

# Preconstruction Services for Hiinga Hospital

## Kampala, Uganda

### Abstract

The project outlines the role of a construction management student in the interdisciplinary development of a hospital in Kampala, Uganda. The Hiinga Organization, an investment fund dedicated to supporting early entrepreneurs of Eastern Africa, tasked a team of students to develop a preliminary design and put together construction resources for a new hospital. Hiinga will use these documents, with the preliminary drawings, to gather funding for the actual construction of the building. The interdisciplinary team consisted of an architecture student (Annebel van der Meulen), two architectural engineering students (Abbie Coffing and Lexi Buhr), and two construction management students (Arley Landis and Brett Shank). Van der Meulen focused on the aesthetic and organization of the hospital. Coffing and Buhr analyzed the structural integrity of the building. Shank's focus was on the cost estimate and constructability of the design during development. Landis's focus was on the cost and constructability of the complete drawings being handed over to Hiinga. The paper consists of a constructability analysis, a cost estimate, and a schedule to accompany the team's drawings. The text also explains how the construction of the substructure of the hospital, the adjacent clinic, will provide insight into constructing the hospital.

### Cost Estimate

Urgent Care Clinic: \$694,000 (UGX 2,532,800,000) \$1,745 per sqm

Hospital: \$53,930,000 (UGX 196,853,000,000) \$3,635 per sqm

Main Costs: General Requirements, Finishes, MEP

### Schedule

**Preconstruction:** 28 days (start July, 1, 2022)

**Construction:**

Phase 1: Site Prep and Start on Clinic - 18 days

Phase 2: Clinic Erection and Rough MEP - 64 days

Phase 3: Clinic Finishes, Punchlist, & Closeout - 54 days

Phase 4: Hospital Site Layout and Foundation - 41 days

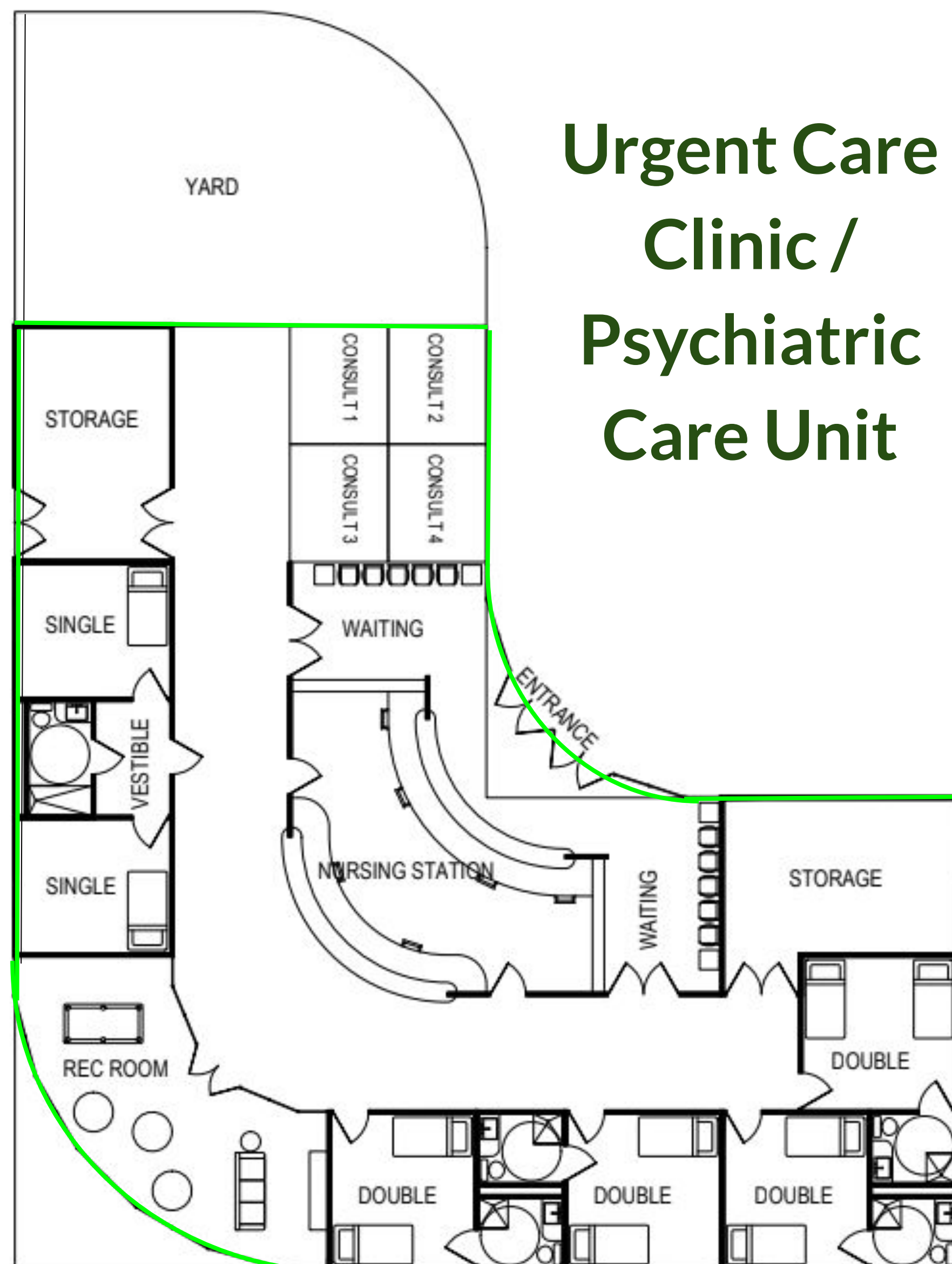
Phase 5: Hospital Erection and Rough MEP - 268 days

Phase 6: Hospital Finishes and Punchlist - 113 days

Project Closeout: 11 days

**Total Duration: 597**

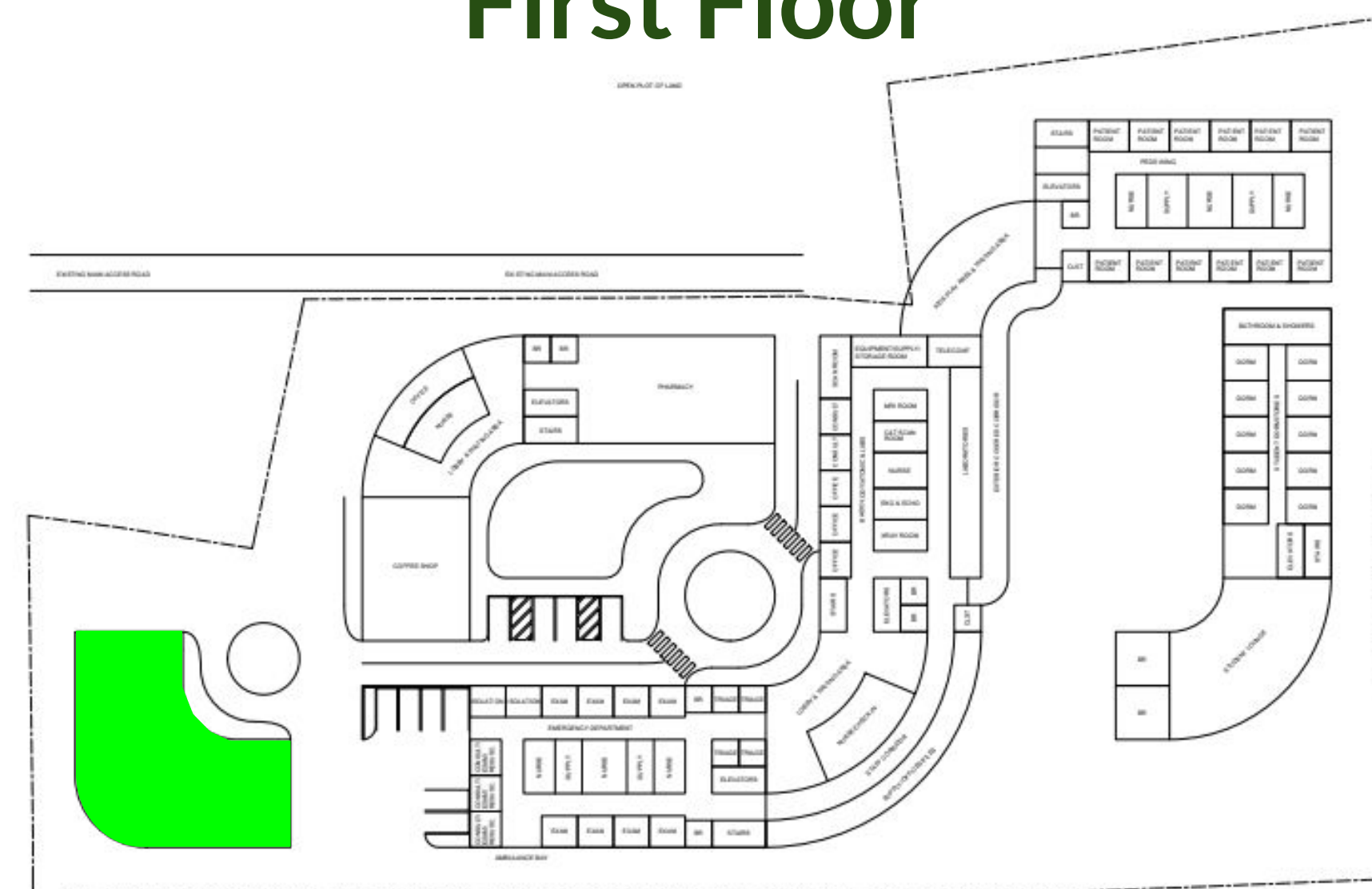
### Urgent Care Clinic / Psychiatric Care Unit



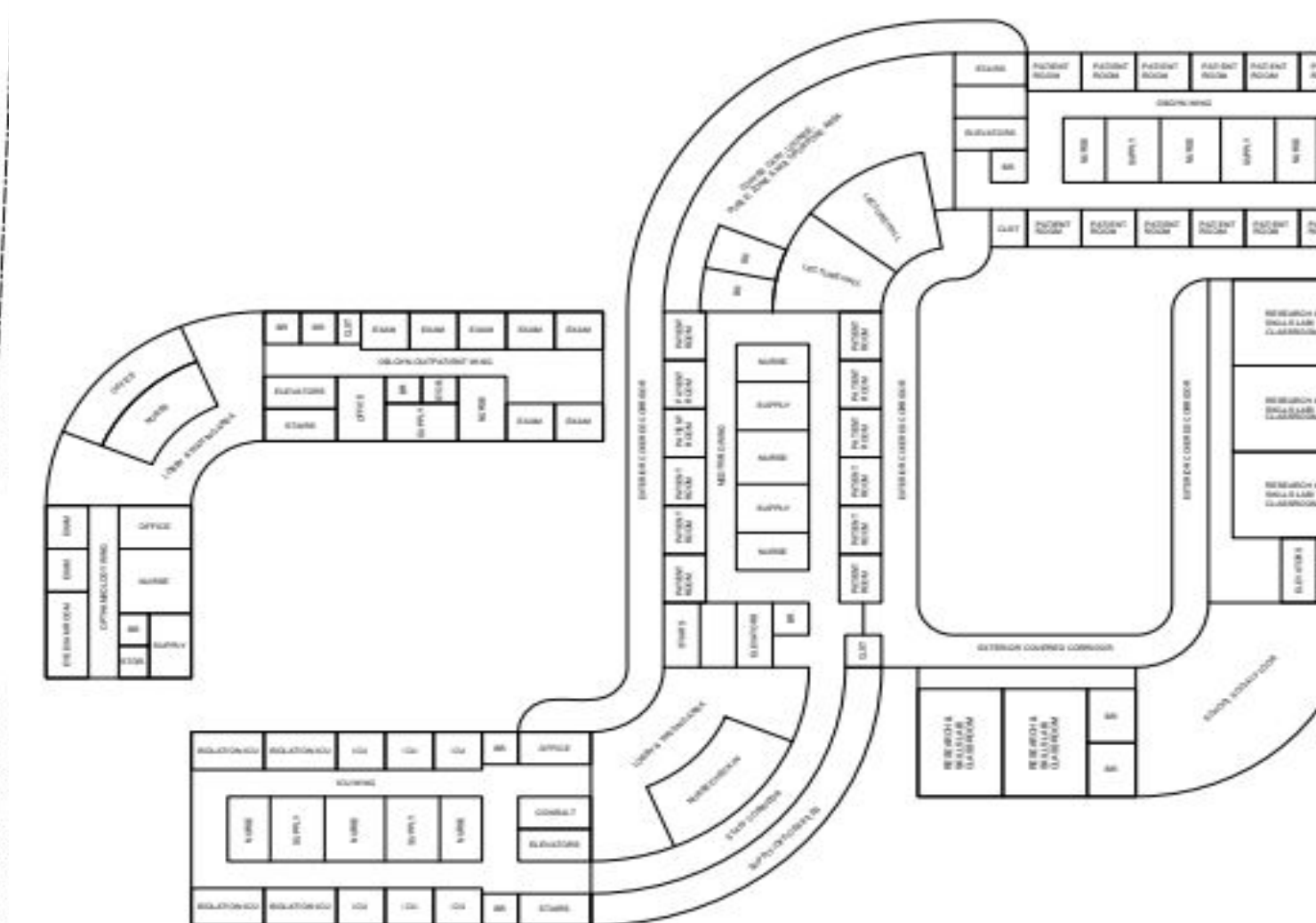
### Challenges Affecting Constructability

- Steel Fabrication
- Brick Manufacturing
- Masonry Construction
- Site Layout
- Municipal Utilities
- Medical Equipment Complexities

### First Floor



### 2nd Floor



### 3rd Floor

