# Migori County Annual Investment Work Plan Budget and Cash flow - FY2025/2026

## 1. Introduction

The County Department of Health has the mandate to deliver quality, affordable and sustainable health services to the people of Migori County with an overarching goal towards the attainment of Universal Health Coverage. The sector intends to deliver on this through provision of Preventive and Promotive health services as well as Curative, Rehabilitative and Referral health services. This will be achieved through scaling up Community Health Services to 100% coverage, upgrading of deserving Dispensaries to Health Centre status, provision of Adequate Health Products and Technologies and medical equipment, recruitment of additional health-care workers and fostering Public Private Partnerships (PPPs) in the provision of specialized services and infrastructure improvement for hospitals.

## Vision:

A county of excellence in provision of health services

## Mission:

To provide quality, affordable and sustainable quality health services in Migori County.

## Sector Objectives:

1. To provide efficient and effective well-coordinated health services
2. To reduce the burden of preventable diseases and promote healthy lifestyles
3. To provide quality and affordable curative, rehabilitative and referral services

## 2. Context

### Health Infrastructure Challenges in Migori County

Migori County Referral Hospital (MCRH) is the primary public tertiary facility and teaching hospital in the county, serving as the central referral hub for specialized services across Migori and neighboring counties. The facility operates on a constrained 5-acre site, limiting infrastructural expansion and impeding its elevation to Level 5 status. Currently, MCRH experiences a bed occupancy rate exceeding 120%, leading to:

- Chronic ward congestion and bed sharing
- Premature patient discharges due to bed shortages
- Surgical backlogs caused by inadequate theatre space, despite availability of specialist staff

These systemic bottlenecks undermine healthcare quality, compromise patient safety, and negatively affect clinical outcomes. To address this, concurrent expansion of MCRH alongside the upgrading of strategic sub-county hospitals such as **Awendo Sub-County Hospital** is urgently required to decongest the facility, improve service delivery, and align with national healthcare standards.

Awendo Sub-County Hospital:
It is the largest referral facility in the sugar belt region, serving a catchment population of approximately 148,079. As a Level 4 hospital, it provides critical healthcare services for patients referred both within and outside the sub-county. However, it faces significant gaps in inpatient facilities and lacks specialized services such as surgical theatres, a renal unit, specialized outpatient clinics, advanced laboratory services, and a mental health clinic. These limitations hinder its capacity to deliver specialized care and adequately meet the healthcare demands of its growing population.

**The Gaps**
To address these gaps, the County Government proposes the construction of a four-storey Comprehensive Outpatient, Inpatient and Specialized Services Complex at Awendo Sub County. The facility—spanning approx. 5500m$^2$—is designed to expand inpatient bed capacity from 80 to 200 and will include:

- Outpatient unit with: registration offices, Casualty, Casualty Theatre, Consultation rooms, Class D laboratory, Pharmacy, Dental, ENT and rehabilitative Unit
- Renal unit, Specialized NCD clinics and mental health clinic
- Surgical theatre with associated medical, pediatric and surgical wards
- Administrative offices
- Telemedicine facilities, intern call rooms, boardrooms, and green spaces

Once fully implemented, the project will significantly reduce referrals, enhance clinical outcomes, and elevate Awendo County Hospital as a sub-regional referral facility for Uriri, Awendo and Rongo sub counties, helping to decongest the major referral hospital MCRH.

**Summary of the main objectives as identified in the County Annual Development Plan (CADP) and County Integrated Development Plan (CIDP)**

**Project Objectives:**

- To enhance the hospital's capacity to manage complex medical and surgical conditions, including trauma and non-communicable diseases (NCDs).
- To strengthen access to specialized services by establishing renal unit
- To increase access to diagnostic services by establishing a comprehensive Class D laboratory
- To improve access to quality mental health services
- To improve the working environment for healthcare workers and promote patient-centred care through modern, well-equipped infrastructure.

## 3. Investment prioritization

**Overall priorities of the Sector:**

**Summary of priorities raised by the county government (assembly and executive) and priorities and issues raised during citizen forums:**

| Sector Priorities | Strategies |
|---|---|
| Strengthen health sector leadership, governance and Partnerships | i. Formulation and implementation of relevant policies, laws and regulations.<br>ii. Streamline health sector governance structures at all levels<br>iii. Foster partnerships with non state actors and private sector |
| Improve management of Human Resources for Health (HRH) | i. Establish strategies to attract, develop, and retain health workforce<br>ii. Enhance HRH performance management |
| Improve Health Infrastructure | i. Increase access to health infrastructure and equipment<br>ii. Provision of adequate health support amenities including sustainable water supply and power backup systems in health facilities<br>iii. Enhance referral services |
| Enhance Healthcare Financing | i. Enforce the legal and regulatory framework<br>ii. Enhance revenue collection<br>iii. Develop and implement resource mobilisation strategy<br>iv. Strengthen public-private partnerships to improve access to healthcare services<br>v. Strengthen the Universal Health coverage scheme |
| Enhance Health Information Management | i. Scale up Electronic Medical Records system in health facilities<br>ii. Strengthen M&E systems |
| Health Research and Development | i. Foster partnerships for research with both state and non state actors |
| Improve Health Products and Technologies availability and accountability | i. Anchor and strengthen the Health Products and Technologies (HPT) Division in the county structure |
| Efficient health Service Delivery | ii. Improve access to quality primary health services.<br>iii. Foster Adolescents and Youth Friendly Services (AYFS) multisectoral approaches and capacity.<br>iv. Expand and equip ambulance/referral system.<br>v. Improve preventive and curative services in relation to climate change impact |

**Description of consensus reached—priorities as retained**

- **Upgrade Infrastructure at Awendo Sub County Hospital to enable it serve as a sub-regional referral facility offering comprehensive outpatient, inpatient and specialized services to help decongest Migori County Referral Hospital. Construction and equipping of a 4 storied Outpatient, Inpatient and Specialized Services Complex to house outpatient unit, renal unit, Class D laboratory, surgical theatre, NCD clinics, mental health clinic and medical and surgical wards.**

## 4. County Investment Plan and Budget FY2025/ 2026

**Project Description**

Upgrade Infrastructure at Awendo Sub County Hospital to enable it serve as a sub-regional referral Level 4 facility offering comprehensive outpatient, inpatient and specialized services to help decongest Migori County Referral Hospital. The Four Storied complex is expected to house:

- Outpatient unit with: registration offices, Casualty, Casualty Theatre, Consultation rooms, Class D laboratory, Pharmacy, Dental, ENT and rehabilitative Unit
- Renal unit, Specialized NCD clinics and mental health clinic
- Surgical theatre with associated medical, pediatric and surgical wards
- Administrative offices and staff call rooms

**Rationale:**

Awendo Sub County Hospital currently serves over 148,000 people, acting as a primary referral point in Migori's sugar belt region. It operates under strain due to:

- Outdated and inadequate infrastructure
- Lack of emergency and critical care services
- Rising incidence of trauma (due to proximity to a national highway), NCDs, and maternal health emergencies
- Limited inpatient and diagnostic capabilities

Given these constraints and the overburdened Migori County Referral Hospital (MCRH), upgrading Awendo to a sub-regional referral hospital is both urgent and necessary.

**KDSP II Level 2 grant criteria**

The project meets KDSP II Level 2 grant criteria: It addresses issue of construction and equipping of county health facilities, it is a priority listed in the CIDP and ADP, it doesn't involve displacement or resettlement of any people as the facilities proposed have adequate land.

| Table 1: County Investment Work Plan FY2025 /2026 | | | | | |
|---|---|---|---|---|---|
| No. | Activity* | Time frame | | Responsible Officer | Budget (Kes) |
| | | Start date | End date | | |
| 1 | Project Preparation and Planning<br>• Consultancy Team Mobilization<br>• Detailed Feasibility Study<br>• Detailed ESIA and GRM<br>• Outline Proposal<br>• Scheme Design (Statutory Approvals)<br>• Detailed Design | 08/09/2025 | 30/09/2025 | CPIU Director-Public Works | 6,650,000.00 |
| 2 | Tender Documentation and Action<br>• Tender Document Preparation<br>• Bidding Process<br>• Bid Evaluation and Negotiation<br>• Contract and Signing | 01/10/2025 | 13//10/2025 | CPIU Director-Medical Services | 2,000,000.00 |
| 3 | Construction<br>• Site Handover<br>• Preliminaries/Mobilization<br>• Substructure Works<br>• Superstructure Works<br>• Walling<br>• Windows and Doors<br>• Finishes<br>• Mechanical Installation Works<br>• Electrical Installation Works | 01/10/2025 | 31/10/2025 | CPIU Director-Public Works | 293,605,964.00 |
| 4 | PHASE 4: Supply and Installation of Medical Equipment<br>• Procurement,<br>• Installation<br>• Commissioning | 11/11/2025 | 15/04/2026 | CPIU Director-Medical Services | 100,000,000.00 |
| 5 | PHASE 5: Works Completion/Handover Documentation:<br>• Testing, Training and Commissioning<br>• Submission of 'As Built Drawings, Manuals and Warranties<br>• Commissioning<br>• Snagging<br>• Certificate of Completion | 01/02/2026 | 01/06/2026 | CPIU Director-Medical Services | 10,000,000.00 |
| 6 | PHASE 6: Operationalization and Post Launch Support<br>• Service Delivery<br>• Teaching Component Activation<br>• Performance Monitoring<br>• Snagging<br>• Certificate of Completion | 01/0/2026 | 16/06/2026 | CPIU Director-Medical Services | 40,000,000.00 |
| | | | | | |
| | *Total* | | | | 452,000,000.00 |

**FOR AND ON BEHALF OF COUNTY GOVERNMENT OF MIGORI**

SIGNATURE.....
DOMNIC AKUGO,PROGRAM COORDINATOR
Date:16/10/25

SIGNATURE.....
H.E DR. OCHILO AYACKO
CHAIR COUNTY PROGRAM STEERING COMMITTEE
Date:16/10/25

| Table 1: County Investment Budget FY2025 /2026 | | | | |
|---|---|---|---|---|
| No. | Activity* | Time frame | | Budget (Kes) |
| | | Start date | End date | |
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| 2 | Tender Documentation and Action<br>• Tender Document Preparation<br>• Bidding Process<br>• Bid Evaluation and Negotiation<br>• Contract and Signing | 01/10/2025 | 13//10/2025 | 2,000,000.00 |
| 3 | Construction<br>• Site Handover<br>• Preliminaries/Mobilization<br>• Substructure Works<br>• Superstructure Works<br>• Walling<br>• Windows and Doors<br>• Finishes<br>• Mechanical Installation Works<br>• Electrical Installation Works | 01/10/2025 | 31/10/2025 | 293,605,964.00 |
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| | | | | |
| | *Total* | | | 452,000,000.00 |

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CHAIR COUNTY PROGRAM STEERING COMMITTEE

Date: 16/10/25

| Table 2: Gantt Chart County Investment Budget FY2025/2026 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Activity** | **Budget (Kes)** | **Jul** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 1 | PHASE 1: Project Preparation and Planning<br>• **Consultancy Team Mobilization**<br>• **Detailed Feasibility Study**<br>• **Detailed ESIA and GRM**<br>• **Outline Proposal**<br>• **Scheme Design**<br>• **Detailed Design** | 6,650,000.00 | | | | | | | | | | | | |
| 2 | PHASE 2: Tender Documentation and Action<br>• Tender Document Preparation<br>• Bidding Process<br>• Bid Evaluation and Negotiation<br>• Contract and Signing | 2,000,000.00 | | | | | | | | | | | | |
| 3 | PHASE 3 : Construction<br>• Site Handover<br>• Preliminaries/Mobilization<br>• Substructure Works<br>• Superstructure Works<br>• Walling<br>• Windows and Doors<br>• Finishes<br>• Mechanical Installation Works<br>• Electrical Installation Works | 293,605,964.00 | | | | | | | | | | | | |
| 4 | PHASE 4: Supply and Installation of Medical Equipment:<br>• Procurement,<br>• Installation<br>• Commissioning | 100,000,000.00 | | | | | | | | | | | | |

| No. | Activity | Budget (kes) | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | PHASE 5: Works Completion/Handover Documentation:<br>• Testing, Training and Commissioning<br>• Submission of 'As Built Drawings, Manuals and Warranties<br>• Commissioning<br>• Snagging<br>• Certificate of Completion | 10,000,000.00 | | | | | | | | | | | | |
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## 5. Expected outcomes

### Expected Outcomes for Awendo Inpatient and Specialized Services Complex

- Improved availability of specialized services such as renal services
- Reduced patient congestion through increased bed capacity.
- Expanded surgical capacity through additional operating theatre.
- Expanded access to mental health services.
- Enhanced patient outcomes and quality of care through accurate diagnostic capabilities
- Significant reduction in out of pocket expenditure for the patient and caregiver due to improved access to inpatient services.

## 6. Implementation modalities and time frame

- ***Who will be responsible for implementation of the proposed activities***

| **Table 1: County Investment Budget FY2025 /2026** | | |
|---|---|---|
| No. | Activity* | Responsible officer |
| 1 | Preparation of Architectural and Engineering Drawings, Bill of quantities (BoQs) and Cost Estimates for Awendo Ultramodern Hospital Complex | Director Public Works |
| 2 | Processing of Statutory Approvals from County, NEMA and NCA | Director Public Works |
| 3 | Procurement processes for the Awendo Ultramodern Hospital Complex | Director Procurement |
| 4 | Project implementation – Construction of the Proposed Awendo Ultramodern Hospital Complex | Director Public Works, |
| 5 | Procurement, installation and Commissioning of Medical equipment and furniture for Awendo Ultramodern Hospital Complex | Director Medical services |
| 6 | Training of the staff on use of and maintenance of the equipment | Director Medical services |
| 7 | Project management (supervision, monitoring and evaluation) | Chief Officer Medical Services |
| | | |

# PROJECT CLIMATE, DISASTER AND ENVIRONMENT SCREENING REPORT

| | |
|---|---|
| **Project Title:** | Awendo Modern County Hospital |
| **Project Number:** | |
| **Project location:** | Migori County, Awendo Sub County within Awendo sub county hospital |
| **Prepared by:** | Kibathi Gerald; KDSP Environment specialist / officer<br>Kepha Owinga: KDSP social safeguard officer |
| **Date:** | 5th October, 2025 |

## 1.0. INTRODUCTION:

### 1.1. Project objective and description

The project involves constructing of a modern, well-equipped health facility in Awendo sub county hospital to offers comprehensive and specialized healthcare services to the public of Awendo, the entire Migori county and also the region. This is aimed at: -

i. Enhancing the hospital's capacity to manage complex medical and surgical conditions, including trauma and non-communicable diseases (NCDs).
ii. Strengthening access to specialized services by establishing a renal unit and HDU unit
iii. Increasing access to diagnostic services by establishing a comprehensive Class D laboratory
iv. Improving access to quality mental health services by establishing a mental health clinic
v. Improving the working environment for healthcare workers; and
vi. Promoting inpatient and outpatient cantered care through modern, well-equipped infrastructure.

The proposed project is a five-storey building with amenities described above.

### 1.2. The screening objective

The main objective of climate and disaster screening is to identify short- and long-term climate and disaster risks to the projects in order to build resilience. This early identification allows for the integration of appropriate adaptation and mitigation measures, helping to ensure that the proposed project achieve its development goals despite potential hazards.

The exercise was undertaken using hazardous assessment, assessing risk levels and vulnerability assessment matrixes provided by the PIM manual.

## 2.0. SCREENING

### 2.1. Climate and disaster Hazard and vulnerability assessment

The project was screened and evaluated against hazards such as floods, droughts, geological hazard such as earth quake, volcano, drought, storm/wind, lightning/thunderstorm and extreme temperatures and their potential impacts on the project, people and ecosystems. This was to determine their probability of occurrence, intensity and impact.

The screening determined that the project area is not prone to floods, droughts, earth quake, volcano, extreme temperatures and drought. However, it is prone to storm/wind and lightning/thunderstorm which are occasional. Therefore, using hazardous and vulnerability assessment matrices the hazard risks and vulnerability were rated to be low. However, there is need to include mitigation measures in the ESIA report.

### 2.2. Climate and disaster Risk assessment:

Based on the hazard assessment the only climatic hazard anticipated to affect the project is lightning and thunderstorm. Using risk assessment matrix, the risk level was determined to be low as they will not to an extent that they can compromise the structure integrity and reliability of the project. This was based on the experience on occasions that the hazards occurred in the area where the risks have been of low intensity. The building is a permanent masonry and storey building that will be constructed as per the construction standards and guideline minding the mitigation of the hazards in case they occur.

### 2.3. Physical, biological, ecological and social environment risks screening

Other than climate and disaster screening, physical, biological, ecological and social environment risks screening was also undertaken consequently it was determined that the project is anticipated to have the following impacts: -

i. Soil erosion hence siltation and pollution of aquatic ecosystem,
ii. Generate solid waste (medical, general and construction waste) that will cause pollution of soil, air, water and also being a nuisance
iii. Generation of liquid waste that may cause pollution if not properly manged
iv. Generation of air emissions hence air pollution
v. cause health and safety risk to project workers and neighbourhood
vi. affect and degrade the biodiversity (fauna and flora) of the project site
vii. affect the aesthetic quality of the site but only during construction works
viii. will use land that is currently used as a farm hence no more farming on the land resulting to food insecurity for the hospital

ix. will be located in an area prone to lightening and thunderstorm

Using the risk assessments matrix, these impacts were rated to be of medium risk hence needs an action to mitigate them.

### 2.4. Risk mitigation and adaptation strategies:

Based on the hazard, vulnerability and risk assessments undertaken on the proposed project it was deemed necessary hence concluded that measures need to be put in place for the proposed project to be resilient to the hazards and the associated impacts. In this regard an environmental impact assessment (comprehensive report) is recommended to determine the extent of the impact and the required mitigation / adaptation actions.

## 3.0. CONCLUSION

The project is to be located within Awendo Sub County hospital hence within an existing government health institution. There is enough land suitable for the project.

It is therefore recommended that the proposed project be subjected to an Environmental Impact Assessment (EIA) comprehensive report (CPR) and the report submitted to NEMA for license consideration.

**SCREENING CHECKLIST**

## SECOND KENYA DEVOLUTION SUPPORT PROGRAMME (KDSP 2)
## ENVIRONMENTAL, SOCIAL, CLIMATE AND DISASTER RISK SCREENING CHECK LIST FOR INFRASTRUCTURE PROJECTS

**Section A: Background Information**

| | |
|---|---|
| Name of the project: | Proposed Awendo Modern County Hospital complex |
| Location of project: | Migori County, Awendo sub county within Awendo sub county Hospital. |
| Brief description of the project: | construction and equiping the proposed Awendo modern county Hospital complex. |
| Project cost | 450,000,000/= |

**Section B: Environmental Issues**

| Will the Subproject: | Yes | No | Remarks |
|---|---|---|---|
| Create a risk of increased soil erosion? | ☑ | ☐ | |
| Create a risk of increased deforestation? | ☐ | ☑ | |
| Create a risk of increasing any other forms of soil degradation? | ☑ | ☐ | |
| Affect soil salinity and alkalinity? | ☐ | ☑ | |
| Divert the water resource from its natural course/location? | ☐ | ☑ | |
| Cause pollution of aquatic ecosystems through sedimentation, agrochemicals, oil spillage, effluents, etc.? | ☑ | ☐ | |
| Introduce exotic plants or animals to the ecosystem? | ☐ | ☑ | |
| Involve drainage of wetlands or other permanently flooded areas? | ☐ | ☑ | |
| Cause poor water drainage and increase the risk of water-related diseases such as malaria? | ☐ | ☑ | |
| Reduce the quantity of water for the downstream users? | ☐ | ☑ | |
| Result in the lowering of groundwater level or depletion of groundwater? | ☐ | ☑ | |
| Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater? | ☑ | ☐ | |
| Reduce various types of livestock production? | ☐ | ☑ | |
| Affect any watershed? | ☐ | ☑ | |
| Focus on Biomass/Bio-fuel energy generation? | ☑ | ☐ | |

**Section C: Socio-economic Issues**

| Will the subproject: | Yes | No | Remarks |
|---|---|---|---|
| Have challenges for women to benefit | ☐ | ☑ | |
| Target vulnerable community members such as physically challenged, LGBTQ, child-headed household etc..? | ☑ | ☐ | Positively |
| Interfere with the normal health and safety of the worker/employee? | ☑ | ☐ | |
| Reduce the employment opportunities for the surrounding communities? | ☐ | ☑ | |
| Reduce settlement (no further area allocated to settlements)? | ☐ | ☑ | |
| Reduce income for the local communities? | ☐ | ☑ | |
| Increase insecurity due to the introduction of the project? | ☑ | ☐ | |
| Increase exposure of the community to HIV/AIDS? | ☐ | ☑ | |
| Induce conflict within the project area? | ☐ | ☑ | |
| Have machinery and/or equipment installed? | ☑ | ☐ | |
| Introduce new practices and habits? | ☐ | ☑ | |
| Lead to child delinquency (school drop-outs, child abuse, child labour, etc.? | ☐ | ☑ | |
| Lead to gender disparity? | ☐ | ☑ | |
| Lead to poor diets? | ☐ | ☑ | |
| Lead to social evils (drug abuse, excessive alcohol consumption, crime, prostitution, etc.)? | ☐ | ☑ | |
| Will the Sub-Project activities engage community labour? | ☐ | ☑ | |

**Section D: Natural Habitats**

| Will the Subproject: | | | Remarks |
|---|---|---|---|
| Be located within or near environmentally sensitive areas (e.g. intact natural forests, mangroves, wetlands) or threatened plant and animal species? | ☐ | ☑ | |
| Adversely affect environmentally sensitive areas or critical habitats – wetlands, woodlots, natural forests, rivers, etc.)? | ☐ | ☑ | |
| Affect the indigenous biodiversity (Flora and fauna)? | ☑ | ☐ | |
| Cause any loss or degradation of any natural habitats, either directly (through project works) or indirectly? | ☑ | ☐ | |
| Affect the aesthetic quality of the landscape? | ☑ | ☐ | |
| Reduce people's access to the pasture, water, public services, or other resources that they depend on? | ☐ | ☑ | |
| Increase human-wildlife conflicts? | ☐ | ☑ | |
| Use irrigation system in its implementation? | ☐ | ☑ | |

**Section E: Indigenous Peoples/VMGs as per ESS7**

| Are there: | | | Remarks |
|---|---|---|---|
| IVMGs living within the boundaries of, or near the project? | ☐ | ☑ | |
| Members of VMGs in the area who could benefit from the project? | ☑ | ☐ | |
| IVMGs livelihoods to be affected by the subproject? | ☐ | ☑ | |
| Unique/specific challenges for VMGs to benefit from the project? | ☐ | ☑ | |
| VMGs as minority in the community? | ☐ | ☑ | |
| Does VMG require to donate land to benefit from the project | | | |

**Section F: Land Acquisition and Access to Resources**

| Will the subproject: | Yes | No | Remarks |
|---|---|---|---|
| Require that land (public or private) be acquired (temporarily or permanently) for its development? | ☐ | ☑ | Already existing |
| Require that community land be acquired (temporarily or permanently) for its development? | ☐ | ☑ | |
| Require more than 10 percent of the affected private land parcel | ☐ | ☑ | |
| Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forests) | ☑ | ☐ | |
| Are complete land ownership documents available for the Sub- Project investment? | ☑ | ☐ | |
| Is the land proposed have encumbrances (cautions, property tax, leases, easements, mortgages, etc)? | ☐ | ☑ | |
| Physically displace individuals, families or businesses? | ☐ | ☑ | |
| Cause loss of income for more than 30 days | ☐ | ☑ | |
| Result in temporary or permanent loss of crops, fruit trees/fencing and pasture land/ loss of income from business activity? | ☑ | ☐ | |
| Adversely affect small communal cultural property such as funeral and burial sites, or sacred graves? | ☐ | ☑ | |
| Result in involuntary restriction of access by people to legally designated parks and protected areas? | ☐ | ☑ | |
| Be on monoculture cropping? | ☐ | ☑ | |

**Section G: Climate and Disaster Risk**

| | Yes | No | Remarks |
|---|---|---|---|
| Is the project located near a river or a stream prone to flooding or breaking its banks? | ☐ | ☑ | |
| Is the project located in an urban area prone to flooding? | ☐ | ☑ | |
| Is the project located in a low-lying coastal area prone to storm surges or coastal flooding from increased water levels? | ☐ | ☑ | |
| Is the project located in an area prone to backflow flooding? | ☐ | ☑ | |
| Is the project located on or near slopes prone to landslides (i.e., mass movements of soil, rock, or debris)? | ☐ | ☑ | |
| Is the project located in an area with geological formations prone to shifts in fault lines, sink holes, or craters? | ☐ | ☑ | |
| Is the project located in an area prone to the sinking of the ground due to erosion, groundwater movement, or tectonic activity? | ☐ | ☑ | |
| Is the project prone to potential structural damage or disruption from earthquakes/earth tremors? | ☐ | ☑ | |
| Is the project located within 50 km from a volcano for which a potentially damaging eruption has been recorded in the past 2,000 years and that future damaging eruptions are possible? | ☐ | ☑ | |
| Is the project located in a vegetated area prone to wildfires? | ☐ | ☑ | |
| Is the project dependent on water resources susceptible to droughts which can adversely impact water availability and quality? | ☐ | ☑ | |
| Is the project susceptible to prolonged periods of extreme heat? | | ✓ | |
| Is the project located in an area prone to strong winds, storms, or gusts? | | ✓ | |
| Is the project located in an area that is prone to lightning and thunderstorm that could compromise the structural integrity and reliability of the asset? | ✓ | | |

**Section H: Pesticides and Agricultural Chemicals**

| Will the subproject: | Yes | No | Remarks |
|---|---|---|---|
| Involve the use of pesticides or other agricultural chemicals, or increase existing use? | ☐ | ☑ | |
| Cause contamination of watercourses by chemicals and pesticides? | ☐ | ☑ | |
| Cause contamination of soil by agrochemicals and pesticides? | ☐ | ☑ | |
| Experience effluent and/or emissions discharge? | ☑ | ☐ | |
| Involve annual inspections of the producers and unannounced inspections for Export produce? | ☐ | ☑ | |
| Require scheduled chemical/pesticide applications? | ☐ | ☑ | |
| Require chemical application even to areas distant away from the focus? | ☐ | ☑ | |
| Require chemical/pesticide application to be done by vulnerable groups (pregnant mothers, chemically allergic persons, elderly, etc.)? | ☐ | ☑ | |

**Section I: Proposed action**

| (i) Summarize the above: | (ii) Guidance |
|---|---|
| ☐ All the above answers are 'No'<br><br>☑ There is at least one 'Yes' | • If all the above answers are 'No', there is no need for further action;<br>• If there is at least one 'Yes', please describe your recommended course of action (see below). |

**Recommended Course of Action**

| Project category | Characteristics |
|---|---|
| A | Full and extensive EIA needed- irreversible environmental impacts; impacts not easy to pick or isolate and mitigation cost expensive; EMP design not easily done; Must have the EIA done and future annual EAs instituted |
| B ✓ | Site specific environmental impacts envisaged; mitigation measures easy to pick, not costly and EMP design readily done; then a summary project report (SPR), ESIA comprehensive project report, ESIA study report or Environmental and Social Management Plan (ESMP) should be developed, submitted and approved by NEMA. In addition, other necessary instruments i.e. Resettlement Action plan (ARAP) should be developed and approved by NLC and other relevant authorities/stakeholders as described in the POM. |
| C | Have minimal or occasionally NO adverse environmental impacts; exempted from further environmental processes save environmental audits |

**Completed by:**

**KDSP II Environment Specialist / Officer**

Name: KIBATHI GERALD

Position / Designation: ENVIRONMENT OFFICER

Signature: Gkibathi

Date: 5/9/2025

**KDSP II Social safeguard Officer**

Name: WEFA OWINGA

Signature:

Date: 5/9/2025

**Comment by County NEMA Officer**

A fairly big development that is planned to be implemented within the existing hospital compound making it easy to manage anticipated impacts associated with the proj

Name: Tom Tago Signature: Date: 16/9/25

COUNTY DIRECTOR OF ENVIRONMENT
NEMA - MIGORI COUNTY
P. O. Box 21 - 40400, SUNA - MIGORI


REPUBLIC OF KENYA


# County Government of Migori

## Department of Public Service Management and Devolution

## Pre-Feasibility Study Report

## On Proposed Construction of

# Modern County Hospital in Awendo

**October, 2025**

## Executive Summary

This pre-feasibility study evaluates the potential for constructing a modern hospital in Awendo to address the growing healthcare needs of the region. The study covers market demand, technical feasibility which entails infrastructure needs, facility design, site assessment and human resources plan. Financial feasibility is about initial capital expenditure, annual fixes costs, operational expenditures, revenue projections, financial viability, and cost-benefit analysis payback period and sensitivity analysis.

The study further covers the aspects of social acceptance, funding sources and options, operational sustainability, environmental considerations, risk assessment, economic and social cost-benefit finally conclusions and recommendations are highlighted. Initial findings indicate that the project is viable feasibility study should be conducted.

## Contents

## 1.0 Introduction

In general, Migori County's demand for high-quality medical care is increasing. Awendo town and the adjacent areas, in particular, have limited access to specialized care, and the county needs to distribute health services fairly due to the growing population and illness burden. The Migori County government and development partners are proposing to build a state-of-the-art hospital in Awendo in this regard. It is worthwhile to give this project some thought in order to evaluate its potential.

In order to meet the increasing need for specialized and high-quality healthcare services in Migori County and beyond, the proposed Awendo Modern County Hospital will be a cutting-edge medical facility. The purpose of this pre-feasibility study is to assess the feasibility of building a modern hospital in Awendo while taking budgetary considerations, infrastructural requirements, health care gaps, and demographic trends into account.

## 1.1 Project Rationale

Strategic sub-county hospitals in Migori County, such as Awendo Sub-County Hospital, are confronted with major equipment and infrastructure constraints that limit their ability to provide specialist care, even in the face of the county-level increase in demand for specialized healthcare services. Congestion and decreased service delivery efficiency are the results of this over-reliance on Migori County Referral Hospital (MCRH) the primary county referral hospital.

Despite having specialist staff on hand, Migori County Referral Hospital (MCRH) currently has a bed occupancy rate of over 120%, which leads to chronic ward congestion and bed sharing, early patient discharges because of bed shortages, insufficient critical care capacity and surgical backlogs because of insufficient theater space. Decentralizing specialized healthcare, improving access to high-quality treatments, and reducing the strain on the referral institution all depend on closing these crucial gaps.

## 1.2 Project Strategic Goal

The project's strategic objective is to construct a modern, well-equipped county hospital in Awendo that offers comprehensive and specialized healthcare services, thereby improving access, reducing patient referrals, and enhancing health outcomes.

## 1.3 Project Objectives

The project intends to construct a modern, well-equipped hospital in Awendo that offers comprehensive and specialized healthcare services, intended to:-

a) Enhance the hospital's capacity to manage complex medical and surgical conditions, including trauma and non-communicable diseases (NCDs).
b) Strengthen access to specialized services by establishing a renal unit and HDU unit
c) Increase access to diagnostic services by establishing a comprehensive Class D laboratory
d) Improve access to quality mental health services by establishing a mental health clinic
e) Improve the working environment for healthcare workers and promote patient-centered care through modern, well-equipped infrastructure.

## 1.4 Project Scope

The proposed Awendo Modern Hospital will be a four-storey facility with a total floor area of 9,000 m², designed to increase the scope of services and inpatient bed capacity for the hospital. The complex will consolidate and expand critical and specialized services, with the following components:

a) Administrative offices
b) Outpatient unit with: registration offices, Casualty, Casualty Theatre, Consultation rooms, Class D laboratory, Pharmacy, Dental, ENT and rehabilitative Unit
c) Renal unit, High Dependency Unit, Specialized NCD clinics and mental health clinic
d) Surgical theatre with associated medical, pediatric and surgical wards
e) Telemedicine facilities, intern call rooms, boardrooms, and green spaces

## 1.5 Services Demand Analysis

The primary target population includes residents of Awendo town and surrounding areas within Migori County, as well as transient populations who may require medical services while traveling through the region. The estimated population of Awendo Sub-County is over 150,000. The households are characterized by predominantly rural and peri-urban households with limited access to advanced healthcare. The population has a high demand for maternal and child health services due to elevated birth rates, rising cases of non-communicable diseases (diabetes, hypertension) requiring long-term care.

Further the demand for emergency medical care is compounded by frequent outbreaks of communicable diseases (malaria, typhoid, respiratory infections) and limited access to surgical services within reasonable proximity. The population growth rate is estimated at 2.5% annually, indicating increasing future demand for healthcare services. The demand for quality services is further driven by urbanization and rising income, SHA expansion and private insurance uptake, coupled with the national government's push for Universal Health Coverage (UHC)

## 2.0 Technical Feasibility

Technical feasibility will be done to evaluate whether the proposed construction of a modern hospital in Awendo can be successfully developed and implemented using existing technology, infrastructure, and expertise.

### 2.1 Infrastructure Needs

The project shall require appropriate buildings to house inpatient, outpatient services, diagnostic labs and operating theatres. In addition to medical equipment such as imaging (X-ray, ultrasound), lab machines and ICU beds. Further necessary utilities such as water, electricity, backup generators, internet and waste management systems need to be put in place

### 2.2 Facility Design and Construction

In the design and construction the following should be observed:-

a) Designed for scalability to accommodate future growth in services and patient volume.
b) Optimized for comfort, privacy, and accessibility.
c) Natural lighting and cross-ventilation to enhance healing environments and reduce energy consumption.
d) Adheres to Kenya's national guidelines for healthcare infrastructure, safety, and service delivery.
e) Ensure eligibility for government support and alignment with public health goals.
f) Seamless data exchange with the Kenya Health Information System for real-time reporting, monitoring, and decision-making.

g) Support digital health records, inventory tracking, and performance analytics.
h) Incorporate passive cooling, solar energy, and water conservation systems.
i) Built to withstand local climate challenges while minimizing environmental impact.
j) All departmental space requirements and specifications should be adhered to

### 2.3 Site Assessment

The proposed site which is public land in Awendo town, adjacent to existing sub-county hospital will be evaluated to determine if it's ideal for the project since project location impacts its operational efficiency, accessibility, and long-term success. Its suitability was evaluated based on physical location, ownership, plan, accessibility, additional utilities required, and topography. Preliminary findings indicate that the site is ideal.

### 2.4 Human Resources

Human resource recruitment plan for medical, administrative and support staff will be outlined to ensure optimal staffing to support effective service delivery

## 3.0 Financial Feasibility

Financial feasibility will be done to estimates total project costs, forecasts revenue & cash flow, identify funding needs & sources, evaluate cost vs. benefit, assesse financial risks to support decision-making on viability

### 3.1 Capital Expenditures (CAPEX)

The project is projected to require Ksh. 452,000,000.00 as the initial capital investment.

### 3.2 Annual Fixed Cost

From the projected capital expenditure, an annual fixed cost due to depreciation will be determined. There will be a provision of depreciation on buildings of 3% annually whereas for office and medical equipment it shall be 10% on straight line method.

### 3.3 Operational Expenditures (OPEX)

The project is expected to incur Ksh 200,000,000.00 as annual operational expenditure stem from personnel emoluments, utilities, maintenance and consumables, further the operational expenditures are expected to increase by 1% annually

### 3.4 Revenues Projections

It is projected that the project upon completion and operationalization, it would be able to generate Ksh. 300,000,000 as revenue annually. Further it is projected that the revenue shall grow by 2% annually. All potential revenue streams for the proposed facility will be assessed. Compared to other facilities of similar magnitude, the projections are feasible.

### 3.5 Financial Viability

To determine the financial viability of the project, the present value of future cash flows and the net present value, cost-benefit and discounted payback period will be determined. The discounting rate will be10%. With a projected positive present net value, the project is worth investing in.

### 3.6 Cost-Benefit Analysis

This financial matrix will be evaluated to determine the economic viability of the proposed construction of the modern hospital in Awendo by comparing the present value of the benefits and the present values of the cost.

### 3.7 Payback Period

Payback period will be evaluated to estimate the length of time required to recoup the initial investment. In particular, the discounted method will used since it takes into account time value money and is more accurate and reliable. It is estimated that it will take 11 years to recoup the initial investment based on net cash inflows.

### 3.8 Sensitivity Analysis

A sensitivity analysis will be done to evaluate how decline in revenues generated can affect the financial stability of the facility and its sustainability.

### 4.0 Social Acceptance

Through public participation forums and a survey commissioned by the county government through the department of public service management and devolution, the project social acceptance level shall be determined. Due to rising demand for specialized services, the project is expected to receive overwhelming support form stakeholders.

## 5.0 Funding Sources/Options

The project will be funded by:-

a) County Government : 100,000,000
b) Development Partner: 352,000,000

## 6.0 Operational Sustainability

Operational sustainability will be evaluated to assess the facility's ability to deliver high-quality healthcare services consistently over time, without compromising financial viability, environmental responsibility, or workforce stability. Therefore it was proposed that for the hospital to operate efficiently, it should be provided with financial support either from:-

a) SHA reimbursements and user fees
b) County health budget allocations
c) Potential donor support for specialized services
d) Other revenue from the identified revenue streams

## 7.0 Environmental Considerations

The following environmental impact considerations will be addressed to enable the facility reduce its environmental footprint

a) Minimal ecological disruption
b) Need for Environmental Impact Assessment (EIA) prior to construction
c) Waste management plan including medical waste disposal
d) Climate-resilient design with solar backup and flood mitigation
e) Rainwater harvesting and solar energy integration

## 8.0 Risk Assessment

Potential common risks associated with hospital projects were identified and further the mitigating measure were proposed

**Table 1: Risk Assessment**

| S/No | Risk | Likelihood | Impact | Mitigation Strategy |
|---|---|---|---|---|
| 1 | Budget overruns | Medium | High | a) Phased budgeting, strict procurement controls<br>b) Regular financial audits & cost control |

| S/No | Risk | Likelihood | Impact | Mitigation Strategy |
|---|---|---|---|---|
| 2 | Delays in approvals | Medium | Medium | Early stakeholder engagement, fast-track permits |
| 3 | Staffing shortages | High | High | Training programs, incentives, partnerships with medical colleges |
| 4 | Community resistance | Low | Medium | Public participation, awareness campaigns |
| 5 | Supply chain disruptions | Medium | Medium | Local sourcing, buffer stock planning |
| | Contractor disputes | Medium | High | Clear contract terms & dispute resolution mechanisms |
| 6 | Regulatory Delay | Low | High | Early engagement |
| 7 | Environmental Risk | Low | High | EIA compliance |
| 9 | Poor monitoring and evaluation | Medium | Medium | Establish a robust M&E framework<br>Appoint dedicated staff |
| 10 | Natural disasters | Low | High | Disaster preparedness initiatives<br>Take insurance covers |

## 9.0 Economic and Social Cost-Benefit Analysis

The anticipated non-monetary impact on the community and broader society were articulated.

**Table 2: Economic and Social Cost-Benefit Analysis**

| S/No | Aspect | Impact | Strategy |
|---|---|---|---|
| 1 | Health Outcomes | Reduced Mortality | a) Faster emergency response<br>b) Better maternal care<br>c) Chronic disease management. |
| | | Public Health Benefits | a) Vaccination programs<br>b) Health education<br>c) Disease surveillance |
| 2 | Social Equity | Increased access | a) Access for vulnerable groups: women, children, elderly, and low-income populations.<br>b) Bridging the urban-rural healthcare gap. |
| 3 | | Education and Productivity | a) Fewer sick days<br>b) Higher productivity.<br>c) Healthy children perform better in school<br>d) Health education programs raise awareness. |
| 4 | Economic Benefits | Revenue Generation: | a) Patient fees<br>b) Insurance reimbursements |

| | | | |
|---|---|---|---|
| | | | c) SHA contributions. |
| | | Job Creation: | a) Direct employment (doctors, nurses, technicians).<br>b) Indirect employment (construction workers, suppliers, vendors). |
| | | Local Economic Stimulus: | a) Boost to nearby businesses (housing, food, transport). |

## 10.0 Conformance to Sector Diagnostics and Master Plans

The project aligns with, Vision 2030, Kenya's Universal Health Coverage (UHC) agenda, Bottom up Economic Transformation Agenda (BETA) and Migori County Health Sector Strategic and Investment Plan 2024–2028. The project will enhance system resilience, promote equitable access to quality care, and significantly improve health outcomes for the people of Migori County and neighboring regions.

## 11.0 Conclusions

Based on the preliminary analysis of market demand, site suitability, facility design, and financial viability, the construction of Awendo Modern County Hospital is deemed feasible and strategically beneficial. The project will significantly improve access to specialized healthcare, reduce maternal and child mortality, and enhance the overall health system in Migori County.

## 12.0 Recommendations

After the pre-feasibility study, the following were recommended:-

- Establishment of a project steering committee
- A team to be formed or consultant engaged to conduct full feasibility study
- Architectural design to be developed and necessary approvals acquired
- Funding to be sourced and stakeholder engaged
- EIA be conducted and necessary permits obtained


# COUNTY GOVERNMENT OF MIGORI

## Department of Public Service Management and Devolution

## Feasibility Study Report

## On Proposed Construction of

## Modern County Hospital in Awendo

## Final Report

## October, 2025

**Acknowledgments**

The technical team takes this opportunity to sincerely thank everyone who participated in the study. Your input was invaluable during the study. We are especially grateful to the Department of Health, Migori County Government, for their leadership and for the provision of vital information. Special thanks to the leadership of the Awendo community for their cooperation and valuable feedback during the study.

We are grateful to the technical consultants, environmental specialists, and healthcare planners whose knowledge enhanced the caliber and comprehensiveness of this report. Lastly, we would like to thank the project team for their hard work, which made this study a success.

This report is a testament to the collaborative approach that was adopted. It shall form the basis for the establishment of a cost-effective, environmentally sound, and community needs-based facility in Awendo Town.

# Contents

**List of Tables**

## Abbreviations and Acronyms

MCRH Migori County Referral Hospital

(ICU/HDU) High Dependency Unit,

non-communicable diseases (NCDs).

ENT

NCD

NEMA

Universal Health Coverage (UHC)

Migori County Integrated Development Plan (CIDP).

CAPEX:

OPEX

NCA

(PV)

NPV

(CBR)

(BCR)

Economic and Social Cost Benefit Analysis (ESCBA)

value for money (VfM)

any PPP

KPIs

(M&E)

EIA

**Executive Summary**

This feasibility study evaluates the viability of constructing a modern hospital in Awendo, Migori County. The analysis confirms that the project is technically feasible, financially viable, and socially impactful. Key recommendations include proceeding with phased construction, securing multi-source funding, and integrating community feedback into design and operations. The hospital will serve over 142,000 residents, reduce pressure on the county referral hospital, and improve access to specialized healthcare services

# CHAPTER ONE

# INTRODUCTION

## 1.1 Project Background

Migori County is currently experiencing increasing pressure on its healthcare system, particularly at the Migori County Referral Hospital, which is overstretched due to high patient volumes and limited capacity. Awendo Sub-County Hospital serves more than 150,000 residents from the sub-county and neighboring regions. However, its existing infrastructure is inadequate, lacking specialized services and modern equipment.

The proposed project seeks to construct a modern hospital to bridge these gaps. Consequently, this feasibility study was undertaken to assess the viability of establishing a modern hospital in Awendo to decentralize healthcare services and enhance access to quality healthcare.

## 1.2 Rationale and Genesis

Despite the increasing demand for specialized healthcare services at the county level, strategic sub-county hospitals in Migori County continue to face significant infrastructural and equipment constraints that limit their capacity to provide specialized care. Consequently, there has been an overreliance on the Migori County Referral Hospital (MCRH), resulting in congestion and reduced efficiency in service delivery. Addressing these critical gaps is essential to facilitate the decentralization of specialized healthcare, improve access to quality services, and alleviate pressure on the referral facility.

The Migori County Referral Hospital (MCRH) serves as the county's primary public tertiary and teaching hospital, and functions as the main referral hub for specialized services within Migori County and neighbouring regions. The facility currently operates at a bed occupancy rate exceeding 120 percent, leading to chronic ward congestion, bed sharing, and premature discharges occasioned by bed shortages. Additionally, the hospital faces inadequate critical care capacity (ICU/HDU) and surgical backlogs resulting from limited theatre space, despite the presence of qualified specialist staff.

## 1.3 Target Population/Market

The primary target population comprises residents of Awendo Town and its surrounding areas within Migori County, as well as transient populations requiring medical services while traveling through the region. The estimated population of Awendo Sub-County is over 150,000 residents. The age distribution is approximately as follows: children (0–14 years): ~40%; youth and adults (15–64 years): ~55%; Elderly (65+ years): ~5%. The population exhibits an approximately equal male-to-female ratio.

Households in the sub-county are predominantly rural and peri-urban, with limited access to advanced healthcare services. There is a high demand for maternal and child health services due to elevated birth rates, alongside a growing burden of non-communicable diseases such as diabetes and hypertension, which require long-term management. The area also experiences frequent outbreaks of communicable diseases, including malaria, typhoid, and respiratory infections, while access to emergency and surgical services within reasonable proximity remains limited.

Awendo is an emerging urban centre experiencing steady rural-to-urban migration. The presence of the sugar industry and small-scale trade activities attracts seasonal workers and business travellers, contributing to population dynamism. The population growth rate is estimated at 2.5 percent annually, suggesting a steadily increasing future demand for healthcare services.

Currently, the Awendo Sub-County Hospital has limited capacity and lacks specialized units. Meanwhile, the Migori County Referral Hospital remains overstretched, resulting in long waiting times. Private clinics in the area are often unaffordable and provide limited services, and there is no comparable public healthcare facility within a 20-kilometer radius.

## 1.4 Project Objectives

The project intends to construct a modern, well-equipped hospital in Awendo that offers comprehensive and specialized healthcare services, intended to:-

a) Enhance the hospital's capacity to manage complex medical and surgical conditions, including trauma and non-communicable diseases (NCDs).
b) Strengthen access to specialized services by establishing a renal unit and HDU unit

c) Increase access to diagnostic services by establishing a comprehensive Class D laboratory

d) Improve access to quality mental health services by establishing a mental health clinic

e) Improve the working environment for healthcare workers and promote patient-centered care through modern, well-equipped infrastructure.

## 1.5 Scope of the Project

The proposed Awendo Modern Hospital will be a four-storey facility with a total floor area of approximately 9,000 square metres. It is designed to significantly expand the hospital's service scope and increase inpatient bed capacity from 40 to 200 beds. The facility will consolidate and enhance the delivery of critical and specialized healthcare services through the following key components:

a) **Administrative Offices** – To support hospital management, coordination, and operational oversight.

b) **Outpatient Department (OPD)** – Comprising registration offices, casualty and casualty theatre, consultation rooms, a Class D laboratory, pharmacy, dental and ENT units, as well as a rehabilitative unit.

c) **Specialized Units** – Including a renal unit, high-dependency unit (HDU), specialized non-communicable disease (NCD) clinics, and a mental health clinic.

d) **Surgical Complex** – Comprising a main surgical theatre and associated medical, pediatric, and surgical wards.

e) **Support and Auxiliary Facilities** – Including telemedicine facilities, intern call rooms, boardrooms, and landscaped green spaces to promote a conducive healing and working environment.

## 1.6 Approach and Methodology of the Feasibility Study

In conducting this feasibility study, a systematic approach was adopted to ensure comprehensive analysis and accurate findings. The process involved stakeholder consultations, site visits, and technical assessments to evaluate the existing healthcare infrastructure and service delivery capacity. Additionally, a review of healthcare supply within the county and neighboring regions

was undertaken to identify existing gaps. Finally, projections for future demand and capacity requirements were developed to inform the design and scale of the proposed facility.

### 1.6.1 Stakeholders Consultations

Stakeholders were engaged through a combination of public forums and boardroom meetings to ensure that the proposed project aligns with the needs, expectations, and concerns of the affected communities and institutions. This engagement process also aimed to identify potential areas of support or resistance early in the project cycle, thereby building transparency, trust, and promoting collaboration among all parties involved. The key stakeholders consulted during the feasibility study are summarized in Table 1.1 below.

**Table 1.1: Stakeholders Analysis**

| S/No | Stakeholder | Description | Influence | Interest | Role /Engagement |
|---|---|---|---|---|---|
| 1 | Ministry of Health (MoH) | • National Health Authority | High | High | a) Policy formulation<br>b) Project approval<br>c) Funding<br>d) Technical support<br>e) Compliance: UHC, SDGs |
| 2 | World Bank group | • International development organization | High | High | a) Funding and investment<br>b) Sustainability planning<br>c) Global best practices<br>d) Monitoring and evaluation |
| 3 | County Department of Health | • County Health Authority | High | High | a) Policy alignment<br>b) Budgetary support<br>c) Project implementation<br>d) Operational support<br>e) Infrastructure coordination<br>f) Oversight and governance |
| | County Department of Public service management and devolution | • Co-coordinator & implementer of KDSP Programmes<br>• Human resource management | High | High | a) Policy alignment<br>b) Project implementation<br>c) Project o-ordination<br>d) Operational support |

| S/No | Stakeholder | Description | Influence | Interest | Role /Engagement |
|---|---|---|---|---|---|
| | | | | | e) Public awareness creation |
| | County Public Works Department | • Construction | High | High | a) Overseeing project design and construction |
| | County Department of Finance and Economic Planning | • Payments facilitator | High | High | a) Procurement<br>b) Payments<br>c) Audit |
| 2 | Community Leaders and Residents | • Project beneficiaries and opinion leaders | High | High | a) Local needs assessment<br>b) Social acceptance<br>c) Employment |
| 3 | Health Professionals and Unions | • Service providers and trade unions | High | High | a) Operational input<br>b) Workforce planning<br>c) Quality of care |
| 5 | Regulatory Bodies | • NEMA | High | High | Compliance with environmental standards |
| | | • NCA | | | |

### 1.6.2 Site Visits and Technical Assessments

On-site inspections were conducted by a multidisciplinary team comprising engineers, architects, and environmental experts to obtain firsthand insights into the physical conditions and site constraints. These assessments aimed to identify potential environmental, logistical, and infrastructural challenges, and to validate the assumptions made during the pre-feasibility study.

### 1.6.3 Healthcare Supply Map

This study included an evaluation of the capacity, range of services offered, and geographical reach of the top five healthcare facilities and service providers within a 20-kilometre radius of the proposed site. The objective was to develop a clear understanding of the existing healthcare supply landscape and to ensure that the proposed facility complements, rather than duplicates, existing services. The healthcare supply map is presented in Table 1.2:

**Table 1.2: Healthcare Supply Map**

| S/No | Facilities | Capacity / Average annual workload | Service offerings | Geographic reach | Gaps to be filled |
|---|---|---|---|---|---|
| | **Hospitals** | | | | |
| 1 | Awendo sub county Hospital | 18,552 | Outpatient, Inpatient, maternity, basic diagnostic | Primary public hospital (serves as the PCN hub) | Specialized services (renal, surgical, HDU), NCD clinics, comprehensive diagnostic |
| 2 | Santa Antonio Hospital | | Outpatient, inpatient, basic diagnostic, maternity, basic theatre | Private, Awendo township | Specialized services (renal, surgical, HDU), NCD clinics, comprehensive diagnostic |
| 3 | Rapcom Nursing and maternity | 13,800 | Outpatient, inpatient, basic diagnostic, maternity, basic theatre | Private, Awendo township | Specialized services (renal, surgical, HDU), NCD clinics, comprehensive diagnostic |
| | **Health Centre/ Clinics** | | | | |
| 1 | Sony Medical Centre | 10,100 | Outpatient, inpatient, basic diagnostic | Awendo Township and Sony sugar factory staff | Inadequate bed capacity, comprehensive diagnostic and |

| S/No | Facilities | Capacity / Average annual workload | Service offerings | Geographic reach | Gaps to be filled |
|---|---|---|---|---|---|
| | | | | | specialized services |
| 2 | Ranen Ochuna Medical centre | 8,800 | Outpatient, inpatient, basic diagnostic | Residents of North Sakwa ward | Inadequate bed capacity, comprehensive diagnostic and specialized services |
| 3 | Ranen SDA health Centre | 7,500 | Outpatient, inpatient, basic diagnostic | Residents of North Sakwa ward | Inadequate bed capacity, comprehensive diagnostic and specialized services |
| 4 | Dede Health Centre | 6,000 | Outpatient, inpatient, basic diagnostic | Residents of West Sakwa ward | Inadequate bed capacity, comprehensive diagnostic and specialized services |

### 1.6.4 Projections for Future Demand and Capacity Needs

Based on existing data and observed trends, the study developed projections indicating a steady increase in demand for quality and specialized healthcare services within the Awendo region and its environs. These projections provide critical insights for planning the scale and capacity of the proposed facility. The projections are presented in Table 1.3:

**Table 1.3 Projections for Future Demand and Capacity Needs**

| S/No | Dimension | Projection |
|---|---|---|
| 1 | Population growth | 2.5% annually |
| 2 | Projected outpatient visits per year by 2030 | 250,000 |
| 3 | Estimated daily outpatient visits | 250–300 |
| 4 | Inpatient bed demand for beds by 2030 | 200 |
| 5 | Inpatient admissions per day | 60–80 |
| 6 | New services demanded | Maternity, dialysis, and surgical services |

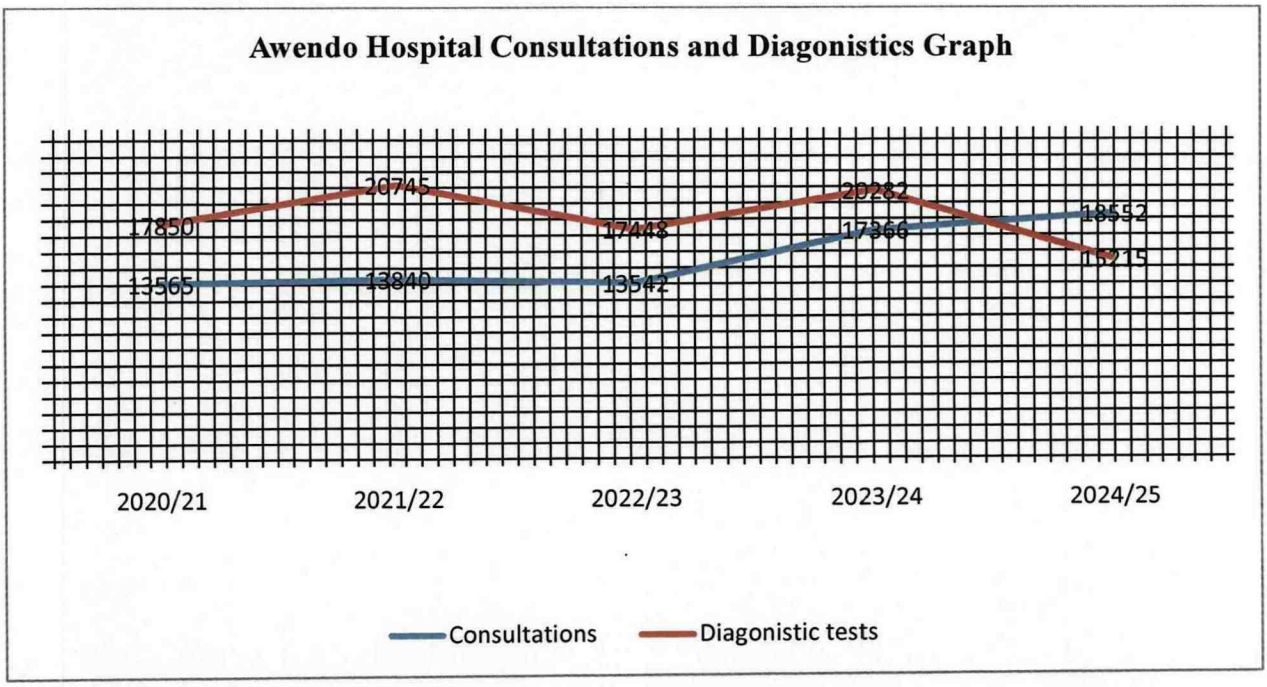
### 1.6.5 Awendo Hospital Historical Data

An analysis of historical data, market trends, and population growth was undertaken to estimate the future utilization and demand for the proposed hospital's services. The results of this analysis will guide the determination of the project's scale, scope, design specifications, and operational strategies to ensure long-term sustainability and efficiency. The historical data and projections are presented in Table 1.4.

**Table 1.3: Awendo Hospital Historical Data**

| S/No | Service | Specifics | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|---|---|---|---|---|---|---|---|
| 1 | Outpatient services | Consultations | 13,565 | 13,840 | 13,542 | 17,366 | 18,552 |
| | | Diagnostic tests | 17,850 | 20,745 | 17,448 | 20,282 | 15,215 |
| 2 | Emergency services | Acute cases | | | | | |
| 3 | Surgical procedures | Routine | N/A | N/A | N/A | N/A | N/A |
| | | Specialized | N/A | N/A | N/A | N/A | N/A |
| 4 | Beds Capacity | Number of hospital beds | 35 | 35 | 40 | 40 | 40 |
| 5 | Referrals | Cases referred | 125 | 138 | 102 | 81 | 107 |

**Table 1.3: Awendo Hospital Historical Data**




**Observation:** This graph depicts that the numbers arriving seeking medical care is on the rise

## 1.7 Conformance to Sector Diagnostics and Master Plans

The proposed project is fully aligned with key national and county development frameworks, including Kenya Vision 2030, the Universal Health Coverage (UHC) Agenda, the Bottom-Up Economic Transformation Agenda (BETA), and the Migori County Health Sector Strategic and Investment Plan (CHSSIP) 2024–2028.

By supporting these strategic priorities, the project will enhance health system resilience, promote equitable access to quality healthcare, and contribute to improved health outcomes for the people of Migori County and neighboring regions.

## 1.8 Institutional Settings

This concerns the roles of the relevant institutions

### 1.8.1 County Government of Migori

The County Government of Migori will serve as the primary initiator and co-financier of the proposed project. Its key responsibilities will include providing political support, administrative coordination, and budgetary allocations necessary for project implementation. Additionally, the county government will ensure that the project is aligned with existing county development plans and health sector priorities, and will facilitate land acquisition, infrastructure development, and community engagement through the County Department of Health.

The county government will also coordinate with other departments to deliver integrated services, and undertake an assessment of the technical and financial capacity required to manage and sustain the project. Furthermore, it will be responsible for identifying gaps that may necessitate external support or capacity-building interventions to ensure the long-term success and sustainability of the facility.

.

### 1.8.2 Ministry of Health

The Ministry of Health (MoH) will play a key regulatory and oversight role in the implementation of the proposed project. The Ministry will ensure compliance with national health standards, policies, and regulations, and will be responsible for providing licensing, accreditation, and quality assurance mechanisms.

In addition, the Ministry will offer technical guidance on clinical protocols, staffing norms, and equipment standards, and will support training, monitoring, and evaluation of health outcomes. The MoH will also ensure that the project is aligned with the national health agenda, particularly the goal of achieving Universal Health Coverage (UHC).

### 1.8.3 Potential Public-Private Partnership (PPP)

The project initiators can leverage private sector efficiency, innovation, and investment capacity to enhance service delivery and address resource gaps in infrastructure, technology, and specialized healthcare services. This collaboration can be achieved through Public–Private Partnerships (PPPs) or other structured arrangements in which roles and responsibilities are clearly defined and risks are appropriately allocated between public and private partners.

# CHAPTER TWO

# TECHNICAL AND COMMERCIAL SOLUTION OPTIONS ANALYSIS

## 2.0 Introduction

This chapter presents the evaluation criteria and analysis of the proposed technical and commercial solution options for the project. It outlines the technical feasibility, including facility design and construction considerations, and the financial feasibility, which encompasses capital and operational expenditures, revenue projections, and overall financial viability.

The financial assessment includes the evaluation of the present value of future cash flows, net present value (NPV), and cost–benefit analysis. It also reviews potential funding sources and options, sensitivity analysis, and operational sustainability. The chapter concludes with a determination of the overall viability of the project based on the integrated technical and financial findings.

## 2.1 Alternative Technical Solutions

In implementing the project proposal, two viable options were identified for consideration. Option one entailed expansion and upgrading of the existing Awendo Sub-County Hospital, whereas option two entailed construction of a new modern hospital facility adjacent to the existing one. To determine the most suitable alternative, each option was evaluated using a set of criteria encompassing technical, economic, financial, legal, social, and environmental aspects, as well as a comprehensive economic cost–benefit analysis. The evaluation results are presented in the subsequent sections.

### 2.1.1 Recommended Technical Solution

However based on the user needs and non-conforming existing structures, the only viable option was construction of a new hospital facility. The facility will be four-storey building with 200 beds, 6 departments, 24/7 emergency care, with estimated Capital Expenditure (CAPEX) of Ksh. 452M and estimated Operational Expenditure (OPEX) of Ksh 210M.

## 2.2 Technical Feasibility

The technical feasibility assessment was undertaken to determine whether the proposed construction of a modern hospital in Awendo can be successfully developed and implemented using the available technology, infrastructure, and technical expertise.

This evaluation ensures that the hospital can be constructed and operated efficiently, with potential risks identified and mitigated early, and available resources optimally utilized. Furthermore, the technical feasibility analysis provides a sound basis for stakeholder confidence in the project's overall viability and sustainability.

### 2.2.1 Facility Design and Construction

In the design and construction of the proposed Awendo Modern Hospital, the following key principles and standards should be observed: -

a) Scalability: The facility should be designed to accommodate future growth in both service scope and patient volumes.
b) Patient-Centered Design: Layouts should be optimized for comfort, privacy, accessibility, and ease of movement for patients, staff, and visitors.
c) Sustainable Architecture: Incorporate natural lighting and cross-ventilation to promote healing environments and reduce energy consumption.
d) Regulatory Compliance: Ensure full adherence to Kenya's national guidelines for healthcare infrastructure, safety, and service delivery standards.
e) Policy Alignment: Design should support eligibility for government funding and align with national and county public health goals.
f) Health Information Systems Integration: Facilitate seamless data exchange with the Kenya Health Information System (KHIS) to enable real-time reporting, monitoring, and evidence-based decision-making.
g) Digital Health Infrastructure: Support the adoption of electronic health records (EHRs), inventory management systems, and performance analytics tools.
h) Environmental Sustainability: Incorporate passive cooling, solar energy, and water conservation systems to enhance energy efficiency and sustainability.
i) Climate Resilience: Ensure the facility is designed and constructed to withstand local climatic conditions while minimizing environmental impact.
j) Spatial Standards: Adhere strictly to departmental space requirements and technical specifications as prescribed by the Ministry of Health and relevant regulatory bodies.

### 2.2.2 Proposed Location

The study evaluated the proposed site to determine its suitability for the project since location directly influences operational efficiency, accessibility, and long-term sustainability of the

facility. The proposed site is public land located in Awendo Town, adjacent to the existing Awendo Sub-County Hospital. Its suitability was assessed based on several key factors, including accessibility, availability of utilities, topography, environmental conditions, and land ownership status. The detailed assessment results are presented in Table 2.1.

**Table 2.1: Proposed Site Evaluation**

| S/No | Criteria | Status | Comment |
|---|---|---|---|
| 1 | Location | a) Public land in Awendo town, adjacent to existing sub-county hospital<br>b) No resettlement required<br>c) Utility relocation is minimal | Longitude<br>Latitude |
| 2 | Ownership | a) Title deed endorsed by County Lands Office<br>b) Allotment letter<br>c) Letter of authority | |
| 3 | Plan | a) Zoned for public health use | |
| 4 | Approval | a) Requires approvals from NEMA, Ministry of Health, and County Planning Office | |
| 5 | Accessibility | a) Accessible via paved roads and public transport routes | The roads require further improvement |
| 6 | Required Utilities | a) Electricity, with backup options to ensure uninterrupted operations.<br>b) Clean water supply and waste management systems.<br>c) High-speed internet for modern healthcare systems and communication. | |
| 7 | Physical conditions | a) Topography: | The site is stable and free from floods risks |

**Decision: It was concluded that the site is ideal and therefore suitable for proposed project**

## 2.3 Financial Feasibility

The study conducted a comprehensive financial feasibility assessment to estimate the total project costs, forecast revenue and cash flow, and identify potential funding needs and sources. The analysis also evaluated the cost–benefit relationship and assessed potential financial risks associated with project implementation.

### 2.3.1 Capital Expenditures (CAPEX)

The total initial capital investment required for the implementation of the proposed Awendo Modern Hospital project is estimated at Ksh. 452,000,000.00. The detailed breakdown is presented in Table 2.2 below.

**Table 2.2: Capital Investment Components**

| S/No. | Component | Estimated Cost Ksh. |
|---|---|---|
| 1 | Architectural and structural plans and preparation of Bill of quantities | 6,000,000.00 |
| 2 | Construction Approvals from County, NEMA and NCA | 3,000,000.00 |
| 3 | Procurement processes | 300,000.00 |
| 4 | Physical infrastructure | 283,200,000.00 |
| 5 | Medical equipment and furniture | 145,000,000.00 |
| 6 | Training of the staff on use of and maintenance of the equipment | 7,000,000.00 |
| 7 | Project management (supervision, monitoring and evaluation) | 7,500,000.00 |
| | Total | 452,000,000.00 |

### 2.3.2 Annual Fixed Cost

Annual fixed cost are due to depreciation and are determined on a straight line method

**Table 2.3: Estimated Annual Fixed Cost**

| | Item | Cost (Ksh) | Rate of Dep. | Depreciation (Ksh) |
|---|---|---|---|---|
| 1 | Physical infrastructure | 283,200,000.00 | 3% | 8,496,000.00 |
| 2 | Medical equipment and furniture | 145,000,000.00 | 10% | 1,450,000.00 |
| | **TOTAL** | | | **9,946,000.00** |

### 2.3.3 Operational Expenditures (OPEX)

Annual operational expenditure stem from personnel emoluments and policy planning and administrative support services. Operational expenditures are expected to increase by 1% annually

**Table 2.4: Estimated annual fixed Cost**

| | Component | Cost |
|---|---|---|
| 1 | Personnel emoluments | 100,000,000.00 |
| 2 | Utilities | 30,000,000.00 |
| 3 | Maintenance | 35,000,000.00 |
| 4 | Consumables | 35,000,000.00 |
| | **Total** | **200,000,000.00** |

**Table 2.5: Distribution of Fixed and Variable Costs**

| | Year | Fixed cost | Variable cost | Total cost | Current value of costs at 10% |
|---|---|---|---|---|---|

| | | | | | discount rate |
|---|---|---|---|---|---|
| | 1 | 9,946,000.00 | 0 | 9,946,000.00 | 9,041,818.18 |
| | 2 | 9,946,000.00 | 0 | 9,946,000.00 | 8,219,834.71 |
| | 3 | 9,946,000.00 | 200,000,000.00 | 209,946,000.00 | 157,735,537.19 |
| | 4 | 9,946,000.00 | 202,000,000.00 | 211,946,000.00 | 144,761,969.81 |
| | 5 | 9,946,000.00 | 204,020,000.00 | 213,966,000.00 | 132,856,051.81 |
| | 6 | 9,946,000.00 | 206,060,200.00 | 216,006,200.00 | 121,929,868.63 |
| | 7 | 9,946,000.00 | 208,120,802.00 | 218,066,802.00 | 111,902,749.76 |
| | 8 | 9,946,000.00 | 210,202,010.02 | 220,148,010.02 | 102,700,671.41 |
| | 9 | 9,946,000.00 | 212,304,030.12 | 222,250,030.12 | 94,255,708.46 |
| | 10 | 9,946,000.00 | 214,427,070.42 | 224,373,070.42 | 86,505,531.63 |
| | 11 | 9,946,000.00 | 216,571,341.13 | 226,517,341.13 | 79,392,946.19 |
| | 12 | 9,946,000.00 | 218,737,054.54 | 228,683,054.54 | 72,865,468.66 |
| | | | | | 1,122,168,156.45 |

### 2.3.4 Revenues Projections

It is projected that the project upon completion and operationalization, it would be able to generate Ksh. 300,000,000 as revenue annually. It was further projected that the revenue shall grow by 2% annually. The study comprehensively assessed all potential revenue streams for the proposed facility.

**Table 2.6: Revenue Projections from Steams**

| | | Time frame | | | | |
|---|---|---|---|---|---|---|
| S/No | Revenue stream | 2028 | 2028 | 2029 | 2030 | 2031 |
| 1 | Consultations | | | | | |
| 2 | Surgeries | | | | | |
| 3 | Diagnostics | | | | | |
| 4 | Reimbursements-private insurers | | | | | |
| 5 | Reimbursements-government programs | | | | | |
| 6 | Pharmacy | | | | | |
| 7 | Specialized clinics | | | | | |
| 8 | Cafeterias | | | | | |
| 9 | Facilities | | | | | |
| | Total | 300M | 306M | 3.1212M | 3.183624M | 3.24729648M |

## 2.4 Financial Viability

To determine the financial viability of the project, the present value of future cash flows and the net present value, cost-benefit and discounted payback period were determined

### 2.4.1 Present Value of Future Cash Flows

The present values (PV) of all future cash flows were determined discounted by 10%.

Therefore:
PV = C/ (1+R) ^n
Where:-
PV=Present Value
C= Future cash flow
r = discounting rate
n= Number of years until the cash flow is received

**Table 2.7: Projected Revenue Analysis**

| | Year | Revenue | Current value of returns at 10% discount rate |
|---|---|---|---|
| 1 | 2026 | 0 | 0 |
| 2 | 2027 | 0 | 0 |
| 3 | 2028 | 300,000,000.00 | 225,394,440.27 |
| 4 | 2029 | 306,000,000.00 | 209,002,117.34 |
| 5 | 2030 | 312,120,000.00 | 193,801,963.35 |
| 6 | 2031 | 318,362,400.00 | 179,707,275.11 |
| 7 | 2032 | 324,729,648.00 | 166,637,655.10 |
| 8 | 2033 | 331,224,240.96 | 154,518,552.91 |
| 9 | 2034 | 337,848,725.78 | 143,280,839.97 |
| 10 | 2035 | 344,605,700.29 | 132,860,415.25 |
| 11 | 2036 | 351,497,814.30 | 123,197,839.59 |
| 12 | 2037 | 358,527,770.59 | 114,237,996.71 |
| | | | 1,642,639,095.62 |

### 2.4.2 Net Present Value

To determine whether the project was viable, the study determined the Net Present Value (NPV)
Therefore:

$$NPV = \frac{\Sigma \text{ (Cash inflow)}}{(1+r)^{t}} - \text{Initial Investment}$$

Where:-
NPV = Net Present Value
r = discounting rate
t = time

NPV = (1,642,639,095.62 / (1+0.1) ^12) - 452,000,000.00 = 71,395,438.24

**Decision: Since the Net Present Value is positive, the project is feasible and its worth investing in it.**

### 2.4.3 Cost-Benefit Analysis

This financial matrix was evaluated to determine the economic viability of the proposed construction of the modern hospital in Awendo by comparing the present value of the benefits and the present values of the cost.

**Table 2.8: Summary of Costs and Cash Flows**

| S/No | Item description | Amount |
|---|---|---|
| 1 | Initial Capital Expenditure | 452,000,000.00 |
| 2 | Discounted Operational Expenditures | 1,122,168,156.45 |
| 3 | Total Cost (Cash out flow) | 1,574,168,156.45 |
| 4 | Discounted Cash Inflow | 1,642,639,095.62 |

**Table 2.9: Cost-Benefit Analysis**

| Term | Common Metric | Interpretation |
|---|---|---|
| **Cost-Benefit Analysis** | Cost-Benefit Ratio (CBR)<br>= Costs / Benefits<br>= 1,574,168,156.45/1,642,639,095.62<br>= 0.97 | 0.97 <1 the project is viable |
| **Benefit-Cost Analysis** | Benefit-Cost Ratio (BCR)<br>= Benefits / Costs<br>= 1,642,639,095.62/1,574,168,156.45<br>= 1.03 | 1.03 >1 the project is viable |

**Decision: Based on Cost-Benefit analysis results, the project is viable**

### 2.4.4 Discounted Payback Period

In the study, payback period was evaluated to determine the length of time required to recoup the initial investment. In particular, the discounted method was used since it takes into account time value money and is more accurate and reliable.

**Table 2.10: Discounted Payback Period**

| Year | | Discounted cash inflow | Discounted fixed cost | Discounted Net cash inflow | Cumulative cash inflow |
|---|---|---|---|---|---|
| 1 | 2026 | | 9,041,818.18 | (9,041,818.18) | (9,041,818.18) |
| 2 | 2027 | | 8,219,834.71 | (8,219,834.71) | (17,261,652.89) |

| | | | | | |
|---|---|---|---|---|---|
| 3 | 2028 | 225,394,440.27 | 157,735,537.19 | 67,658,903.08 | 50,397,250.19 |
| 4 | 2029 | 209,002,117.34 | 144,761,969.81 | 64,240,147.53 | 114,637,397.72 |
| 5 | 2030 | 193,801,963.35 | 132,856,051.81 | 60,945,911.54 | 175,583,309.26 |
| 6 | 2031 | 179,707,275.11 | 121,929,868.63 | 57,777,406.48 | 233,360,715.74 |
| 7 | 2032 | 166,637,655.10 | 111,902,749.76 | 54,734,905.34 | 288,095,621.08 |
| 8 | 2033 | 154,518,552.91 | 102,700,671.41 | 51,817,881.50 | 339,913,502.58 |
| 9 | 2034 | 143,280,839.97 | 94,255,708.46 | 49,025,131.51 | 388,938,634.09 |
| 10 | 2035 | 132,860,415.25 | 86,505,531.63 | 46,354,883.62 | 435,293,517.71 |
| 11 | 2036 | 123,197,839.59 | 79,392,946.19 | 43,804,893.40 | 479,098,411.11 |
| 12 | 2037 | 114,237,996.71 | 72,865,468.66 | 41,372,528.05 | 520,470,939.16 |

Projected annual net cash flow = 43,372,578.26
Predetermined Payback Period = 452,000,000.00/43,372,578.26
= 10 years: 4 months
Calculated Discounted Payback period = 10 + (16,706,482.3/452,000,000.00)*12)
= 10 years: 1month

**Decision: since the calculated payback period is less than predetermined period, the project is viable**

## 2.5 Sensitivity Analysis

A sensitivity analysis was done to evaluate how decline in revenues generated can affect the financial stability of the facility and its sustainability.

**Table 2.10: Operating Income Statement**

| Operating Income statement | |
|---|---|
| Item | Amount |
| Revenue | 290,000,000.00 |
| Fixed cost | (9,946,000.00) |
| Variable cost | (200,000,000.00) |
| Operating Income | 80,054,000.00 |

**Table 2.11: Sensitivity Analysis**

| | Drop in Revenue (%) | Revenue | Operating Cost | Profit | Remark |
|---|---|---|---|---|---|
| Base Line | | 290,000,000.00 | 209,946,000.00 | 80,054,000.00 | |
| Scenario | 5 | 275,500,000.00 | 209,946,000.00 | 65,554,000.00 | |
| | 10 | 261,000,000.00 | 209,946,000.00 | 51,054,000.00 | |
| | 15 | 246,500,000.00 | 209,946,000.00 | 36,554,000.00 | |

| | | | | | |
|---|---|---|---|---|---|
| | 20 | 232,000,000.00 | 209,946,000.00 | 22,054,000.00 | |
| | 25 | 217,500,000.00 | 209,946,000.00 | 7,554,000.00 | |
| | 26 | 214,600,000.00 | 209,946,000.00 | 4,654,000.00 | |
| | 27 | 211,700,000.00 | 209,946,000.00 | 1,754,000.00 | |
| | 27.5 | 210,250,000.00 | 209,946,000.00 | 304,000.00 | |
| | 27.6 | 209,960,000.00 | 209,946,000.00 | 14,000.00 | |
| | 27.7 | 209,670,000.00 | 209,946,000.00 | -276,000.00 | |

From the sensitivity analysis done it was observed that the project can only tolerate a decline in revenues by up to 27.6% beyond which it starts making loses which could adversely affects its sustainability

## 2.6 Social Acceptance

Through public participation forums and a survey that was commissioned by the county government through the department of public service management and devolution, the project received overwhelming support and approval from the public and key stake holders. They survey indicated that all respondents involved gave a 98% approval to the project as planned.

## 2.7 Decision

Based on the results of the technical and financial feasibility backed by high social acceptance rate, it was concluded that the project meets all requirements to validate its viability. Therefore investment in it was deemed worthwhile.

## 2.8 Funding Sources

The funds required for the project will be sourced from:-

a) County government development budget
b) Development partner(s )

## 2.9 Financing Options

The project will be funded by:-

a) County Government : 100,000,000
b) Development Partner: 352,000,000

## 2.10 Operational Sustainability

Operational sustainability was evaluated to assess the facility's ability to deliver high-quality healthcare services consistently over time, without compromising financial viability, environmental responsibility, or workforce stability. Therefore it was concluded that for the hospital to operate efficiently, it should be provided with financial support either from:-

a) SHA reimbursements and user fees
b) County health budget allocations
c) Potential donor support for specialized services
d) Other revenue from the identified revenue streams

# CHAPTER THREE

# PROJECT DUE DILIGENCE

## 3.0 Introduction

This section covers the legal aspects, site enablement, Economic and Social Cost Benefit Analysis (ESCBA) and identified environmental impact concerns.

## 3.1 Legal Aspects

Legal and regulatory due diligence was performed to review relevant laws, policies, and regulatory frameworks through consultation with legal experts and government agencies, verification of land titles, permits, and contractual obligations. To ensure compliance with laws, zoning, and environmental regulations and avoid legal disputes, fines, or project delays and clarifies land ownership, permits, and licensing requirements

**Table 3.1: Legal Aspects**

| S/No | Legal requirement | Compliance action |
|---|---|---|
| 1 | Land use rights | Secured via county allocation |
| 2 | Compliance with Public Finance Management Act | |
| 3 | Environmental Management Act | |
| 4 | Health Act | |
| 5 | Zoning laws | |
| 6 | Licensing and Accreditation | a) Construction permits<br>b) Operation and service delivery protocols<br>c) Accreditation standards |
| 7 | Data Privacy and Compliance | a) Adhere to local and international laws governing patient data protection,<br>b) Investment in robust IT systems to ensure secure storage and management of patient records. |

| | | |
|---|---|---|
| 8 | Legal Contracting | |

## 3.2 Site Enablement

The study assessed the status of the necessary supporting infrastructure to enable the site support the construction and subsequent operation of the modern hospital

**Table 3.2: Utility Infrastructure Assessment**

| S/No | Utility | Comment | Future plan |
|---|---|---|---|
| 1 | Electricity | Available | |
| 2 | Water | Available | |
| 3 | Internet | Available | Require expansion |
| 4 | Medical gas system | | d) To be included in design |
| | | | e) |

## 3.3 Economic and Social Cost-Benefit Analysis

This part evaluates non-monetary impact on the community and broader society.

**Table 3.3: Economic and Social Cost-Benefit Analysis**

| S/No | Aspect | Impact | Strategy |
|---|---|---|---|
| 1 | Health Outcomes | Reduced Mortality | a) Faster emergency response<br>b) Better maternal care<br>c) Chronic disease management. |
| | | Public Health Benefits | a) Vaccination programs<br>b) Health education<br>c) Disease surveillance |
| 2 | Social Equity | Increased access | a) Access for vulnerable groups: women, children, elderly, and low-income populations.<br>b) Bridging the urban-rural healthcare gap. |
| 3 | | Education and Productivity | a) Fewer sick days<br>b) Higher productivity.<br>c) Healthy children perform better in school<br>d) Health education programs raise awareness. |
| 4 | Economic Benefits | Revenue Generation: | a) Patient fees<br>b) Insurance reimbursements<br>c) SHA contributions. |
| | | Job Creation: | a) Direct employment (doctors, nurses, technicians).<br>b) Indirect employment (construction workers, suppliers, vendors). |
| | | Local Economic | a) Boost to nearby businesses (housing, food, |

| | | | |
|---|---|---|---|
| | | Stimulus: | transport). |
| | | | • |

### 3.4 Environmental Impact Considerations

The following environmental impact considerations were assessed to enable the facility reduce its environmental footprint

**Table 3.4: Environmental Impact Considerations**

| | Consideration | Observation/suggestion |
|---|---|---|
| 1 | Low ecological sensitivity of proposed site | a) The selected site in Awendo has minimal impact on local biodiversity and ecosystems.<br>b) It is not within protected area, wetland, and habitats of endangered species. |
| 2 | EIA to be conducted before construction | a) A comprehensive EIA to be conducted to evaluate potential environmental risks and propose mitigation strategies. |
| 3 | Waste management plan including medical waste disposal | a) The hospital to implement a structured waste segregation system: general, recyclable, and hazardous.<br>b) Medical waste to be treated using incineration or autoclaving.<br>c) Partnerships with licensed waste disposal firms will ensure safe and compliant handling. |
| 5 | Climate-resilient design with solar backup and flood mitigation | a) Materials and design adopted should withstand extreme weather patterns linked to climate change.<br>b) Solar power systems set ups to provide backup energy during outages, enhancing reliability. |
| 6 | Rainwater harvesting and solar energy integration | a) Rooftop rainwater harvesting systems to collect and store water for non-potable uses like cleaning.<br>b) Solar panels to be installed to reduce reliance on grid electricity and lower operational costs. |

# CHAPTER FOUR

# PROCUREMENT OPTIONS AND PPP STRUCTURE ANALYSIS

## 4.0 Introduction

This section will focus on evaluation of the alternative options for procuring the project, including the preferred PPP option.

## 4.1 Procurement Options Considered

The electronic government procurement method will be used as guided by the public procurement and disposal act 2015 to ensure transparent tendering process for contractors and suppliers. The use of e-procurement systems will ensure accountability

## 4.2 Evaluation Criteria

During evaluation, value for money (VfM) will be the guiding principle

## 4.3 Preferred Procurement Option

The facility shall be entirely a public entity therefore any PPP arrangement is not provided for as at now.

# CHAPTER FIVE

# PROJECT RISK MATRIX

## 5.0 Introduction

The chapter focuses on the identified risks associated with the project and the mitigating strategies.

## 5.1 Risks

The study identified common risks in hospital projects and further the mitigating measure were proposed

- Delays in construction due to unforeseen site conditions or regulatory hurdles.
- Cost overruns resulting from inflation, material shortages, or design changes.
- Challenges in recruiting skilled medical and non-medical staff.
- Changes in healthcare regulations that affect the project's scope or costs.

## 5.2 Mitigation Strategies

Mitigation strategies will include

- Build contingency funds into the budget to handle unexpected expenses.
- Establish strong project management protocols to ensure timely delivery.
- Develop competitive recruitment and training programs to attract and retain talent.
- Monitor regulatory developments and maintain open communication with authorities to address compliance issues swiftly.
- Proactively addressing risks ensures the project stays on track and within budget, ultimately leading to a successful hospital launch.

**Table 5.1: Risks and Mitigating Strategies**

| S/No | Risk | Likelihood | Impact | Mitigation Strategy |
|---|---|---|---|---|
| 1 | Budget overruns | Medium | High | a) Phased budgeting, strict procurement controls<br>b) Regular financial audits & cost control |
| 2 | Delays in approvals | Medium | Medium | Early stakeholder engagement, fast-track permits |

| S/No | Risk | Likelihood | Impact | Mitigation Strategy |
|---|---|---|---|---|
| 3 | Staffing shortages | High | High | Training programs, incentives, partnerships with medical colleges |
| 4 | Community resistance | Low | Medium | Public participation, awareness campaigns |
| 5 | Supply chain disruptions | Medium | Medium | Local sourcing, buffer stock planning |
| | Contractor disputes | Medium | High | Clear contract terms & dispute resolution mechanisms |
| 6 | Regulatory Delay | Low | High | Early engagement |
| 7 | Environmental Risk | Low | High | EIA compliance |
| 9 | Poor monitoring and evaluation | Medium | Medium | Establish a robust M&E framework Appoint dedicated staff |
| 10 | Natural disasters | Low | High | Disaster preparedness initiatives Take insurance covers |

# CHAPTER SIX

# PROJECT IMPLEMENTATION, MONITORING AND EVALUATION

## 6.0 Introduction

This chapter highlights the operational plan, project implementation schedule, finally conclusion and recommendations are covered

## 6.1 Operational Plan

A prototype operational plan was developed for the proposed modern hospital outlining how the facility will function on a day-to-day basis to achieve its strategic goals. It translates high-level objectives into actionable steps, ensuring that resources, personnel, and systems are aligned for smooth and efficient operations.

**Table 6.1: Operational Plan**

| S/No | Activity | Sub-activity | Strategy |
|---|---|---|---|
| 1 | Policy planning | Planning | a) Developing a strategic plan for the hospital |
| 2 | Organizational Structure | Governance | a) Hospital Board of Directors<br>b) Executive Management Team |
| | | Operationalization of departments | a) Clinical Services (Inpatient, Outpatient, Emergency, Maternity)<br>b) Diagnostic Services (Laboratory, Radiology)<br>c) Pharmacy<br>d) Nursing<br>e) Administration (HR, Finance, IT, Procurement) |
| 3 | Human Resource Plan | Staffing Needs assessments | a) Medical Officers, Nurses, Clinical Officers, Lab Technicians, Radiographers<br>b) Administrative Staff: HR, Finance, Records<br>c) Support Staff: Drivers, Cleaners, Cooks, Security |
| | | Recruitment Strategy | a) Partner with medical colleges and universities<br>b) Advertise locally and nationally |
| | | Training & | a) Continuous Medical Education |

| S/No | Activity | Sub-activity | Strategy |
|---|---|---|---|
| | | Development | b) Emergency response drills<br>c) Customer service and ethics workshops |
| | | Performance Management | a) Setting of KPIs for each department<br>b) Annual appraisals and feedback sessions |
| 4 | Clinical Operations | Patient Flow Design | a) Triage → Registration → Consultation → Diagnostics → Treatment → Discharge |
| | | Standard Operating Procedures | a) Infection control<br>b) Medication administration<br>c) Emergency response |
| | | Quality Assurance | a) Clinical audits<br>b) Patient satisfaction surveys<br>c) Morbidity and mortality reviews |
| 5 | Facility Management | Maintenance Schedule | a) Daily checks (water, power, sanitation)<br>b) Monthly equipment servicing<br>c) Annual infrastructure review |
| | | Waste Management | a) Segregation of medical and general waste<br>b) Incineration and disposal protocols |
| | | Safety & Security | a) 24/7 security personnel<br>b) CCTV and access control<br>c) Fire safety systems |
| 6 | Financial Management | Budgeting | a) Annual operating budget<br>b) Departmental allocations |
| | | Revenue Streams | a) SHA reimbursements<br>b) Out-of-pocket payments<br>c) Donor funding and grants |
| | | Cost Control Measures | a) Procurement audits<br>b) Inventory tracking<br>c) Energy efficiency programs |
| 7 | Information Systems | Health Information System | a) Electronic Medical Records<br>b) Patient billing and scheduling |
| | | Data Security | a) Role-based access<br>b) Regular backups |
| | | Reporting | a) Monthly performance dashboards<br>b) Compliance with Ministry of Health reporting standards |
| 8 | Community | Outreach Program | a) Mobile clinics |

| S/No | Activity | Sub-activity | Strategy |
|---|---|---|---|
| | Engagement | | b) Health education campaigns |
| | | Stakeholder Collaboration | a) County health department<br>b) NGOs and faith-based organizations |
| | | Feedback Mechanisms | a) Suggestion boxes<br>b) Community forums |
| | | Key Performance Indicators (KPIs) | a) Bed occupancy rate<br>b) Average length of stay<br>c) Patient satisfaction score<br>d) Staff-to-patient ratio |
| | | Review Cycle | a) Monthly departmental reviews<br>b) Quarterly board meetings<br>c) Annual strategic review |
| 9 | Contingency & Risk Management | Emergency Preparedness | a) Disaster response plan<br>b) Backup generators and water tanks |
| | | Risk Mitigation | a) Insurance coverage<br>b) Legal compliance audit |
| | | Pandemic Response: | a) Isolation wards<br>b) PPE stockpiles<br>c) Staff training on outbreak protocols |
| 10 | Monitoring and Evaluation | KPIs: | a) Patient satisfaction<br>b) Bed occupancy rate<br>c) Average length of stay<br>d) Staff retention |
| | | Quality Assurance | a) Clinical audits<br>b) Accreditation readiness |
| | | Continuous Improvement: | a) Root cause analysis<br>b) Implement Six Sigma initiatives |

### 6.1.2 Project Implementation Schedule

The proposed project implementation schedule was as below

**Table 6.2: Project Implementation Schedule**

| S/No. | Activity | Time Frame | Responsibility | Comment |
|---|---|---|---|---|
| 1 | Concept note | | | |
| 2 | Pre-feasibility | | | |

| | | | | |
|---|---|---|---|---|
| 3 | Feasibility | | | |
| | Design and approvals | | | |
| 4 | Procurement | Q2 2026 | | |
| 5 | Construction | Q3 2026 – Q4 2027 | | |
| 6 | Operations commencement | Q1 2028 | | |

### 6.1.3 Implementation Plan

An implementation plan for the proposed modern hospital was developed to serve as a roadmap that outlines how the project will be executed from start to finish. It helps ensure clarity, coordination, and accountability among all stakeholders.

**Table 6.3: Implementation Plan**

| S/No. | Aspect | Activity | Role | Responsibility |
|---|---|---|---|---|
| | Governance | Establishment of a Project Steering Committee | | |
| | | Appointment of a Project Manager and technical team | | |
| | | Appointment of project implementation team | | |
| | | Establishment of a Monitoring and evaluation Committee | Regular monitoring and evaluation | |
| | Monitoring & Evaluation | Regular monitoring and evaluation (M&E) | Quarterly progress reports | Monitoring and evaluation Committee |
| | | | Independent audits and technical reviews | Monitoring and evaluation Committee |
| | | | Health service delivery indicators tracked post-completion | Monitoring and evaluation Committee |

## 6.2 Monitoring and Evaluation

A comprehensive Monitoring and Evaluation (M&E) Framework was developed for the proposed construction of a modern hospital in Awendo. The framework will ensures that the project stays on track, delivers quality outcomes, and uses resources efficiently.

To enable the project achieve its objectives, the framework will help in:-

| | Aspect | How its Achieved |
|---|---|---|
| 1 | Tracking progress against targets | a) Defining clear objectives, indicators, and timelines.<br>b) Assessing whether construction, staffing, equipment procurement, and service delivery are proceeding as planned. |
| 2 | Ensuring accountability | a) Keeping stakeholders informed.<br>b) Providing transparency in how funds are used and decisions are made. |
| 3 | Improving decision-making | a) Offering real-time data to adjust strategies, budgets, or timelines.<br>b) Identifying bottlenecks early |
| 4 | Measuring impact | a) Evaluating whether the hospital improves health outcomes<br>b) Assessing patient satisfaction and service quality levels. |
| 5 | Supporting sustainability | a) Planning for long-term operations, maintenance, and staffing.<br>b) Encouraging learning and adaptation for future health infrastructure projects. |
| 6 | Facilitating compliance | a) Ensuring that the hospital meets regulatory, safety, and health standards.<br>b) Tracking adherence to environmental and social safeguards. |

Project Objectives

| | Objective | Description |
|---|---|---|
| | Infrastructure Development | Build hospital wards, outpatient units, maternity wing, surgical theaters, and support facilities |
| | Health Service Expansion | Increase access to quality healthcare for Awendo and surrounding areas |
| | Employment Creation | Generate jobs for medical staff, contractors, and support personnel |
| | Public Health Improvement | Reduce disease burden and improve maternal and child health outcomes |

Key Performance Indicators (KPIs)

From each of the projects objectives, key performance indicators were deduced:-

Table Key Performance Indicators

| | Indicator | Baseline | Target | Data Source | Frequency |
|---|---|---|---|---|---|
| | % of construction completed | 0% | 100% | Site reports | Monthly |
| | Number of hospital beds installed | 0 | [Insert target] | Procurement records | Quarterly |
| | Number of staff recruited | 0 | [Insert target] | HR records | Post-construction |
| | Community satisfaction rate | N/A | ≥85% | Survey | End line |
| | Compliance with health & safety standards | N/A | 100% | Inspection reports | Bi-monthly |
| | Number of patients served (Year 1) | 0 | [Insert target] | Hospital records | Annually |

**Monitoring Plan**

A monitoring plan which entailed a structured framework that outlines how a project's progress and performance will be tracked over time was developed for the proposed Modern Hospital. It ensures that activities are being implemented as intended and that resources are used efficiently to achieve desired outcomes.

**Table Monitoring Plan**

| | Activity | Responsible Party | Tool/Method | Frequency |
|---|---|---|---|---|
| | Site inspections | County Engineer | Checklist | Weekly |
| | Budget tracking | Finance Officer | Ledger review | Monthly |
| | Stakeholder meetings | Project Manager | Minutes & attendance | Quarterly |
| | Progress reporting | Contractor | Progress reports | Monthly |
| | Risk assessment | M&E Officer | Risk matrix | Bi-monthly |
| | | | | |

**Evaluation Plan**

An evaluation plan which entailed which is a structured document that outlines how a project's outcomes and impacts will be assessed was developed for the proposed modern Hospital in Awendo. It provides a roadmap for determining whether the project is achieving its goals, how well it's performing, and what lessons can be learned for future initiatives.

**Table evaluation Plan**

| | Type | Timing | Methodology | Responsible |
|---|---|---|---|---|
| | Midterm Evaluation | Halfway through project | Interviews, site visits | External evaluator |

| | | | | |
|---|---|---|---|---|
| | Final Evaluation | After completion | Surveys, focus groups, impact analysis | M&E team |
| | Operational Evaluation | 6–12 months post-opening | Service delivery audit | Health Directorate |
| | | | | |

**Reporting Structure**

The proposed Awendo Modern Hospital will have a reporting structure which will be organized system through which data, findings, and insights are communicated across stakeholders. It defines who reports what, to whom, how often, and in what format to ensure accountability, transparency, and informed decision-making throughout the project lifecycle.

**Table Reporting Structure**

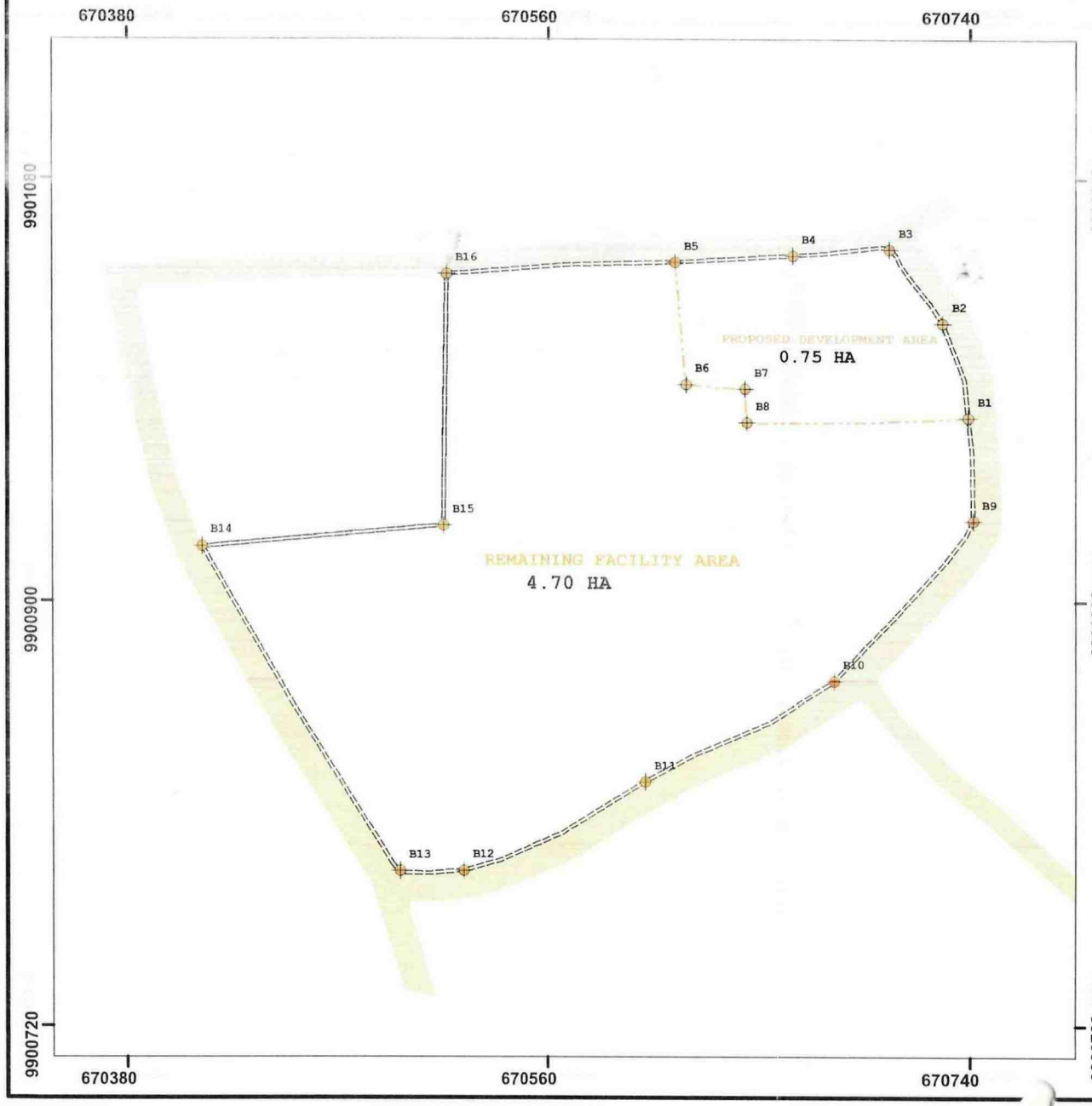
| | Report | By | To | |
|---|---|---|---|---|
| | Monthly Progress Reports | | | County Executive Committee & Ministry of Health |
| | Quarterly Review Meetings | | | Stakeholders, Community Representatives, Donors |
| | Final Evaluation Report | | | **P**ublic dissemination, policy integration, and donor feedback |

## 6.2 Conclusion and Recommendations

The proposed Awendo Modern County Hospital is a viable and strategic investment in Migori County's health infrastructure. It addresses critical service gaps, aligns with Kenya's Universal Health Coverage (UHC) goals, and offers long-term social and economic benefits. Based on this feasibility study, it is recommended that the county proceed to:

- Secure funding and finalize architectural designs
- Engage stakeholders for transparency and support
- Conduct EIA and obtain necessary approvals
- Procure the contractors and suppliers
- Launch the construction

# PROPOSED SITE FOR DEVELOPMENT AT AWENDO SUB-COUNTY HOSPITAL





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**Legend**

- ROAD
- PROPOSED_BOUNDARY
- EXISTING_HOSPITAL_BOUNDARY
- BEACONS

**DETUM: ARC_1960**

ARC_1960_UTM ZONE_36S

| B_Id | Y_Coordinates | X_Coordinates |
|---|---|---|
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| B2 | 9901018.17 | 670728.23 |
| B3 | 9901049.65 | 670705.79 |
| B4 | 9901046.94 | 670664.51 |
| B5 | 9901044.1 | 670614.29 |
| B6 | 9900992.16 | 670618.88 |
| B7 | 9900990.18 | 670644.02 |
| B8 | 9900975.77 | 670644.7 |
| B9 | 9900934.03 | 670740.87 |
| B10 | 9900866.34 | 670682.5 |
| B11 | 9900823.73 | 670601.77 |
| B12 | 9900785.97 | 670523.58 |
| B13 | 9900785.82 | 670496.32 |
| B14 | 9900923.33 | 670412.41 |
| B15 | 9900931.93 | 670514.74 |
| B16 | 9901039.12 | 670516 |

Coordinate System: Arc 1960 UTM Zone 36S
Projection: Transverse Mercator
Datum: Arc 1960
False Easting: 500,000.0000
False Northing: 10,000,000.0000
Central Meridian: 33.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

DRAWN BY:OMONDI P.

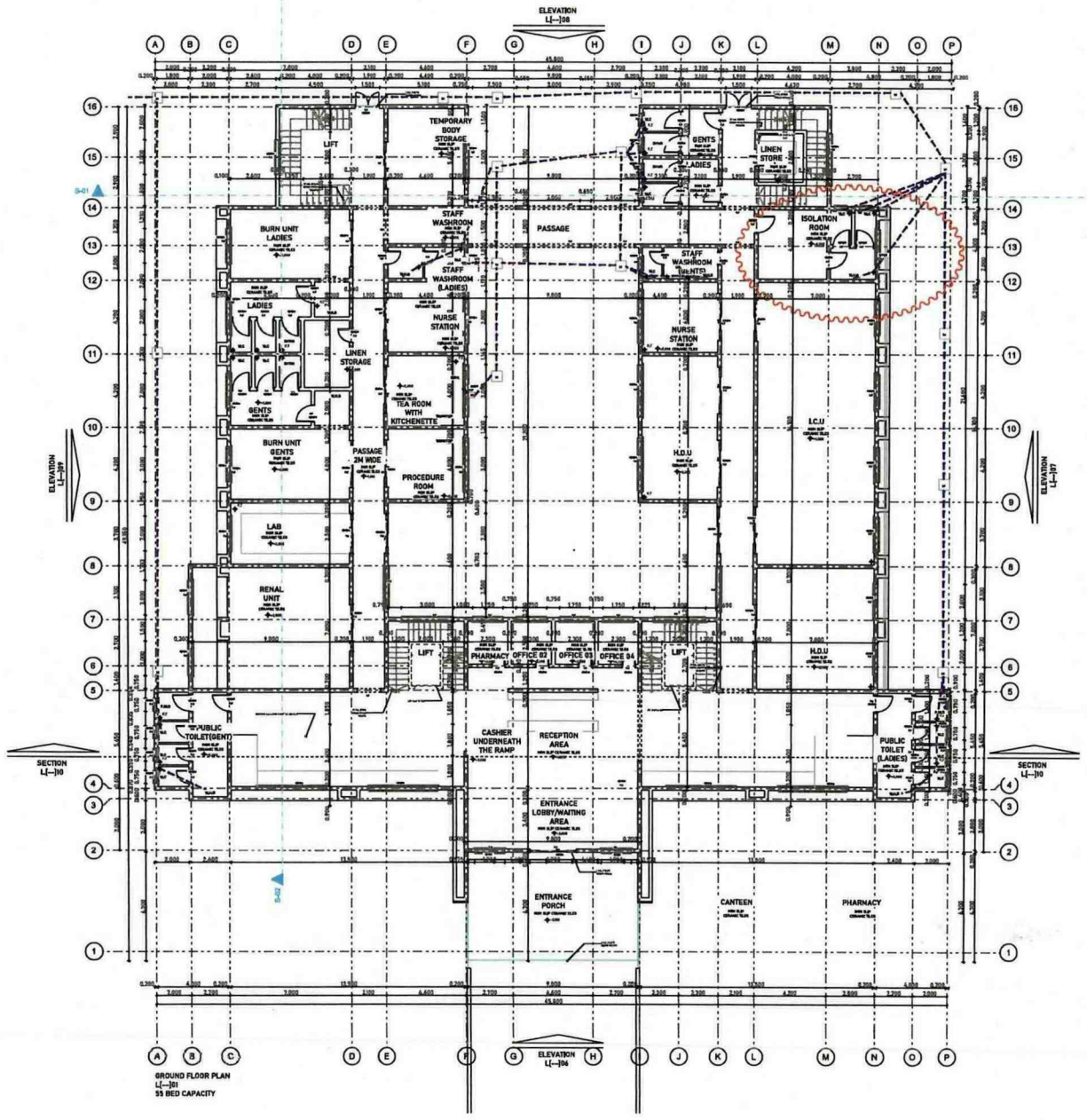
# MIGORI COUNTY GOVERNMENT

DEPARTMENT OF ROADS,INFRASTRUCTURE AND PUBLIC WORKS

PROPOSED LEVEL 5 HOSPITAL AT AWENDO SUBCOUNTY

SCHEMATIC DRAWINGS

C 2025




GROUND FLOOR PLAN
L(--)01
55 BED CAPACITY

| No. | NOTES |
|---|---|
| 1. | ALL DIMENSIONS MUST BE CHECKED ON SITE BY THE CONTRACTOR BEFORE WORK COMMENCES. |
| 2. | ALL R.C. COLUMNS,SLABS,FOUNDATIONS AND ROOF STRUCTURES TO STRUCTURAL ENGINEER'S DETAILS. |
| 3. | FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALING OF DRAWING. |
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| 5. | COPYRIGHT OF THIS DRAWING AND OF THE WORK EXCUTED FROM IT IS THE PROPERTY OF THE DESIGNER. |
| 6. | ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED. |

REVISIONS

| No. | Date | Description | By |
|---|---|---|---|
| | | | |

CLIENT.

PROJECT:
Proposed Residential Development,Kibos,Kisumu

CONSULTANTS

Architects
**Department of Roads, Infrastracture and public works**

Structural Engineers

Mechanical/Electrical Engineers

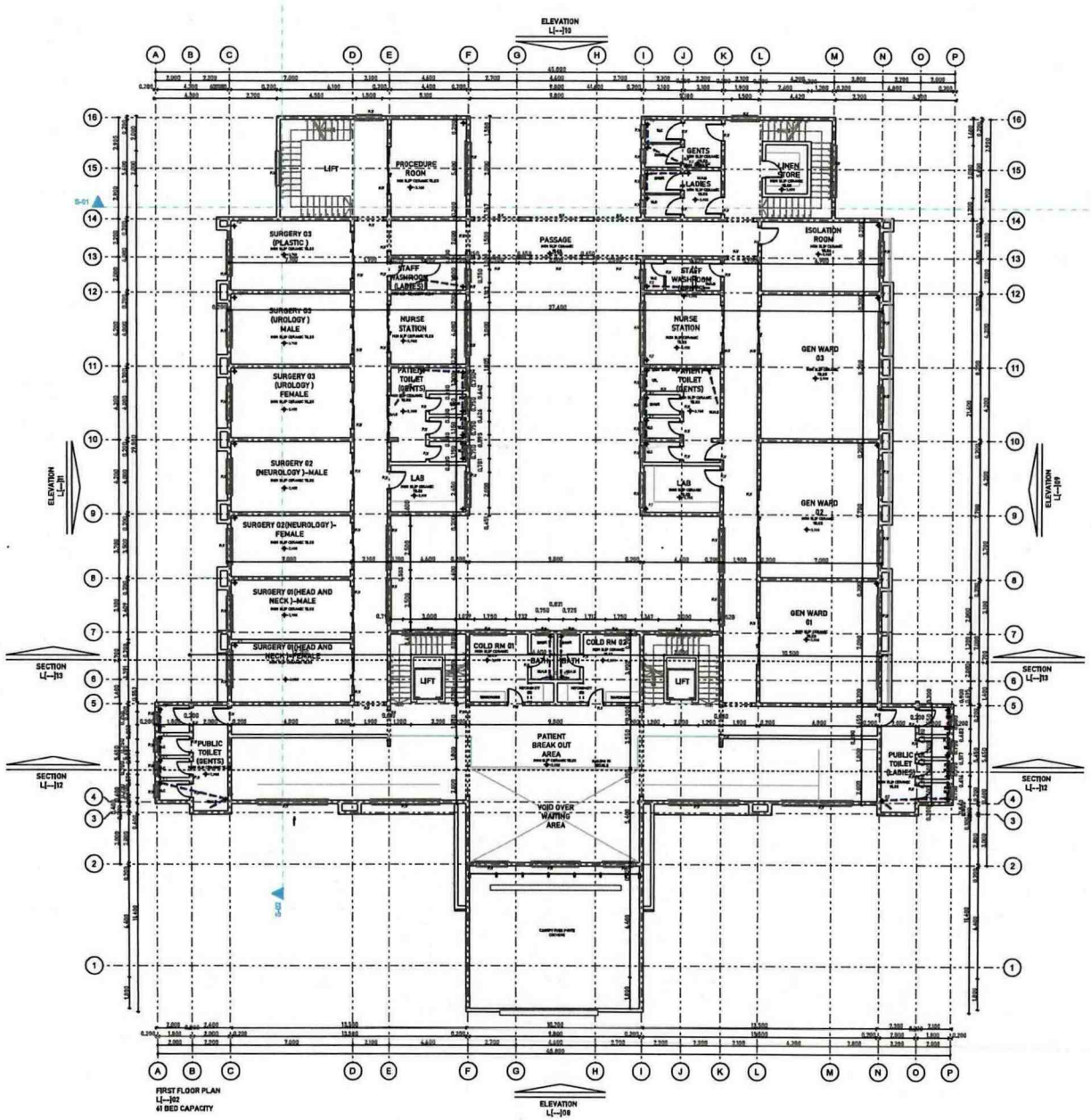
Quantity Surveyors

Project Managers

**PRODUCTION DRAWING**

Drg. Title

| | |
|---|---|
| Scale 1:250 | Job no. |
| Drawn by J.T.M | Drg. no. |
| Checked by J.T.M | Revision |
| Date Friday, September 5, 2025 | |




FIRST FLOOR PLAN
LL--102
41 BED CAPACITY

| No. | NOTES |
|---|---|
| 1. | ALL DIMENSIONS MUST BE CHECKED ON SITE BY THE CONTRACTOR BEFORE WORK COMMENCES. |
| 2. | ALL R.C. COLUMNS,SLABS,FOUNDATIONS AND ROOF STRUCTURES TO STRUCTURAL ENGINEER'S DETAILS. |
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**REVISIONS**

| No. | Date | Description | By |
|---|---|---|---|
| | | | |

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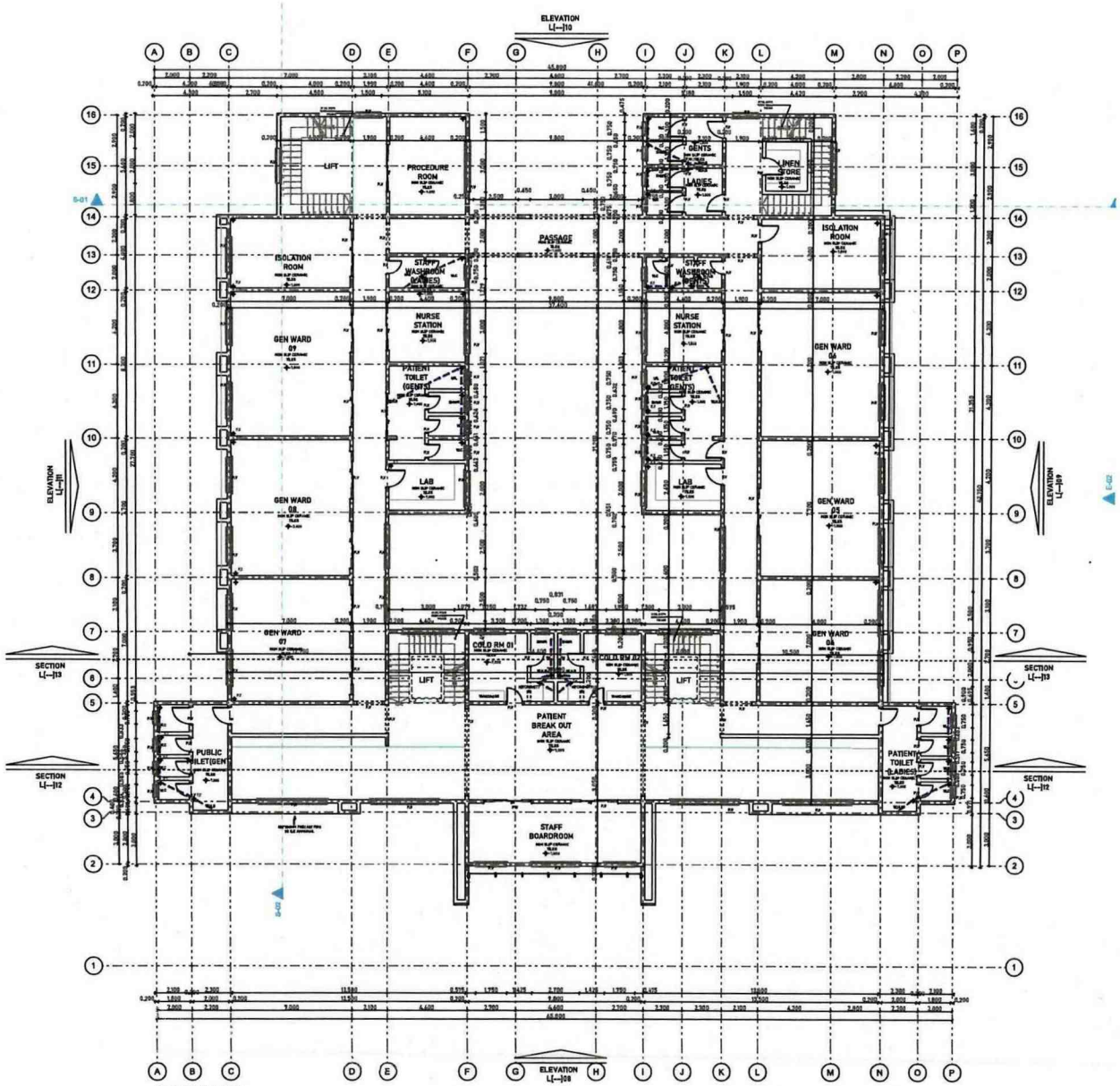


SECOND, THIRD & FOURTH FLOOR FLOOR PLAN
LL—J10
41 BED CAPACITY EACH

| No. | NOTES |
|---|---|
| 1. | ALL DIMENSIONS MUST BE CHECKED ON SITE BY THE CONTRACTOR BEFORE WORK COMMENCES. |
| 2. | ALL R.C. COLUMNS,SLABS,FOUNDATIONS AND ROOF STRUCTURES TO STRUCTURAL ENGINEER'S DETAILS. |
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**REVISIONS**

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|---|---|---|---|
| | | | |

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Drg. Title

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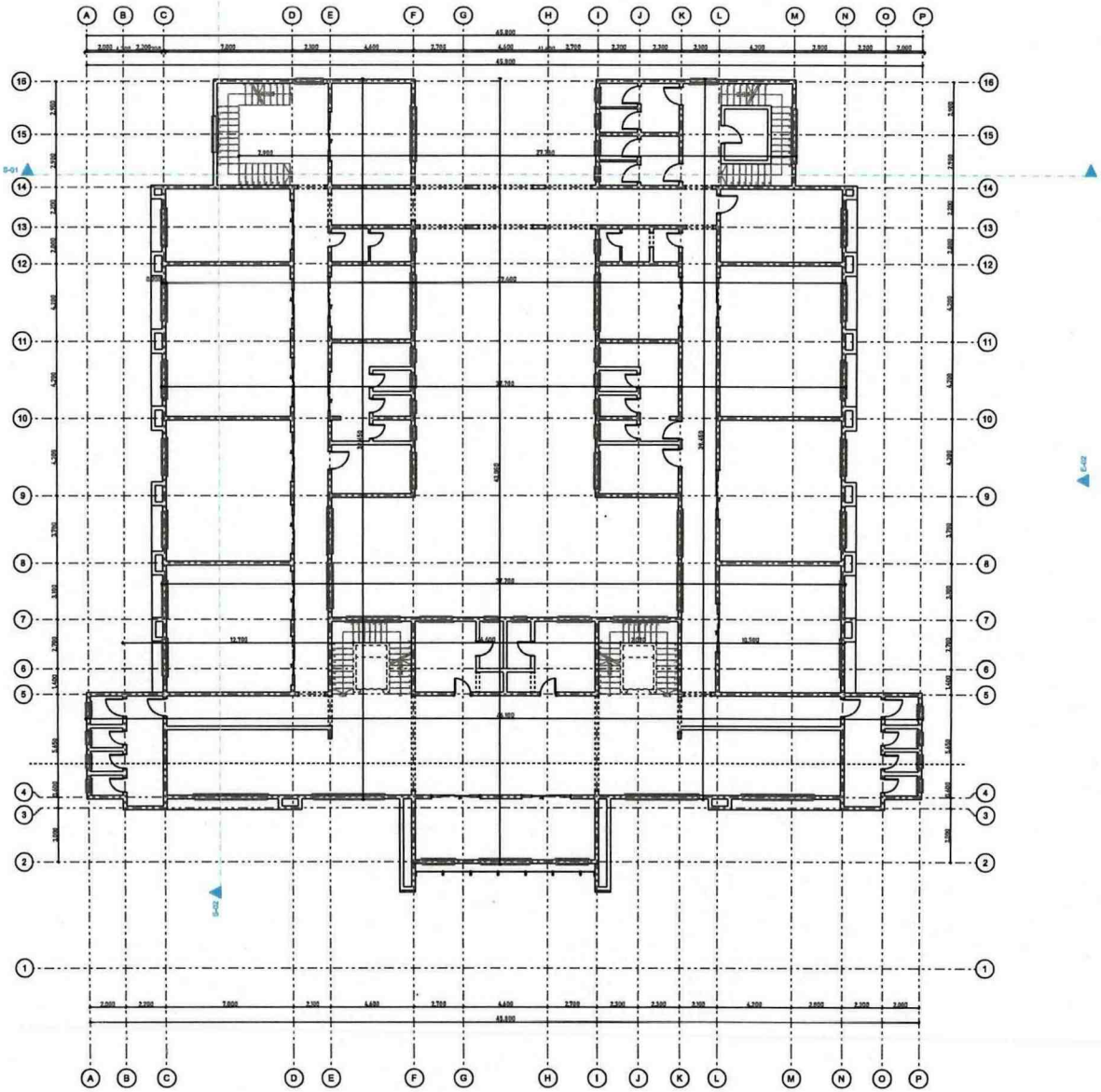

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**REVISIONS**

| No. | Date | Description | By |
|---|---|---|---|
| | | | |

CLIENT.

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Proposed Residential Development,Kibos,Kisumu

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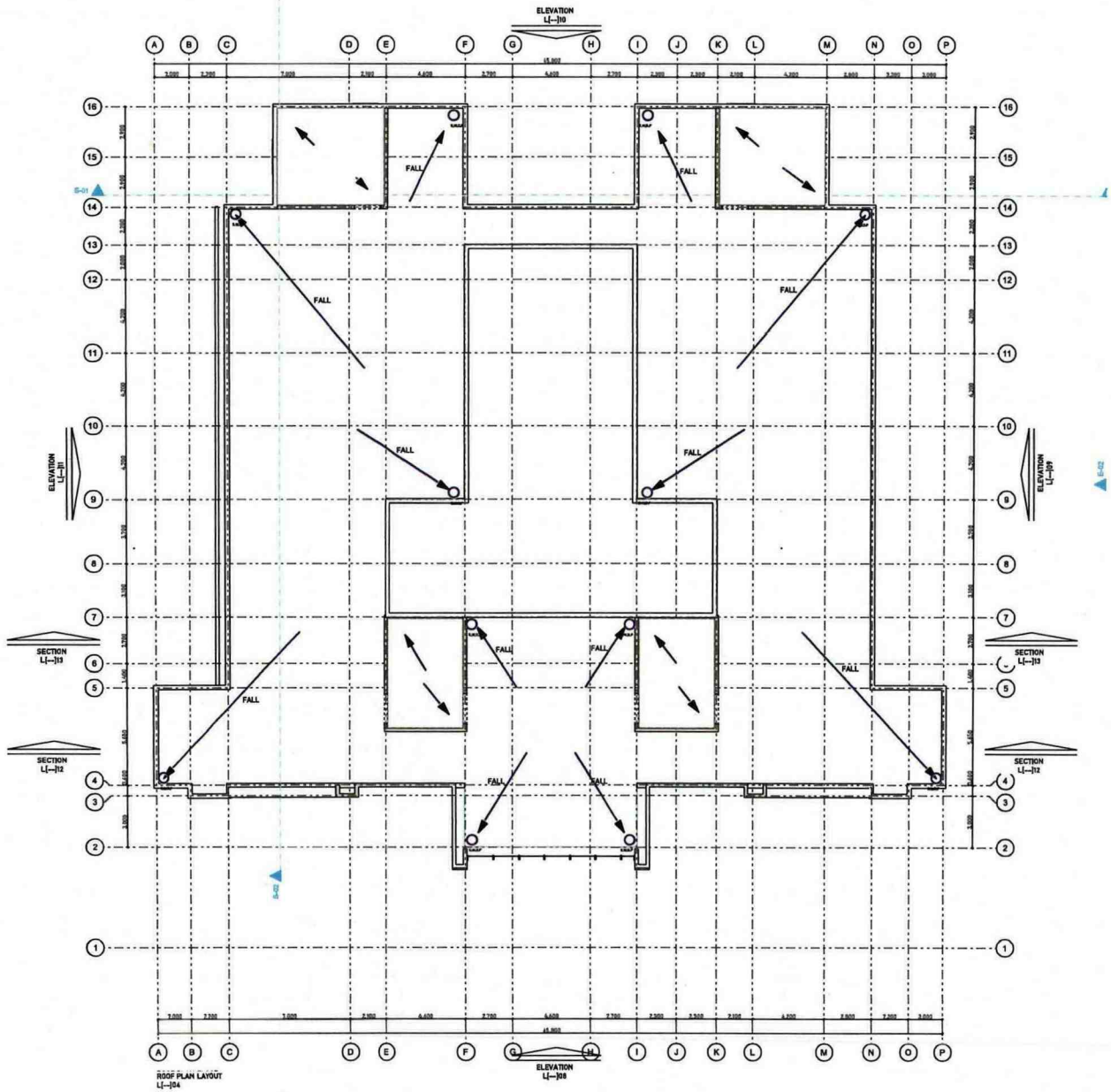


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**REVISIONS**

| No. | Date | Description | By |
|---|---|---|---|
| | | | |

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PROJECT:
Proposed Residential Development,Kibos,Kisumu

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**Department of Roads, Infrastracture and public works**

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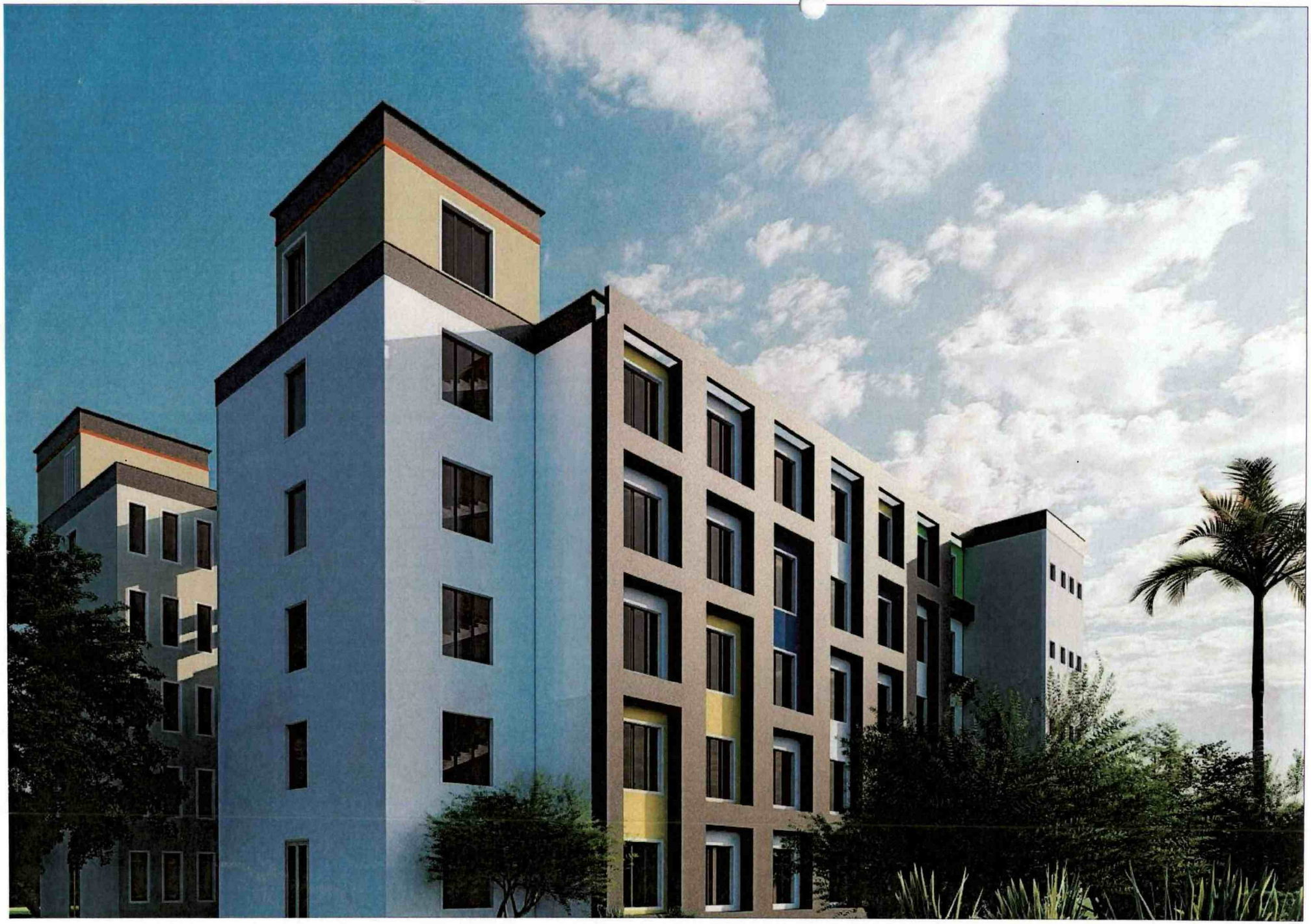

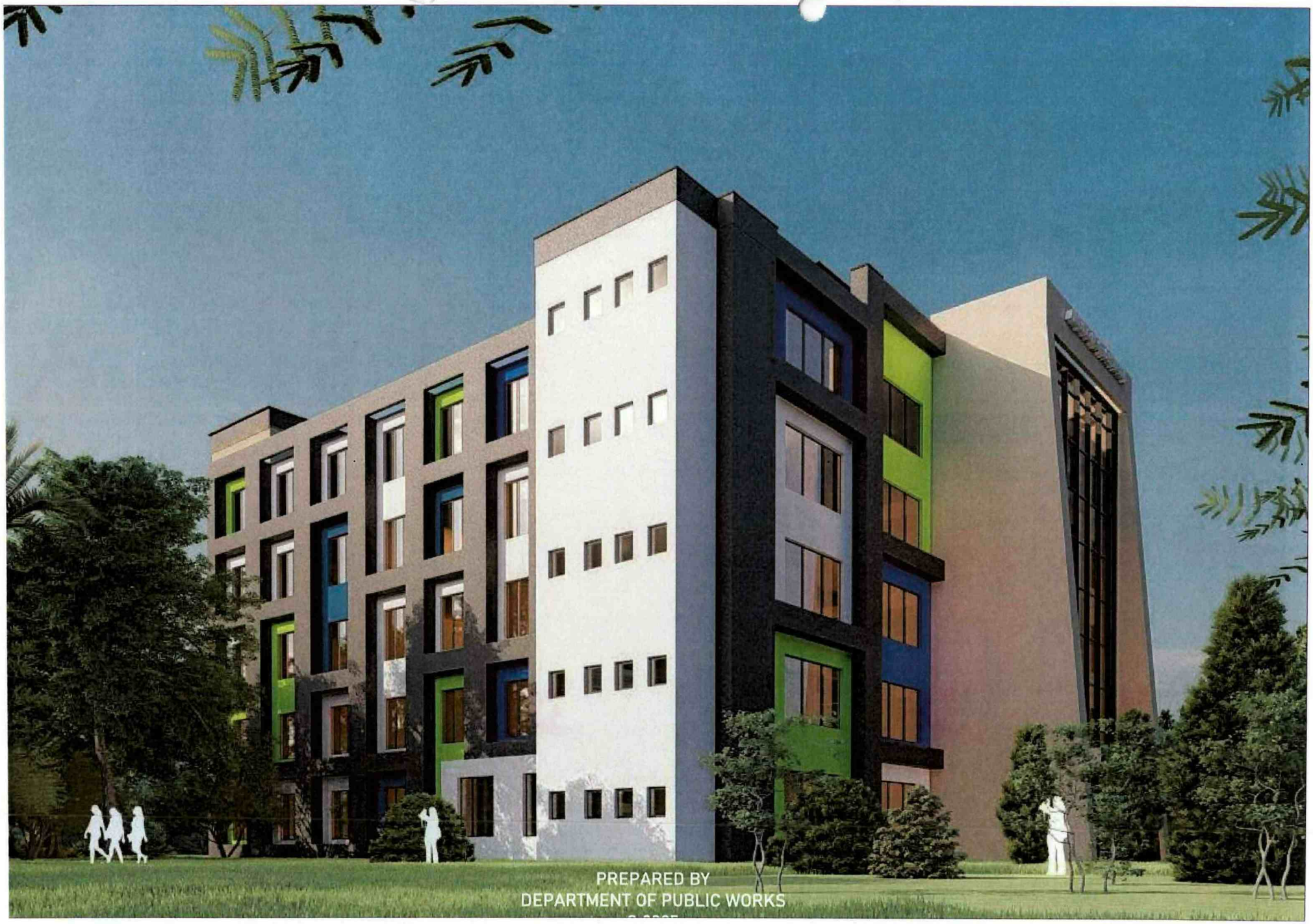
PREPARED BY
DEPARTMENT OF PUBLIC WORKS

CONFIDENTIAL

TENDER No.:

**REF: PWD/001/09/25**

REPUBLIC OF KENYA
MIGORI COUNTY GOVERNMENT

**PROPOSED CONSTRUCTION OF LEVEL 5 HOSPITAL**
AT
**AWENDO SUB-COUNTY**

# Bills of Quantities

**(Preliminary)**

SIGN: _____
DIRECTOR, PUBLIC WORKS

PREPARED BY:
QUANTITY SURVEYOR
DEPARTMENT OF PUBLIC WORKS
MIGORI COUNTY,
P.O BOX 164-40400,
SUNA - MIGORI

SIGN _____
CHIEF OFFICER, PUBLIC WORKS

**September 2025**

| Item | Description | Amount |
|---|---|---|
| | **GENERAL AND PARTICULAR PRELIMINARIES** | |
| | **DEFINITION OF TERMS** | |
| | **GENERALLY** | |
| A | PRICING ITEMS OF PRELIMINARIES AND PREAMBLES<br>The following clauses are given for the guidance of the Contractor in the preparation of his tender.<br>The Contractor must allow in his tender any sum he may consider necessary in respect of these clauses by way of pricing the clauses as required.<br>The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.<br>In the case of the contractor leaving unpriced any Preliminary Items, then he shall be deemed to have considered that the rate for the remaining items in the bills of Quantities are sufficient to perform the services and obligations in the items not priced without charge.<br><br>Wherever in the Contractor's priced Tender Documents no price appears against an item of Preliminaries or Bills of Quantities, the value of such item shall be deemed to be included in their prices for the other items in the Preliminaries and Bills of Quantities.<br>Only those items which are priced in this Section, Preliminaries, of the Bills of Quantities - will be reviewed for adjustment in the event of a variation and any such adjustment in each case shall be in accordance with the merits of each priced item in relation to the variation involved. Therefore it is a condition of this Contract that this Section is priced according to the merits of each item | |
| | **DEFINITION OF TERMS** | |
| B | **Employer**<br>The term 'The Employer' shall be deemed to mean The County Government of Migori. The term 'Employer', 'Client' and 'Owner' wherever used in this Tender Document shall be synonymous | |
| C | **Architect**<br>The term "Architect" shall be deemed to mean The County Architect, Department of Public Works - County of Migori | |
| D | **Quantity Surveyor**<br>The term 'The Quantity Surveyor' shall be deemed to mean The County Quantity Surveyor, Department of Public Works - County of Migori | |
| E | **Engineer**<br>The term "Engineer" shall be deemed to mean any of the following firms appointed by the Employer to carry out the work under reference<br>**(a) Electrical and Mechanical Engineers**<br>The County Electrical Engineer, Department of Public Works - County of Migori<br><br>**(b) Structural/Civil Engineers**<br>The County Structural Engineer, Department of Public Works - County of Migori<br><br>**(b) Mechanical Engineers**<br>The County Mechanical Engineer, Department of Public Works - County of Migori | |
| | **Carried to Collection** | 0.00 |

| Item | Description | Amount |
|---|---|---|
| | DEFINITIONS CONTINUED;- | |
| A | **Contractor**<br>The term "Contractor" shall mean the person or persons, firm or Company whose tender has been accepted by the employer and includes the Contractor's legal personal representatives, successors and | |
| B | **Sub-Contractor**<br>The term "Sub-Contractor" shall be deemed to mean the person or persons, partnership, firm or company who has or have been engaged by the Contractor to carry out any Sub-Contract works forming part of this Contract and shall include his or their heirs, etc. as described above or who shall be appointed by the Employer to carry out the Sub-Contract Works. | |
| C | **Approved or Approval**<br>Means approved or approval in writing by the Architect unless otherwise specified. | |
| D | **Architect's Instructions**<br>Architect's Instructions: Means drawings, detail instructions, directions explanations, approval or orders issued in writing by the Architect or Architect's representative. | |
| E | **'Works"**<br>The term 'the works' wherever used hereinafter and in all contract documents shall mean all or any portion of the works, materials and articles wherever the same are being manufactured or prepared which are to be used in the execution of this contract and whether the same be on site or not. It shall also be deemed to include of all sub-contractors and of all variations. | |
| F | **"Ditto"**<br>"Ditto" shall mean the whole of the preceding description except as qualified in the section in which it occurs. Where it is in brackets, it shall mean the whole of the preceding description which is contained within the appropriate brackets. | |
| G | **Direct or Directions**<br>Means directed or directions by the Architect. | |
| H | **Contract Drawings**<br>The term "the contract Drawings" wherever used hereinafter and in all contract documents shall be deemed to imply the drawings referred to in this document. | |
| J | **Provisional:**<br>Provisional: Means that the quantity, description or value of work so described may be varied or executed in whole or in part or omitted entirely from the contract as directed and shall be measured and valued in accordance with the contract. | |
| K | **Site:**<br>Site: The term "the site" shall mean the lands and other places on, under, in or through which the works are to be executed or carried out and any other lands or places provided by the employer for the purpose | |
| | **Carried to Collection** | 0.00 |

| Item | Description | Amount |
|---|---|---|
| A | **Definition of Abbreviation and Terms**<br>The following abbreviations are used throughout these Bills of Quantities to denote the unit of measurement, etc., and the contractor should take due of the under mentioned:-<br>**cm / $m^3$** - to denote Cubic Metres<br>**sm / $m^2$** - to denote Square Metres<br>**lm** - to denote Liner Metres<br>**mm** - to denote Millimetre<br>**nr/no** - to denote Enumerated item<br>**mn** - to denote Meganewton<br>**kg** - to denote Kilogramme<br>**prs** - to denoted Pairs<br>**sum/item** - to denote pricing on lumpsum basis<br>**BS** - to denote British Standard current before the date of invitation to tender unless otherwise specifically stated.<br>**B.S.C.P. - t**o denote British Standard Code of practice current three months before the date of invitation to tender unless otherwise specifically stated.<br>**SMM** - to denote Standard Method of Measurement of Building for East Africa.<br>**"MS"** Shall mean measured separately<br>**VAT'** Shall mean Value Added Tax'. | |
| B | **The following terms, wherever they occur, shall be interrupted as hereunder:-**<br>The term **"approved" "directed"** or **"selected"** shall mean the approval, direction or selection of the Architect. | |
| C | **Removal**<br>The term "removal" shall be held to mean all requisite cutting away, breaking up, sawing or unbolting or cutting by flames as may be required and for handling or basketing the old materials to convenient position on site | |
| D | **Clear Away**<br>The tern **"clear away"** shall be held to mean removal from the site to a tip provided by the contractor including all necessary wheeling, handling. and cartage. | |
| E | **Fixing Only**<br>The term "fixing only' shall be held to mean and including ordering, unloading, unpacking, checking, storing, distributing, assembling, hoisting and fixing complete, and return of empty cases carriage paid to supplier and all costs and charges of work involved in obtaining replacement of goods damaged in transit, and also for replacement by the contractor of goods or materials damaged or rendered unserviceable subsequent to delivery. | |
| F | **'Singular and Plural'** | |
| | Words importing the singular only wherever used hereinafter and in all Contract Documents shall also include the plural and vice versa where the context required. | |
| | **Carried to Collection** | |

| Item | Description | Amount |
|---|---|---|
| A | **SITE**<br>The site for the proposed works is situated at the Awendo Sub County Hospital compound, County of Migori | |
| B | **VISIT THE SITE**<br>Before tendering, the Contractor should visit the site and satisfy himself as to local conditions, water, lighting services, the accessibility of the site, the full extent and character of operations, the nature of the ground, the supply of and conditions affecting labour services and materials necessary for the execution of the Contract works generally and shall make all necessary allowances and provisions for his tender as no claim for want of knowledge in this respect will be allowed. If unable to locate the site, he should apply to the Project Manager or directions to enable him to do so. | |
| C | **SCOPE OF CONTRACT.**<br>The Employer intends to continue with Phase II of the works based on the Architectural and Engineering drawings and information provided;- | |
| D | DRAWINGS | |
| | Drawings used for the tender documents are attached to the tender. Contractor to note that any difference between the tender drawings and the construction drawings / and or measured quantities do not give room for any claims. | |
| | Before submitting tenders Contractors may examine all the drawings and satisfy themselves regarding all details as no claim by reason of ignorance to this connection will be entertained | |
| | The Contractor shall satisfy himself as to the correctness of all drawings and measurements. If the Contractor finds any discrepancy into the drawing or between the drawings and the Bills of Quantities, he shall immediately refer the same to the Consultants who shall decide which shall be followed | |
| | Figured dimensions will be used in preference to scales mentioned on or attached to any drawing. | |
| | The Contractor is to take the necessary particulars for ordering his materials and work from the drawings and the work in progress on the building and not use the Bills of Quantities for that purpose. | |
| | While every effort shall be made to furnish the contractor with all necessary details, the contractor shall not demand bar bending schedules more than six weeks before they are required to be fixed on site | |
| | | |
| | **Carried to Collection** | |

| Item | Description | Amount |
|---|---|---|
| | **GENERAL MATTERS** | |
| **A.** | **EQUIPMENT**<br>The Contractor shall make available on site as and when required by the Architect a modern and accurate level together with levelling staff, Ranging rods and one 30 metre metallic measuring tape. | |
| **B** | **SUFFICIENCY OF TENDER**<br>The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the priced Bills of Quantities which rates and prices shall cover all his obligations under the contract and all matters and things necessary for the proper execution, completion and maintenance of the works. Any items left unpriced by the Contractor in the Bills of Quantities shall be deemed to have been included within the rates of the other priced items | |
| **C** | **INSURANCE**<br>The contractor shall insure as required by clause 30 of the conditions of contract in Tender documents. No payment on account for the work executed will be made to the Contractor until he has satisfied the Architect either by production of an Insurance Policy or an insurance certificate that the provisions of the Insurance Clauses have been complied with in all respect and payment for premiums made as necessary.<br>The insurance cover shall include: Contractor's All Risks Policies, Third Party Liability and Workmen's Compensation. The Contractor shall further indemnify the Employer against all claims arising out of the execution of the Contract Works. | |
| **D** | **BOND OR SECURITY DEPOSIT.**<br>The Contractor will be required to furnish a Bond from approved and well reputed Bank or Insurance Company in a sum equal to 10% of the Contract sum, using the standard form of Bond provided. Alternatively the Architect may at his discretion, accept a security deposit in cash in lieu of the Bond. The deposit is to be of the same amount as the Bond. No payment on account for the work executed will be made to the Contractor until he has submitted the performance Bond to the Architect duly signed, sealed and stamped from an approved Bank. | |
| **E** | **SIGNBOARD**<br>The Contractor shall provide, erect and maintain throughout the Contract period and afterwards clear away a signboard in accordance with Drawing CS 1. The height of the lowest board on signboard not to be lower that 1.80m above surrounding ground levels. No other signboard of advertising will be permitted without the written authority from the Architect. Signboard comprises a strong well braced frame set in foundations with a "Title" board and separate boards for all consultants, main and Sub-contractors. The whole of the supports and boards must be well painted and the lettering, which must not exceed 50mm high on the consultants boards, motifs etc. must be carried out by an experienced sign writer to the approval of the signboard as indicated above shall be erected within four (4) weeks from | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **SITE OFFICE**<br>The office shall be competed and ready for use within ( 2 ) two weeks from the date of site possession subjected to liquated damages of kshs 30,000.00 per day from non- completion. The site office shall be equipped with sufficient furniture to permit the Architect to hold site meetings in it, and for the Clerk of Works and any other site staff to operate efficiently. Site office shall not be used for storage of materials. The Contractor shall make connections to existing drain and water mains all to the satisfaction of the Architect and Local Authority. The Contractor shall pay for all charges for connections, and water bills during construction and maintenance period.The Contractor shall also allow for providing the services of a cleaner for keeping both office and the closet in a clean and sanitary condition from commencement to the completion of the works. | Existing |
| B | **WHITE ANTS AND TERMITES**<br>Allow for destroying any white ants and termites' nests found in the vicinity of the buildings, destroying Queen Ants, depositing cyanide lumps in holes and tunnes and filling with hard-core and murram well rammed and scaled. | N/A |
| C | **SITE LEVELS**<br>Before commencing work the Contractor must arrange for and agree with Consultants the existing site levels and similarly establish and agree a bench mark. Any survey beacons disturbed shall be reinstated at the contractor cost | N/A |
| D | **WORK TO BE OPENED UP AT THE REQUEST OF THE ARCHITECT**<br>The Contractor shall, at the request of the Architect within such time as the Architect shall name, open for inspection any work covered up, and should the Contractor refuse or neglect to comply with such request, the Architect may employ workmen other than those employed by the Contractor to open up the same. If the sad work has been covered up in contravention of the Architect's instructions, or if, on being opened up, it be found not in accordance with the drawings of Bills of Quantities or the instructions of the Architect, the expenses of opening and covering it up again whether done by the Contractor or by the Architect, shall be borne by and be recoverable from the Contractor or may be deducted from any monies due to the Contractor. If the work has not been covered up in contravention of such instructions and be found in accordance with the said drawings and Bills of Quantities, then the expenses aforesaid shall be and requiring immediate attention, the Architect shall within a reasonable time after the work has been opened, make or cause to be made the inspection thereof, and the expiration of such time,<br><br>if such inspection shall not have been made the Contractor may cover up the same and shall not be required to open it up again for inspection except at the expense of the Employer. | |
| E | **PUBLIC AND PRIVATE ROADS, PAVEMENT, ETC.**<br>The Contractor will be required to make good at his own expense any damage he may cause to the present approach road surfaces during the period of the Works. | |
| F | **OVERTIME**<br>The Contractor shall be responsible for any extra costs for overtime working he considers will be necessary in order to complete the work within the contract period or time for completion | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A | **PROTECTION OF WORK**<br>In the event of any damage occuring to the Works, materials, sewers, drains, gullies, paths or other works on the site in temporary possession of the Contractor for the purpose of this Contract, either from the weather, want of proper protection, defects, or insufficiency of the Works or any other cause whatsoever during the progress of the Works, the Contractor alone shall be responsible and shall without extra charge, make good all damage and pay all costs which may be levied. | |
| B | **HEALTH, SITE SAFETY AND FIRST AID FACILITIES**<br>The Contractor shall comply at all times with the requirements of HSE and ensure that the safety of his work people and authorized visitors to the site is protected at all times. In particular there shall be proper provision of planked footways and guard rails to scaffolding, etc, protection against falling materials and tools and the site to be kept tidy and clear of dangerous rubbish.<br>The Contractor shall appoint a Safety Officer and notify the Safety Inspector of his name. The Safety Officer shall be on site at all times and all directions given by the Architect to the Safety Officer shall be deemed to be Architect's Instructions, and shall be complied with promptly without additional cost to the contract.<br>The Architect shall be empowered to suspend work in the Site should he consider these conditions are not being observed, and no claim arising from such a suspension will be allowed. | |
| C | **FIGURED DIMENSIONS**<br>Figured dimensions are to be followed in preference to dimensions scaled from the drawings but whenever possible dimensions are to be taken on the site or from the buildings. Before any work is commenced by Sub-contractor or specialist firms, dimensions must be checked on the site and/or buildings and agreed with Main Contractor, irrespective of the comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions. | |
| D | **WORKS PROGRAMME**<br>The Contractor shall, upon possession of site draw up a works programme, Setting out the order in which the works are to be carried out with the appropriate date thereof. The works programme is to be agreed with the Architect within a maximum of six (6) weeks from the date of possession of site and no deviation from the order set out in the programme will be permitted without the written consent of the Architect. The Main Contractor permitted without the written consent of the Architect. The Main Contractor will be responsible for arranging the above programme with all sub-contractors including nominated sub-contractors and nominated suppliers. Payment shall not be certified and made to the Contractor unless the progress schedule is approved and agreed upon within the stipulated time indicated | |
| E | **ACCESS TO SITE AND TEMPORARY ROADS**<br>Means of access to the site shall be agreed with the Architect prior to the commencement of the works and the Contractor must allow for building any temporary access roads, culverts, bridges, roadside rain-water drains for the transport of materials, plant and workmen including the provision of any other means of gaining access to the site. Upon completion of the works the Contractor shall remove such temporary access roads, temporary culverts, etc and make good and reinstate all works and services disturbed to the satisfaction of the Architect and the Local Authority. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A | **DISTURBANCE**<br>Tenderers should note that normal activities shall be continuing within and in the surrounding building during the construction period.<br>Minimum disturbance by noise, dust, water or movement of vehicles, materials, labour or plant must be caused to the function of the existing adjacent buildings in the vicinity and the occupants and staff therein. The Contractor shall comply with all instructions issued by the Employer or Architect with regard to minimizing such disturbances. | |
| B | **RESTORATION OF DAMAGE TO EXISTING PROPERTY**<br>The Contractor shall exercise utmost care and precaution to ensure that all existing property is well protected during construction operations. Any damage to such property caused by the Contractors' workmen or Sub-Contractors shall be repaired or restored to the Architect and Employer's satisfaction at the Contractor's expense | |
| C | **SURVEY BEACONS**<br>The Contractor will be required to protect from damage all the survey beacons found or to be installed on the site. Any survey beacon disturbed by the main Contractor or his Sub-Contractor whilst carrying out the contract works shall be re-established in the correct positions by a licensed Land Surveyor without delay to the satisfaction of the Architect and the Director of of Surveys and the Responsibility and expense of the reinstatement shall be borne by the Contractor. Survey beacons shall be inspected and their presence confirmed and certified by the Architect on completion of the contract works. Final payment certificates shall not be released to the Contractor until a certificate to this effect is furnished to the Quantity Surveyor. Should the Contractor not reinstate (re-establish) the beacons within eight (8) weeks from the date of Architect's instructions and which date shall be taken to be the date of practical completion, the employer shall engage and pay a licensed surveyor to establish the disturbed beacons and the amounts payable for the<br><br>Surveying services shall be deducted from any sum of money due or to become due to the contractor, the said monies shall be a debt payable by the Contractor to the Employer. | N/A |
| D | **PREVENTION OF NUISANCE**<br>The works and such sections of the site necessary shall be under the entire care and control of the Contractor during the whole period of the contract and to ensure that the Contractor has representatives or agents and workmen (Employees) shall take all possible precautions to prevent any nuisance, inconveniences or injury to the holders or occupiers of the existing neighbouring or surrounding properties and to the public generally and shall at all times keep all the paths and roads affected by the works in a safety of all traffic, pedestrians and public in general. | |
| E | **TRANSPORT TO AND FROM THE SITE**<br>The contractor shall include in his tender prices for the transport of materials, workmen, etc. to and from the site of the proposed works, at such hours and by such routes as per regulations that shall be issued by the police and the Local Authority. | |
| F | **PROTECTIVE CLOTHING: STAFF & CONSULTANTS AT ALL TIMES**<br>The Contractor shall provide all protective or any other special clothing or equipment for his employees and consultants that may be necessary.<br>This shall include, inter-alia, safety helmets, gloves, goggles, earmuffs, gumboots, overalls, etc. according to the type of work. The Contractor shall ensure that safety helmets, reflectors and boots are worn by all staff, visitors and consultants on site at all times. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A | **ENVIRONMENTAL CONDITIONS**<br>The Contractor is to comply with the Environmental Conditions of Approval. | |
| B | **EXISTING PROPERTY AND SERVICES**<br>The Contractor shall take every precaution to avoid damage to the existing property including roads, cables, drains, boundary wall and other services and he will be held responsible for all damages arising from the execution of this contract to the aforementioned and he shall make good any damage when directed at his own expense to the satisfaction of the Architect and the Local Authority. | |
| C | **WATER AND ELECTRICITY SUPPLY FOR THE SITE AND THE WORKS**<br>The Contractor shall provide at his own cost and risk all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangements for connections to the nearest suitable water and electricity main and for metering the same. He must also provide temporary storage tanks and meter as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the Architect. The Contractor shall pay all charges in connection therewith. No guarantee is given that sufficient water will be available from the main and the Contractor, must make his own arrangements for augmenting this supply at his own cost if necessary. | |
| D | **TELEPHONE**<br>The Contractor shall provide and maintain in the site office a telephone throughout the course of contract and shall pay all charges and rentals in connection herewith. The telephone shall be available for use by the Architect or his representatives during working hours. The contractor shall also provide one mobile phone equipment and line with maximum charges | N/A |
| E | **AREA TO BE OCCUPIED BY THE CONTRACTOR**<br>The area to be occupied by the Contractor for use as storage or erection of workshops etc shall be defined on the site by the Architect and the Contractor must confine his activities to the areas so marked and must ensure his own and Sub-contractor's workmen do not trespass on the adjoining properly or cause inconvenience to its occupiers. | |
| F | **STAMP DUTY CHARGES**<br>The Contractor shall allow for the payment of all stamp duty charges in connection with the Performance Bond and Contract Agreement | |
| G | **OCCUPATION CERTIFICATE**<br>At the completion of the Works, the Contractor shall apply for and obtain the Occupation Certificate from the Local Authority and see that it is duly completed and signed in accordance with conditions laid down by current By-Laws. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **SANITATION OF THE WORKS FOR WORKERS**<br>The sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities and the Architect. roof, sides and partitions. The site of the latrine shall be agreed with the Architect and the works shall not be commenced before the sanitary accommodation has been approved by the Architect and the Authorities. The Contractor will be required to pay all conservancy charges and employ adequate sweepers on the site to ensure clean maintenance and daily disinfecting of the latrines upon completion of the works. The latrines and any temporary drain shall be removed and all works and surfaces disturbed made good and whole area disinfected and left clean and free from pollution all to the satisfaction of Architect and local authorities. | |
| B. | **SETTING OUT**<br>The Contractor shall set out the works in accordance with the dimensions and levels shown on the drawings and shall be responsible for the correctness of all dimensions and levels so set out by him and will be required to amend all errors arising from inaccurate setting out or discrepancy in the dimensions or levels marked on the drawings, such errors or discrepancies must be reported by the Contractor to the Architect for his immediate attention. No work shall be commenced by the Contractor until he has received written instructions from the Architect to adjust such discrepancies which may have been proved. Upon receipt of such instructions the contract shall thereupon be responsible for the accurate setting out of the work giving effect to the adjustments necessary to comply with such instructions, and no claim for extra expense or relief may be made thereafter. | |
| C | **SHOP DRAWINGS**<br>The Contractor shall prepare for scrutiny and issue to the Consultants, copies of detailed shop drawings of all specialist works. Following the Architect's checking of these shop drawings the Contractor shall immediately amend them as necessary and when approved, promptly issue to the Consultants four copies for general use.<br><br>The scrutiny of shop drawings by the Consultants shall be for general conformity, including conformity with the work of others and to co-ordinate the contract work in space. Such approval shall not imply any further indication of correctness | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **MATERIALS AND WORKMANSHIP**<br><br>All materials and workmanship used in the execution of the works shall be of the quality and description herein described unless otherwise stated. Samples of all materials proposed to be permanently incorporated in the works must be submitted to the Architect for his approval before the bulk of the materials are delivered to the site. The contractor shall be responsible for ordering all materials as early as necessary to ensure that such materials are on the site as and when required for the works. | |
| B. | **STORAGE OF MATERIALS**<br><br>The Contractor shall provide at his own cost where directed on the site weather proof lock-up sheds for the safe storage and custody of materials for the works including sub-contractor's materials and for the use of workmen engaged thereon and shall remove such sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the Architect. No material shall be stored or stocked on suspended slabs without the prior approval of the Architect. Materials stored off-the-site shall not be paid for unless the Architect has given a written approval for the storage away from the site.<br><br>The Contractor shall also provide at his own cost where directed on the site **separate** weather proof lock-up sheds for the safe storage and custody of materials for the works for other Nominated Contractors directly appointed by the Client for the same Works and for the use of their workmen engaged thereon and shall remove such sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the Architect. The Nominated Contractors shall provide their own padlocks and shall be solely responsible for the materials and equipment stored therein. | |
| C. | **TESTING**<br>The Contractor shall arrange at the request of the Architect for testing of materials and portions of work at his own expense. It the tests fail, the affected materials or work shall be removed and replaced at the Contractor's costs. The tests will be performed in an approved manner and by an approved testing authority.<br><br>**NOTE**: The Contractor must allow in his concrete rate all costs in connection with the making of the cubes, curing, transport, crushing by Local Authority and obtaining the test certificate.<br><br>TESTS: Contractor must conduct all tests as would be required by the Architect / Engineer from time to time and include but not limited to;- Material tests, Portion of work tests and surface tests on work surfaces before, during construction and finished works.<br>**Schedule of such tests is to be obtained from the engineer during tendering and no claims shall be entertained for ignorance** | |
| D. | **LABOUR CAMPS**<br>The Contractor will generally not be permitted to house labour on the site and the Contractor must make all necessary arrangement for transportation of labour to and from the site where necessary This will be with the express permission of the Architect. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **LABOUR**<br>Unless the Architect otherwise agrees, the Contractor is to recruit locally all his unskilled labour and as much as possible of his skilled labour. | |
| B. | **NOTICES**<br>For notices to be served under the conditions of contract:- The Contractor shall notify the Architect an address where notice may be served upon him or in the event of his failing to do so. Notices shall be deemed served upon the Contractor if sent by Registered post to his usual place of business or left at his office on the site. | |
| C. | **SECURITY OF WORKS**<br>The Contractor shall be entirely responsible for the security of the works, stores materials, personnel, etc., both his own and for other Nominated Contractors directly engaged by the Client in the same Works, and shall provide all necessary watching, lighting and other precautions as necessary to ensure the security and the protection of the public. | |
| D. | **TEMPORARY DISPOSAL OF RAINWATER**<br>The Contractor shall provide and maintain all necessary temporary gutters, downpipes, chutes, earth or other drains, etc. for conveying rainwater from the building and site works. Embankment and sides of excavations shall be shaped to such slopes that soil erosion does not take place. The Contractor shall allow for temporary drainage, pumping and piping for keeping the buildings, services and entire site free from accumulation of and flooding with water and soil. The Contractor shall reinstate the existing ground to the satisfaction of the Architect on practical completion of the works. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **FAIR WAGES AND GOVERNMENT ACT ETC.**<br>The Contractor shall comply with the regulations of wages (Building and Construction Industry) order and shall be responsible for compliance by Sub-Contractor employed in the execution of the Contract. If required he shall notify the Architect of the names and address of all such Sub-contractors. Should a claim be made to the Employer alleging the contractor's default in payment of fair wages to any workman employed on contract and if proof thereof satisfactory to the Architect is furnished by the Labour Department ,the Architect may, failing payment by the Contractor, pay the claim out of any monies due or which may become due to the Contractor under this contract.<br><br>The working hours shall be those generally worked by good employers in the Contractor shall furnish the Architect if called upon to do so such particulars of the rates of wages, hours and conditions of labour referred to above as the Architect shall direct. The Contractor shall also be required to comply with all other Government Acts, regulations and orders in connection with employment of labour. | |
| B. | **WORKING HOURS**<br>Building and Civil Engineering Trade. No work shall be carried out at night or on gazetted holidays unless the Architect shall direct. No work shall be covered up or shall any correcting be carried out without prior approval of the Architect. | |
| C. | **REMOVAL OF RUBBISH**<br>The Contractor is to remove all rubbish from the site from time to time and as instructed by the Architect and leave the site clean and tidy on completion. Heaped soils, materials etc. Shall on completion of works be spread and levelled properly to the satisfaction of the Architect. | |
| D. | **PLANT, TOOLS, SCAFFOLDING AND VEHICLES**<br>Allow for providing all scaffolding, plant, tools and vehicles required for the proper execution of the works except for such items specifically and only required for the use of nominated sub-contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.<br><br>All such plant, tools and scaffolding shall comply with all regulations whether general or local in force throughout the period of the Contract and shall be altered or adapted during the Contract as may be necessary to comply with any amendments in or additions to such regulations | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **CONTRACTOR'S SUPERINTENDENCE/SITE AGENT.**<br>The Contractor shall constantly keep on the works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Architect and such directions and instructions shall be deemed to have been given to the Contractor in accordance with the conditions of contract. | |
| B. | **METHOD OF MEASUREMENT**<br>The whole of the works contained in these Bills of Quantities is measured on the basis of the current Standard methods of Measurement in Building works for East Africa (First Edition Metric). All work in this contract that is liable to adjustment has been measured as "provisional" in these Bills of Quantities, and no excavation, foundation work so described shall be filled in or covered up until all measurements needed for the adjustments of variations have been made by the Quantity Surveyor.<br><br>The rates set down by the Contractor against each item in these Bills of Quantities shall, unless otherwise expressly provided to the contrary, or unless there is a separate item for extra labour, cutting or waste, shall be deemed to include for waste on materials, carriage and cartage, carrying in and return of empties, hoisting, setting, fitting and fixing in position making and all other labour and everything else necessary for the proper completion and all other labour and everything else necessary for the proper completion of each item of cutting shall include for consequent waste. | |
| C. | **PROVISIONAL SUMS**<br>The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(1) of the standard method of measurement. Such sums are net and no addition shall be made to them for profit. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **PRIME COST (OR P.C. SUMS)**<br>The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the standard Method of Measurement. Persons or firms nominated by the Architect to execute work or to provide and fix materials or goods are described herein as nominated Sub-Contractor. Persons of firms so nominated to supply goods or materials are described as Nominated suppliers. | |
| B. | **ADJUSTMENT OF P.C. SUMS**<br>In the Final account all P.C. sums shall be deducted and the amount properly expended upon the Architect order in respect or each of them added to the contract sum. The Contractor shall produce to the Architect such quotations, invoices or bills properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. Item of "Attendance" following P.C. sums shall be adjusted pro rata to the amount paid in the Final Account. Should the Contractor be permitted to tender and his tender be accepted for any work for which a P.C. sum is included in these Bills of Quantities, profit will be allowed at the same rate as it would be if works were executed by a Nominated Sub-contractor. | |
| C. | **CONSULTANTS SITE OFFICES**<br>The Contractor shall provide properly ventilated lockable offices for the Consultants sole use with a concrete or timber floor and glazed windows. Clerk of Works/Consultants office and equipment to be provided are as detailed below:<br>**Number of rooms: 2 rooms**<br>**Equipment to provide; Computer, Internet, Printers, Tables and chairs, drawing desk / table, pin boards and safety and first aid equipment**<br>The equipment will be returned to the Contractor at the completion of the project<br>The Contractor shall also provide, erect and maintain a lock-up European type latrine for the sole use of the Consultants and to the sesrvices of a sweeper, pay all charges and keep clean during the period of the works<br>The Contractor shall keep on the site and maintain in good condition one dumpy or quickset level, metric levelling staff, one 30 metre steel tape for the use of the Consultants. | |
| D. | **PHOTOGRAPHY**<br>Allow for a digital camera ; weekly digital photographs, processing of the same including photo albums for the duration of the project.The camera shall revert to the Employer at expiry of contract. | |
| E | **SAMPLES**<br>The Contractor shall furnish at the earliest possible opportunity before works commences and at his own cost, samples of materials or workmanship that may be called for by the Consultants for their for his approval or rejection and any further samples in the case of rejection until such samples are approved by the Consultants and such samples when approved shall be the minimum standard for the works to which | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **ADJUSTMENT OF PROVISIONAL SUMS.**<br>In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the Architect order added, to the Contract Sum, such works shall be valued as described for variations in clause 30 read "thirty" of the conditions of contract, but should any part of the work be executed by a Nominated Contractor, the value of such work shall be treated as a P.C. sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added. | |
| B. | **NOMINATED SUB-CONTRACTOR**<br>When any work is ordered by the Architect to be executed by nominated sub-contractors, the Contractors shall enter into Sub-contracts shall thereafter be responsible for such Sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractor any or all of the facilities described in these preliminaries. work concerned in the P.C. sums under the description "Add for Attendance". The Contractor will be required to obtain approval of the Architect in writing before employing any pf his own (I.e. nominated) Sub-contractor for any portion of the works. | |
| C. | **ATTENDANCE TO NOMINATED SUB-CONTRACTORS**<br>Under the terms and conditions of the Main Contract, the main contractor shall accept responsibility for providing the following services for Nominated sub-contractors: | |
| D. | **General Attendance**<br>The following services are described as "allow for general attendance":<br>(a) Use, for the purpose of the subcontract works of any scaffolding belonging to or provided by the contractor while it remains so erected upon the site, provided that no warranty or other liability on the part of the contractor or of his other sub-contractors shall be created or implied in regard to the fitness, condition or suitability of the said scaffolding.<br><br>(b) Provision of water, lighting, watching and attendance for the purpose of the sub-contract works.<br><br>c) Use of sanitary accomodation,messrooms and welfare facilities.<br><br>(d) Provision of space for erection of offices or stores or space for storage of plant and materials<br><br>(e) Clearing away rubbish produced by them. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **Special Attendance**<br>(a) 'Taking delivery' shall mean the provision of unskilled labour necessary to attend upon the sub-contractors workmen for the purpose of unloading plant and materials when received upon the site and placing in position within the sub-contractor's storage space or store.<br><br>(b) 'Hoisting' shall mean the provision of unskilled labour and the use of any contractor's standing plant for the purpose of assisting the sub-contractor's workmen in hoisting the sub-contractor's plant and materials to the various levels but not placing to its final position.<br><br>c) 'Providing Power' shall mean the provision of power during the course of the works and during the period of maintenance. | |
| B. | **ALTERATIONS TO BILLS, PRICING E.T.C.**<br>Any unauthorised alterations or qualifications made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored.The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. | |
| C. | **BLASTING OPERATIONS**<br>Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at the Contractor's sole cost and risk in accordance with any Government regulation in force in force for the time being, and any special regulation laid down by the Architect governing the use and storage of explosives. | |
| D. | **HOISTING**<br>Throughout these Bills of Quantities generally no mention is made of heights for hoisting. All prices must include for hoisting and fixing at any level of the works. Where a particular level is specified the Contractor shall price accordingly. | |
| E. | **MATERIALS ARISING FROM EXCAVATIONS**<br>Materials of any kind obtained from the excavation shall be the property of the Employer. Unless the Architect directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works in substitution of the materials which the contractor would otherwise have had to supply with the written permission of the Architect. Should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed. | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| A. | **CLEANING UP**<br>On completion and as necessary during the course of the works the Contractor sanitary fittings, clean out all gulley and drain and leave the buildings and the entire site in a clean and habitable condition to the satisfaction of the Architect. | |
| B. | **HOARDING**<br>The Contractor shall allow for providing and clearing away on completion such hoarding or fencing and access gates as may be necessary for the protection of the works and the public, all to the Architect approval and local authority requirements. The Contractor will be responsible for paying any fees or taxes in respect of hoarding. The hoarding and gates shall be painted as directed by the Architect. The Contractor shall allow for maintaining the hoarding and gates throughout the contract and clearing away and making good disturbed surfaces upon completion. All the material arising will remain the property of the Contractor and he should allow for credit against this accordingly. | |
| C. | **INCREASE OR DECREASE IN COST**<br>THIS IS A FIXED PRICE CONTRACT. No Adjustment to the contract price in respect of rise or fall of cost of materials and labour and other matters affecting the cost of execution of the works shall be entertained. | |
| D. | **LOCAL AUTHORITY BY-LAWS AND CHARGES**<br>The Contractor shall comply with all local Authorities by-laws and pay for all charges in connection therewith. The Contractor should therefore allow in his tender for such expenses. | |
| E. | **SECTIONAL COMPLETION.**<br>Not with standing the completion of the whole works, the contractor is required to have practically completed any agreed work sections within a period specified from commencement. | |
| F | **GOVERNMENT ACTS REGARDING WORKFORCE, ETC.**<br>Allow for complying with all Government Acts, Orders and Regulations in connection with the Employment of Labour and other matters related to the execution of the works. The tender price must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, Pensions and Holidays for workpeople or to the safety, health or welfare of workpeople.<br><br>The Contractor must acquaint himself duly with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority the fullest<br>information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc and allow accordingly in his tender.<br>No claim in respect of want of knowledge in this connection will be entertained | |
| | **Carried to Summary** | |

| Item | Description | Amount |
|---|---|---|
| | | |
| | **PRELIMINARIES AND GENERAL CONDITIONS.** | |
| | | |
| | **COLLECTION** | |
| | | |
| | Brought forward from Page | |
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| | 1/01 | |
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| | **CARRIED TO GRAND SUMMARY** | |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **MAIN HOUSE**<br>**ELEMENT 1**<br>**SUBSTRUCTURE WORKS**<br>**All Provisional** | | | | |
| A | **Site Clearance**<br>Clear site of all grass, weeds, shrubs, bushes, rubbish, small trees etc. and grub up all roots or similar obstructions and burn or cart away. | SM | 1,328 | 100 | 132,800.00 |
| | **Excavations and Earthworks** | | | | - |
| | Excavations including trimming sides and bottoms of excavations; maintaining and supporting sides; and keeping free from water, mud and fallen material; with and including destruction of termites nests within site of works, take out and destroy queens, impregnate holes and tunnels with insecticide and fill voids with approved material. | | | | - |
| B | Excavate over site to remove vegetable soil average 200 mm deep and load, wheel and deposit in spoil heaps on site where directed. | SM | 1,328 | 200 | 265,600.00 |
| C | Excavate for foundation trenches; commencing from stripped level; not exceeding 1.50m deep | CM | 660 | 400 | 264,000.00 |
| D | Excavate for column bases; commencing from stripped level; not exceeding 1.50m deep | CM | 1,152 | 400 | 460,800.00 |
| E | Extra over all excavations for excavating in rock, irrespective of class | CM | 181 | 2,100 | 380,100.00 |
| | **Disposal** | | | | |
| F | Load, wheel and cart away from site surplus excavated material and deposit in approved dumping area | CM | 652 | 400 | 260,800.00 |
| G | Return, fill and ram selected excavated material around foundations; | CM | 1,160 | 250 | 290,000.00 |
| | **Disposal of water** | | | | |
| H | Allow for keeping excavations free from all water by pumping or otherwise | Item | 1 | 50,000 | 50,000.00 |
| | **Planking and strutting** | | | | |
| J | Allow for plunking and strutting sides of excavation trenches | Item | 1 | 50,000 | 50,000.00 |
| | **Fillings** | | | | |
| K | 300 mm Approved hardcore fill; Filling in making up levels under floors, spread, levelled, well rammed, watered, and consolidated in 150 mm thick layers. | CM | 360 | 1,800 | 648,000.00 |
| L | 50 mm Thick quarry dust blinding on surfaces of hardcore | SM | 1,200 | 400 | 480,000.00 |
| | **Anti-termite treatment**<br>Premise 200 SC Chemical anti-termite treatment manufactured by Bayer Environmental Science and applied by an approved specialist under a ten-year guarantee to surfaces of hardcore, etc. to: | | | | |
| M | Surface of filling | SM | 1,200 | 250 | 300,000.00 |
| | **Damp proof Membrane** | | | | |
| N | 1000 Gauge approved polythene sheeting as a damp proof membrane laid on blinded hardcore (measured separately) with 150 mm side laps to receive | SM | 1,200 | 150 | 180,000.00 |
| | Carried to Collection | | | | 3,762,100.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **Concrete work** | | | | |
| | 50 mm Plain concrete blinding class 15 (1:4:8) to: | | | | |
| A | Strip footing | SM | 508 | 450 | 228,600.00 |
| B | Column bases | SM | 772 | 450 | 347,400.00 |
| C | Lift base | SM | 16 | 450 | 7,200.00 |
| | Vibrated reinforced concrete (class 25) waterproofed with and including 'Sika 1' or other equal and approved waterproofing compounds in strict accordance with the manufacturer's instructions to: | | | | |
| D | Strip foundation | CM | 104 | 15,000 | 1,560,000.00 |
| E | Columns bases | CM | 352 | 15,000 | 5,280,000.00 |
| F | Columns | CM | 28 | 15,000 | 420,000.00 |
| G | 150 mm Thick slab | SM | 1,200 | 2,250 | 2,700,000.00 |
| H | Lift Shaft | CM | 12 | 15,000 | 180,000.00 |
| J | 200 mm Thick concrete walls; Lift shaft | SM | 48 | 3,000 | 144,000.00 |
| | **Reinforcement** | | | | |
| | Deformed high-yield steel ribbed bars reinforcement to KS 2712:2017 for cutting, bending, hoisting and fixing including all necessary tying wires, distance blocks, spacers, templates and stools in; | | | | |
| | *Strip footing* | | | | |
| K | 10 mm Diameter bars | KGS | 1,808 | 200 | 361,600.00 |
| L | 12 mm Diameter bars | KGS | 1,964 | 200 | 392,800.00 |
| | *Column Bases* | | | | |
| M | 16 mm Diameter bars | KGS | 6,264 | 200 | 1,252,800.00 |
| N | 20 mm Diameter bars | KGS | 20,800 | 200 | 4,160,000.00 |
| | *Stub Columns* | | | | |
| P | 8 mm Diameter bars | KGS | 1,400 | 200 | 280,000.00 |
| Q | 16 mm Diameter bars | KGS | 1,320 | 200 | 264,000.00 |
| R | 20 mm Diameter bars | KGS | 6,376 | 200 | 1,275,200.00 |
| | *Lift Shaft* | | | | |
| S | 20 mm Diameter bars | KGS | 222 | 200 | 44,400.00 |
| | Fabric Mesh | | | | |
| | Fabric reinforcement: A142 mesh with a 200 x 200 mm grid, weighing 2.22 kg/m², conforming to B.S. 4483, including 400 mm laps, bends, tying wire, and spacer blocks, to: | | | | |
| T | Floor bed | SM | 1,200 | 450 | 540,000.00 |
| | Carried to Collection | | | | 19,438,000.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **Formwork** | | | | |
| | Sawn formwork to:- | | | | |
| A | Sides of strip foundation footing | SM | 340 | 500 | 170,000.00 |
| B | Sides of column bases | SM | 448 | 500 | 224,000.00 |
| C | Sides of columns | SM | 272 | 500 | 136,000.00 |
| D | Edges of slab over 75 mm but not exceeding 150mm thick | LM | 380 | 75 | 28,500.00 |
| E | Sides of Lift Shaft | SM | 88 | 500 | 44,000.00 |
| | **Foundation walling** | | | | |
| | Approved local natural stone walling with a compressive strength of 7.0 N/mm2 (Class A1); bedded and jointed in cement and sand (1:4) mortar, reinforced with 25mm x 20- gauge hoop iron at every alternate course as described in: | | | | |
| F | 200 mm Thick walls | SM | 948 | 1,900 | 1,801,200.00 |
| | **Plinth Plaster work** | | | | |
| | External 12 mm thick cement and sand render (1:3) with wood float finish | | | | |
| G | 15 mm Thick to plinths | SM | 60 | 600 | 36,000.00 |
| | **Painting** | | | | |
| | Prepare and apply three coats black bituminous paint to: | | | | |
| H | Rendered surfaces | SM | 60 | 600 | 36,000.00 |
| | Carried to collection Below | | | | **2,475,700.00** |
| | **SUBSTRUCTURE WORKS** | | | | |
| | **COLLECTION PAGE** | | | | |
| | Carried from page | 1 | | | 3,762,100.00 |
| | Carried from page | 2 | | | 19,438,000.00 |
| | | 3 | Above | | 2,475,700.00 |
| | SUBSTRUCTURES<br>TOTAL CARRIED TO SUMMARY | | | | **25,675,800.00** |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT 2 : REINFORCED CONCRETE FRAME** | | | | |
| | **Conrete Works** | | | | |
| | Vibrated reinforced concrete (class 25) waterproofed with and including 'Sika 1' or other equal and approved waterproofing compounds in strict accordance with the manufacturer's instructions to: | | | | |
| A | Columns | CM | 352 | 15,000 | 5,280,000.00 |
| B | Beams | CM | 432 | 15,000 | 6,480,000.00 |
| C | 150 mm thick suspended slabs | SM | 4,800 | 2,250 | 10,800,000.00 |
| D | Lift Shaft | CM | 156 | 15,000 | 2,340,000.00 |
| | **Reinforcement** | | | | |
| | Assorted Steelwork reinforcement as Ribbed bar High Yield steel reinforcement to B.S. 4461 and K.S. ISO 6935-2:2007 including provisions for cutting, bending, hoisting, and fixing, including all necessary tying wires, distance blocks, spacers, templates, and stools in; | | | | |
| E | Columns | KG | 22,176 | 200 | 4,435,200.00 |
| F | Beams | KG | 34,600 | 200 | 6,920,000.00 |
| G | Suspended slabs | KG | 55,620 | 200 | 11,124,000.00 |
| H | Lift Shaft Walling | KG | 9,360 | 200 | 1,872,000.00 |
| | **Formwork** | | | | |
| | Sawn formwork including spacer blocks to:- | | | | |
| J | Vertical sides of columns | SM | 3,688 | 500 | 1,844,000.00 |
| K | Sides of Beams | SM | 4,228 | 500 | 2,114,000.00 |
| L | Soffits of Beams | SM | 560 | 500 | 280,000.00 |
| M | Soffits of slabs | SM | 4,800 | 500 | 2,400,000.00 |
| N | Vertical sides of Lift Shaft | SM | 1,540 | 500 | 770,000.00 |
| p | Edges of suspended floor slabs; not exceeding 225 mm girth | LM | 1,200 | 125 | 150,000.00 |
| | REINFORCED CONCRETE FRAME TOTAL CARRIED TO SUMMARY | | | | 56,809,200.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT NO.3**<br>**ROOFING AND ROOF FINISHES** | | | | |
| | **Roof Slab**<br>Vibrated reinforced concrete (class 25) waterproofed with and including 'Sika 1' or other equal and approved waterproofing compounds in strict accordance with the manufacturer's instructions to: | | | | |
| A | 150 mm Thick Roof slab | SM | 1,200 | 2,250 | 2,700,000.00 |
| | **Reinforcement**<br>Assorted Steelwork reinforcement as Ribbed bar High Yield steel reinforcement to B.S. 4461 and K.S. ISO 6935-2:2007 including provisions for cutting, bending, hoisting, and fixing, including all necessary tying wires, distance blocks, spacers, templates, and stools in; | | | | |
| B | Assorted reinforced bars of all kinds | KG | 18,000 | 200 | 3,600,000.00 |
| | **Formwork**<br>Sawn formwork as described to:- | | | | |
| C | Soffits of roof slab | SM | 1,200 | 500 | 600,000.00 |
| D | Edges of the slab not exceeding 225 mm girth | LM | 380 | 125 | 47,500.00 |
| | **Waterproofing**<br>Supply and apply two coats of APP (Atactic Polypropylene) modified asphalt membrane waterproofing system to prepared roof surface. System to include primer, base and top waterproofing membrane layers, all laid in strict accordance with manufacturer's instructions and relevant standards. Surface to be clean, dry, and free from dust and debris prior to application, The membrane shall be applied by torch or self-adhesive method as specified, ensuring continuous and fully bonded coverage, with all joints heat-welded or sealed for complete waterproofing integrity. Protection layer, if specified, to be applied over membrane as per project requirements. Complete with all necessary preparation, protection, and finishing works to provide a durable, weather-resistant, and long-lasting waterproof roof covering. | | | | |
| E | APP Waterproofing membrane; laid to roof surfaces | SM | 1,068 | 3,000 | 3,202,800.00 |
| F | Wrapping to surfaces; parapet wallS | SM | 344 | 3,000 | 1,032,000.00 |
| G | Ditto; rainwater outlets | No | 64 | 800 | 51,200.00 |
| H | 50 mm Thick cement and sand screed; laid to falls and cross-falls to receive waterproofing membrane | SM | 1,068 | 800 | 854,080.00 |
| J | 20 mm Thick protective screed to surfaces of membrane | SM | 1,068 | 600 | 640,560.00 |
| K | Ditto; parapet walls | SM | 344 | 600 | 206,400.00 |
| | Screed Fillet | | | | |
| L | 50 x 50mm Triangular Angle fillet for waterproofing | LM | 380 | 1,500 | 570,000.00 |
| M | Supply and fix termination strip complete with and including fasteners and waterproofing sealant to details | LM | 380 | 1,000 | 380,000.00 |
| | Carried to Collection | | | | 11,184,540.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **Coping**<br>Supply, deliver, and fix precast concrete coping units to parapet and boundary walls as shown on drawings and as directed by the Project Manager. Coping to be minimum 200 mm wide and 50 mm thick, manufactured in approved steel or timber molds, with concrete mix class 20/20 (1:1.5:3) using 20 mm nominal aggregates; Fix coping units on prepared mortar bedding of cement:sand (1:3) mix, jointed and pointed neatly with cement mortar 1:3. Ensure true alignment, level, and secure fixing. Joints between units to be sealed with approved flexible waterproof sealant. All work to comply with relevant BS standards and be suitable for the local environment conditions. | | | | |
| A | 350 x 200 x 50 mm Thick coping | LM | 712 | 900 | 640,800.00 |
| | **Parapet Wall**<br>Approved local machine-cut natural stone walling; bedded and jointed in cement and sand mortar (1:4); reinforced with 25 x 20 gauge hoop iron at every alternate course as described in; | | | | |
| B | 900 mm High parapet wall with moulding to Arch details to approval | SM | 344 | 1,900 | 653,600.00 |
| | **Rain Water Goods**<br>Heavy duty UPVC down pipes, "Key terrain" or other equal and approved UPVC rainwater pipes and fittings fixed onto walls or columns with and including galvanised bends, mild steel holder bats | | | | |
| C | 100 mm Diameter down pipes: fixed to concrete column at 600 mm centres with and including half round plastic holder bats | LM | 300 | 1,800 | 540,000.00 |
| D | Extra over pipe for 68 mm Horse shoe 92.5 degrees | NO | 16 | 1,500 | 24,000.00 |
| E | Extra over pipe for swan necked projections: 600mm long 92.5 degrees | NO | 16 | 2,000 | 32,000.00 |
| | Fullbora outlets; Forming outlets in concrete; dressing finishes round to match surrounding areas; waterproofing including cover caps as instructed | | | | |
| F | 150 mm Diameter cast iron "Fulbore" roof outlet with dome grating : for EPDM membrane finish : cast into conctere | No | 64 | 1,200 | 76,800.00 |
| | **Precast Concrete Sun Louvres (Brise Soleil)**<br>Supply, deliver, and fix precast concrete sun louvres as architectural shading devices to roof parapet or façade edges as shown on drawings and as directed by the Project Manager. Louvres to be 500 mm wide by 100 mm thick with hollow sections for lightness and airflow, cast in approved molds to the specified profile; Louvres shall be fabricated from high-quality, dense concrete of class 25/20 or better with smooth, fair-faced finish on all exposed surfaces. Edges to be clean-cut and consistent in dimension. Units to be factory cured for optimum strength and durability. Fixing to include bedding on mortar or suitable anchoring system ensuring secure, level installation with adequate expansion joints as necessary. | | | | |
| G | Precast Concrete Sun Louvres | LM | 95 | 6,000 | 570,000.00 |
| | Carried to Collection | | | | 2,537,200.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | ROOFING AND FLAT ROOF FINISHES<br>COLLECTION PAGE | | | | |
| | Brought forward from page | | | | 11,184,540.00 |
| | Brought forward from page | | | | 2,537,200.00 |
| | ROOFING AND ROOF FINISHES<br>TOTAL CARRIED TO SUMMARY | | | | 13,721,740.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT 4 WALLING** | | | | |
| | **Internal and External Walling** | | | | |
| | Approved local machine-cut natural stone walling; bedded and jointed in cement and sand mortar (1:4); reinforced with 25 x 20 gauge hoop iron at every alternate course as described in; | | | | |
| A | 200 mm Thick Internal and External walls | SM | 4,530 | 1,900 | 8,607,000.00 |
| | | | | | - |
| B | 100 mm Thick; Internal | SM | 80 | 1,900 | 152,000.00 |
| | | | | | - |
| | **Damp Proof Course** | | | | - |
| | Three-ply bituminous felt damp-proof course; bedded in cement and sand mortar (1:3) (measured net, no allowance for laps). | | | | - |
| C | 200 mm Thick wide damp proof course | LM | 844 | 200 | 168,800.00 |
| | | | | | - |
| D | 100 mm Wide ditto | LM | 12 | 100 | 1,200.00 |
| | EXTERNAL AND INTERNAL WALLING TOTAL CARRIED TO SUMMARY | | | | 8,929,000.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT NO. 5** | | | | |
| | **WINDOWS AND WINDOW FINISHES** | | | | |
| | Note: *All windows as per Architect's window schedule* | | | | |
| | Steel Casement Windows | | | | |
| | Supply and fix approved purpose-made powder-coated steel casement windows in standard cross sections, complete with lugs, hinges, window stays, handles, 90 mm wide galvanized vents at the top, and neoprene or other approved glazing compounds. Glazing (M/S). | | | | |
| A | Window size 500 x 1500mm high | NO | 62 | 6,375 | 395,250.00 |
| | | | | | - |
| B | Window size 1500 x 1500mm high | NO | 36 | 19,125 | 688,500.00 |
| | | | | | - |
| C | Window size 2000 x 1500mm high | NO | 136 | 25,500 | 3,468,000.00 |
| | | | | | - |
| D | Window size 2500 x 1500mm high | NO | 24 | 31,875 | 765,000.00 |
| | | | | | - |
| E | Window size 3750 x 1500mm high | NO | 8 | 47,813 | 382,500.00 |
| | | | | | - |
| | **Glazing** | | | | |
| | 6 mm Thick glass and glazing with clips and putty in casement panes:- | | | | - |
| F | Not exceeding 0.1sm panes; clear sheet glass | SM | 474 | 2,100 | 995,400.00 |
| | | | | | - |
| G | Ditto; obscure glass | SM | 600 | 2,200 | 1,320,000.00 |
| | | | | | - |
| | **Precast concrete cill** | | | | - |
| | Precast concrete; Class 20/20; including hoisting into position and bedding and pointing in cement mortar (1:4) | | | | - |
| H | 200 x 100mm (overall) weathered and throated window cill, fair faced on all exposed surfaces | LM | 450 | 450 | 202,500.00 |
| | | | | | - |
| | **Curtain tracks** | | | | - |
| J | Supply and fix approved wrot iron curtain rods 20mm diameter hollow section curtain rail complete with curtain rings, rollers, hardwood end brackets (2No.) and accessories | LM | 225 | 1,800 | 405,000.00 |
| | | | | | - |
| | **Paiting and Decorating** | | | | - |
| | Prepare the surface and apply an undercoats and three finishing coat first quality gloss oil paint on:- | | | | - |
| K | Steel metal surfaces, measured net overall | SM | 450 | 600 | 270,000.00 |
| | WINDOWS AND WINDOW FINISHES TOTAL CARRIED TO SUMMARY | | | | 8,892,150.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT 6**<br>**DOORS AND DOOR FINISHES**<br>***Note: All doors as per Architect's door schedule***<br>**TIMBER DOORS**<br>**Hardwood paneled door** | | | | |
| A | 50 mm Thick hard wood double paneled door overall size 2000 x 2100 mm high comprising of, openable 2 leafs of 1900 x 2000mm high infilled with 50mm thick solid mounded timber panels in 6 No. per leave with mounded beading around panels; edges beveled and grooved into frames; all framed, clamped and grooved together | NO | 8 | 65,000 | 520,000.00 |
| B | 50 mm Thick hard wood paneled door overall size 900 x 2100 mm high comprising of 1 leaf of 800 x 2000mm high infilled with 50mm thick solid mounded timber panels in 6 No. with mounded beading around panels; edges beveled and grooved into frames; all framed, clamped, and grooved together | NO | 264 | 43,500 | 11,484,000.00 |
| C | 50 mm Thick hard wood paneled door overall size 1000 x 2100 mm high comprising of 1 leaf of 900 x 2000mm high infilled with 50mm thick solid mounded timber panels in 6 No. with mounded beading around panels; edges beveled and grooved into frames; all framed, clamped, and grooved together | NO | 24 | 55,600 | 1,334,400.00 |
| | **Flush Doors**<br>45 mm Thick solid core mahogany veneered flush door; with scratch-proof laminate finish to both sides; wrot hardwood lipping to all edges. | | | | |
| D | Door size 800 x 2100mm high | NO | 16 | 9,000 | 144,000.00 |
| | **GLAZED-ALUMINIUM DOORS**<br>**Folding Doors**<br>10 mm Thick toughened glass sliding folding door system overall size (as per site conditions) comprising of 6 leaves of 10mm thick clear toughened glass panels, each leaf supported with solid aluminium hinges and mounted on anodized aluminium top and bottom tracks; panels fitted with nylon wheels having ball bearings for smooth sliding and folding action; entire system including aluminium frames, channels, hinges, rollers, and all necessary hardware and accessories of approved make (Häfele/Hettich/Ozone or equivalent); complete with installation to architect's approval. | | | | |
| E | Door size 2000 mm x 2100 mm | NO | 16 | 237,650 | 3,802,400.00 |
| | **Glazed Mild Steel Fire Escape Doors**<br>Supply and fix Glazed mild steel door constructed from 50 x 50 x 3 mm SHS frame, 3 No 30x40mm RHS midrails and vertical rail; 6mm thick clear glass sections and 3mm thick steel panel sections obtained from an approved manufacturer and primed with red oxide primer before delivery; complete with all necessary ironmongery including building lugs to jambs, plugging and screwing head and all to stonework and bedding frames in waterproof cement mortar and pointing in approved mastic externally, oiling easing and adjusting to: | | | | |
| F | Single leaf door; overall size 900 x 2100 mm high | NO | 16 | 8,809 | 140,944.00 |
| | Carried to Collection | | | | 17,425,744.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **The following in wrot hardwood or equal and approved door frames: selected and set clean** | | | | |
| A | Rebated door frames; one labour plugged, size 200 x 50mm | LM | 820 | 1,800 | 1,476,000.00 |
| B | Ditto transome | LM | 820 | 1,800 | 1,476,000.00 |
| C | Architrave with one labour, size 50x25mm | LM | 820 | 450 | 369,000.00 |
| D | 20 mm Quadrant beading | LM | 820 | 300 | 246,000.00 |
| | Prime backs of timber; prepare and apply one coat of aluminum wood primer and two finishing coats of wood gloss paint to: | | | | |
| E | Back of wood before fixing; over 200 mm but not exceeding 300 mm girth | LM | 820 | 180 | 147,600.00 |
| | Prepare and apply two undercoats and one finishing coat of oil paint to general surdaces of timber | | | | |
| F | General Surfaces of Timber | SM | 308 | 600 | 184,800.00 |
| | **Iron Mongery** Supply and fix the following ironmongery to timber complete with matching screws and keys as per 'UNION' manufucturers ( reference to a particular catalogue are given as a guide to type and quality only, other equal and approved alternatives may be used) | | | | |
| G | Polished Stainless steel 3 lever mortice door lock and brass handle furniture set;( keyhole escutcheons, cylinder and latch ); Reference to "UNION" Catalogue NO. 2237 orequal and approved | NO | 296 | 800 | 236,800.00 |
| H | Ditto: But 2 Lever as per "UNION" cataloque NO. 2102 or equal and approved | NO | 16 | 3,800 | 60,800.00 |
| J | 100 mm Brass butt hinges | PRS | 656 | 600 | 393,600.00 |
| K | 38 mm Rubber door stop fixed with rawl bolt | NO | 328 | 300 | 98,400.00 |
| | Carried to Collection below | | | | 4,689,000.00 |
| | DOORS AND DOOR FINISHES COLLECTION PAGE | | | | |
| | Brought Forward from Page | | | | 17,425,744.00 |
| | | | | | 4,689,000.00 |
| | DOORS AND DOOR FINISHES TOTAL CARRIED TO SUMMARY | | | | 22,114,744.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT 7** | | | | |
| | **INTERNAL FINISHES** | | | | |
| | FLOOR FINISHES | | | | |
| | **Screeds and backings** | | | | |
| | 32 mm Thick Cement and sand (1:3) screed finished rough with a wood float to receive:- | | | | |
| A | Floors; to receive ceramic tiles (m.s) | SM | 4,880 | 600 | 2,928,000.00 |
| | **Floor Tiles** | | | | |
| | 300 x 300 x 8 mm thick non slip-ceramic floor tiles; bedded and jointed in cement and sand mortar (1:4); including pointing with matching colored grout, aluminum edge trims, silicon joints, spacers, expansion joints, and all other materials; laid to completion to: | | | | |
| B | Floors | SM | 4,880 | 2,500 | 12,200,000.00 |
| C | 100 mm High skirting | LM | 7,120 | 250 | 1,780,000.00 |
| | INTERNAL WALL FINISHES | | | | |
| | **Plaster / Render and Backings** | | | | |
| | 12 mm Thick plaster: 9 mm first coat of cement/sand (1:6): 3mm second coat of cement/lime/putty (1:6):fair faced steel trowell finish: as described to | | | | |
| D | Internal wall surfaces | SM | 5,096 | 600 | 3,057,600.00 |
| | | | | | - |
| E | 10 mm Thick backings; waterproofed; to receive wall tiles | SM | 1,040 | 600 | 624,000.00 |
| | | | | | - |
| | Waterproofing (Provisional) | | | | - |
| | Waterproofing as " Masterseal" or other equal and approved sealant executed by an approved specialist under a Twenty (20) year guarantee (minimum) and in accordance with the manufacturer's specifications and guarantee:- | | | | - |
| F | Wall surfaces to receive tiling | SM | 1,040 | 1,500 | 1,560,000.00 |
| | | | | | - |
| | Ceramic Wall Tiling | | | | - |
| | Supply and fix approved coloured ceramic wall tiles or equal and approved : fixed with proprietary adhesive : jointed and pointed in matching coloured proprietary grouting : incorporating proprietary pvc spacers and expansion joint as necessary: all to Interior designers approval | | | | - |
| G | Wall surfaces, vertical or sloping (Bathroom and Toilet) | SM | 1,040 | 2,200 | 2,288,000.00 |
| | | | | | - |
| | **Painting and Decoration** | | | | - |
| | Prepare surfaces, sandpaper smooth and apply ONE undercoat and THREE finishing coats as "Permacote Ultra Guard Rain- Proof Silicone Paint" : "CROWN SOLO RANGE" or other equal approved Exterior & Interior Quality paint: to: | | | | - |
| H | Plastered surfaces | SM | 5,096 | 600 | 3,057,600.00 |
| | Carried to Collection | | | | 27,495,200.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **CEILING FINISHES** | | | | |
| | **Plaster** | | | | |
| | 12 mm Thick plaster: 9 mm first coat of cement/sand (1:6): 3 mm second coat of cement/lime/putty (1:6): steel trowelled: as described to | | | | |
| A | Horizontal soffits of suspended slab | SM | 6,960 | 600 | 4,176,000.00 |
| | **Painting and Decoration** | | | | |
| | Prepare surfaces, skillfully skim all soffits to approval, roller apply three coats first quality "Crown" or other equal and approved weatherproof matt emulsion paint to;- | | | | |
| B | Plastered slab soffits | SM | 6,180 | 600 | 3,708,000.00 |
| | Carried to Collection below | | | | 7,884,000.00 |
| | INTERNAL FINISHES<br>COLLECTION PAGE | | | | |
| | Brought Forward from Page | | | | 27,495,200.00 |
| | | | | | 7,884,000.00 |
| | INTERNAL FINISHES<br>TOTAL CARRIED TO SUMMARY | | | | 35,379,200.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT NO 8**<br>**EXTERNAL FINISHES** | | | | |
| | EXTERNAL WALL FINISHES<br>**Plaster / Render and Backings**<br>15 mm Thick plaster: 9 mm first coat of cement/sand (1:6): 3mm second coat of cement/lime/putty (1:6): steel trowelled: as described to | | | | |
| A | Surfaces of walls, columns and beams | SM | 3,968 | 600 | 2,380,800.00 |
| | **Painting and Decoration**<br>Prepare surfaces, sandpaper smooth and apply ONE undercoat and THREE finishing coats as "Permacote Ultra Guard Rain- Proof Silicone Paint" : "CROWN SOLO RANGE" or other equal approved Exterior & Interior Quality paint: to: | | | | - |
| B | Plastered surfaces | SM | 3,968 | 600 | 2,380,800.00 |
| | EXTERNAL FINISHES<br>TOTAL CARRIED TO SUMMARY | | | | 4,761,600.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT NO 9** | | | | |
| | **STAIRCASE AND STAIRCASE FINISHES** | | | | |
| | **Concrete Work** | | | | |
| | Vibrated reinforced concrete (class 25) waterproofed with and including 'Sika 1' or other equal and approved waterproofing compounds in strict accordance with the manufacturer's instructions to: | | | | |
| A | Steps | CM | 28 | 15000 | 420,000.00 |
| B | Waist | SM | 1,004 | 2250 | 2,259,000.00 |
| C | Landing | SM | 240 | 2250 | 540,000.00 |
| | **Reinforcement** | | | | |
| | Assorted Steelwork reinforcement as Ribbed bar High Yield steel reinforcement to B.S. 4461 and K.S. ISO 6935-2:2007 including provisions for cutting, bending, hoisting, and fixing, including all necessary tying wires, distance blocks, spacers, templates, and stools in; | | | | - |
| D | Staircase | KG | 11,904 | 200 | 2,380,800.00 |
| | **Formwork** | | | | |
| | Sawn formwork as described to: | | | | |
| E | Vertical edge of risers and landings : exceeding 150 mm but not exceeding 225mm high | LM | 800 | 112.50 | 90,000.00 |
| F | Vertical edge of open string 350mm (extreme) wide : cut to profile of treads and risers | LM | 392 | 175 | 68,600.00 |
| G | Sloping soffits of stairs, waist | SM | 1,004 | 500 | 502,000.00 |
| H | Soffits of landings | SM | 240 | 500 | 120,000.00 |
| | **Staircase Finishes** | | | | |
| | Screeds and backings | | | | |
| | 32 mm Thick Cement and sand (1:3) screed finished rough with a wood float to:- | | | | |
| J | Staircase Steps to receive ceramic tiles | SM | 1,004 | 600 | 602,400.00 |
| | **Non slip Ceramic tiles** | | | | |
| | 300 x 300 x 8 mm thick non slip-ceramic floor tiles; bedded and jointed in cement and sand mortar (1:4); including pointing with matching colored grout, aluminum edge trims, silicon joints, spacers, expansion joints, and all other materials; laid to completion to: | | | | |
| K | Staircase Steps | `SM | 1,004 | 2,500 | 2,510,000.00 |
| | **Plaster / Render and Backings** | | | | |
| | 12 mm Thick plaster: 9 mm first coat of cement/sand (1:6): 3mm second coat of cement/lime/putty (1:6): steel trowelled: as described to | | | | |
| L | Vertical edge of open string 350mm (extreme) wide : cut to profile of treads and risers | LM | 392 | 210.00 | 82,320.00 |
| M | Sloping soffits of stairs/waist | SM | 1,004 | 600 | 602,400.00 |
| N | Soffits of landings | SM | 240 | 600 | 144,000.00 |
| | Carried to Collection | | | | 10,321,520.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **Painting and Decoration**<br>Prepare surfaces, skillfully skim all soffits to approval, roller apply three coats first quality "Crown" or other equal and approved weatherproof matt emulsion paint to;- | | | | |
| A | Vertical edge of open string 350mm (extreme) wide : cut to profile of treads and risers | LM | 392 | 210.00 | 82,320.00 |
| B | Sloping soffits of stairs/waist | SM | 1,004 | 600 | 602,400.00 |
| C | Soffits of landings | SM | 240 | 600 | 144,000.00 |
| | BALUSTRADES<br>900 mm High aluminium balustrade comprising 50mm dia. extruded aluminium top rail fixed over vertical balusters of 25mm x 25mm aluminium square sections spaced at 100mm c/c; all members in powder-coated finish of approved shade; top rail fixed using concealed stainless steel brackets anchored to the base; vertical balusters fixed to aluminium base channel securely anchored to the slab edge or stringer with stainless steel fasteners; all joints factory welded or mechanically joined and neatly ground smooth; system to include corner posts, end caps, expansion joints, and all necessary accessories; complete in all respects as per manufacturer's specifications and to architect's approval. | | | | |
| D | Balustrades with handrail | LM | 96 | 7500 | 720,000.00 |
| | **Sun Louvres**<br>Supply, fabricate, and install vertical sun louvre blades fabricated from high-grade extruded aluminum alloy or galvanized steel, 50 mm wide and 5 mm thick, powder-coated/anodized finish, fixed in structural frame with stainless steel fasteners, including all preparation, finishing, fixing, sealants, accessories, scaffolding, and workmanship to the Architect's approval. | | | | |
| E | Sun Louvres | LM | 216 | 1500 | 324,000.00 |
| | Carried to Collection below | | | | 1,188,000.00 |
| | STAIRS AND STAIRCASE FINISHES<br>COLLECTION PAGE | | | | |
| | Brought Forward from Page | | | | 10,321,520.00 |
| | | | | | 1,188,000.00 |
| | STAIRS AND STAIRCASE FINISHES<br>TOTAL CARRIED TO SUMMARY | | | | 11,509,520.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **ELEMENT NO 10**<br>**ELEVATORS AND PERGOLA**<br><br>ELEVATOR<br>Supply, deliver, install, test and commissioning one (1) fully automatic Machine Room-Less (MRL) passenger lift with the following specifications: capacity approx. 1125 kg (15 persons), travel speed 1.0 m/s, serving up to 7 floors with double panel automatic center-opening car and landing doors. Complete with; rigid structural steel car frame and platform 1500mm wide x 1600mm deep finished with slip-resistant floor covering and 150mm stainless steel skirting; high-grade stainless steel and tinted safety glass car enclosure; stainless steel handrails at 900mm height; recessed LED lighting and ventilation fan with key switch control; Heavy-duty, high-speed, VVVF-driven door operators with integrated safety devices including infrared light curtain sensors, mechanical pressure edges, and emergency manual override mechanisms. Smooth operation within specified cycle time; Gearless permanent magnet synchronous motor with AC VVVF drive; fully programmable microprocessor control system with remote monitoring and building management system (BMS) compatibility; key-operated priority, fireman's service, standby power and independent service modes; digital LED position and direction indicators in car and at landings; Emergency rescue device (ARD) with battery backup for power failure, overload protection with audible and visual alarms, fireman's switch, battery-operated emergency lighting and alarm bell, manual door release, load weighing device, and full compliance with BS EN 81-20, BS EN 81-70 and local safety codes. Complete wiring and connections in accordance with IEE wiring regulations; fully enclosed, ventilated control cabinet with protective dust filters and lockable access; electrical protections including overcurrent, phase failure, and rope slippage detection; with and including guide rails, buffers, pit ladder, safety fascia plates, door frames, jambs, landing sills, lighting and ventilation provisions within lift shaft; all supports fitted with anti-vibration and sound insulation materials. | | | | |
| A | Approved brand and make; supply, test and commission | NO | 1 | 700000 | 700,000.00 |
| | PERGOLA ROOF<br>**Structural Frame**<br>75 mm x 50 mm x 4 mm Thick steel RHS vertical and horizontal members used as standing pillars and rafters for pergola, cut to height and width as per site requirements (typically 2500mm high), base plates welded at bottom and fixed to RCC footing or slab using anchor bolts; top ends capped with welded MS plates for beam connection; all joints ground smooth and finished; surface cleaned, primed with anti-corrosive primer and finished with two coats of exterior-grade synthetic enamel paint in approved shade; complete with all welding, cutting, drilling, fixing, and accessories; to be installed plumb and true to line and level, all as per engineer's drawings and architect's approval. | | | | |
| B | Rectangular Hollow Sections | KG | 1,465 | 350 | 512,750.00 |
| | Carried to Collection | | | | 1,212,750.00 |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **Pergola Roof**<br>Roof finished with 6mm thick clear Perspex (acrylic) sheets fixed over horizontal rectangular hollow sections, spaced at 600mm c/c; Perspex sheets cut to size and fixed with UV-resistant silicon sealant and stainless steel dome-head screws with neoprene washers; all steel members in approved finish and shade; edges neatly finished with aluminium end caps; complete with all structural supports, fixings, trims, and sealing works as per manufacturer's specifications and architect's approval. | | | | |
| A | Roofs; sloping | SM | 61 | 20000 | 1,220,000.00 |
| | | | | | - |
| | Carried to Collection below | | | | 29,725,260.00 |
| | ELEVATOR AND PERGOLA<br>COLLECTION PAGE | | | | |
| | Brought Forward from Page | | | | 1,212,750.00 |
| | | | Above | | 29,725,260.00 |
| | ELEVATOR AND PERGOLA<br>TOTAL COLLECTION TO SUMMARY PAGE | | | | 30,938,010.00 |
| | **SECTION 2: BUILDERS WORK** | | | | |

| ITEM | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **MAIN SUMMARY PAGE** | | | | |
| | | | | | |
| 1 | SUBSTRUCTURE | | | | 25,675,800.00 |
| | | | | | |
| 2 | REINFORCED CONCRETE FRAME | | | | 56,809,200.00 |
| | | | | | |
| 3 | ROOFING AND ROOF FINISHES | | | | 13,721,740.00 |
| | | | | | |
| 4 | WALLING | | | | 8,929,000.00 |
| | | | | | |
| 5 | WINDOWS AND WINDOW FINISHES | | | | 8,892,150.00 |
| | | | | | |
| 6 | DOORS AND DOOR FINISHES | | | | 22,114,744.00 |
| | | | | | |
| 7 | INTERNAL FINISHES | | | | 35,379,200.00 |
| | | | | | |
| 8 | EXTERNAL FINISHES | | | | 4,761,600.00 |
| | | | | | |
| 9 | STAIRCASE AND STAIR FINISHES | | | | 11,509,520.00 |
| | | | | | |
| 10 | ELEVATOR AND PERGOLA | | | | 30,938,010.00 |
| | | | | | |
| | | | | | |
| | | | | | |
| | SECTION NO. 2: BUILDERS WORK<br>TOTAL TO GRAND SUMMARY PAGE | | | | 218,730,964.00 |

| Item | Description | Unit | Qty | Rate | Amount |
|---|---|---|---|---|---|

| Item | Description | Unit | Qty | Rate | Amount |
|---|---|---|---|---|---|
| | **ELEMENT NO. 11**<br>**PRIME COST SUMS**<br><br>*Rates for assistance by the Contractor in respect of work by Nominated Sub-Contractor shall include, but not be limited to:-*<br>*a. Use of Contractor's administrative arrangements*<br>*b. Use of construction plant*<br>*c. Use of Contractor's facilities*<br>*d. Use of temporary works*<br>*e. Space of Sub-contractor's office and stores*<br>*f. Clearing away rubbish*<br>*g. Scaffolding including maintenance and removal of any special scaffolding required*<br>*h. Unloading, distribution and placing in position all plant, machinery etc.*<br>*i. Provision of electric power for Sub-contractor's on-site work and for lighting*<br><br>*j. Provision of water for the works including requirements for testing and commissioning.*<br>*k. Unloading all plant and materials, placing in suitable storage areas, hoisting or lowering to respective floor levels and distributing to positions convenient to the Nominated Sub-contractor for executing his work*<br>*l. General co-ordination and intergration of all sub-contract works into the general programme* | | | | |
| | **SPECIALISTS INSTALLATIONS**<br>**Plumbing and drainage installations** | | | | |
| A | Provide a Prime Cost Sum of **(Ksh xxxxxxxx )** only for supply and installation of Water Supply works ; Plumbing fittings and Sanitary appliances; Waste Drains and reticulation; Sewer connections by a nominated subcontractor. | Item | 1 | 30,000,000 | 30,000,000.00 |
| B | Builders work in connection with Plumbing Works | % | 2.5% | | 750,000.00 |
| C | Main Contractor's Profits and Overheads | % | 2.5% | | 750,000.00 |
| D | General & special attendance | % | 2.5% | | 750,000.00 |
| | **Electrical Installations** | | | | |
| E | Provide a Prime Cost Sum of **(Ksh xxxxxxxxx)** only for supply and installation of the complete electrical works inc. external works linking to remote staff quarters by a nominated subcontractor. | Item | 1 | 35,000,000 | 35,000,000.00 |
| F | Builders work in connection with Electrical Works | % | 2.5% | | 875,000.00 |
| G | Main Contractor's Profit and Overheads | % | 2.5% | | 875,000.00 |
| H | General & special attendance | % | 2.5% | | 875,000.00 |
| | **Medical Equipment** | | | | |
| | Provide a Prime Cost Sum of **(Ksh xxxxxxxx )** only for supply and installation of Medical Equipment including fittings and appliances; Reticulation and connections by a nominated subcontractor. | Item | 1 | 100,000,000 | 100,000,000.00 |
| | Prime Cost Sums<br>Total Carried to Summary | | | | 169,875,000.00 |

| Item | Description | Unit | Qty | Rate | Amount |
|---|---|---|---|---|---|
| | **ELEMENT NO. 12**<br>**PROVISIONAL SUMS** | | | | |
| | VANITY FIXTURES | | | | |
| A | Provide a provisional sum of Kenya Shillings Five Hundred Thousand Only (Ksh **500,000.00**) only for associated Vanity Cabinets and Shelving to Design Specifications | Item | 1 | 500,000 | 500,000.00 |
| | FOUL DRAINAGE | | | | |
| B | Provide a provisional sum of Kenya Shillings One Million (**Ksh 1,000,000/=**) only for Foul Drainage including Septic Tank and Soak Pit to Details and specifications | Item | 1 | 1,000,000 | 1,000,000.00 |
| | STORMWATER DRAINAGE | | | | |
| C | Provide a provisional sum of Kenya Shillings Five Hundred Thousands Only (**Ksh 500,000/=**) only for Stormwater Management | Item | 1 | 500,000 | 500,000.00 |
| D | PROJECT MANAGEMENT<br>Provisional sum for the project management, administration and supervision services | Item | 1 | 3,000,000 | 3,000,000.00 |
| | **Benchmarking**<br>Provide a Prime Cost Sum of **(Ksh xxxxxxxx )** only for benchmarking | Item | 1 | 50,000,000 | 50,000,000.00 |
| | Provisional Sums<br>Total Carried to Summary | | | | 55,000,000.00 |

**MIGORI COUNTY GOVERNMENT**
**PROPOSED CONSTRUCTION OF LEVEL 5 HOSPITAL**
**AWENDO SUB-COUNTY**
**SPECIFICATIONS AND PRELIMINARY BILLS OF QUANTITIES**

GRAND SUMMARY

| | SECTIONS | | AMOUNT |
|---|---|---|---|
| 1 | PRELIMINARIES | | 6,650,000.00 |
| 2 | BUILDERS' WORK | | 218,730,964.00 |
| 3 | MECHANICAL INSTALLATION WORKS | | 32,250,000.00 |
| 4 | ELECTRICAL INSTALLATION WORKS | | 37,625,000.00 |
| 5 | SUPPLY AND INSTALLATION OF MEDICAL EQUIPMENT | | 100,000,000.00 |
| 6 | PROVISIONAL SUMS | | 55,000,000.00 |
| | **SUB TOTAL** | | **450,255,964.00** |
| 7 | ALLOWANCE FOR CONTINGENCIES | | *Excluded* |
| 8 | VALUE ADDED TAX | 16% | *Included* |
| | TOTAL COST OF PROJECT CARRIED TO FORM OF TENDER | | 450,255,964.00 |