

Regional Road

Year of Construction: 2022
 Location: Niagara Falls, ON
 Product Installed: 270R + TX7
 System: Pavement Optimization

CASE STUDY

CHALLENGE

Due to the unsuitable ground conditions, “subgrade values were very low CBR = 1.4% =N value= 7 - 8 =14.5 mPa” for a regional road design with more than 1 million ESALs, 85% reliability and 25 years lifetime. Terrafix provided a complementary technical services and Value Engineering design.

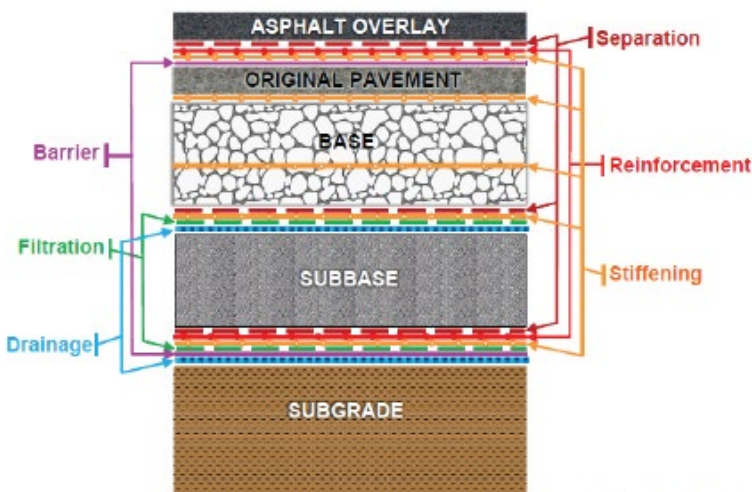
SOLUTION

A multi-layer system approach was required to meet the design criterias and address the site challenges. The improvement for the first layer, increased the subgrade resilient modulus up to 62 MPa.

The second layer enhanced the load distribution, eliminated aggregate rotation and movement. All those benefits were transferred into the structure.

Third layer was placed in a small section that was required for an existing utility. By incorporating geogrid, the end user was able to achieve a lifetime of 25 years instead of the 20 years original design.

Geosynthetic Functions in Roadways



Source: Zornberg (2017a)

