

Wall Density and Seismic Performance of Confined Masonry Buildings

Maria Moroni¹, Maximillano Astroza², and Rodrigo Caballero³

Abstract:

A criterion to evaluate seismic performance of confined masonry buildings is presented. By comparing displacement demands imposed by real earthquakes records and displacement capacities of the same confined masonry buildings, a minimum wall density that ensures an appropriate seismic behavior is obtained. How this minimum wall density relates with strength requirements included in the Chilean seismic design code and with observed building damage in past earthquakes is also addressed. These results allow us to assess the seismic vulnerability of existing or new structures, obtaining information that is required in any study of seismic risk.

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¹ Assistant Prof., Professional Member TMS, Dept of Civil Engineering, University of Chile

² Associate Prof., Professional Member TMS, Dept. of Civil Engineering, University of Chile

³ Civil Engineer, Dept. of Civil Engineering, University of Chile