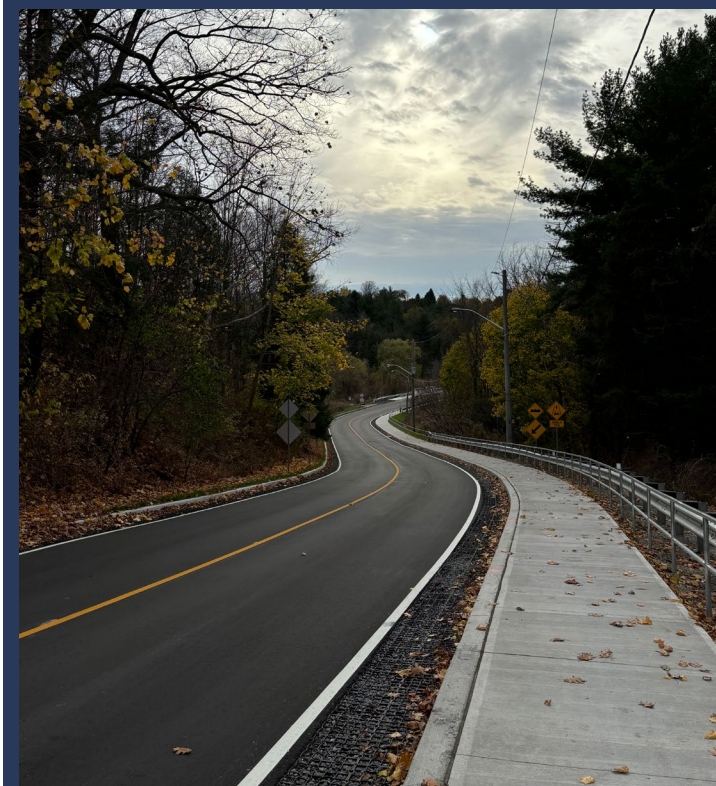
Infiltration Trench For Road Reconstruction

Year of Construction: 2022
Location: Toronto, ON
Product Installed: Ecoraster E50
System:Stormwater Management

CASE STUDY



CHALLENGE

An 800m stretch of a reconstructed two-way municipal road required an infiltration trench on both sides to manage stormwater, in compliance with the City of Toronto and Conservation Authority guidelines. This trench was essential to prevent erosion and control runoff effectively.

SOLUTION

Gravel filled Ecoraster E50 permeable pavement was selected and installed to address these requirements.

SPECIAL NOTE

Ecoraster E50 bordered both sides of the newly constructed road, positioned between the curb and sidewalk on one side, and along the edge of the pavement on the other. Each piece of E50 measures 0.33m x 0.33m x 0.05m in depth and the pieces were connected to create a continuous 0.66m wide strip. The trench's base consisted of ¾" clear angular stone. The same gravel was used as the infill material within the E50. The entire infiltration gallery was wrapped in non-woven geotextile for enhanced filtration and separation.

Ecoraster E50 was selected for its high permeability and effective capacity to contain infill material, ensuring the system met the project's stormwater management needs. With a load rating of 800 tonnes per square metre, Ecoraster E50 provides the durability required to support heavy vehicle loads, making it ideal for use in an infiltration trench beside a busy road. Its modular design further facilitated a quick installation process, allowing the system to be customized to fit the project's specific dimensional requirements.

Designed to withstand harsh environmental conditions, Ecoraster is well-suited for cold climates, with resilience against UV exposure and aggressive solvents. Its adaptability is critical in urban areas like Toronto, where seasonal variations necessitate robust infrastructure that can endure snow plowing. Ecoraster promotes sustainable practices as it is manufactured from recycled LDPE. It supported the project goals by minimizing surface runoff and encouraging groundwater recharge.