

Sliding Shear Resistance of Reinforced Masonry Shear Walls

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Abstract:

For reinforced masonry shear walls, the general strength-design provisions of the 2011 MSJC Code addresses capacities as governed by flexure and shear only, and do not address sliding shear. This omission should be corrected, because sliding can govern the behavior of reinforced masonry shear walls. Six fully grouted, fixed-fixed reinforced concrete masonry shear wall specimens were designed and tested at The University of Texas at Austin, and were intended to provide experimental data to develop analytical models for shear-dominated wall segments. Four specimens exhibited significant sliding during testing. Based on the results of those tests, plus previously reported test results for reinforced masonry shear walls governed by sliding, an equation for nominal sliding-shear capacity based on shear friction is proposed for the MSJC Code. The equation uses a coefficient of friction of 0.63, which is valid whether or not the interface is intentionally roughened.

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