

Case Study Summary: Residential Apartments Development in Juja, Kiambu County

Project Overview

This project involved the **development of residential apartments in Juja, Kiambu County**, aimed at providing **modern and affordable rental housing** for the growing population in the area. The development was designed to accommodate students, working professionals, and small families due to Juja's proximity to educational institutions and Nairobi's expanding metropolitan region.

The project focused on **efficient land utilization, functional apartment layouts, and durable construction methods** to ensure long-term sustainability and comfortable living spaces.

Project Location

- **Location:** Juja, Kiambu County, Kenya
 - **Setting:** A rapidly growing urban center within the Nairobi Metropolitan Area
 - **Accessibility:** Convenient access via the **Thika Superhighway**, connecting Juja to Nairobi CBD and Thika Town
 - **Nearby Amenities:** Close proximity to **Jomo Kenyatta University of Agriculture and Technology (JKUAT)**, shopping centers, schools, healthcare facilities, and public transport routes.
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Project Scope

The development involved the construction of **multi-unit residential apartments** designed to provide comfortable and efficient rental accommodation.

Key components of the project included:

- **Multiple bedsitter and one-bedroom apartment units**
- **Shared circulation areas** including staircases and corridors
- **Parking space and access pathways**
- Water storage tanks and drainage infrastructure

The construction works undertaken included:

- Site preparation and building setting out
- Excavation and reinforced concrete foundation works
- Structural framework construction using reinforced concrete columns, beams, and slabs

- Masonry wall construction using machine-cut stones
 - Roofing and waterproofing works
 - Internal and external plastering
 - Floor finishing works
 - Plumbing and sanitary installations
 - Electrical wiring and installations
 - Installation of doors, windows, and fittings
 - Internal and external painting works
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Design Considerations

The apartment development incorporated several important design considerations:

- **Efficient space planning** to maximize residential units within the available land
 - **Structural stability and safety** using reinforced concrete structural systems
 - **Adequate natural lighting and ventilation** for all apartment units
 - **Durable construction materials** to reduce long-term maintenance costs
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Construction Approach

The project was implemented through structured construction phases to ensure quality and efficiency:

1. Site preparation and excavation works
 2. Reinforced concrete foundation and structural framework construction
 3. Masonry walling and roofing works
 4. Internal and external finishing works
 5. Installation of plumbing and electrical services
 6. Final painting and project completion
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Project Outcome

The project successfully delivered **modern residential apartments in Juja**, providing affordable and comfortable housing units. The development contributed to addressing the **increasing demand for rental accommodation** in the area.

Conclusion

The **Residential Apartments development in Juja, Kiambu County** demonstrates effective urban housing development through **functional design, durable structural construction, and efficient use of space**, supporting the rapid growth of residential infrastructure within the Nairobi metropolitan region.