

Commander Park Arena Parking Lot

Year of Construction: 2021

Location: Scarborough, ON

Product Installed: High Modulus Woven THM-3800

CASE STUDY

CHALLENGE

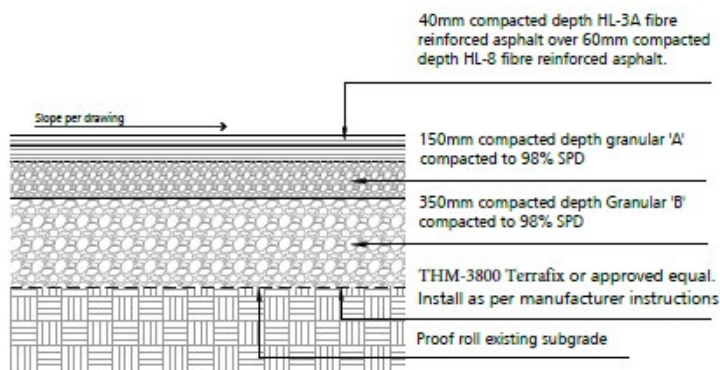
The site had soft soils (18.6 MPa resilient modulus) in the heavy-duty asphalt parking lot which required 800mm-700mm excavation recommendation in the Geo-technical report.

This parking lot has suffered multiple rehabilitation and repairs due to the heavy traffic and some drainage issues. If the specified pavement section was built over this subgrade, the calculated drop in performance would be 50% compared to building the section over a competent subgrade. Excavation and removal of the soft soil were considered too expensive and time-consuming. The engineer contacted Terrafix for technical support and solutions using Geosynthetics.

SOLUTION

Our High Modulus Woven provided the extra strength and support to reduce the sub-base layer and accommodate a more optimal cross-section with the required bearing capacity at the base course for a heavy-duty parking lot. On the other hand, Digging out the soft soil and replacing it with an additional aggregate layer would increase the cost significantly with an extra 2 ft or 600 mm of engineered fill/crush stone. Terrafix designed a solution with THM-3800 underneath that worked without any additional undercut from the original design.

SPECIAL NOTE



- Savings 15 - 20% compared to original design
- Avoid full depth excavation (2m)
- Extend the lifetime/traffic requirements

