

# AGGREGATE RESOURCE ASSESSMENT

## PROBLEM

The Ontario Ministry of Transportation had proposed to resurface Highway 66 between Larder Lake and the Quebec border and to repair other roads in the area. In order to complete the work, the Ministry required the identification and verification of approximately 350,000 tonnes of gravel and sand within an economic haul distance of the projects.

## APPROACH

The phased study involved target area identification, detailed aggregate investigation, laboratory testing, analysis and reporting. For the first step, regional maps and Ministry file data in conjunction with the stereoscopic interpretation of aerial photographs were used to identify potential resources. These areas were field checked and prioritized for detailed investigations. Three areas were investigated. For each area, up to 32 backhoe test pits were excavated, and soil samples obtained, photographs taken, and terrain conditions sketched using a transit station survey. Soil samples were tested for grain size, petrographic number, magnesium sulphate soundness, and absorption.



## ANALYSIS

For each pit, aggregate was assessed for compliance with Ministry of Transportation standards for Granular A, Granular B- Type 1, HL2 and HL4 fine and coarse aggregate. The distribution and quantity of reserves of each product were then determined.

## RESULTS

Within the three pits investigated, there were adequate reserves of sand and gravel to complete the proposed construction. Additional unconfirmed reserves were likely available in other deposits near the projects if needed.