

Flange Effects on the Nonlinear Behavior of URM Piers

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Abstract:

In order to address the significant flange effects observed in unreinforced masonry buildings, the effective pier model, originally proposed to describe the behavior of rectangular sections of URM piers, is modified to investigate the flange effects in non-rectangular sections of URM piers. The study shows that flanges influence the four primary failure modes of a URM pier in different manners. Nonlinear pushover analysis based on the modified effective pier model further shows the significant flange effects on the lateral force-displacement relationships of URM piers.

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