

## Column Base Pipe Pins

### Description

#### Meta Fields

**Project Starting Year :** 2012

**Primary Sponsor Contact Info :** California Department of Transportation (Caltrans)

**Budget :** 280.00

#### Abstract :

To accomplish the objective of the study, the proposed research will consist of several tasks including a literature search of recent relevant work. Detailed analytical modeling of the seismic response of hinged column-footing connections with pipe pins will be conducted. Different alternative to provide tensile force resistance at the hinge without compromising its moment-free behavior will be considered and studied. A large scale two-column pier with hinged bases and precast columns will be tested under dynamic loads to failure mainly to generate data about the performance of pipe-pins under seismic loads. The pier test will be also used to study two other aspects of ABC, one the required embedment length for precast columns into the cap beam and the other the performance of engineered cementitious composites (ECC), which is a type of fiber-reinforced concrete with high resistance to damage. Extensive parametric studies will follow and practical design and detailing guidelines will be developed along with numerical examples.

**Subject :** Columns

**Group :** Seismic

**Category :** Ongoing Projects