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TERMS OF REFERENCE (ToR) FOR THE ARCHITECTURAL & ENGINEERING DESIGN AND SUPERVISION OF THE CENTER OF EXCELLENCE FOR CROP BIOTECHNOLOGY (COECB) BIOSAFETY LEVEL 2 ON BEHALF OF RWANDA AGRICULTURE AND ANIMALS' RESOURCES BOARD (RAB)

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1. Background

The Rwanda Agriculture and Animal Resources Development Board (RAB) intends to establish a state-of-the-art Center of Excellence for Crop Biotechnology (COECB). The establishment of the COECB aims to build capacity for accelerating development, deregulation and adoption of enhanced crops through modern biotechnology. The Centre will provide state-of-the-art laboratory infrastructure to support national and regional research in mycology, bacteriology, virology, plant tissue culture, gene transformation, genome editing and advanced molecular diagnostics. The proposed facility will comprise specialized biosafety level BSL-2-P[1] laboratories, and all required auxiliary spaces to ensure biosafety, operational efficiency, and long-term sustainability which will be designed to meet international biosafety and laboratory engineering standards. The BSL-2-P is used for plants that pose minimal or no recognizable risk of becoming weeds, spreading genetic material to wild relatives, or causing environmental harm.

The COECB will be located at RAB Headquarters at Rubona, Huye District-Southern Province. The COECB design and construction will be funded by International Potato Center (CIP)

2. Objective of the Assignment

The objective of this assignment is to procure a qualified Architectural and Engineering (A&E) design firm to undertake the full design, documentation and supervision-ready drawings for the COECB. The selected firm will produce modern, functional, safe, and future-proof designs compliant with DRS 642:2026, and up to date Rwanda building codes as published in the official gazette.

3. Scope of Work

The Consultant shall provide complete multidisciplinary design and supervision services, including:

3.1. Architectural Design

- Master planning and spatial layout for the building
- Building configuration and architectural drawings
- Architectural specifications
- Functional flow design ensuring segregation of clean/dirty areas
- Biosafety zoning and circulation planning (personnel, materials, specimens)
- 3D visualizations and architectural renderings
- Barrier-free access, universal design, and fire-escape plans

[1] BSL-2-P—is a set of containment practices and physical barriers designed to prevent the environmental release of genetically modified plants that contain or are associated with moderate-risk biological agents. (https://ehs.stanford.edu/manual/biosafety-manual/transgenic-plants).

3.2. Structural Engineering

- Structural design for the building considering laboratory floor loads
- Design of reinforced concrete/steel elements
- Seismic analysis per Rwanda codes
- Foundation design based on geotechnical investigation

3.3. Mechanical, Electrical, and Plumbing (MEP) Design

- Heating, Ventilation, and Air Conditioning (HVAC)design, including:
  - High-Efficiency Particulate Air (HEPA) filtration systems
  - Negative/positive pressure regimes
  - Temperature and humidity control
- Electrical system design:
  - Lighting, emergency lighting
  - Backup power generators and UPS
  - ICT and data network
  - Backup Solar Energy system
- Plumbing and specialized systems:
  - Lab-grade water supply (Reverse Osmosis (RO), Deionization (DI) systems)
  - Gas lines (N_2, CO_2, etc.)
  - Emergency showers and eye-wash stations
  - Effluent decontamination system (EDS)
- Fire detection & suppression systems

3.4. Laboratory Design & Biosafety Engineering

The Consultant must design all laboratories to meet appropriate biosafety level (BSL-2-P):

Key Containment Practices of BSL-2-P facilities:

- **Preventing Escape:**

  Measures must be taken to prevent the dissemination of pollen, seeds, and vegetative propagules (such as roots or tubers). Openings like windows and vents may be left open for ventilation without requiring strict air filtration, assuming the plant does not pose a dispersal hazard.

  The growing space can feature gravel or porous floors, though impervious walkways (e.g., concrete) are recommended.

- **Disposal:**

  All plant material and associated soil must be rendered biologically inactive (typically via autoclaving) before leaving the facility.

- **Pest Control:**

  The facility must have an active integrated pest management program to control weeds, rodents, arthropods, and pathogens.

- **Restricted Access:**

  Access to the growing area or laboratory is generally limited to authorized personnel, and appropriate hazard signage is posted. [1, 2, 3, 4, 5]

  Required Laboratory Areas
  The proposed Center of Excellence for Crop Biotechnology (COECB) shall include, but not be limited to, the following laboratory facilities:

  1. Media preparation room
  2. Chemical storage room
  3. Sample reception room
  4. Waste Disposal area/room
  5. General Store
  6. Data Management room
  7. Packaging Room
  8. Mycology Laboratory
  9. Bacteriology Laboratory
  10. Virology Laboratory
  11. Molecular Biology Laboratory including gel documentation area
  12. Genetic Engineering Laboratory including growth rooms (3)-Banana, Potato and Cassava and dark room
  13. Cold Room
  14. Tissue Culture Laboratory (including Growth Rooms for Banana, Potato and Cassava)
  15. Phytotrons/glasshouse compartment (outside)
  16. Washing room (Glassware Washing and Drying Room)

The facility should be designed according to the requirements described in the DRS 642:2026

3.4.1. Indicative Space Program & Area Schedule

The following space program provides indicative laboratory areas and technical notes to guide architectural and engineering design. Areas may be optimized during detailed design, subject to biosafety, workflow, and equipment requirements.

No.	Laboratory / Facility	Indicative Area (m^2)	Biosafety Level	Justification of Biosafety Level	Key Functional Requirements
1	Media Preparation Room	40	Non-BSL	Support room used for preparation and sterilization of media. No handling of infectious biological materials.	Media preparation benches, sinks, autoclave, distilled water, storage cabinets
2	Chemical Storage Room	20	Non-BSL	Storage of laboratory chemicals and reagents only; no biological work performed.	Ventilated chemical cabinets, flammable storage cabinet, spill containment, emergency shower/eyewash
3	Sample Reception Room	15	Non-BSL	Receipt, logging, labeling and temporary holding of incoming samples before distribution to laboratories.	Sample registration desk, barcode system, temporary storage refrigerator, pass-through counter
4	Waste Management and Decontamination Room	10	Non-BSL (Support to BSL-2-P)	Collection, segregation and decontamination of laboratory waste before disposal. Biological materials are rendered safe prior to handling.	Autoclave, waste segregation area, biohazard waste storage, wash sink
5	General Store	30	Non-BSL	Storage of consumables, glassware, PPE and laboratory supplies.	Shelving, inventory management, controlled access
6	Data Management and Bioinformatics Room	15	Non-BSL	Office space for data analysis, genomics, image processing and laboratory information management.	Computer workstations, server rack, LIMS, UPS, networking
7	Packaging and Dispatch Room	20	Non-BSL	Preparation of samples and materials for shipment following decontamination and packaging regulations.	Packing benches, labeling station, shipping materials, refrigerator
8	Mycology Laboratory	40	BSL-2-P	Handles fungal cultures requiring partial containment.	Fungal culture, microscopy, biosafety cabinet
9	Bacteriology Laboratory	40	BSL-2-P	Work with plant pathogenic bacteria; requires standard biosafety cabinets & controlled access.	Bacterial culture, incubators, autoclave access
10	Virology Laboratory	40	BSL-2-P	Work with virus infecting crop plants requires standard containment.	Biosafety cabinet
11	Molecular Biology Laboratory (including Gel Documentation Area)	60	BSL-2-P	PCR, DNA/RNA work; requires contamination control but minimal aerosol risk.	PCR, sequencing, clean zones
12	Genetic Engineering and Gene Editing Laboratory including Growth Rooms (Banana, Potato and Cassava) and Dark Room	60	BSL-2-P	CRISPR-based gene editing; requires controlled workflow, contamination prevention.	CRISPR workflows, sterile rooms/ Temperature, humidity, photoperiod control/ Artificial lighting
13	Cold Room	20	Non-BSL	Environmental control; no heightened biosafety risks.	Sample and reagent cold storage
14	Tissue Culture Laboratory including Growth Rooms (Banana, Potato and Cassava)	40	Non-BSL	Photoperiod, humidity, temperature-regulated growth room.	Growth room with timer and LED lights

15	Contained Phytotron / Glasshouse Facility (External) (6x10m)	60	BSL-2-P	Growing and evaluation gene editing and Transgenic plants in pots prior to transfer to **External space** at 3.6	Biosecurity and Containment, temperature, light and ventilation control, Plant Growth Space, data acquisition, energy efficiency and backup systems
16	Washing room (Glassware Washing and Drying Room)	50	Non BSL	Cleaning, drying and temporary storage of reusable laboratory glassware and equipment. No biological manipulation is performed.	Deep sinks, laboratory glassware washer, drying oven, drying racks, deionized water supply, work benches
Total		560			

Notes:

- *Areas are indicative and exclude shared circulation and service shafts*
- *Growth rooms require independent environmental controls and backup power using solar energy.*
- *Final space allocation shall be validated during detailed design and equipment planning.*
- *Final biosafety certification shall be conducted by relevant national or international authorities.*

3.5. Support Services & Administrative Areas

The Consultant will design complementary functional spaces including:

- Administration block (Director's office, meeting rooms, secretariat)
- Logistics office
- Maintenance & Engineering workshop
- Staff amenities (kitchenette, cafeteria, rest areas)
- Sanitary facilities (staff and visitors)
- Security office and access control system
- Waste management area:
  - Solid waste segregation zone
  - Biohazard waste storage

3.5.1. Indicative Space Program & Area Schedule – Support Services & Administrative Areas

This space program defines indicative areas for administrative, technical support, and service facilities required for effective operation of the COECB. Areas are indicative and subject to optimization during detailed design.

No.	Space / Function	Indicative Area (m^2)	Key Functional Notes
1	Reception & Waiting Area	20	Visitor control, security screening
2	COECB Management Office	50	Office
3	Open-Plan Offices (Researchers/Admin)	40	Flexible workstations
4	Meeting / Conference Room	60	AV equipped, 20–25 persons
5	Logistics Office	20	Secure records storage
6	ICT / Server Room	20	Dedicated cooling, access control
7	General Store	20	Consumables & equipment storage
8	Chemical Store	20	Ventilated, spill containment
9	Maintenance Workshop	40	Tools, spare parts, repair work
10	Waste Holding & Autoclave Area	20	Biohazard & general waste segregation
11	Staff Lounge / Cafeteria	80	Rest area, kitchenette
12	Changing Rooms & Lockers	40	Gowning and PPE storage
13	Sanitary Facilities including bathrooms (toilet, washbasin, showers) (M/F/Person with Disability (PWD))	TBD by the consultant	Code-compliant restrooms
14	Security Control Room	20	CCTV and access control monitoring
15	Archives & Records Room	20	Secure document storage
16	Janitor Closets / Cleaners Stores	20	Cleaning supplies & equipment
Total		500	

Notes:

- *Areas exclude primary circulation, staircases, lifts.*
- *Administrative areas should be acoustically separated from laboratory zones.*
- *Waste management and chemical stores must be isolated and code-compliant.*
- *Final space allocation shall be confirmed during detailed architectural and engineering design.*

3.6. External Works

- Landscaping greenhouses and screenhouses area
- Parking lots (staff, visitors, service area, loading bay)
- Landscaping and drainage design
- Perimeter fencing and access control
- Backup power generators and UPS and its associated sheds.
- Water supply, water storage facilities, septic/sewer connections, reverse osmosis
- Fire assembly area

3.6.1. Indicative Space Program – External Works

This external works space program defines indicative outdoor infrastructure requirements to support full operational functionality of the COECB

No.	External Component	Indicative Area / Capacity	Key Functional Notes
1	2 Glasshouses and 3 Screenhouses area	6m x 3m each	
2	Main Access Road & Driveway	6–8 m width	Two-way vehicular access, turning radius for delivery trucks
3	Parking – Staff	15 bays	Dedicated staff parking, paved, shaded if possible
4	Parking – Visitors	5 bays	Near main entrance/reception
5	Service Vehicle Parking & Loading Bay	2-3 bays	Adjacent to stores, waste area, and logistics office
6	Perimeter Fence & Gatehouse	Site boundary	Security fencing, controlled entry gate, guardroom
7	Walkways & Pedestrian Circulation	Site-wide	Accessible pedestrian movement linking all blocks

8	Landscaping & Green Zones	10–15% of site	Erosion control, aesthetics, controlled planting
9	Drainage System	Site-wide	Stormwater management, lined channels, soakaways where needed
10	Fire Assembly Area	80–100 m^2	Open, safe distance from labs, compliant with fire safety codes
11	Standby Power Generator Yard	40–60 m^2	Ventilated, separated, acoustic shielding
12	Transformer / Substation Area	Depending on utility req.	Coordination with national utility provider
13	Water Storage Tanks (Domestic & Fire)	50–100 m^3	Emergency fire-fighting reserve + domestic supply
14	Waste Management Area/ Incinerator	60–80 m^2	General waste segregation, Waste management
15	Sewage Treatment / Septic System	Per capacity design	Laboratory effluent pre-treatment if required
16	External Lighting	Site-wide	Security and safety lighting with energy-efficient fixtures

Notes:

- *Areas are indicative and depend on total plot size and site constraints.*
- *Loading, waste, and utilities should be located away from public-facing areas.*
- *Drainage and landscaping must consider terrain, soil characteristics, and climate.*
- *Utility zones should be accessible for maintenance without disrupting laboratory operations.*

3.7. Deliverables

The Consultant shall prepare and submit:

A. Design Reports & Drawings

- Architectural design report
- Civil/structural design report
- MEP engineering report
- Biosafety Level 2 & laboratory engineering report
- Environmental and social design considerations and required certification (ESIA, etc...)

B. Drawings

- Architectural drawings (plans, elevations, sections)
- Structural drawings
- Mechanical drawings
- Electrical drawings
- Plumbing drawings
- Lab layout drawings (equipment positioning & workflow)
- Landscaping plan

C. Construction Documents

- Detailed Bill of Quantities (BoQ)
- Technical specifications
- Cost estimates

D. 3D Models

- BIM model (Revit or equivalent)
- 3D renderings (minimum 6 viewpoints)
- 3D renderings reflecting laboratory equipment and furniture placements

4. Responsibility of the Consultant during the Design and Supervision processes

The Consultant shall be responsible for providing end-to-end architectural and engineering design services required for the development of a modern, compliant, and fully functional COECB. The responsibilities shall include but not be limited to the following:

4.1. Architectural design (concept, schematic, detailed)

- The proposed design should be futuristic and aim to be sensitive to the landscape while responding to modern architecture and traditions. The design would aspire to be in harmony with nature through its minimal impact and through maximizing the use of natural systems;
- The design character should be in tune with the architecture of modern existing facilities which maximizes the use of local building materials and local labour; this engages community participation and supports their wellbeing;
- This study shall comprise though not limited to the completion and submission of the following items/deliverables in English both in hard and soft copy (AutoCAD, drawings in CD);
- All the plans will be presented on suitable scale and format;
- Develop several potential design options in consultation with the technical team to guide the construction of the new laboratory for long-term use and meet the user requirements and specifications of the client;
- **Architectural drawings, though not limited to following, shall include:**
  a) Floor plans/construction plans with all partition types and details;

b) Furniture design with location plan and seating arrangement with anthropometric measures;
c) Horizontal and Cross section details;
d) Plan of side views in elevation 2D, 3D perspectives and axonometric views;
e) Interior elevations, sections and perspective of the building to show general design of the building's spaces;
f) Metalwork, woodwork and joinery drawings;
g) Detailed floor finish and patterns drawings;
h) Miscellaneous decorative details;
i) Reflected ceiling plans (showing height, materials, finishes and decorative lighting);
j) Green minimum compliance reports;
k) Any other architectural related documents necessary for the tender process and construction permit application.

- **The site plan drawings:**
  a) Property lines (according to the extract plan);
  b) Outline of existing (if any) and proposed buildings and structures;
  c) Dimensions (overall length, width, height), location and use of all existing and proposed buildings; use of all remaining lands of site;
  d) Adjacent streets and any easements; the access road level shall be clearly indicated;
  e) Footprints of buildings and other structures on the abutting lots;
  f) Land uses on adjacent lands;
  g) Driveways and pedestrian arrivals and routes;
  h) Landscaped areas and distance between buildings and property lines (setbacks);
  i) Parking lots, indicating parking spaces (with provision for the disabled, motor bikes and bicycles);
  j) Summary of the area covered by each existing or site improvement (including Existing development);
  k) Service drawings showing any existing service and proposed points of connection, including any sewer, storm water drain;
  l) A site information chart providing information as to how applicable requirements of the zoning by law are to be satisfied (e.g., parking, building floor area, landscaped area, number of units, etc.).

4.2. Engineering Design

Engineering designs details on Structural; Mechanical, Electrical and Plumbing (MEP); ICT, Security, Electronic and Innovation in technology; Security systems considering biosecurity measures; and Access to Infrastructures and utilities shall be presented. The consultancy firm is required to produce the following designs for each of the engineering components:

- Geotechnical data report;
- Structural drawings, calculation notes and construction drawings;
- MEP layout drawings, and equipment (those items that are used by the laboratory and are fixed to the building. Examples of items that the constructor will generally provide as part of the construction contract would be casework, autoclaves (built in), glassware washers and dryers (built in), generators, biological safety cabinets (BSCs), chemical fume hoods (CFHs)incinerator, HVAC list with clear technical specifications;
- The required length and cross section of different cables based on the purpose, The required protection devices (different types of CBs, fuses, lightning arrestors) based on the type of the device and the faults to be protected, the required control devices (switches) based types and functions, the required lighting fixture type and characteristics, the required firefighting protection systems (fire detection systems, fire alarms system, control panels, firefighting, fire suppression systems such as sprinklers, extinguishers and fire suppression agents), The required generators, UPSs, Automatic Transfer Switch (ATS). Also, propose the safe and efficient configuration, the required Automatic Voltage Regulator (AVR), with emphasis on recent technologies, the required capacity of electric panels (DBs and Sub-DBs), the required HVAC systems, the required water supply systems.
- Heating Ventilation and Air Conditioning (HVAC) system;
- Load calculation and electrical wiring diagrams;
- Electric result transmission board;
- Potable water supply and installation inside of the building;
- Water demand calculation and plumbing diagrams;
- Waste water treatment plant and recycling system;
- Storm water management system;
- Lightening Protection and earthing system.
- Fire detection, fighting and Alarm System,
- ICT, Electronics and Innovation in technology, Internet data connection network,
- Artificial intelligence (sensors) and Sound and noise control System
- Building Automation & Management System (BAMS).
- CCTV Cameras Network and Control room and Access control equipment
- Access and ring roads with street lighting.

4.3. Environmental and Social Impact Assessment (ESIA)

The Consultancy firm should assess the environmental and social impact by the project and consider the following during the Implementation Phases:

- Existing baseline environmental conditions as required by Rwanda Environmental Management Authority (REMA);
- Potential environmental impacts both direct and indirect on the environment, people and communities (health, livelihoods, culture, land use);
- Opportunities for environmental enhancement;

- Design proposals to protect the environment;
- Approved ESIA Certificate and Report.

4.4. Plans of the buildings comprising the laboratory:

- Existing conditions plan at minimum 1:500 scale
- Demolition plan (if necessary) at minimum 1:500 scale
- Building placement plan at minimum 1:500 scale
- Soil erosion control plan at minimum 1:500 scale
- Landscape plan at minimum 1:200 scale, showing all relevant paving, plantings, and exterior works.
- Grading plan at minimum 1:200 scale, showing spot elevations for key areas.
- Landscape planting and paving details and specifications.
- Life safety / evacuation plan at minimum 1:200 scale.
- Architectural floor plans of all floors at minimum 1:100 scale.
- Roof plans at minimum 1:200 scale.
- Reflected ceiling plans of all floors at minimum 1:100 scale.
- Finishes plans of all floors at minimum 1:200 scale
- Finishes schedule with specifications.
- Wall sections at scales to be determined, including material details, window details, roof details, and other relevant information.
- Built-in furnishing details at scales to be determined, if needed.
- Typical architectural details at scales to be determined.
- Door schedule, with door details.
- Window schedule, with window details.
- All architectural details determined to be necessary by the Consultant or Client.
- Architectural sections at minimum 1:100 scale
- Architectural exterior elevations at minimum 1:100 scale.
- Architectural interior elevations of key areas at minimum 1:50 scale.
- Civil engineering plans at minimum 1:200 scale, showing all road, pedestrian, drainage, plumbing and sanitation information.
- Structural foundation plans at minimum 1:100 scale, with details.
- Structural beam plans at minimum 1:100 scale, with details.
- Structural column plans at minimum 1:100 scale, with details.
- Structural sections at minimum 1:50 scale, with details.
- Structural connection details and specifications.
- Electrical plans at minimum 1:100 scale, with details and specifications.
- ICT plans at minimum 1:200 scale with details and specifications.
- Plumbing plans at minimum 1:100 scale, with details and specifications.
- Sewage network plan at minimum 1:200 scale, with specifications.
- Fixture schedule with specifications.
- Equipment layout plan at minimum 1:200 scale, with specifications.

4.5. Schedules of the following are required

a) finishes
b) sanitary ware
c) door and window schedule
d) furnishing
e) surface area of all rooms, compared with those of the basic data
f) any other schedules needed for full understanding of design intent and construction requirements
g) required mock-ups and 3D models
h) required material samples (per specifications)
i) equipment and furniture layout and placement vis-à-vis the electrical installations

Calculations

All calculations relevant to the design shall be provided by the Consultant

4.6. Tender Document

Tender documents shall be prepared **using International Potato Center (CIP) Procurement Policy and shall include**:

a) Detailed description of works, specifications, etc. as described in, but not limited to, sections 4.1 – 4.5
b) Detailed bill of quantities.
c) Financial Proposal

4.7. Responsibilities of the selected consultancy firm-Bill of Quantities (BoQ) and Cost Estimate

Upon winning this bid, the selected consultancy firm shall estimate the costs of the designs made and provide the Bills of Quantities with detailed specifications for each of the design components **which shall be managed with strict confidentiality**. The estimate shall be prepared in the form of a table taking up each work or part of work to be carried out during the construction phase and will include, but not limited to, the following:

a) The description of all items and their measuring units
b) Quantities of work planned for each activity,
c) The unit price and total price of each item and,
d) Total cost estimate

N.B.:

i) in the preparation of the detailed architectural and engineering designs, including the preparation of tender documents, Rwandan Standards shall be applied**.** Where Rwandan Standards are not available for any aspect of the work, any other recognized international Standards shall be applied.

ii) The BoQ and cost estimate shall form part of the confidential construction quantities and cost estimate document;

4.8. Technical documents

- Technical prescription documents and standard norms to be applied;
- Special prescription document of each item to be executed;
- Detailed description and quantitative work of each item;
- Project implementation plan;
- Project operation and maintenance plan;

4.9. Assignment sub-phases

The consultancy services for design and supervision of construction of the COECB Building will be carried out in seven stages:

I. Preliminary activities;
II. Outline (Preliminary) design proposals;
III. Schematic design;
IV. Detailed design;
V. Bill of Quantities (BoQ)
VI. Tender Documents;
VII. Construction stage;
VIII. Post construction and project closure.

A design presentation will be required at the end of the schematic design phase, the end of the design development phase, halfway through the construction documents phase, and at the end of the construction documents phase before approval to proceed is granted. At these presentations, the following documentation will be necessary, depending on the phase:

- Presentation drawings include (but not limited to) plans, sections, perspective renderings, and diagrams illustrating the overall conceptual design, environmental strategies, and programmatic relationships.
- An architectural model at a scale to be determined by the Consultant. A short paper explaining the guiding ideas of the architectural vision and the reasons behind the choices. Detail drawings showing proposed usage of materials and design motifs.
- Technical drawings for construction phase
- Technical Specifications and Bill of Quantities

All stages are detailed below:

4.9.1. Stage 1: Preliminary Activities

- The Consultant shall visit the site and familiarize him/herself with the present situation and general condition of the site and the services therein to determine the requirements for accessibility, site clearance, connections to services and any required demolitions and removals.
- The Consultant shall carry out a topographic and cadastral survey of the plot to confirm the boundaries of the plot, size of the plot, existing ground profiles, position of existing buildings and features and the location of existing services. Where adjustments to the boundaries are found necessary, the Consultant shall recommend appropriate action
- The Consultant shall carry out geo-technical investigations to ascertain and identify the soil conditions and characteristics of the site. The soil investigations will include and not be limited to:

    a) *Geology of the area and field investigations:* drilling boreholes, standard penetration tests, undisturbed samples, determination of ground water.
    b) *Laboratory tests:* sieve analysis, Atterberg limits, moisture content, shear strength, specific gravity, consolidation, chlorides, sulphates, PH values.

- The Consultant shall prepare and submit for approval a comprehensive plan (CP) for implementing construction of the proposed buildings. The CP shall contain and not be limited to the following:

    a) *The project organization chart*: this shall be in the form of an organigram and a template, showing all those involved with implementing the project including the Consultant's and the Client's personnel and reporting lines.
    b) *Project brief for implementing the construction works*: this shall be in the form of a template and shall summarize all relevant facts for implementing the constructions
    c) *The scope management plan*: this shall contain a statement of the project scope and the work breakdown structure (WBS) needed to achieve the scope of the project.
    d) *The project activity list*: this shall include all activities to be performed on the project, an estimate of the duration of each activity, sequence of the activities on a logic diagram
    e) *Project resource schedule*: showing resource usage over time, cash or fund flow projections, and order and delivery schedules.
    f) *Cost management plan*: this shall contain the cost estimate for each activity, the assumptions made, how variances will be handled, a budget and spending plan for measuring or monitoring costs.
    g) *A quality management plan* for the project deliverables.
    h) *A communications management plan*: this shall show the distribution

structure, information to be disseminated, schedules showing timing for information to be produced.

i) *The risk management plan*: this shall show all the risks and the plans to respond to the same and will entail the use of risk logs and management forms

j) *The procurement management plan*: this shall describe the Statement of Requirements (SoR) or Scope of Work (SoW) for the items to be procured, the bidding procedures, documents and forms of contract to be used in the selection and employment of contractors and subcontractors.

- The Consultant shall obtain the approval of the Client **(CIP and RAB)** before the activities in the plan or the subsequent stages of the consultancy assignment is proceeded with. If the plan submitted by the Consultant is found unsatisfactory or unacceptable, the Consultant shall submit a revised or alternative plan for approval and at no additional cost.
- The Consultant shall prepare and submit a report on preliminary activities containing findings and recommendations from the above tasks for the approval of the Client.

4.9.2. Stage 2: Outline (Preliminary) Design Proposals

Based on the approved Report on preliminary activities, the Consultant shall prepare the following for the approval of the Client before proceeding with the next stage:

a) Outline (Preliminary) drawings at appropriate scale showing:

i) A master plan for the plot.

ii) A site plan showing the proposed works: building, roads and drives, footpaths, parking, drainage, fencing, power and water supply, communications connection, landscape and other infrastructures.

iii) Floor plans showing the proposed layout, partitioning, fixed fittings, loose furniture etc.

iv) Elevations, sections, perspectives to fully illustrate the finishes and fittings.

b) A report on the outline (preliminary) design and containing (a) above as well as describing the following as applicable:

i) The structural system;

ii) Finishes (internal and external), including proposals for alternatives and the resulting impact on costs;

iii) Internal fittings;

iv) Sun shading and ventilation methods;

v) Electrical, mechanical, Security and IT installations proposed, including linkages and connections to the existing;

vi) Water supply and wastewater management;

vii) Fire prevention proposals; security measures for the building and premises

viii) Maintenance (low cost) proposals for the building;
ix) Cost estimates and cost control measures;
x) Update items in the comprehensive plan, particularly the project implementation schedule.

4.9.3. Stage 3: Scheme Design Stage

- Following approval of the Stage 2 Report, the Consultant shall prepare:

  a) Scheme design drawings presented in the appropriate scales, showing in more detail (architectural and engineering) the site layout and the spatial arrangements and appearances of the proposed building;
  b) The site plan should show the proposed water, drainage, electricity, communications and other services, the vehicular circulation and parking, pedestrian circulation, fencing, landscaping and other infrastructure
  c) Draft technical specifications (architectural and engineering) for the proposed buildings;
  d) Schedules of the proposed finishes, fixtures, fixed and moveable fittings, equipment and furniture;
  e) Draft Bills of Quantities and cost estimates;
  f) Updates on items in the approved comprehensive.

- The Consultant shall prepare and submit a Scheme Design Report (SDR) for the approval of the Client before proceeding.

4.9.4. Stage 4: Detailed Design Stage

- Following approval of the Scheme Design Report, the Consultant shall prepare:

  a) Final and detailed design drawings (architectural and engineering) of the proposed works, in sufficient detail to enable construction and installation works to be undertaken;
  b) Final specifications;
  c) Final Bills of Quantities (provisional sums shall not be used except with the prior approval of the Client);
  d) Cost estimate based on the final bills of quantities;
  e) Updates on items in the approved comprehensive plan, in particular the program for implementation based on the detailed design.
  f) Final 3D renders

- The Consultant shall prepare and submit a Final Design Report (FDR) for the approval of the Client before proceeding.

4.9.5. Stage 5: Tendering Process Stage

Preparation of bid/tender documents

Based on the approved Final design Report, the Consultant shall prepare and submit to the Client for approval, bid/tender documents containing bid notice, instructions to bidders, bid data, evaluation methodology and criteria, bidding forms, statement of requirements, conditions of contract (general and special), contract forms, all in accordance with the standard bidding document from the RPPA.

Activities of the Consultant during the bidding process

Pre-bid conference

In collaboration with the Consultant, the client shall organize and conduct a pre-bid conference at the site and at an agreed conference facility. The client and Consultant shall conduct the proceedings of the conference, clarify issues and answer questions raised on any matter at the conference and prepare a record of the conference that will be distributed by the client.

a) Preparation, submission and opening of bids:

The Client shall respond to any requests for clarification that are received from bidders before the deadline set in the bidding documents. The Consultant shall prepare and submit to the client for approval any addenda required during the period of bidding.

b) Evaluation of bids and recommendations:

The Client shall decide whether to appoint staff to participate in the membership of the evaluation committee, and this shall be communicated to the Consultant beforehand for mobilization of his team. The Client will be responsible for awarding the contract and for issuing notice of the award.

c) Contract documents:

Following award, the Client shall prepare the issues for pre-contract discussions and participate in the discussions/negotiations with the selected Contractor.

Signing of the contract: implementation schedule

Signing the contract with all the contractual provisions in place stipulated in the bidding documents (i.e. guarantee for advances, performance bond, etc.)

- **Responsibilities of the Consultant's team:**

  a) The lead Consultant will perform in the role of the Project Manager (PM) and will be responsible for management and administration of the contract, assisted by other specialists in the fields of architecture, engineering in all the relevant disciplines and the Quantity Surveyor. The PM will make monthly progress reports to the Client, coordinate contract activities and be the liaison between the Client and Contractor and other agencies.

  b) The PM will also arrange for regular site inspections which will involve other members of the consultancy team when appropriate. Full site meetings will be held at least once every month. Copies of minutes of site meeting shall be circulated promptly to reach all parties concerned, including the Client within seven calendar days.

- **Employment of a Resident Engineer and Clerks of Works:**

  The Consultant will employ a suitably qualified and experienced Resident Engineer and Inspectors or Clerks of Works, in sufficient numbers and specializations to carry out full-time day-to-day supervision of the construction works and perform the responsibilities specified in the construction contract.

- **Safety:**

  The Consultant will be responsible for ensuring that the main contractors, any domestic or nominated sub-contractors or visitors to the site adhere to safety regulations. Safety measures will include safety helmets, boots, safety equipment, site signs, first aid equipment, etc. and compliance with the local safety laws and regulations.

- **Quality Control:**

  The Resident Engineer and the other specialists on the Consultant's team, in the various disciplines, will be expected to ensure compliance with the drawings and specifications of their respective expertise and ensure quality control of materials and workmanship on the construction contract.

- **Cost Control:**

  The contract shall be an ad measurement contract, and the Consultant shall prepare schedules of unit cost for individual work elements and, applying these to measured quantities, check elemental and grand totals against the project budget.

- **Payments:**

  Payments for construction work certified by the Consultant and approved by the Client will be made by the Client. The formats for preparation of the statements by the Contractor, valuations and certificates and other related documents shall be approved by the Client prior to their adoption and use by the Consultant.

- **Instructions:**

  The Consultant will from time to time and within the provisions of the construction contract issue instructions to the main contractor related to guidance or adherence to the drawings, specifications, progress of the work or administrative requirements in the contract. The Consultant will also issue instructions related to possible claims for extensions of time, which may be due to the Contractor in accordance with the contract.

- **Variations:**

  Where the Consultant needs to issue instructions related to variations which increase the value of the contract, prior approval will, where required by the Contract, be sought from the Client. Where the issue of instruction is related to the safety of the work, installations, Contractor's staff or any other emergency, the Consultant will issue the instruction and notify the Client at the earliest opportunity providing full details to substantiate the issue of the instruction.

- **Cash flow:**

  As soon as the Contract Price for the Works has been established, the Consultant will prepare charts to show the anticipated cash flow to the end of the contract period. This chart will be updated every three months from the date of the contract to show the comparison between projected and actual expenditure. In addition, the Consultant will prepare a financial projection to show the anticipated expenditure in advance of each quarter. These will be prepared before each quarter and will show the quarterly anticipated expenditure to the end of the defect liability period.

- **Financial Appraisal:**

  Financial appraisals including up-to-date pricing of all variations instructions and re-measurements will be prepared and submitted to the Client promptly every three months.

- **Progress Photographs:**

  The Consultant will prepare three sets of progress photographs on the first day of each month during the construction period. The progress photographs are to be mounted and supported by a short report to describe the progress achieved in the month and supported by an up-date of the construction programmed.

- **Take-Over by Client:**

  The construction stage will end and the Works shall be taken over by the Client when the Works have been completed in accordance with the contract and the Taking-Over Certificate for the Works has been issued by the Consultant. At the take-over, the completed works shall be handed over to the Client at the practical (substantial) completion date, followed by preparation of snags list and defects notification, testing, preparation of operating and maintenance manuals and as-built drawings, which activities start at practical completion. The Consultant shall oversee these in accordance with the construction contract.

4.9.6. Stage 7: Post Construction and Project Closure Stage

In addition to the specific responsibilities set out in Section above and below, the Consultant shall manage the project closing activities by carrying out the following:

a) Establish and agree with the Client and document the criteria to be used for confirming completion of the contract (tasks finished, deliverables finished, testing completed, training requirements finished, equipment installed, tested and operating, document manuals submitted, etc.).
b) Document and agree with the Client the acceptance process and procedures, the checklist of activities that must be completed before acceptance is confirmed.
c) Identify the Client representatives to sign the project completion report, confirm the persons responsible for each step of the acceptance process, the post-project support required and the persons responsible.
d) Convene and hold a project close-out meeting attended by the Client, stakeholders, end users and Contractors at which the completion report is among other items approved and signed off
e) Carry out a post-project evaluation of the project technical work, achievements, the project processes and the management of the project and prepare and submit a final report.

- **Rectification of defects:**

The Consultant will carry out a detailed inspection of possible defects during and at the end of a twelve-month defects liability period and arrange follow-up meetings to confirm that remedial work has been fully completed. Interim visits and inspections or testing during the defect's liability period will be required where remedial measures are necessary to ensure the safety or continued normal use of the buildings.

- **Completion Certificates:**

  The completion certificates, defects correction certificate and final payment certificate will be prepared and issued in accordance with the works contract and to signify full completion of the works.

- **Final accounts:**

  The Consultant shall prepare two separate final accounts for the Client's approval as follows:

  (i) The final account for the construction contract will be prepared soon after issue of defects correction certificate and issued to all parties for agreement.

  (ii) The project final report, acceptance whereof will signify the end of the Consultant's assignment on the consultancy contract.

5. Summary of Consultant Roles Responsibilities

Below is a summarized account of the roles and responsibilities reflected from the above detailed responsibilities to help the Consultant get a clear picture of what is expected.

5.1. Inception (Preliminary) Phase Responsibilities

1. Conduct a detailed site assessment including topographical, geotechnical, and environmental considerations.
2. Review all client inputs, space programs, laboratory requirements, and biosafety specifications.
3. Prepare an Inception Report outlining:
   - Understanding of scope
   - Proposed methodology
   - Work plan and schedule
   - Team composition
   - Risk management plan
4. Facilitate an inception workshop with RAB stakeholders.

5.2. Architectural Design Responsibilities

1. Develop functional architectural layouts for all floors, ensuring efficient circulation and zoning (public, administrative, restricted, BSL areas).
2. Ensure optimal spatial integration of:
    - Mycology, Bacteriology, Virology, Molecular Biology
    - Gene editing & transformation labs including growth rooms (banana, potato, cassava)
    - Support services (cold rooms)
3. Incorporate universal accessibility, fire safety design, emergency exits, and Rwanda building code compliance.
4. Produce 3D renders, conceptual models, and massing studies for client approval.
5. Integrate energy-efficient and green building principles.

5.3. Structural Design Responsibilities

1. Develop a complete structural engineering design.
2. Conduct structural modelling and analysis compliant with national standards and international best practice.
3. Design foundations based on geotechnical investigations.
4. Provide structural drawings, reinforcement detailing, and construction specifications.
5. Ensure structural integrity under laboratory equipment loads, seismic conditions, and vibration sensitivity.

5.4. Mechanical, Electrical & Plumbing (MEP) Design Responsibilities

A. Mechanical Systems

- Design laboratory-grade **HVAC systems** ensuring:
- Pressure gradients (positive/negative)
- HEPA filtration
- Temperature and humidity control
- Dedicated exhaust systems for BSL-2 zones
- Provide mechanical layouts and specifications for all specialized components.

B. Electrical Systems

- Design power distribution, lighting, emergency lighting, and backup power systems (UPS, solar system + generator).
- Integrate ICT, networking, access control, security (CCTV), and fire alarm systems.
- Ensure adequate power for growth chambers, cold rooms, and lab equipment.

C. Plumbing Systems

- Design hot/cold-water supply, drainage, laboratory-grade sinks, gas lines, eyewash showers, and emergency safety systems.
- Include a **laboratory effluent decontamination system (EDS)** where required.

5.5. Laboratory & Biosafety Engineering Responsibilities

1. Define biosafety zoning (BSL-2) containment requirements, and person/material flow.
2. Integrate laboratory engineering requirements including:
    - Airlocks, anterooms, gowning areas
    - Biosafety cabinet placement
    - Lab waste pathways
    - Specialized equipment footprints
3. Ensure compliance with DRS 642:2026, ISO, WHO, CDC-NIH, FAO, biosafety guidelines.
4. Provide a complete Biosafety Compliance Design Report.

5.6. Support Facilities & External Works Responsibilities

1. Prepare designs for:
    - Administration, finance, logistics, meeting rooms
    - Server rooms, stores, chemical storage, waste areas
    - Loading bays, generator yard, landscaping, parking
2. Ensure smooth integration of external works with the main building.

5.7. Detailed Design Documentation

The Consultant shall produce **full construction-ready documents**, including:

- Detailed architectural drawings
- Structural engineering drawings
- Complete MEP drawings (HVAC, electrical, plumbing, fire protection, ICT)
- Laboratory engineering layouts
- Bills of Quantities (BoQs)
- Technical specifications
- Cost estimates
- BIM Model (Revit or equivalent)

5.8. Regulatory Compliance & Approvals

1. Ensure all designs meet Rwanda building codes, environmental regulations, and biosafety requirements.
2. Prepare submissions for planning and construction permits, regulatory approvals, and safety certifications.
3. Support RAB during discussions with authorities and regulatory agencies.

5.9. Reporting & Stakeholder Engagement

1. Provide regular progress reports (**weekly / monthly**) to RAB and CIP Joint Taskforce.
2. Participate in stakeholder workshops, technical reviews, and validation meetings.
3. Incorporate client feedback promptly and transparently.

5.10. Quality Assurance & Risk Management

1. Establish and implement a **Quality Assurance/Quality Control (QA/QC)** strategy for all design outputs.
2. Identify design risks (biosafety, structural, operational) and propose mitigation measures.
3. Ensure compatibility and coordination across all engineering disciplines.

6. Consultant Qualification Requirements

6.1. Mandatory Requirements

The Consultant/Bidder must meet the following mandatory requirements:

- Must be registered with the relevant Architectural/Engineering Board in Rwanda
- Must hold a valid practicing license in good standing with the relevant professional board.
- Must have a valid business operating license.
- Must submit a valid copy of the Certificate of Incorporation/Registration.

Bidders who do not satisfy any of the above requirements shall be considered non-responsive, disqualified and eliminated from further evaluation and consideration for the contract award.

6.2. Minimum Experience Requirements

The Consultant's firm must demonstrate the following minimum experience:

1. A minimum of **ten (10) years of general experience** in architectural/engineering design and supervision services.
2. Proven experience in the design and supervision of similar projects, including:
    - At least **two (2) completed projects** involving the design of biosafety laboratories, tissue culture laboratories, or research centers; and
    - At least **one (1) completed project** involving the supervision of biosafety laboratories, tissue culture laboratories, or research centers.
3. The above similar experience in Rwanda must be supported by **Certificates of Good Completion** or equivalent evidence.
4. International companies without subsidiaries in Rwanda may participate in the tender through a Joint Venture (JV) with a locally registered company, subject to compliance with all applicable procurement requirements.

6.3. Key Personnel Requirements

The Consultant shall propose suitably qualified and experienced key personnel, including, but not limited to, the following:

1. Lead Architect (Valid Professional Registration)
2. Structural Engineer (Valid Professional Registration)
3. MEP Engineer (RURA certified or equivalent)
4. Laboratory/Biosafety Specialist (Valid Professional Registration)
5. Quantity Surveyor (Valid Professional Registration)
6. Plant Biotechnology Expert with proven experience in Lab design and operations
7. HVAC specialist
8. Environmental engineer (Valid Professional Registration)
9. Resident Engineer
10. Geotechnical Engineer (Valid Professional Registration)
11. Surveyor (Registered surveyor with a professional body)

6.4. Proposal Submission Requirements

i. The Consultant must submit both **Technical Proposal** and Financial **Proposal**.
ii. The Proposal shall be submitted to the following address:

International Potato Center (CIP) Rwanda

KG 548# 4

Attn: Elizabeth Karenga

Kigali, Rwanda,

Site Visit:
A mandatory site visit date**: at RAB Office, Rubona.**

iii. **Time: 2:00 p.m.**

Date: …Tuesday, 1st September 2026
Time: …2:00 p.m. Rwanda Time

iv. Technical and Financial Proposals must be submitted not later than: **Monday 14th September by 2:00 p.m. Rwanda Time, at CIP Rwanda Office in Kigali**.
v. The opening of the Technical Proposals shall be conducted on the same day

6.5. Additional Administrative Documents

i.	Any additional documents (administrative documents) required to be completed and submitted by the Bidders are: 1. Certificate of Domestic company registration indicating similar activities issued by RDB; 2. Valid clearance certificate issued by the Rwanda Social Security Board (RSSB); 3. Valid tax clearance certificate issued by Rwanda Revenue Authority (RRA); 4. VAT registration certificate; 5. Notarized Copy of the certificate of registration as consultant in the field of studies of civil works certified by the National Council of Engineering (Practicing certificate) still valid; 6. A declaration of commitment; 7. Site visit certificate; 8. Declaration of beneficial owners of private companies by filling ANNEX 2; 9. Must appear on the updated list of RPPA company categorization issued by RPPA (consultancy services related to Buildings, Minimum Category D) 10. Notarized copy of yellow card or a notarized renting agreement of One vehicle for transportation of personnel accompanied by notarized yellow card from the leaser **N.B:** **1. The Technical Proposal must not include any financial information** 2. *Before awarding the tender, the procuring entity shall undertake a due diligence on the content of the bid for the successful bidder and the result of the due diligence shall be included in the evaluation report* **3.** *The successful Consultant shall be required to conduct a visit to a completed Biotechnology Laboratory. The visit shall be conducted in Nairobi, Kenya, under the guidance of representatives from Rwanda Agriculture and Animal Resources Development Board (RAB) and International Potato Center (CIP).*

6.6. Staffing

The Consultant shall organize their resources as they deem appropriate. The estimated staff requirement and the minimum qualifications and experience which will be required of the Consultant's key personnel are detailed in the table below:

Proposed Key Staff Requirements

SN	Designation	Number Required	Minimum Requirements
1	Lead Architect / Project Manager / Team Leader	1	• Bachelor's degree in Architectural • Minimum 10 years' experience • At least 2 similar projects • Valid professional registration
2	Laboratory/Biosafety Specialist	1	• Degree in Biotechnology/Microbiology/Biosafety Engineering • Minimum 8 years' experience • Atleast 2 similar projects • Experience with BSL-2 labs • Valid certification/registration
3	Structural Engineer	1	• Bachelor's degree in Civil/Structural Engineering • Minimum 8 years' experience • Atleast 2 similar projects • Valid professional registration
4	MEP Engineer	1	• Degree in Electromechanical/Mechanical/Electrical Engineering • Minimum 8 years' experience • RURA certification (still valid) • Atleast 2 similar projects
5	HVAC specialist	1	• Degree in Mechanical/HVAC Engineering • Minimum 8 years' experience • Specialization in BSL-2/BSL-3 HVAC • Atleast 2 similar projects • Valid professional registration
6	Quantity Surveyor	1	• Degree in QS/Construction Management • Minimum 8 years' experience • Atleast 2 similar projects • Registered QS with valid certification
7	Environmental Engineer	1	• Environmental Engineering degree • Minimum 6 years' experience • Atleast 2 similar projects • Valid registration and certification
8	Resident Engineer	1	• Bachelor's degree in civil engineering • Minimum 8 years' site supervision experience • Experience in laboratory or biotech construction projects • Atleast 2 similar projects • Valid engineering registration

9	Geotechnical Engineer	1	• Bachelor's degree in Civil/Geotechnical Engineering • Minimum 8 years' experience • Atleast 2 similar projects • Valid professional registration
10	Surveyor		• Bachelor's degree in GIS/Surveying engineering • Minimum 8 years' experience • Atleast 2 similar projects • Registered surveyor with a professional body

Notes:

1. *All staff shall have an excellent working knowledge of English.*
2. *Any Key staff scoring less than 75% shall be replaced during contract negotiations in case of award.*
3. *Each proposed Key staff shall provide an updated 2 page CV, Academic certificates, Professional certification (still valid), and certificates of services rendered (these shall be submitted together with the Technical Proposal)*

7. Methodology & Work Plan

The Consultant must submit:

- Proposed design and supervision methodology
- Detailed work plan and timeline
- Quality assurance approach
- Risk mitigation strategy

The evaluation criteria, sub-criteria, and point system for the evaluation are:

S/No	Evaluation criteria	Points
1.1	General Experience of the consultants (firm): general experience of 1-5 years max score of 5points general experience of 5-10 max score of 10 points	10
1.2	Experience of the consultants (firm) related to the assignment	
	Two (2) completed projects involving the design of biosafety laboratories, tissue culture laboratories, or research centres	**10**
	one (1) completed project involving the supervision of biosafety laboratories, tissue culture laboratories, or research centres.	**5**
2	Adequacy of the proposed work plan and methodology in responding to the terms of reference	**20**
2.1	Realistic methodology to carry out the task	10
2.2	Innovative approaches to execute the task	5
2.3	Practical manning and work schedule	5

3	**Qualifications and competence of the key staff for the assignment (detailed CV + Certificate + degrees)**	**60**
3.1	Lead Architect / Project Manager / Team Leader	**15**
3.2	Laboratory/Biosafety Specialist	10
3.3	Structural Engineer	5
3.4	MEP Engineer	5
3.5	HVAC specialist	5
3.6	Quantity Surveyor	5
3.7	Environmental Engineer	5
3.8	Resident Engineer	5
3.9	Geotechnical Engineer	2.5
3.10	Surveyor	2.5
TOTAL		**100**

Note: the score of staff will be based on the staff requirement as per Table 6.1 above

The firm must score at least 70% from the technical Evaluation for it to proceed to the next stage (Financial evaluation)

8. Timeline

i) The design assignment is expected to take 12 weeks, covering

1. Inception: 2 weeks
2. Preliminary design: 3 weeks
3. Detailed design: 4 weeks
4. Final documentation: 3 weeks

ii) Construction will take 9 months

ii) Supervision will take 10 months until provisional handover of the project including one month for final report preparation and submission.

iii) The Defects Liability Period shall be 12 months and shall result in Final handover of the project after all identified defects have been addressed.

9. Reporting & Communication

The Consultant will report to the COECB Construction committee

Regular meetings will be held:

- Weekly technical progress meetings
- Monthly management meetings
- Stakeholder consultation workshops (as required)

10. Ethical, Environmental & Safety Requirements

All designs must be incorporated:

- Occupational health and safety considerations
- Energy-efficient and green-building principles
- Environmental safeguards
- Accessibility and gender-responsive design

11. Submission Format

Proposals must be submitted in hard copy to CIP, Rwanda Office in accordance with CIP requested documents in the system that form the technical and financial proposal.

Clear Labeling: Each envelope must be clearly marked with the project name, bidder details, and its specific contents ("Technical Proposal" and "Financial Proposal")

Both sealed inner envelopes placed inside one outer wrapping.

Both envelopes must be handed over at the exact same deadline time.

12. Selection Method

The procurement method that shall be used to select the Consultant shall be Quality and Cost-Based Selection (QCBS).

The weights given to the Technical (T) and Financial (P) Proposals are:

T = ***70%***, and

P = ***30%***

The lowest evaluated Financial Proposal (Fm) is given the maximum financial score (Sf) of 100.

The formula for determining the financial scores (Sf) of all other Proposals is calculated as following:

Sf = 100 x Fm/ F, in which “Sf” is the financial score, “Fm” is the lowest price, and “F” the price of the proposal under consideration.

Proposals shall be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; T + P = 1) as following: S = St x T% + Sf x P%.

END.

CIP and RAB reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders at any time prior to contract award, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for its action."

ANNEX 1.

LIST OF EQUIPMENTS IN EACH LABORATORY

1. MEDIA PREPARATION ROOM

ITEM / EQUIPMENT	QUANTITY
Electrical precision balance	1
Precision electronic scale	1
Precision Balance	1
pH meter with buffer solutions	2
Distiller machine	1
Deionized water machine	1
Microwave	2
Oven (keeping media warm)	1
Autoclave	2
Glassware washing machine	1
Dry sterilizer machine	1
Fridge (4°C)	1

2. MYCOLOGY LABORATORY

ITEM / EQUIPMENT	Quantity
Vertical laminar flow hood	1
Stereo-microscope with camera	1
Trinocular VWR microscope with camera	1
Shaker	1
Vortex	1
Incubator	1
Colony counter	1
Automated hemocytometer	1
Fridge (4°C)	1

3. BACTERIOLOGY LABORATORY

ITEM / EQUIPMENT	Quantity
Vertical laminar flow hood	1
Bead sterilizer	2
Binocular dissecting microscope	1
Shaker (small)	1
Vortex	1
Incubator	1
Centrifuge (15 ml)	1
Mini spin centrifuge	1
Spectrophotometer (Genesys20)	1
Colony counter	1
Fridge (4°C)	1

4. VIROLOGY / PATHOLOGY LABORATORY

ITEM / EQUIPMENT	Quantity
Horizontal laminar flow hood	1
Bead sterilizer	2
Cytometry system	1
Liquid nitrogen tank	1
Locator plus rack & box system	1
Fridge (4°C)	1

5. MOLECULAR BIOLOGY LABORATORY

(Including Gel Documentation Area)

ITEM / EQUIPMENT	Quantity
Fumehood	1
Biosafety cabinet	3
RT-qPCR machine	1
Water bath	1
ELISA well wash machine	1
Automated nucleic acid extraction	1

Sonicator machine	2
Tissue lyzer machine	1
Centrifuge (50 ml)	1
Centrifuge (15 ml)	1
Mini spin centrifuge	1
Thermocycler / PCR	2
Gel tank	2
Gel electrophoresis system	6
Gel reader (iBright)	1
Qubit Flex Fluorometer	1
UV crosslinker	1
Nanopore sequencing system	1
Hybridization oven	1
Fridge (4°C)	1
Fridge (20°C)	1
Freezer (-80°C)	2
Ice maker	1

6. GENETIC ENGINEERING AND GENE EDITING LABORATORY INCLUDING GROWTH ROOMS (3)-BANANA -POTATO AND CASSAVA AND DARK ROOM

(Banana – Growth Room 1) (Potato & Cassava – Growth Rooms 2)

ITEM / EQUIPMENT	**Quantity**
Horizontal laminar flow hood	1
Bead sterilizer	4
Vertical Laminar flow	2
Electroporation machine	1
Agena MassArray system	1
Growth Chamber	3
Humidity chamber	1
Electric soil sterilizer	1

7. TISSUE CULTURE LABORATORY

(Banana, Potato & Cassava – Growth Rooms 3)

ITEM / EQUIPMENT	Quantity
Horizontal laminar flow hood	1
Bead Sterilizer	1
Microscope	1
Labeling Machine	1
Growth chamber	3

9. COLD ROOM FACILITY

ITEM / EQUIPMENT	Quantity
Cold room	1

10. GREENHOUSE & HARDENING FACILITIES

ITEM / EQUIPMENT	Quantity
Glasshouses	2
Plastic greenhouses	2
Phytotrons	1

11. SHARED INFRASTRUCTURE, IT & SAFETY

ITEM / EQUIPMENT	Quantity
Generator	2
Solar energy system	1
UPS APC Smart-UPS 5000	3
Server device	1
Desktop computers	5
Printer machine	1
Air conditioners	TBD

ANNEX 2: DECLARATION OF BENEFICIAL OWNERS OF PRIVATE COMPANIES

Identification of the Company

Type of Company

Limited by Shares Private ☐ | Limited by Shares Public ☐
Limited by Shares and Guarantee Private ☐ | Limited by Shares and Guarantee Private ☐
Limited by Guarantee Private ☐ | Unlimited Company ☐
Foreign Company ☐

Tax regime | Real ☐ | Micro ☐
Tax Identification Number(TIN) | | | | | | | | | | | | | |
Company's registered name | Abbreviation
Address of the Head office:
Town | District | Quarter | Street
P.O. Box | Tel Fix | Tel Mobile
E-mail | Fax
Business Activity
Date of registration of the Company | Registration Code
Full name of the Secretary of the Company
Residential address of Company Secretary

OWNERSHIP STRUCTURE

Share Capital
Class and Number of shares
Number of shareholders

Identification of Shareholders(s)

Where the Shareholder is a natural person

Name and Surname
Gender: Male ☐ | Female ☐
Date of birth | Place of birth
Tax Identification Number(TIN) | | | | | | | | | | | | | |
Country of Residence | Town | Street
Nationality | Tel Fix | Tel Mobile
National ID/Passport Number | Occupation
Email | P.O. Box
Effective date when the person became a Shareholder
Class and Number of shares held | Percentage of shares
Type of shares held: Ordinary ☐ | Redeemable ☐ | Voting rights ☐
Rights to distribution of capital or income ☐

Add other Shareholder(Natural Person)

Where the Shareholder is a legal entity

Full Name | Abbreviation
Date of creation | Registration Number
Tax Identification Number(TIN) | | | | | | | | | | | | | |
Country of Residence | Town | Street
P.O. Box | Tel
Email
Effective date when the entity became a Shareholder
Class and Number of shares held | Percentage of shares
Type of shares: Ordinary ☐ | Redeemable ☐ | Voting rights ☐
Rights to distribution of capital or income ☐

Add Shareholder(Legal entity)

Identification of Members of Board of Directors

Name and Surname
Gender: Male ☐ | Female ☐
Date of birth | Place of birth
Tax Identification Number(TIN) | | | | | | | | | | | | | |
Country of Residence | Town | Street
Nationality | Tel Fixed | Tel Mobile
National ID/Passport Number
Email | P.O. Box
Effective date when the person became a Board Member

Add Board Members

Identification of Beneficial owners

Name and Surname
Gender: Male ☐ | Female ☐
Date of birth | Place of birth
Tax Identification Number(TIN) | | | | | | | | | | | | | |
Country of Residence | Town | Street
Nationality | Tel Fix | Tel Mobile
National ID/Passport Number | Occupation
Email | P.O. Box
How is ownership held or control over the company is exercised by this person?
By Direct Shares: ☐ | **By Direct Shares:** ☐ | **By Direct Voting:** ☐
By Indirect shares: ☐ | **By Indirect voting:** ☐ | **By other means** ☐

1. In case of Direct Shares:
Number of shares held | % of shares

2. In case of Direct Voting:
Number of votes | % of votes

3. In case of Indirect shares:
Number of Indirect Shares | % of indirect shares
Full name of intermediate Company
Address of intermediate Company

4. Indirect voting:
Number of indirect votes | % of Indirect votes
Full name of intermediate company

5. By other means | Select from list

Add beneficial owner

Declaration of Company Assets

Description of assets	Value of assets	Location

Add rows

I , hereby declare that the information provided is accurate and up-to-date. If found to be false or untrue or misleading, we are aware that we are liable for it.

Authorised Signature and stamp | Date
Name

***Note** : Where necessary proof of statements made in this form should be submitted in attachment.*