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Seismic retrofit of Ancione viaduct piles on E45 road Orte-Ravenna, Pieve S. Stefano, Arezzo, Italy

After the required seismic verifications, the RC piles of the Ancione viaduct, having a diameter of 1.5 m, showed lack of shear and ductility capacity. The proposed intervention consists on the application of a first layer of fiber reinforced polymer (FRP) fabric placed along the vertical direction for a length of 1.8 m and subsequently anchored to the foundation. At a second stage, a FRP fabric layer has been placed along the longitudinal direction for all the height of the pile. The retrofit is completed by painting the FRP fabric with polyurethane paint that protects the retrofitted piles from the ultraviolet (UV) rays.

Project: Seismic retrofit of Ancione viaduct piles on E45 road Orte-Ravenna,

Location: E45 road Orte-Ravenna, Pieve S. Stefano, Arezzo, Italy

Client: ANAS, Florence department, Italy

Contract Duration: 5 weeks

Scope of Works:

- Enhancement of the shear capacity by adding confinement through the application of FRP fabric Tyfo® SCH-11UP-N and Tyfo® S Epoxy
- Final protection by means of two layer application of polyurethane paint for the ultraviolet (UV) protection







