

Column Pile Shaft Pin Connections

Description

Meta Fields

Category : Ongoing Projects

Group : Seismic

Subject : Columns

Abstract :

Reinforced concrete pins are used at the top or bottom of columns to substantially reduce or eliminate moment transfer to the adjacent element and hence reduce the moment and shear demand to the foundation or pier cap. The most common hinge type consists of a cluster of reinforcing bars placed near the center of the connection. The bars are of sufficient anchorage length in the column and the adjoining member to fully develop. A spiral is placed around the bars to confine the concrete within clustered bars and essentially form a small diameter column that connects the main column to the adjacent member. Pins are also used at Type II pile shaft to column connections for the same purpose as other pins, except that they are intended to eliminate moment transfer to the pile. There are two types of pins: (1) bar pins, and (2) pipe pins. The primary objective of the proposed study is to investigate the performance of Type II pile-shaft column pin connections that consist of reinforcing bars or pipes under seismic and vertical loads, identify necessary refinements in details, and develop design guidelines based on analytical and experimental results from large-scale models.

Budget : 0.00

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

Project Starting Year : 2016