



## Redwood Drive Slide Repair County of Santa Cruz, California

### Civil and Structural Engineering



#### Client Reference:

County of Santa Cruz,  
Public Works Department  
701 Ocean Street, Room 410  
Santa Cruz, CA 95060  
(831) 454-2160

**Budget:** \$250,000

A large rain event in the winter of 2005 caused a slide adjacent to 1959 Redwood Drive in County Service Area (CSA) #33, located in the hills above Aptos in Santa Cruz County. The slide undermined approximately 40ft of road shoulder and left an 8-ft high near-vertical scarp adjacent to the roadway.

Mesiti-Miller Engineering was chosen by the County of Santa Cruz to design repairs for the damaged roadway and stabilize the adjacent slope. By constructing a soldier pier tied-back retaining wall below the roadway along the length of the damaged area, our design was able to repair the road shoulder at minimum cost. Soldier piers were steel beams encased in concrete piers with wood lagging spanning between the piers.

The adjacent slide area below the wall was graded with a maximum slope of 2:1 and a new storm drain including a wall back drain system was installed. Our design sought to minimize the environmental impact of the repair on the natural surroundings by employing a detailed erosion control plan, preserving existing trees and using an appropriately placed energy dissipater at the storm drain outfall.

Our design included a new traffic guardrail, wider shoulder, and improved roadside drainage as well.