TERMS OF REFERENCE

FOR PREPARATION OF INFRASTRUCTURE DESIGNS AND SUPERVISION SERVICES FOR THE EXPANSION & EQUIPPING OF NINE TECHNICAL INSTITUTES IN UGANDA

1 BACKGROUND

The Government of Uganda (GOU) has secured a long-term Loan from the Islamic Development Bank to the tune of **US$ 45 million,** to finance the Business, Technical & Vocational Education & Training (BTVET) Support Project. Government is providing counterpart funding of **US$ 6.14 million**. The Project Executing Agency is the Ministry of Education and Sports (MOES). The Ministry's joint Projects Coordination Unit (PCU) for the IsDB, OFID & Arab-funded Projects, is handling the day-to-day planning, coordination and management of the project activities.

The project is aligned with the National Vision of transforming Uganda from a peasantry-based society into a modern, self-sustaining, industrialized, competitive upper middle-income and prosperous country, by 2040. The overall project aim is to support key Education Sector priorities included in the National Development Plan (NDP III) and the Education Sector Strategic Plan (ESSP III), focusing on expanded and equitable access to quality BTVET. In so doing, the project shall contribute towards the paradigm shift in the BTVET sub-sector, aimed at making it a comprehensive system of skills development for employment, enhanced productivity and national growth, while augmenting Government's efforts to address the increasing demand for alternative further education opportunities, from outputs of Universal Primary Education (UPE), Universal Secondary Education (USE) and Universal Post O-Level Education & Training (UPOLET).

2 OBJECTIVES OF THE CONSULTANCY ASSIGNMENT

2.1 **The overall objective of the consultancy services described in these Terms of Reference (TOR) is to provide competent infrastructure and equipment related consultancy services for the planned expansion of nine technical institutes, with the view of ensuring that the design, tender action and execution of civil works and supply contracts, are undertaken in an economical, efficient and effective manner.** Congruently, the services are to be provided within the available budget, the stipulated project time frame and consistent with good engineering and environmental standards and practices, to the satisfaction of both Government and IsDB.

2.2 Particular attention and experience is to be placed on **Climate-responsive, Energy efficient and Sustainable infrastructure designs, in line with the Sustainable Development Goals *(SDGs, dubbed 'Transforming our World: the 2030 agenda for Sustainable Development'),* which are geared towards achieving an environmentally sustainable and socially inclusive World by 2030.** The key elements from an infrastructure design and training equipment specifications perspective include: [1]**Participatory Design** *(i.e. best involvement of key stakeholders for good project ownership and acceptance)*, [2]**Energy Efficient Design** *(low overall and renewable energy utilization, vis-à-vis required functional performance, including solar energy and relevant rainwater harvesting)*, [3]**Construction Materials** *(technically appropriate),* [4]**Costs/Benefits** *(optimum value-engineered balance between the initial and through-life costs to achieve overall affordability),* [5]**Comfortable and Conducive Design** *(appropriate for healthy human habitation, including ventilation and lighting, as well as normal temperatures, humidity and acoustics)* [6]**Environment and Ecosystem** *(for harmony with the broader environment/ecosystem of the World, including much-reduced carbon emissions into the atmosphere).*

2.3 The TOR leaves ample room for the consultant's creativity and innovations in determining the most appropriate approach and methodology to be applied in achieving the above consultancy objectives. In so doing, the consultant is expected to work in close liaison with relevant departments of the Ministry of Education and Sports, as well as the various works and supplies contractors.

2.4 Key background information on each institute (2018) is summarised below. Given the moderate to low status of existing facilities at the nine institutes, **the project interventions will focus on new construction and modern training equipment for the respective training areas of focus,** with due cognisance to the available budget**.** Master plans will be developed for each institute to guide future expansion. Each institute will be required to confirm ownership of their site land.

2.4.1 Institute-1: Kitovu Technical Institute, Masaka

This institute is located along Cathedral Road in Ssenyange Parish, Nyendo-Ssenyange Division in Masaka Municipality. It sits on 20 acres of land belonging to the Masaka Catholic Diocese *(founding body).* The institute is supplied with 3-phase power from the National Grid and water from National Water and Sewerage Corporation (NWSC) mains. The existing facilities at the institute include: two small administration buildings, eight rather ad-hoc workshop blocks, three classroom blocks *(1 4-CR, 2 2-CR)*, one dining hall, four dormitory blocks *(1 for girls and 3 for boys),* several ad-hoc staff housing units & sanitation blocks and one gatehouse/canteen. Many of the institute's buildings are semi-permanent and/or in average to poor state of repair. Under the Project, training focus at Kitovu TI will be on **Electronics & Telecommunications** to support the fast urbanizing nature of townships along the Kampala-Mbarara Highway. This will be a new 2-year course with an annual enrolment target of 60 students *(30 per year of study)*. The new training facilities will include one 3-classroom block, one library/ICT block, one engineering laboratory block *(with separate rooms for electronics, instrumentation and testing)* and one workshop block *(with separate spaces for electronics and telecommunications, incl. storage & trainers' workrooms).* Other generic facilities for use by all students will include one 400-seater multi-purpose hall, two 100-capacity student dormitory *(1 for boys and 1 for girls),* two 3-bedroomed senior staff houses, ten 2-bedroomed junior staff housing units, one administration block, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. New external works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(foot ball field with athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical and mechanical supply and reticulation *(inclusive of solar-operated security lighting).* The new engineering laboratories and workshops will be provided with **modern training equipment for electronics and telecommunications**, including laboratory, instrumentation, testing and practical training equipment, as well as required tools.

2.4.2 Institute-2: Lutunku Community Polytechnic, Sembabule

This institute is located 18km along Sembabule-Kisozi Road *(from Masaka side)*, in Kawanda Parish, Lugusuulu Sub-County, Mawogola County in Sembabule District. It owns 200 acres of land in 4 land titles *(transfer is in progress).* The existing facilities include one administration block *(with 4 offices & a staff room)*, three workshop blocks *(2 twin and 1 single),* two classroom blocks *(1 permanent twin & 1 temporary)*, one dinning hall, one kitchen block, two ad-hoc dormitories *(1 for girls & 1 for boys),* Staff quarters *(5 permanent blocks for 11 & 1 temporary block for 16)*, 1 main stores block *(for machines, tools & equipment; attached boys dormitory)* and six Toilet blocks *(3 of 5-stance, 2 of 4-stance & 1 of 2-stance)*. The institution is supplied with single-phase power from the National Grid *(3-phase is available for connection)* and a solar system. Water supply is from a rural piped system that draws from R. Katonga supplemented by rainwater tanks and a village dam. Under the Project, training focus at Lutunku TI will be on **Agricultural Value-addition in Animal Husbandry,** given the institute's location in Uganda's cattle corridor. This will be a 2-year course with an annual enrolment target of 60 students *(30 per year of study)*. The new training facilities will include one 3-classroom block, one library/ICT block, one laboratory block *(with separate rooms for microbiology, animal food science & artificial insemination),* one veterinary clinic with isolation units, including cattle crush/deep, six 10-pen milking shed each for cows, goats and sheep, six 10-pen feeding shed each for calves, kids and lambs, one milk storage/cooling facility, one twin workshop block *(with separate spaces for e.g. animal rearing science, crop science, improved animal feeds production, small abattoir for training purposes, beef & milk processing - sausages, yogurt, cheese; as well as tannery and jewelry from skin, horns & hooves)*, paddocking and water points. Other generic facilities for use by all students will include one 400-seater multi-purpose hall, two 100-capacity student dormitories *(1 for boys and 1 for girls),* two 3-bedroomed senior staff houses, four 2-bedroomed junior staff housing units, one administration block, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. New external works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical and mechanical supply & reticulation *(inclusive of solar-operated security lighting).* The new training facilities will be provided with new **modern training equipment for value addition in animal husbandry**, including laboratory, clinical, investigative and production equipment, as well as the required hand tools.

2.4.3 Institute-3: Nalwire Technical Institute

This institute is located 25km South of Busia Town along the Lumino-Namayingo Road, in Mukina LC-1 Zone, Lunyo Sub-County in Samia Bugwe South, Busia District. The institute sits on 11 acres *(additional neighborhood land is earmarked for purchase).* The existing facilities include one administration block, four workshop blocks *(without suitable equipment)*, one dining hall/kitchen/store *(without furniture),* two classroom blocks *(8 rooms; one for ICT),* three dormitory blocks *(1 for girls and 2 for boys),* as well as one incomplete staff housing block *(for the Principal and his Deputy).* The institute has a National Grid transformer from which single phase power has been tapped for the dormitories and dining hall *(3-phase power is not yet tapped for the workshops).* A solar system supports backup lighting of existing buildings and office computers. Water supply is from a borehole *(keeps breaking down)*, a shadoof and two rainwater-harvesting tanks. Under the Project, training focus at Nalwire TI is foreseen on **Agricultural Value-addition in textile development**. This will be a new 2-year course with an annual enrolment target of 60 students *(30 per year of study)*. The new training facilities will hence include one 3-classroom block, one library/ICT block, one laboratory block *(with separate rooms for textile development and testing),* one twin workshop block *(with separate spaces for textile production – e.g. for cotton gin to loom to thread (reeling) to cloth, and design, production of cotton seed oil & cake).* Other generic facilities to for use by all students will include one 400-seater multi-purpose hall, two 100-capacity student dormitories *(1 for boys and 1 for girls),* two 3-bedroomed senior staff houses, ten 2-bedroomed junior staff housing units, one administration block, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. New external works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical and mechanical supply & reticulation *(inclusive of solar-operated security lighting).* The new training facilities will be provided with priority **modern training equipment for agricultural value addition in textile development**, including required for ginning, looming, threading and making cloth, as well as the related hand tools.

2.4.4 Institute 4: Nkoko Memorial Technical Institute

This institute is located 16km from Mayuge Town in Kityerera Parish, Kityerera Sub-County, Bunya County in Mayuge District. The institute sits on only 6 acres of freehold land *(3 are titled and the other 3 are not yet; there is reportedly room to purchase more land from neighbours).* The existing facilities include an Administration block, two Workshop blocks, two Classroom blocks, two Dormitories *(1 for girls and 1 for boys),* three Pit latrines and two Bathing shelters. The institute is supplied with 3-phase power from the National Grid and water from a shallow well. Under the Project, training focus at Nkoko MTI will be on **Roads Construction** given the availability of suitable raw materials in the area *(coarse sand & rock).* The District is advised to secure 20 acres of land for establishment of a new campus. This will be an upgraded 2-year course with an annual enrolment target of 60 students *(30 per year of study)*. The new training facilities will hence include one classroom block, one library/ICT block, one engineering laboratory block *(with separate rooms for materials testing, surveying equipment, drawing, CAD)* and two twin workshop blocks *(with separate spaces for roads construction equipment, testing and maintenance)* and an outdoor training truck of about 500m for various road construction types *(variations of murram, tarmac, concrete pavoirs, etc).* Other generic facilities to be used by all students will include one 400-capacity multi-purpose hall, two 100-capacity student dormitories *(1 for boys and 1 for girls),* two 3-bedroomed senior staff houses, six 2-bedroomed junior staff housing units, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. New external works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical and mechanical supply & reticulation *(inclusive of solar-operated security lighting).* The new training facilities will be provided with **modern training equipment for road construction trades**, including for laboratory investigations of materials and surveying, as well as the required heavy roads equipment and hand tools.

2.4.5 Institute-5: Kabale Technical Institute

This institute is located 4km along Kekubo-Rutooma Road in Nyabikoni Ward, in the Central Division of Kabale Municipality. The institute sits on only 4 acres for which a title is being processed. The existing facilities at the institute include one administration block, one classroom block *(3 rooms)* and one dormitory block. Additional temporary structures include a classroom block *(5 rooms),* workshop blocks *(4 no)*, a kitchen block and a store. The institute is connected to single-phase National Grid power *(3-phase is available to connect)* and piped water from NWSC. Under the Project, training focus at Kabale TI is foreseen on **Building Construction Trades** with the view of supporting the development of Kabale as a major municipality in Western Uganda. Due to the limited available land of only 4 acres, coupled with very sorry state of existing training facilities, the District is strongly advised to secure additional 10 to 15 acres of land for the establishment of a new main campus for the institute. The new training facilities will include one 3-classroom blocks, one library/ICT block, one engineering laboratory block *(with separate rooms for materials testing, surveying, drawing, CAD)* and two twin workshop blocks *(with separate spaces for building construction, carpentry, electrical and plumbing works and automotive mechanics).* Other generic facilities to be used by all students will include one 400-capacity multi-purpose hall, three 100-capacity student dormitories *(2 for boys and 1 for girls),* two 3-bedroomed senior staff houses, ten 2-bedroomed junior staff housing units, one administration block, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. New external works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and relevant sports fields *(volley ball, netball & basket ball courts)*, as well as electrical and mechanical supply & reticulation *(inclusive of solar-operated security lighting).* The new training facilities will be provided with **modern training equipment for the various building construction trades**, including for laboratory investigations of materials and surveying, practical workshop training for masonry and concrete construction, electrical and plumbing works, as well as the required hand tools.

2.4.6 Institute 6: Birembo War Memorial Technical Institute

This institute is located 35km from Kakumiro Town along the Kakumiro-Hoima Road *(3km before reaching Igayaza Town Coumcil)* in Kyakarongo Parish, Birembo Sub-County, Bugangaizi West County in Kibaale District. The institute sits on 22 acres of land donated by the Hoima Catholic Diocese and holds very significant memories of key NRM bush war battles. The existing facilities at the institute include 2 Workshop blocks *(1 for C&J & BCP with admin office and 1 for Tailoring with staffroom and store)*, 1 Main Hall, 1 Classroom block and 2 Dormitories *(1 for girls and 1 for boys)*. The institute is supplied with single-phase power from the National Grid and water from a private production well and rainwater harvesting tanks *(a GOU initiative to supply piped water from new production wells to the whole area was in preparation in June 2018).* Under the Project, training focus at Birembo War MTI is foreseen on **Agricultural Mechanization, including mini-irrigation for crop production.** Technical guidance will be required on this vis-à-vis the rather sloppy terrain at this institute. This will be a new 2-year course with an annual enrolment target of 60 students *(30 per year of study)*. The new training facilities will hence include one classroom block, one library/ICT block, one laboratory block *(with separate rooms for microbiology, crop science)*, one twin workshop blocks *(with separate spaces for e.g. crop science, plumbing & pipe fiting, fuel pumps, maintenance),* three farm structures, one water storage facility/reticulation *(inc. tanks, pumps, sprinklers, etc).* Other generic facilities to be used by all students will include one 100-capacity student dormitory, two 3-bedroomed senior staff houses, six 2-bedroomed junior staff housing units, one administration block, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. New external works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical and mechanical supply & reticulation *(inclusive of solar-operated security lighting).* The new training facilities will be provided with priority **modern training equipment for irrigation**, including laboratory, investigative, heavy plumbing and crop production equipment, as well as the required hand tools.

2.4.7 Institute 7: Minakulu Technical Institute

This technical institute is located in Atego Parish, Minakulu Sub-County, Oyam-South County, Oyam District *(150m from the Gulu-Kampala highway with turn off at about 33km from Gulu Town).* The institute sits on about 70 acres land *(there is a dispute on about 2 acres of the land).* The existing facilities at the institute include 1 administration block, 2 workshop blocks *(for Automotive Mechanics and Fashion Design)*, 1 library block *(not equipped)*, 3 classroom blocks *(2 not complete),* 1 girls' and 2 boys' Dormitories *(1 under construction),* 03 Pit latrines *(1 for staff, 1 for girls and 1 for boys)* and 02 Bathing shelters *(1 for girls and 1 for boys).* The institute is supplied with 3-phase power from the National Grid, piped water through a rural supply system from a deep borehole well. Under the Project, training focus at Minakulu TI s foreseen on **Building Construction Trades,** with the view of supporting the development of Gulu as an upcoming major urban municipality in the Northern Region of Uganda. The new training facilities will include, one library/ICT block, one engineering laboratory block *(with separate rooms for materials testing, surveying, drawing, CAD)* and two twin workshop blocks *(with separate spaces for building construction, carpentry, electrical and plumbing works).* Other generic facilities to be used by all students will include one 400-seater multi-purpose hall, two 100-capacity student dormitories *(1 for boys and 1 for girls,),* two 3-bedroomed senior staff houses, ten 2-bedroomed junior staff housing units, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. New external works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical and mechanical supply & reticulation *(inclusive of solar-operated security lighting).* The new training facilities will be provided with **modern training equipment for the various building construction trades**, including for laboratory investigations of materials and surveying, practical workshop training for masonry and concrete construction, electrical/plumbing works, as well as the required hand tools.

2.4.8 Institute-8: Moyo Technical Institute

This institute is located in Aluru Parish, Moyo Sub-County, West Moyo County, in Moyo District *(about 100m off on the right, about 1 km from Moyo Town Council on Gulu Road).* The institute owns about 50 acres of land *(the institute is working on the title).* The existing facilities at the institute include 2 Administration blocks, a Dining Hall, Workshops *(for CJ, MVM, TGC, BCP)*, 5 Classroom blocks, Library block, ICT Laboratory block, 6 Dormitories *(1 for girls and 5 for boys)* and a Main Store. The institute is supplied with 3-phase power from the National Grid. Water is supplied from a borehole with submersible pump *(the NWSC supply broke down).* Under the Project, Moyo TI will focus on **Light Manufacturing, including Ornaments**. The new training facilities will include one library/ICT block, two twin workshop blocks *(with separate spaces for carpentry, metal fabrication (inc. furnaces), machining for production).* Other generic facilities to be used by all students will include one 400-seater multi-purpose hall, two 100-capacity student dormitories *(1 for boys and 1 for girls, to adequately cater for all new and old course students),* two 3-bedroomed senior staff houses, ten 2-bedroomed junior staff housing units, one sick bay, one general store block and two toilet blocks. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. External works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical & mechanical supply & reticulation *(inclusive of solar-operated security lighting).* The new training facilities will be provided with **modern training equipment for light manufacturing**, including for general fabrication, precision carpentry & metal works, and ornamental designs, as well as the required hand tools.

2.4.9 Institute-9: Moroto Technical Institute

This technical institute is located in Nawaikorot Parish, Ngoleriet Sub-County, Bokora County, Napak District *(3km off Kangole-Moroto highway at 4km from Kangole Town).* The institute sits on about 50 acres of titled land. The existing facilities include one Administration block, two Workshop blocks *(for Building, Automotive mechanics & Fashion Design)*, one girls' and one boys' Dormitory *(with latrines and showers)* and one 4-unit staff housing block. The institute is not yet connected to the National Grid, but related work is on-going in the vicinity. The institute does not have a piped water supply system yet. Under the Project, Moroto TI will focus on **(1) Tourism & Hospitality, and (2) Mineral Development,** with the view of harnessing the related potential of Karamoja *(particularly the Kidepo National Park & the mineral deposits at various locations).* Tourism & Hospitality will be a 2-year course with an annual enrolment target of 60 students *(30 per year of study)*. The new training facilities for this course will include one 3-classroom block, one library/ICT block and one tourism & hospitality training centre *(including restaurant/kitchen, reception booth and prototype rooms for training purposes only).* Mineral development will be a separate new 2-year course with an annual enrolment target of 60 students *(30 per year of study)*. The new training facilities for this course will include one 3-classroom block, one library/ICT block, one mineral analysis laboratory block *(with separate rooms for investigation and testing inc. field and lab equipment and tools),* one twin workshop block *(with separate spaces for metal fabrication (inc. furnaces, specialized welding) & machining for production).* Other generic facilities to be used by all students will include one 400-capacity multi-purpose hall, one student dormitory, two senior staff houses and ten junior staff houses. Building services will include power supply *(with backup generator and solar)*, Internet, water supply and drainage. External works will include landscaping; perimeter fencing & gates; access roads & rain/storm water drains and sports fields *(athletic trucks, volley ball, netball & basket ball courts)*, as well as electrical & mechanical supply & reticulation *(inclusive of solar-operated security lighting)*. The new training facilities will be provided with **modern equipment for tourism and hospitality training**, including for professional catering, hospitality management, tour guiding, as well as the required hand tools. **Modern training equipment will also be provided for mineral development,** including for specialised investigations & analysis.

3 SCOPE OF SERVICES, TASKS AND EXPECTED DELIVERABLES

The scope of consultancy services will be as outlined below. The consultant will be responsible for all technical investigations and preparation of essential documents for executing the assignment.

3.1 Part 1: Design and Procurement Process for Works and Supplies

A. Preliminary investigations and designs:

1. Check and confirm the plot boundaries of the project sites.
2. Carefully study the Employer's list of institutional needs and budget.
3. Conduct comprehensive site analyses, topographical surveys, geo-technical investigations and checks with local area development plans; *inter alia* indicating existing natural/man-made features, utility service lines/sources, main/access roads and planned future developments.
4. Study and ensure full compliance with the public health, building, urban and environmental planning regulations, including all required approvals and permits.
5. Prepare a preliminary Environmental and Social Impact Assessment for the project sites.
6. Prepare climate-responsive, energy-efficient and sustainable architectural & engineering designs/calculations/principles, construction methods & finishes schedules, ensuring optimal utilization of space, functional effectiveness & necessary variations to suite the project site.
7. Prepare preliminary furniture/equipment layout plans.
8. Prepare draft technical specifications for civil works, furniture and equipment.
9. Prepare preliminary cost estimates including advice on possible financial implications of different construction materials and methods for civil works, furniture and equipment.
10. Prepare and submit stage reports as indicated under sub-section 5, for approval.

B. Detailed designs and tender documentation:

1. Finalize the design process and assist with preparation of tender documents.
2. Complete the Environmental and Social Impact Assessment (ESIA) for the project sites and obtain NEMA and/or other relevant statutory approvals.
3. Submit schematic services layouts to the respective statutory authorities for no-objection (e.g. electricity, water, sewerage and communication as appropriate).
4. Prepare detailed location, site and block plans/sections for the project sites, including all civil, services and external works.
5. Prepare detailed architectural and engineering drawings for the works (including floor plans, sections, elevations, 3D drawings, working details and finishes/fittings schedules), as well as furniture/equipment positioning and accessories.
6. Prepare detailed technical specifications, un-priced bills of quantities and detailed confidential cost estimates (priced bills of quantities) for the civil works, furniture and equipment.
7. Prepare and submit the stage reports as indicated under Item 6, for approval.

C. Tender and contracting process assistance:

The consultant will provide assistance to the Employer during the tender & contracting process.

1. Prepare applications and submit plans to the relevant local authorities for approvals under Building Regulations and Public Health Rules
2. Prepare responses to tender queries, including necessary explanations.
3. Prepare necessary addenda to tender documents.
4. Provide technical inputs at the pre-tender site visit and meeting, tender opening session, tender evaluation process and necessary contract negotiations *(as part of the Employer's Tender Evaluation or Contract Negotiation Committees).*
5. Provide all the technical components of the contract documents.

3.2 Part 2: Contract Management and Supervision of Works and Supplies:

During the implementation and defects liability/warranty periods for works and installations, the consultant's services shall include, but not be limited to the following:

1. Provide **contract management services**, including general liaison with the Employer and contractor(s) and attending all coordination meetings with the Employer as requested.
2. Participate in **handing over of the project sites** to the works contractors.

3. Carefully review and advise on the **contractors' detailed work plans and activity schedules**, in view of acceptable construction processes and the contract period.
4. Ensure that the contractors' **Environmental and Social Management Plans (ESMP)** are in accordance with good international practice and delivers the **contractors' Environmental and Social Health & Safety (ESHS)** obligations. The plans should include method statements, implementation plans, prevention strategies against Gender Based Violence (GBV) and Sex Exploitation and Abuse (SEA), adherence to national worker-related laws and local bye-laws. The plans should be monitored every month and carefully reviewed every six months.
5. Organize and manage **monthly site meetings** to be attended by representatives of the various stakeholders *(Consultant's key staff and Ministry representatives),* including formal invitations, chairing and preparation/issue of meeting minutes.
6. Provide **full-time well-trained site supervisors (Clerks of Works**; one per site with fully functional office facilities for effective work including laptop, printer, camera, phone, etc), whose tasks during the site execution of the works and supplies contracts shall include:
   - Inspect site activities on a daily basis and confirm specified design and quality of the works; prepare and issue necessary remedial site instructions.
   - Record on a daily basis the contractors' labour force, major equipment, materials on site and works activities performed and prepare weekly progress reports.
   - Closely watch progress and timelines of planned construction/installation activities.
   - Participate in the provisional hand over inspections and preparation of snag lists.
   - Inspect and confirm the rectification of defects listed in the snag lists or identified during the DLP.
   - Participate in the final inspections and hand over.
7. Conduct **regular site inspection visits** by relevant key staff on the Consultant's team *(i.e. technical monitoring in-between the monthly site meetings)* and prepare related **back to office briefs** for prompt emailing to the Project Coordination Unit and Ministry Contract Manager. The briefs should cover key progress, any negative happenings and anticipated problems/delays on site vis-à-vis agreements at the previous monthly site meeting.
8. Issue **relevant written technical instructions** to the civil works, furniture and equipment contractors with due consultation with the Employer.
9. Carry out **regular measurements required for checking contractors' valuations of works** and preparing **related payment certificates**.
10. Supervise the **delivery and relevant installation of supplies/equipment**, ensuring correct specifications and quantities.
11. Advise the Employer on measures being taken to avoid **inherent delays**.
12. Prepare **quarterly progress and financial reports**.
13. Participate in the **provisional handover**, including issuing of snag list(s) and Provisional Acceptance Certificate(s) for works and supplies, in close liaison with the Employer & User. Also secure the required **Occupation Permit.**
14. Develop a 5-year **civil works and equipment operation & maintenance plan/manual**, in a participatory manner including the end-users and other stakeholders.
15. Prepare/compile and provide to the Employer "As Built" drawings/specifications, installation schedules and Operation & maintenance manuals for the civil works.
16. Supervise the **Defects Liability Period (DLP) for civil works and warranty periods for furniture and equipment**. In so doing, carry out periodic inspections during the DLP and notify the Employer and Contractor of any emergent defects and supervise their timely repair.
17. Perform the **final handing-over at the end of the DLP** in close liaison with the Employer/users, and issue the **Final Acceptance Certificate**.
18. Prepare the **Final Payment Certificate & Final Accounts**.

4 TEAM COMPOSITION & QUALIFICATION REQUIREMENTS FOR THE KEY EXPERTS

4.1 Team Composition

The nature of the assignment requires the consultant to assemble a well-qualified and experienced team of experts, of sufficient size and capacity, covering all the professional disciplines required for successful preparation of infrastructure designs and supervising their apposite execution on site.

4.2 Staffing Requirements

The consultant's team shall include, but not be limited to the following key professionals and experts, segregated for part 1 and part 2 of the assignment. Each key expert shall have a minimum of a University Degree in their core specific discipline, corporate registrations with respective professional bodies, practicing certificates, professional indemnity insurance and excellent track records on the implementation of projects of similar nature. Each Clerk of Works shall however have a minimum of a Higher National Diploma in Building and Civil Engineering.

Required Expert	Core role	Min Overall experience (years)	Min Related experience (years)	Core Specific discipline
PART 1: DESIGN AND TENDER DOCUMENTATION				
1. Team Leader	Project management & team coordination	15	9	Architecture or Civil Engineering
2. Project Architect	Sustainable architectural building design & details	15	9	Architecture
3. Structural Engineer	Sustainable civil/structural design & details	15	9	Civil Engineering
4. Electrical/Electronics Eng.	Sustainable Electrical/ICT design & details	15	9	Electrical Engineering
5. Mechanical Engineer	Sustainable Mechanical design & details	15	9	Mechanical Engineering
6. Quantity Surveyor	Cost estimates & detailed Bills of Quantities	15	9	Quantity Surveying
7. Land Surveyor	Cadastral & topographical surveys	15	9	Land Surveying
8. Environmental Expert	ESHS assessments	12	7	Environmental Studies
9. TVET Expert	Technical advice on appropriate pedagogy and required training equipment/supplies	12	7	Mechanical Engineering
PART 2: SUPERVISION OF WORKS AND SUPPLIES CONTRACTS				
1. Team Leader	Project management & team coordination	15	9	Architecture or Civil Engineering
2. Project Architect	Architectural site supervision	15	9	Architecture
3. Structural Engineer	Civil/structural site supervision	15	9	Civil Engineering
4. Electrical/Electronics Eng.	Electrical/ICT site supervision	15	9	Electrical Engineering
5. Mechanical Engineer	Mechanical site supervision	15	9	Mechanical Engineering
6. Quantity Surveyor	Verifications, Certifications & Cost appraisals	15	9	Quantity Surveying
7. TVET Expert	Delivery, installations, testing commissioning & user training supervision for equipment/supplies	12	7	Mechanical Engineering
8. Nine Clerks of Works	Full time representatives on site	12	7	Building & Civil Engineering

5 REPORTING REQUIREMENTS AND TIME SCHEDULE FOR DELIVERABLES

5.1 Reporting Requirements

The Consultant will prepare and submit stage reports to the satisfaction of GOU and IsDB. The content and presentation of reports will be guided by the detailed scope outlined in sub-section 3. The metric system and the British standard codes shall apply and the consultant shall retain sole responsibility for analyses and credibility of all information gathered and conclusions made thereof.

The consultant will take into account all comments of the Client on each report submission and accordingly make modifications. Below is more specific guidance on the required reports.

PART 1: DESIGN AND TENDER DOCUMENTATION:

Inception Report

Overview of mobilization, approach, programme, checklist, etc for the assignment

Draft Preliminary Design Report

A report submission for each institution including:

- Narrative explanatory report, covering works and supplies
- Preliminary environmental assessment reports
- Location plans (scale 1:2500); Site plans (scale 1:500; 1:1000)
- Architectural floor plans, sections and elevations (scale 1:100)
- Furniture/equipment layout plans (scale 1:100)
- Cost estimates (based on costs per unit area for comparable projects)

Final Preliminary Design Report:

A report submission for each institution including:

- Narrative explanatory report, covering works and supplies
- Separate Final Environmental Impact Assessment reports
- Location plans (scale 1:2500); Site plans (scale 1:500; 1:1000)
- Facility block plans (scale 1:200)
- Architectural floor plans, sections and elevations (scale 1:100)
- 3-dimensional drawings (perspectives)
- Structural design principles (scale 1:20)
- Furniture/equipment layout plans (scale 1:100)
- Furniture/equipment details (scale 1:20/50)
- Cost estimates (based on elemental costs for comparable projects)

Final Design Report and Tender Documents:

A report submission for each institution including:

- Narrative explanatory report, covering works and supplies
- Environmental Impact Assessment approvals (district/NEMA)
- No objections of the relevant authorities for services
- Location plans (scale 1:2500); Site plans (scale 1:500; 1:1000)
- Facility block plans (scale 1:200)
- Architectural floor plans, sections and elevations (scale 1:100)
- 3-dimensional drawings (perspectives)
- Architectural and external works details (scale 1:10; 1:20; 1:50)
- Door, window and finishes schedules (scale: 1:20)
- Structural drawings/bending schedules (scale 1:10; 1:20; 1:50)
- Services drawings - electrical/mechanical/communication (scale: 1:100)
- Furniture/equipment layout plans (scale 1:100)
- Furniture/equipment details (scale 1:20/50)
- Technical Specifications and Bills of Quantities (BOQ) for works
- Confidential cost estimates for works (based on priced BOQ)
- Technical Specifications for furniture/equipment
- Confidential cost estimates for furniture/equipment (based on final list of quantities)

Tender and contracting process for works:

- Submission and receipt of local authority approvals
- Relevant tender responses, addenda and meeting minutes
- Final technical components for the works contracts

PART 2: SUPERVISION OF WORKS AND SUPPLIES CONTRACTS

Meeting minutes, mid-month site inspection briefs and contract management reports:

- Minutes of all technical meetings held at the site, including technical handover, monthly site meetings, technical commissioning, etc (circulated to all key participants).
- Briefs on the mid-month inspection visits per site
- Monthly contract management reports in the MOES format *(to be provided).*

Tender and contracting process for supplies:

- Relevant tender responses, addenda and meeting minutes
- Final technical components for the supply contracts

Quarterly Progress and Financial Reports for works and supplies (as appropriate):

A narrative explanatory report submission covering:

- Brief overview of project site (Executive Summary).
- Detailed report on project site (with specific details in annexes), covering:
  - Progress in relation to the contractor's work plans, including issued instructions.
  - Financial appraisal including payments summary, variation costs, contract cost status, etc.
  - Any contractual and technical problems with proposed solutions (inc. end-user issues).
  - Meeting minutes and progress photographs for the quarter.

Quarterly progress reports must be submitted within 14 days of the end of the reporting quarter. **Each late submission will attract a penalty of 5% of the corresponding fees.**

Practical (Provisional) Completion Reports for works and supplies:

A narrative explanatory report submission for each institution covering works and supplies:

- All elements noted in the above reporting category.
- Agreed snag lists of outstanding/defective works to be completed/rectified during the DLP.
- Copies of site handover certificates signed by the contractor, consultant and Employer-user.
- Reports on required user trainings for the works, furniture and equipment.
- Copies of Provisional Acceptance Certificates.
- Progress with obtaining occupation permits.

Mid-DLP Reports for works and supplies:

A narrative explanatory report submission for each institution covering works and supplies:.

- Progress with rectification of listed/emergent snags.
- Updated reports on required user trainings for the works, furniture and equipment.
- Copies of occupation permits.
- Draft operation and maintenance manuals.

Final Completion Reports for works and supplies:

A narrative explanatory report submission for each institution covering:

- Project and consultancy background
- Degree of fulfillment of the consultancy TOR
- Financial report including payments, variation costs, contract cost status, final accounts, etc.
- Report on rectification of listed/emergent snags.
- Copies of Final Acceptance Certificates.
- Final operation and maintenance manuals, plus as-built/installed drawings.

Report Copies: Hard submissions: One (1) original and four (4) copies; **all copies to be of the same quality as the original i.e. colour, visibility, page arrangement/orientation, etc).** Digital submissions: One (1) CD.
Formats: Unless not possible or requested otherwise, drawings and schedules shall be on A3 paper size. Electronic copies shall be direct to PDF (for drawings & narrative documents) and MS Excel (for BOQs).

5.2 Time and Payment Schedule for Deliverables

The consulting services described in this TOR will be undertaken over a period of **48 months**. The table below shows the indicative breakdown of the consultancy period in relation to the completion of each stage, as well as the related percentage of the contract price payable. The consultant is expected to follow this schedule closely in executing the assignment. Advance payment of 20% of the contract price may be granted to the Consultant at his request, on submission of an acceptable unconditional and irrevocable bank guarantee valid for the contract period. The full advance payment shall have been proportionately recovered by completion of stage 1 of Part 2.

Activity	Description	Duration (Months)	% of Contract Price
Part 1	**Design and Tender Process**		
Stage 1	***Preliminary investigations and designs***		
	Inception report	0.5	
	Draft Preliminary design report	1.5	
	Client Review	0.5	
	Final Preliminary design report	1.0	
	Client Approval	1.0	**10%**
Stage 2	***Detailed designs and tender documentation***		
	Final design and tender documents	2.0	
	Client Approval	1.0	**20%**
Stage 3	***Tender and contracting process assistance***		
	Tender and evaluation process for works	2.0	
	Client Approval	1.0	
	Contract negotiations	0.5	
	Contracting process for works	1.0	**10%**
	Total Part 1	**12.0**	**40%**
Part 2	**Contract Supervision Phase**		
Stage 1	***Overall contract period for works and supplies***	24.0	**QR-1: 6%** **QR-2: 6%** **QR-3: 6%** **QR-4: 6%** **QR-5: 6%** **QR-6: 6%** **QR-7: 6%** **PCR: 8%**
Stage 2	***Defects Liability/Warranty Period/Final Report***	12.0	**FCR: 10%**
	Total Part 2	**36.0**	**60%**

6. CLIENT'S INPUTS AND COUNTERPART PERSONNEL

6.1 Performance Assessment

For continuity reasons, the Client will award the contract for Part I and II of the services to the same Consultant. The Client shall provide the necessary stage approvals or otherwise. The Consultant shall only be allowed to proceed to Part II upon satisfactory performance of the Part I services. In case the Client is not satisfied with the Consultant's services for Part I, the Client reserves the right to procure alternative consultancy services for Part II through a new procurement process or other appropriate means as may be agreed upon with the financier.

6.2 Assistance with Information, Approvals and Permits

The Client shall assist with the required contacts and access to relevant information essential to the proper implementation of the consultancy. Where necessary and possible, the Client will provide or assist the Consultant to obtain relevant documentation that is required to carry out the duties expeditiously. In case of foreign consultants requiring work permits, the Client will assist by introducing such consultants to the relevant Government authorities.

7 ENVIRONMENTAL AND SOCIAL POLICY & CODE OF CONDUCT

7.1 Environmental and Social Policy

This policy shall integrate environmental protection, occupational and community health and safety, gender, equality, child protection, vulnerable people (including those with disabilities), sexual harassment, gender-based violence (GBV), sexual exploitation and abuse (SEA), HIV/AIDS awareness and prevention and wide stakeholder engagement in the planning processes, programs, and activities of the parties involved in the execution of the Works. The policy will include a frame for monitoring, continuously improving processes and activities and reporting on compliance. The policy shall include a statement that, for the purpose of the policy and/or code of conduct, the term "child" / "children" means any person(s) under the age of 18 years. The policy shall be brief, but specific, explicit and measurable, to enable reporting of compliance with the policy and reporting requirement. As a minimum, the policy shall commit to:

1. Apply good international industry practice to environmental conservation and protection;
2. Provide and maintain a healthy and safe work environment and safe systems of work;
3. Protect the health and safety of local communities and users, with particular concern for those who are disabled, elderly, or otherwise vulnerable;
4. Ensure that terms of employment and working conditions of all workers engaged in the Works meet the requirements of the ILO labour conventions to which the host country is a signatory;
5. Be intolerant of, and enforce disciplinary measures for illegal activities, including GBV, inhumane treatment, sexual activity with children, and sexual harassment;
6. Incorporate a gender perspective enabling both women and men to have equal opportunity to participate in, and benefit from the planning and development of the Works;
7. Work co-operatively, including with end users, authorities, contractors and local communities;
8. Engage with and listen to affected persons and organizations and be responsive to their concerns, with special regard for vulnerable, disabled, and elderly people;
9. Provide an environment that fosters the exchange of information, views, and ideas that is free of any fear of retaliation, and protects whistleblowers;
10. Minimize the risk of HIV transmission and mitigate related effects in executing the Works;

The policy shall be signed by the Client to signal the requirement for it to be applied rigorously.

7.2 Environmental and Social Code of Conduct (ESCC)

The consultant's ESCC is to contain obligations on all their experts that are suitable for addressing the following issues, as a minimum. Additional issues may be added to respond to particular concerns of the region, location, sector or specific project requirements.

1. Compliance with applicable environmental laws, rules, regulations and reports, e.g. ESIA/ESMP.
2. Compliance with applicable health and safety requirements to protect the local community (including vulnerable and disadvantaged groups), the Consultant's experts, the Client's personnel, and the Contractor's personnel, including sub-contractors and day workers, including wearing prescribed personal protective equipment (PPE), preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment.
3. Use of illegal substances (drugs, chemicals, etc).
4. Non-Discrimination in dealing with the local community (including vulnerable and disadvantaged groups), the Consultant's Experts, the Client's personnel, and the Contractor's personnel, including sub-contractors and day workers, for example, on the basis of family status, ethnicity, race, gender, religion, language, marital status, age, disability (physical and mental), sexual orientation, gender identity, political conviction or social, civic, or health status.
5. Interactions with the local community, members of the local community and any affected person(s), for example to convey an attitude of respect, including to their culture and traditions.
6. Sexual harassment, e.g. to prohibit use of language or behavior towards women and/or children, that is harassing, abusive, sexually provocative, demeaning or culturally inappropriate.

7. Violence, including sexual and/or gender based violence, for example acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion, and deprivation of liberty.
8. Exploitation including sexual exploitation and abuse, for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading behavior, exploitative behavior or abuse of power.
9. Child protection, including prohibitions towards them against sexual activity or abuse, unacceptable behavior, limiting interactions, and ensuring their safety in project areas.
10. Sanitation and accommodation requirements, for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas and live in decent housing.
11. Avoidance of conflicts of interest, ensuring that benefits, contracts, employment, or any preferential treatment, are not given to anyone with whom there is a financial, family, or personal connection.
12. Respecting reasonable work instructions, including on environmental and social norms.
13. Protection and proper use of property, for example, to prohibit theft, carelessness or waste.
14. Duty to report violations of the Code to the Client or relevant authorities.
15. Non-retaliation against personnel who report violations of the Code, if made in good faith.

The code shall be written in plain language and signed by each expert to indicate that they have: (1) received a copy of it; (2) had it explained to them; (3) acknowledged that adherence to it is a condition of employment; and (4) understood that violations of it can result in serious consequences, including dismissal or referral to legal authorities. Two copies of the code shall be displayed in the Site Engineer's office, one in English and the other in an appropriate language.