Back-to-back MSE system maximizes Landfill capacity and extends its life.

LOCATION: Campbell River, British Columbia
PRODUCT: SierraScape® & Sierra Slope®
PROJECT PARTNERS:
Owner
Comox Valley Regional District
Consultant
exp
SCS Engineers
Lewkowich Engineering Associates Ltd.
Contractor
Jacob Bros Construction
Completion Date
Summer, 2014

The Campbell River Landfill on Vancouver Island, the only landfill in the region, was nearing its maximum capacity, as it waits for a nearby landfill to begin construction in 2017. In need of a solution to extend the life of the Campbell River Landfill for an additional three years, Nilex was brought in to help design a berm that would provide additional landfill capacity.

Challenge
Nilex’s main challenge was trying to maximize the amount of additional capacity for the landfill within the landfill boundaries, while providing an aesthetically pleasing wall adjacent to Argonaut Road.

Solution
Nilex designed back to back Mechanically Stabilized Earth (MSE) structures using a Sierra Slope® Retention System (a vegetated reinforced slope) and a SierraScape® Retaining Wall System (a vertical wire-form wall). The front-facing vegetated slope faced the existing paved roadway, and the vertical wall was placed behind it to allow for maximum volumes of waste material to be pushed against it. With the help of Tensar and Lewkowich Engineering, Nilex provided stamped engineered construction drawings for this project.
Installation

Nilex conducted pre-construction and start-up meetings with the contractor, allowing the contractor to build the wall efficiently and meet their production rates. The total wall system measured 13 meters in height and 180 meters in length. The Sierra Slope reinforced soil slope (RSS) solutions significantly reduce materials and installation costs by eliminating costly concrete facing material, minimizing fill requirements and allowing the use of on-site fills.

Results

Technically speaking, back to back walls are difficult to design and build. Nilex’s Sierra Slope and SierraScape MSE solutions met the technical needs of the project, and were also a cost effective choice that provided an aesthetically pleasing green wall along the adjacent road.

The Nilex Advantage

Nilex is committed to unearthing better results. Whether it’s for a civil, resource or environmental project, we offer the latest engineered and technically superior materials and techniques to save our customers time and money, and minimize the need to move or remove earth, and reduce the need for granular materials.

With over 35 years experience, a long-standing commitment to the environment and highly qualified staff, Nilex delivers the products and technologies that give clients an economic advantage with environmental benefit.