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## COMPARATIVE STUDY ON DIFFERENT BRACING SYSTEMS ON A STEEL JUNCTION TOWER

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**ABSTRACT:** Junction tower is a material handling structure supporting belt conveyors and are made of steel. They are mainly subjected to lateral forces such as wind and seismic loads due to their height varying from anywhere between 20 meter to 70 meter. Hence bracings are required to resist these lateral forces. The tower considered in this study is a 24 meter tall steel structure with a plan area of 10m x 12m. The main object is to study participation of braces for different parameters such as base shear, storey forces, displacement, storey shear and storey stiffness for different bracing configurations mainly Chevron bracing, Inverted Chevron bracing, K-bracing and X-bracing. STAAD Pro. Software is used for modelling and analysing the tower. The response of the building with different bracing configuration at different locations is represented in tables and graphs which will help to understand the behaviour of the concentrically braced steel tower more accurately.

**Keywords:** Steel Junction Tower, Concentrically Braced Frames, Lateral Loads, Seismic Design

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