



PROJECT: Cobham Avenue Reconstruction

LOCATION: Cranbrook, BC

OWNER: City of Cranbrook

CIVIL ENGINEER: Urban Systems

GEOTECHNICAL ENGINEER: Vast Resources

INSTALLATION DATE: October 2018

PROJECT DETAILS

Cobham Avenue is one of Cranbrook's primary industrial roadways. A wide variety of industrial, commercial and residential vehicles use the road on a routine basis. Having been in use well beyond its intended design life, the pavement was showing signs of major distress such as potholes, alligator cracking and rutting. The primary purpose of this project was to provide approximately 1.5km of new paved road surface capable of bearing the anticipated volume of heavy traffic as well as address routine storm water and drainage issues. The City's priority was to deliver the project in the most cost effective and efficient manner to ensure minimal impact to residents and businesses.

Tensor® Biaxial (BX) Geogrids were the world's first commercially available geogrid. Through ongoing investment, product development and innovation, Tensor has successfully re-engineered the geogrid structure; creating a revolutionary new TriAx® Geogrid. The predominant historical use of geosynthetics in roadways has been for the purpose of stabilizing unsuitable subgrade conditions. However, because of the way geogrid works to confine aggregate and mitigate its lateral spreading under load, there are significant benefits to its use even when subgrade conditions are good. A mechanically stabilized aggregate layer has increased initial and long-term stiffness compared to a conventional unbound aggregate layer. The resulting performance improvement can be used by the designer to dramatically increase the design life and/or optimize the thickness of pavement components thereby reducing the upfront costs of construction.



PRODUCT

TriAx® TX5 Geogrid
17,200 M2



COST SAVINGS

\$167,000



TIME SAVINGS

2 weeks

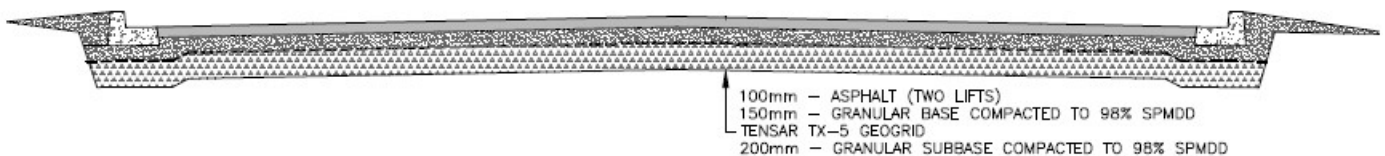
IN PARTNERSHIP WITH:



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In the case of the Cobham Avenue project, a geotechnical investigation revealed the subgrade soils were hard and consisted of gravel, sand and some silt. Standard Penetration Test (SPT) blow counts were used to estimate a subgrade strength of 8% CBR (California Bearing Ratio). Tensor was engaged by the project geotechnical engineer to provide comparative AASHTO (1993) analyses of The City's standard pavement design versus a geogrid stabilized approach. After looking at several options, the chosen solution incorporated Tensor TriAx® TX5 geogrid between the crushed gravel subbase and the crushed gravel base. Using a conventional unstabilized approach would have required an additional 190mm of subbase gravel. Not only was less import gravel required, a thinner pavement structure also meant less excavation and removal of the existing road. As a result, fewer haul trucks were required, improving safety of the surrounding community, reducing environmental impact, and reducing damage to existing roads leading to the project site. Furthermore, constructing a TriAx® stabilized pavement structure took less time to build and cost less money. So, even with good soil conditions Tensor geogrid proved to be a valuable solution. As the infrastructure deficit in North America continues to increase why not consider TriAx® for every road construction project?



Completed road

