



ChemTech

## International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.8, pp 417-424, 2017

# Comparison Study of Shear Wall and Bracings under Seismic Loading in Multi- Storey Residential Building

Dharanya A<sup>1\*</sup>, Gayathri S<sup>2</sup>, Deepika M<sup>3</sup>

Department of Civil Engineering, Anna University Regional Campus Coimbatore,  
Tamilnadu, India.

**Abstract :** During earthquake almost all the structures in that area will experience the seismic force. When a tall building is subjected to lateral or torsional deflections under the action of seismic loads the resulting oscillatory movement can induce a wide range of response in the building occupants. Hence lateral stiffness is a major consideration in the design of multi-storey structures. The improvement of reinforced concrete frame structure against lateral loading can be achieved by providing shear wall and cross bracing. In this study, a G+4 storey residential RC building with soft storey has to be analysed with cross bracings and shear wall. This analysis was made as per IS 1893:2002 codal provision by using ETABS software<sup>1</sup>. The cross bracings such as X bracing are to be provided at the outer periphery of the column and the shear walls are provided at the corners of the buildings. The building model are analysed by equivalent stiffness method using ETABS software. The main parameters compared are lateral displacement, base shear, storey drift, axial force, shear force and time period.

**Keywords :** Shear wall, Bracing, Lateral Stability, Seismic loading.

Dharanya A *et al* /International Journal of ChemTech Research, 2017,10(8): 417-424.

\*\*\*\*\*