

## Design of Reinforced Concrete (RC) Walls Considering Shear Amplification by Nonlinear Dynamic Behavior

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**Abstract :** In the performance-based design (PBD), by using the nonlinear dynamic analysis (NDA), the actual performance of the structure is evaluated. Unlike frame structures, in the wall structures, base shear force which is resulted from the NDA, is greatly amplified than that from the elastic analysis. This shear amplifying effect causes repeated designs which make designer difficult to apply the PBD. Therefore, in this paper, factors which affect shear amplification were studied. For the 20-story wall model, the NDA was performed. From the analysis results, the base shear amplification factor was proposed.

**Keywords :** performance based design, shear amplification factor, nonlinear dynamic analysis, RC shear wall

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