

GEOWEB®

DRAINAGE DITCH STABILIZATION

PROJECT ENGINEER:
Bussen-Mayer Engineering
Group, Inc.

CONTRACTOR:
Maschi Corporation

OWNER:
Brevard County, Florida

MATERIAL SUPPLIER:
R.H. Moore & Associates
Tampa, Florida



LAKE DRIVE DRAINAGE

Cocoa, Florida



ROADWAY STORMWATER CHANNEL PROTECTION

GEOWEB tiered channels offer design flexibility. They are highly adaptable to varying infill types, landscape contours, curves, and obstructions. Select vegetation can be applied, or aggregate or concrete for hard-armor protection where required.

VEGETATED CHANNELS SHORE UP EMBANKMENTS; MITIGATE DRAINAGE-RELATED FLOODING.

Chronic drainage issues along a Florida roadway were alleviated by incorporating naturally-vegetated channels to prevent erosion, allow for higher stormwater volume and eliminate potential for flooding.

THE PROBLEM

Lake Drive located in the West Cocoa area of Brevard County, Florida experienced chronic drainage issues that lead to flooding. Engineers Bussen-Mayer Engineering Group, Inc. approached stormwater/erosion control specialists R.H. Moore & Associates for erosion control ideas for a newly planned channel. The channel design consisted of box culverts as well as some open areas to allow for more volume to help alleviate the flooding potential.

NATURALLY-VEGETATED CHANNEL SOLUTION

Various options were considered including gabions, articulating concrete block mats, fabric-formed concrete, and the GEOWEB tiered channel system. The project required erosion protection—but natural aesthetics were also desired. Ultimately, the GEOWEB channel system was the chosen solution to meet both needs.

GEOWEB®

DRAINAGE DITCH STABILIZATION



GEOWEB Channel System

The GEOWEB channel system consisted of Mirafi 2XT reinforcing geogrid and 15,000 face sq ft of GEOWEB green-fascia wall panels. The installation was completed in six months by Masci Corporation.

How GEOWEB Tiered Channel Systems Work

Multi-layered GEOWEB channels can be designed with steep banks and small horizontal footprints to allow for flood storage. GEOWEB channels withstand high flows for short durations while allowing natural vegetation—unlike hard armoring solutions such as gabions or concrete.

- The flexible nature of GEOWEB channels allows them to tolerate reasonable differential settlement without loss of integrity—resulting in high performance even in soft-soil environments.
- Concrete or grout infill in the outer cells may be designed when heavier flows are expected for greater resistance to higher flows and shear stresses.



**Dense Vegetation
4 years after installation**

GEOWEB CHANNEL PERFORMANCE

More than four years after the installation in late 2012, the channel system is performing as intended—protecting the channel side slopes from erosion that previously limited stormwater volume and contributed to flooding while providing the desired natural vegetation.

With the drainage project completed, the flooding problems on Lake Drive have been eliminated.

Ideas that will
work for your
Project?



**Request a FREE
Project Evaluation**