Scour Repair
Product: Gabions & Reno Mattresses

Problem
The Wilson County, Texas area is geologically characterized by sandy clay soils, which are highly susceptible to erosion. Un-vegetated soil is more susceptible to erosion and is common under bridges due to the high heat, lack of sunlight, and sparse rain. When creeks do collect water, there is an impact on bridge abutments, banks and foundations.

The Gunn Branch bridge crossing under US 87 was one of the most impacted by soil erosion. Analysis collected by the Texas Department of Transportation concluded that a design using gabions and Reno Mattresses would be the best solution in preventing a soil erosion problem.

Solution
The Texas Department of Transportation has taken preventative measures to armor and protect bridge supports and structures.

In the case of the Gunn Branch bridge crossing, the most efficient, cost effective, and environmentally sound solution was to install gabions and Reno Mattresses. Their flexibility and strength perfectly accommodate eventual scours or settlements. Additionally, their permeability promotes re-vegetation and offers an ideal solution in terms of flow shear stress and flow velocity reduction.
Client
TEXAS DEPARTMENT OF TRANSPORTATION

Main Contractor
REVEGETATION SERVICES

Designer
TEXAS DEPARTMENT OF TRANSPORTATION

Products Used
MACCAFERRI GABIONS 12’ X 3’ X 3’ AND RENO MATTRESSES 12’ X 6’ X 1’ GALVANIZED

Date of Construction
JUNE 2012