



Structural Detailing for a Leading UK-Based Contractor



Structural &
Civil

AT A GLANCE

CLIENT CHALLENGES

- Position needed to be changed for over 80% of the columns
- Structural integrity must be maintained
- Floating columns needed to be provided

CLIENT BENEFITS

- 24/7 service was provided
- The material procurement at the site was accurate and coordinated and prevented any material wastage

Business Need

The project was a highly complex 15,000 sqm mixed-use development structure. The asset had floating columns at multiple levels due to the mixed-use scope of the building.

In conjunction with the structural contractor, RAMTeCH had to devise unique RCC detailing solutions to cater to the floating columns while ensuring that the structural integrity of the asset remained intact and flexible for future expansions.

RAMTeCH Solution

A key complexity of the project was more than 80% of columns needed to change column position in order to match the upper-level floor plan as per the architectural requirements. To add to the complexity, static columns ended at the first-floor level slab, and floating columns were used from the first-floor level and upwards.

Owing to this complexity, a unique approach of transferring floor slab thick with punching shear reinforcement was adopted. Pile foundations were used for this structure. At the ground level, a pile cap with a ground beam was provided and at the first-floor level, a transfer floor slab was provided. For the upper floors, a thick flat slab was provided.

This approach ensured that the structural integrity of the building was maintained and at the same time floating columns were also catered.

Being a fast-paced and design-build project, 24/7 service was provided to the client. The lead team was aligned with the UK time zone to ensure real-time collaboration with the client and ready resolution of coordination issues.

Results

A critical element of the project was to ensure a fast-paced solution for the floating columns. RAMTeCH aligned dedicated SMEs leading detailing teams to ensure that a timely solution was provided to the client.