CHAPTER THREE

3.0. MATERIALS AND METHODS

3.1. INTRODUCTION:

Constructing a wooden suspended ground level involves several steps to ensure stability, safety, and durability. This methodology outlines the key steps to follow when building a wooden suspended ground level

3.3. MATERIALS

The materials used were procured at ilorin

The material include;

1. **Timber:** soft wood as shown in Plate 3.1 was used to make the prepare the form work (as shown in plate 3.2) for the suspended ground floor. It was cut in 22 x 36 inches or 560mm x

   915mm

THE IMAGE OF TIMBER (SOFT WOOD)

Fasteners: Nails were used for joining and securing the wooden components.

THE IMAGE OF NAIL.

2. **Flooring Material:** plywood or composite boards as shown in plate 3.3 was used as the material that served as walking surface of the suspended ground level

Plate 3.2: Plywood for suspended floor

3. Safety Equipment: Include any personal protective equipment (PPE) necessary for the construction process, such as helmets, safety glasses, gloves, and harnesses.

4. Tools: These are the tools required for the construction, such as saws, nail, hammers, measuring tapes.

THE IMAGE OF HAMMER, SAW, MENSURING TAPE.

3.4.**DESIGN AND CONSTRUCTION PROCESS**

3.4.1. Design and Planning:

3.4.2. The design of the suspended ground floor is drawn up as Shown in Figure 3.1, taking into account the dimensions required (560mm by 915mm)

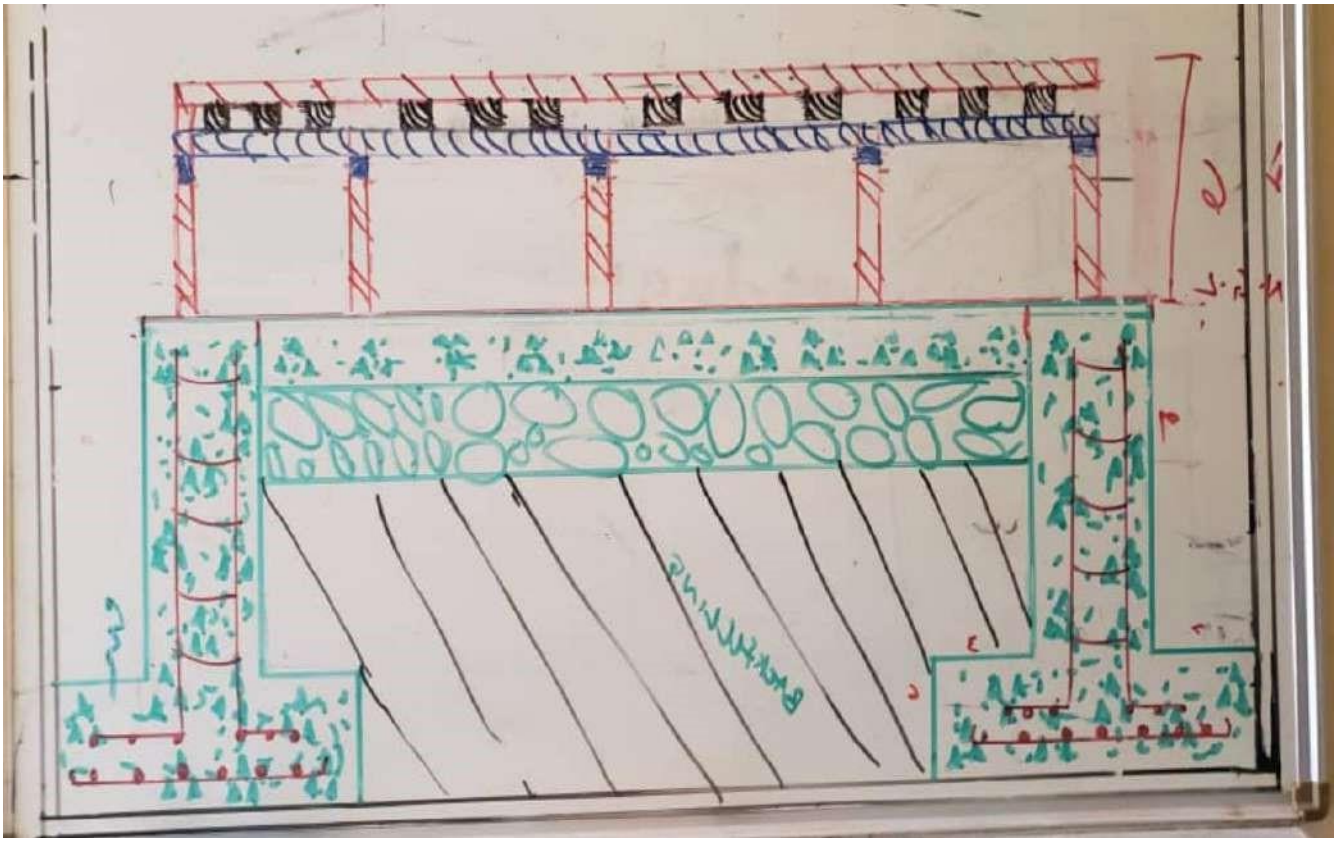

Figure 3.1: Design of the suspended ground floor

3.5.CONSTRUCTION PROCEDURE

The following procedure were deployed to achieve the stated objective The prototype box was constructed with dimension of 36mm by 22mm.

- Before the mixing of materials foundation footing was constructed.
- Block foundation was erected using concrete(batching, mixing, curing)
- Casting & Compaction was carried out immediately after the mixing of the material.
- The block work was demoulded after 48hours.
- The demolded foundations was placed carefully into the prototype box
- Backfilling took place with the usage of fine aggregate(sand)

- Hard core was placed immediately after backfilling
- Oversite concrete was constructed above the hard core which serves as the solid ground floor.

- Sleeper wall was constructed immidiately after the groundfloor to support the flloor joist, floor board and wall plate

- DPC was laid immediately after the sleeper wall to prevent moisture rising.
- Wall plate is used to prepare a stable base for the floor joist
- Floor joist it was used to create a layer that the floor board will rest on
- Then floor board is laid
- The finishing touches were made (polish, brush, thinner, etc..)
- Treatment; This is used to prevent the growth of vegetative matter.