

## **ABSTRACT**

This project presents the analysis and design of a five-storey commercial building located in Thika Kiambu County.

The residential building was designed to meet both strength and serviceability requirements when subjected to gravity and lateral loads. Manual calculations as well computer software were used in the analysis of the structure.

The project report involved the careful study of the architectural drawings, determination of the loadings, preliminary sizing of members, checks on deflection, detailed design and analysis of structural elements and a representation of the design in form of structural drawings.

The project will involve the use of modern construction materials and techniques to ensure the durability and sustainability of the building. The construction process will be carried out in phases, starting with the foundation and structural work, followed by the installation of the amenities and finishing work

The drawings were prepared using REVIT and ROBOT STRUCTURAL ANALYSIS. Bar bending schedule from the drawings and a structural drawing were prepared.