

Case Study - Road Base over Peat – Urban Road

View & Vancouver Streets – November 2007 – February 2008 City of Victoria, British Columbia, Canada

Problem: The intersection of the City of Victoria's View and Vancouver streets was experiencing major differential settlement, due to excessive decay and consolidation of the underlying peat. The road sections had been rebuilt several times earlier, but with limited, or no success. Removal and replacement of the peat in this downtown site was impractical and too costly. Minimum intrusion and interruption to residents and businesses in the area was also of prime importance.

Solution: CEMATRIX was asked to provide a material structurally equivalent to a 1 metre thick rock-slab, but with a material that would significantly lessen the loading over the peat.

CEMATRIX CMEF-475 cellular concrete with a wet cast density of 475 kg/m³ was produced and placed onsite, utilizing a CEMATRIX wet-mix production unit. A 500 mm layer of cellular concrete was placed on the prepared sub grade. Tensar BX1100 was also placed between lifts of cellular concrete, followed by 150 mm of aggregate, and then 75 mm of asphaltic concrete. Loading was reduced by a factor of 5.

Advantages: The CEMATRIX solution provided a monolithic, lightweight mass of engineered fill to minimize the loading on the peat, and provide a structural component to the total road structure. Construction traffic to and from this congested site was lessened substantially, compared to traditional re-construction methodology. Substantial time and cost savings were realized.

