

Jagadamba College of Engineering & Technology, Yavatmal
Department of Civil Engineering



Certificate

This is to certify that the project titled

**“SEISMIC ANALYSIS OF SHEAR WALL AT DIFFERENT LOCATION
ON MULTISTOREY RCC BUILDING”**

has been successfully completed in session 2017-2018

*by MISS.GOURAVI M. MUNDE in recognition to the partial fulfillment for
the degree of Master of Engineering (Structural Engineering), Sant Gadge
Baba Amravati University, Amravati.*

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ABSTRACT

Looking to the past records of earthquake, there is increase in the demand of earthquake resisting building which can be fulfilled by providing the shear wall systems in the building. Also due to the major earthquakes in the recent past the codal provisions revised and implementing more weightage on earthquake design of structure. Generally shear wall can be defined as structural vertical member that is able to resist combination of shear, moment and axial load induced by lateral load and gravity load transfer to the wall from other structural member. Reinforced concrete walls, which include lift wells or shear walls, are the usual requirements of Multi Storey Buildings. Design by coinciding centroid and mass center of the building is the ideal for a Structure. An introduction of shear wall represents a structurally efficient solution to stiffen a building structural system because the main function of a shear wall is to increase the rigidity for lateral load resistance.

Shear wall systems are one of the most commonly used lateral load resisting systems in high-rise buildings. Shear walls are incorporated in building to resist lateral Forces and support the gravity loads. RCC shear wall has high in plane stiffness, which can be used to simultaneously resist large horizontal loads and support gravity loads, making them quite advantageous in many structural engineering applications. There are lots of literatures available to design and analyze the shear wall. However, the decision about the location of shear wall in multi-storey building is not much discussed in any literatures. Positioning of shear wall has influence on the overall behavior of the building. For effective and efficient performance of building it is essential to position shear wall in an ideal location.

The main aim of the project is to determine the solution for shear wall location in multi-storey building (G+9). It is carried out to determine the strength of RC shear wall of a multistoried building by changing shear wall location. Three different cases of shear wall position for a building are to be analyzed. An earthquake load is calculated by the Response Spectrum method using IS 1893 (PART-I): 2002. STAAD Pro V8i software is used for the analysis of structures. Earthquake zone is III. The structures are compared on four different parameters namely joint displacement, axial force, bending moment and base shear




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