

**MOSCOSO BRIDGE
PUERTO RICO
APRIL 2001**



Moscoso Bridge with wraps installed. Toll station end showing density of piles under toll plaza and private access ramp.



Moscoso Bridge with wraps installed Aeropuerto/San Jose end showing Isle Verde mangroves.



Moscoso Bridge 1.6 miles dual expressway (405) 42" piles



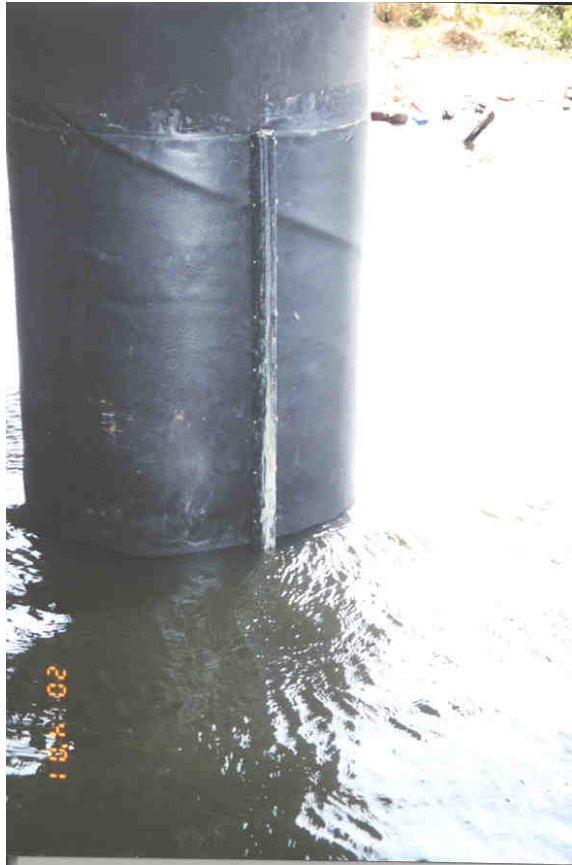
Factory fitted $\frac{1}{2}$ " 316L lag fasteners being driven by impact wrench. Note closure calipers that are used in place of draw bolts.



Diver removing line up rod prior to driving lag fasteners



Closure flange showing excess gel exuding after final closure due to residual hoop tension created within wrap fabric.



Wrap installation complete. Note spiral weld on pipe pile clearly visible through wrap jacket.



Installed Retrowrap showing closure flange with fasteners fully installed. Also shown is product name and client identification information.



Corrosion rate (weight loss). Sample being fitted under wrap prior to closure. Sample to be removed after 1, 3, and 5 years service to determine corrosion rate. (See formula below).

Coupon Corrosion Rate Analysis

Basic Calculations

Test coupons removed after the 6 month exposure period were descaled and then analyzed by visual examination and corrosion weight loss measurements. The difference in coupon weight (if any) after the 6 month period was converted to an average corrosion rate using Faraday's Law and the follow generalized formula (1):

$$\text{Corrosion Rate (mils per year)} = \frac{C \times \Delta \text{ Weight}}{\text{Area} \times \Delta \text{ Time}}$$

Where :

C = 2,820, a correction factor based on the density of carbon steel (7.86 gms/sq. cm.) and the particular units of weight, time, and area used in the calculation.