

GEOWEB®

Track Stabilization at High Impact Transition Zones FLORIDA EAST COAST RAILWAY (FEC)



"Estimated time to install the GEOWEB system was minimal. Since the location was pumping, we had to excavate and grade the sub base lower than normal. For this particular location, we completed the sub base preparation and installation of the GEOWEB material in approximately three hours. If hot mix asphalt had been used for the sub base, in proper lifts and thicknesses, it would have been an all-day process and at least twice as expensive. We would have required pavers, and additional compaction equipment."

-Houston Spears, P.E., Project Manager,
Gonzales & Sons Equipment, Inc.



PROJECT OVERVIEW

Florida East Coast Railway (FEC) headquartered in Jacksonville, Florida operates 351 miles of mainline track along Florida's east coast. FEC is the exclusive rail provider to South Florida's ports and connects with other railway systems to move freight around the country.

A portion of FEC's track along Griffin Road in Fort Lauderdale had been a high maintenance area for many years due to high impact loads from rail cars transitioning off of a concrete bridge abutment onto ballasted concrete ties placed over soft sub grade with a history of pumping. **FEC required a solution to eliminate the maintenance area due to pumping of the soft sub grade.**

GEOWEB® TRACK STABILIZATION SYSTEM

The GEOWEB system was selected by FEC based on 30 years of rail industry use and independent testing conducted in 1998 at AAR FAST High Tonnage Loop in Pueblo, CO. The testing examined soft sub grade solutions for tracks subjected to heavy loads and determined that the GEOWEB load support system significantly improves load distribution, therefore reducing the vertical stresses reaching the sub grade. The system's three-dimensional structure performs like a semi-rigid slab.

The end result is a more durable sub grade that increases railway life by preventing long term settlement and consolidation. The ability to quickly install GEOWEB panels and limit the track downtime was critical in maintaining operations.

"FEC installed the GEOWEB system on the south end of the western track extending from the bridge approach through the heavily travelled grade crossing. The area with the GEOWEB system has been subjected to 25 MGT this year with no deflection. The other end of the bridge without the GEOWEB system has settled over 2 inches and has been resurfaced twice."

- Charles Stone, Asst. Chief Engineer Design and Construction, FEC



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