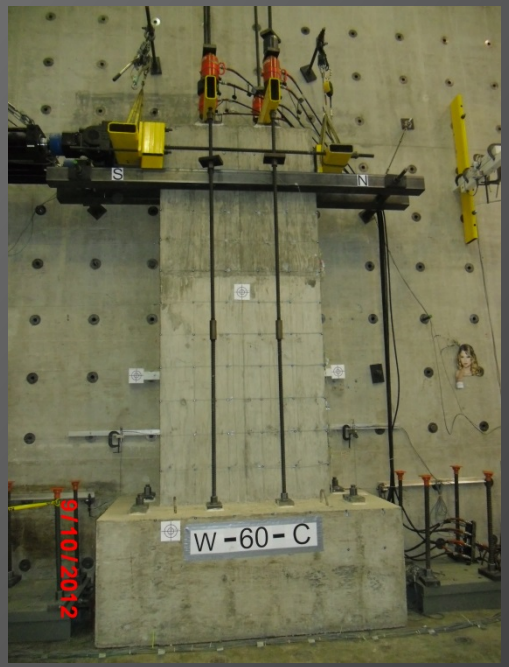
SEISMIC RESPONSE OF REINFORCED CONCRETE WALLS WITH LAP SPLICES



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Research Objectives

- Investigate the effects of lap splices on the seismic response of reinforced concrete structural walls
- Study the effects of boundary-element confinement on the behavior of these walls
- Investigate the effects of moment gradients along lap splices

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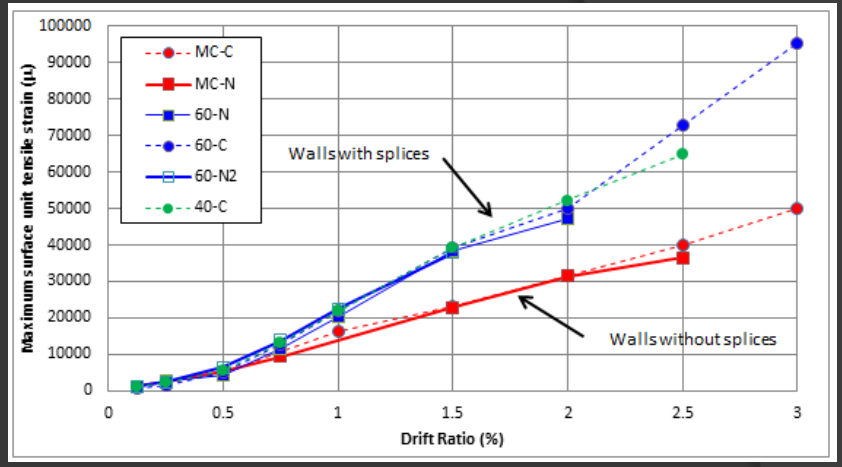
Findings

- The presence of lap splices reduced the drift capacity by 16% to 40%.
- Confining reinforcement caused an increase of the drift capacity ranging from 20% to 67%.
- Concrete-surface unit tensile strains increments of 100% were observed at the base of the walls with lap splices.
- In regions of nearly constant moment lap-splice failures were observed. In regions with large moment gradients these failures did not occur.



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