

**Terms of Reference**  
**Assessment of Medical Equipment and Furniture Requirements for Phase 1**  
**New Redemption Hospital**

## **1.0 Background**

The New Redemption Hospital is a 155-bed capacity hospital which is under construction in Upper Caldwell in Monrovia, Liberia. Phase one of the hospital is designed to provide maternity and pediatrics services. In June 2019, the Ministry of Health hired Meirovich Consulting Company to carry out an assessment of the medical equipment and specifications required at the hospital. The assignment was completed as envisaged but since then, there have been some changes to the design of the hospital. Due to these changes, the Government of Liberia (GoL) now requires the services of a Biomedical Engineer to re-assess the medical equipment and furniture requirements for the hospital; and to provide technical support during their installation.

## **2.0 Objectives of the Assignment**

The objectives of the assignment are to: (i) determine the type of medical equipment, quantity, and specifications required at the hospital; (ii) assess the furniture and specifications required at the hospital; (iii) cost the medical equipment and furniture; (iv) provide technical support during the tendering and installation of the medical equipment and furniture; and (v) provide technical support on telemedicine technologies.

## **3.0 Scope of Work**

### *Task 1: Identification and specification of the required medical equipment and furniture*

- a. Review the current (previous) medical equipment assessment report.
- b. Relate the current medical equipment assessment report to the building plans of the New Redemption Hospital and the standard medical equipment list of the Liberia Ministry of Health; and come up with the required medical equipment and medical furniture.
- c. Based on the identified medical equipment and furniture, develop the specifications for the New Redemption Hospital in liaison with the Ministry of Health.
- d. Determine any installation constraints, if any.

### *Task 2: Costing of the identified medical equipment and furniture*

- a. Undertake a market survey to determine the most cost-effective prices.
- b. Using the prices, cost the medical equipment and furniture
- c. Identify the pre-installation works (civil, electrical, mechanical) to be incorporated in the works to accommodate the medical equipment and furniture. This will include examination of the architectural and technical studies/documents concerning the installation of the medical of equipment and furniture.
- d. Develop a Bill of Quantities

### *Task 3: Technical Support in the Tender Process and Installation for Medical Equipment*

- a. Assist the Ministry of Health in the identification of suitable suppliers of the medical equipment.

- b. Support the Ministry of Health in the evaluation of bids for the medical equipment and furniture.
- c. Supervise and certify installation and commissioning of medical equipment and furniture in liaison with the committee on medical equipment at the Ministry of Health.
- d. Monitor performance of medical equipment and furniture during the warranty period.

*Task 4: Technical Support on Telemedicine*

- a. Participate in the development of the appropriate telemedicine technologies to be adapted at the hospital.

#### **4.0 Deliverables**

1. A comprehensive medical equipment assessment report for phase one. The report must include a list of the required medical equipment and medical furniture.
2. Technical specifications for each of the required medical equipment and medical furniture.
3. A Bill of Quantities.
4. Schedule of pre-installation works (civil, electrical, mechanical) for specialized medical equipment and furniture.
5. Equipment Installation completion reports and certification
6. Project completion report for medical equipment and medical furniture component

#### **5.0 Qualifications and competences**

The successful candidate should have the following minimum qualifications:

- a. A Degree in Biomedical Engineering OR a Degree in any field of Engineering and a postgraduate diploma in Biomedical Engineering from a recognized university.
- b. At least eight (8) years professional experience in preparation of medical equipment, condition assessment, and specifications for hospitals. This must include installation, commissioning, and maintenance of large-scale networks of specialized hospital equipment.
- c. Demonstrated knowledge in preparation of tender documents and specifications for medical equipment and medical furniture is desirable.
- d. A high level of interpersonal, management skills, integrity and ability to work with complex teams.
- e. Proven ability to work under pressure and meet tight deadlines with minimum supervision.
- f. Strong written and oral communication skills in English, and demonstrated ability of making effective presentations to diverse audiences.

#### **6.0 Timeframe**

The successful candidate will be issued a time-based contract. The assignment shall be for 24 months divided in four phases in line with the four tasks outlined above. The schedule shall depend on the construction schedules and delivery schedules by the equipment suppliers. Commencement of each phase shall be upon written instruction by the Project Manager.

## **7.0 Reporting**

Administratively, the Biomedical Engineer will report to the Project Manager, World Bank Health Project Implementation Unit (PIU) at the Ministry of Health. For all technical aspects, the Biomedical Engineer will report to the Infrastructure Specialist at the PIU. The Director for Infrastructure at the Ministry of Health will oversee all the technical aspects of the assignment.

## **8.0 Payment**

The successful candidate shall be paid a competitive, negotiated and agreed monthly salary commensurate with qualification in accordance with the project financing provisions.