

Case Study - Road Base over Peat - Rural Road

Dixie Road – August 2009 Region of Peel, Caledon, Ontario, Canada

Problem: A 120 metre section of rural highway built over 5 metres of peat had experienced ongoing settlement for a number of years. The remediation required a solution that would minimize environmental impacts on the adjoining wetlands. Traditional re-construction would require extensive sheet piling, total removal of the peat, dewatering, and replacement of peat with a large volume of competent material.

Solution: CEMATRIX CMEF-475 engineered fill with a wet cast density of 475 kg/m³ was produced and placed onsite with one of the CEMATRIX dry-mix production units. These high-volume, automated, production units are capable of producing up to 120 m³/hour of cellular concrete at the required density. A 650 mm layer of cellular concrete was placed on the prepared sub grade, followed by 150 mm of aggregate, and then 125 mm of asphaltic concrete.

Advantages: The CEMATRIX solution reduced the total excavation to 925 mm versus removal of 5 metres of peat. Sheet piling and dewatering were not required. This section of Dixie Road was closed for just over one week, compared to traditional re-construction methods that would require road closure of 3 to 4 weeks.

This application was an extremely cost effective solution, as well as showcasing the time savings, lessened construction traffic to and from the site, and reduced inconvenience to the public, that are possible with the use of cellular concrete.

