



The Flexible Solution

How can costly form work, reinforcing steel, and expansion joints be eliminated when lining channels with concrete?

...with Presto's Geoweb® cellular confinement system.

The Geoweb system provides a permanent but flexible concrete form which functions as a series of expansion joints. The cellular system flexes and conforms to changes in slope and grade as well as subgrade irregularities. The result is a more natural looking channel liner. The Geoweb system effectively confines concrete, controls cracking and is the cost effective alternative to other lining systems.

In 1986, the A.G. Simpson Inc. plant in Ontario Canada required a concrete lined channel for storm water containment and runoff. The original design called for a formed 152.4 mm (6") deep reinforced concrete liner on the 300.5 meter (1,000 foot) long

section of channel. The side slopes were 1:1 to 3:1 and peak flow velocities were projected to be 3.5 meters (11-12 feet) per second.

The installation began with placement of a non-woven geotextile down the channel side slopes and across the bottom. The geotextile was then toed in 304.8 mm (12") along the top of the channel slope. Geoweb sections were placed over the geotextile and the top row of cells were staked with 381 mm (15") long steel pins at approximately 0.9 m (3') on center to secure each section prior to filling with concrete.

A 4,000 psi concrete was poured into the upper cells and the overfill was raked into the lower cells. Designated cells in the bottom of the channel were filled with clear stone, instead of concrete, to provide drainage for groundwater collected by the underlying geotextile. The concrete liner was finished with a rough raked surface.



Concrete was poured into the upper Geoweb cells and raked into lower cells.



A four man crew placed 1486 square meters of concrete per day.



Finished concrete Geoweb channel liner.

The 2,800 square meter (30,000 square foot) by 102 mm (4") depth concrete pour was completed in two days with a four man crew. Total time, from start to completion, was eight days for the 300 meter (1,000 foot) channel liner; half the projected time and cost of a traditional formed and poured concrete channel liner.

Years later, the system continues to function as originally designed and installed. No maintenance has taken place and no maintenance is projected in the future.

The Geoweb system is the cost effective solution for channel linings.



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