ministry staff were completed in preparation for the field program. A visual reconnaissance of all bedrock exposures and more than 1000 sand and gravel sources in the highway corridor was completed. Detailed visual assessments were completed for approximately 165 bedrock sites, including quarry sites and mine development rock storage sites, and all sand and gravel sites. The assessments included documentation of location, rock or deposit type and characteristics, exposure, estimated quantity, and sterilizing factors. Photographs and reference samples were taken. Laboratory testing of selected samples was completed to assess the physical properties of the surficial and bedrock materials, and the suitability for use on highway construction projects. The survey results were input into a GIS database (Arcview) to mesh with MTO's existing digital files. The database will provide rapid access to the information and allow detailed source maps of the project area to be generated.

## RESULTS

A summary report was submitted, providing a review of both the sand and gravel, and the bedrock resources of the study area. Approximately 1200 MTO site files were updated with detailed visual observations and photographs. The report concluded that there are significant resources in parts of the study area. In other areas, resources are limited, or restricted by cultural development, private ownership, or access. The bedrock is a potentially available alternative source for aggregate, and several potential sites were identified for further evaluation.