

LEGAL NOTICE NO. ....

**THE ENGINEERS ACT, 2011**  
*(No. 43 of 2011)*

**IN EXERCISE** of the powers conferred by section 58 of the Engineers Act, 2011 the Engineers Board of Kenya, with the approval of the Cabinet Secretary for Transport, Infrastructure, Housing, Urban Development and Public Works, makes the following rules—

**PART I : PRELIMINARY PROVISIONS**

**1** These regulations may be cited as the Scale of Fees for Professional Engineering Services, 2020. Citation.

**2.** In these Rules unless the context otherwise requires— Interpretation.

“Act” means the Engineers Act, 2011.

“the Board” means the Engineers Board of Kenya.

“aerospace engineering services” entails the design, development, testing and production of aircrafts and space crafts and their related systems. The major overlapping branches include; (i) aeronautical engineering services which explores development of systems and products such as helicopters, planes and unmanned aerial vehicles (drones), i.e. any aircraft that operates within Earth’s atmosphere, and (ii) astronautical engineering services that entails design, development and deployment of objects in space; vehicles such as satellites, space shuttles and rocket ships.

“agricultural engineering services” entails the design, construction and improvement of farming equipment, machinery and systems such as soil management, erosion control, farm drainage, water supply and irrigation, processing technology and value addition to food and animal products.

Agricultural engineering works involves;

- Design, construction and improvement of agricultural machinery, equipment, and processing technology.
- Planning, supervising and managing the construction of agricultural infrastructure such as warehouses, dairy effluent schemes.
- Agricultural resource management; land and water use, soil management and conservation including erosion control.
- Water management, conservation, and storage for crop irrigation and livestock production
- Planning, design and construction of irrigation and drainage schemes

- Surveying and land profiling
- Floodwater control systems
- Performing Environmental Impact Assessments (EIAs)
- Food engineering and the processing of agricultural products
- Crop processing and storage which deals with post-harvest management
- Controlled-environment agriculture such as greenhouse production.
- Rural technology such as animal draught power, treadle pumps
- Harnessing of green energy such as wind power, biogas technology

“chemical engineering services” entails designing and developing processes to produce, transform and transport products from raw materials into useful and beneficial products. Chemical engineering services focuses on managing resources, protecting the environment and enhancement of health and safety in the processes.

“builder’s work drawings” means the drawings prepared by the contractor for approval by the professional engineer which shows details of work of a structural nature that is required to be carried out by a builder or other party to facilitate the execution of the engineering systems in the buildings;

“civil and structural engineering services” means design, construction supervision and maintenance of the physical and naturally built environment including public works such as roads, bridges, canals, tunnels, railways, dams, airports, sewerage systems, pipelines and structural components of the aforementioned infrastructure. Civil and structural engineering are categorized as;

a) civil engineering works

- Transport infrastructure
- Airport runway, taxiway
- New and improved unpaved roads
- New and improved urban roads
- New paved rural roads
- New rural and urban freeway
- Railway track work
- Railways (excluding cost of the track)
- Road rehabilitation
- Rural road expansion

i) Water engineering works

- Large earth dams
- Large concrete dams
- Small dams
- Storm water

- Irrigation
  - River intakes/pump stations
  - Water and wastewater treatment works
- ii) civil engineering building works
- Municipal works
  - Parking lots
  - Geotechnical-underground structure and dredging
- b) structural engineering services
- i) Reinforced concrete and structural steel works
- Complex load bearing structures, quay walls and jetties
  - Minor structures
  - Overpasses and freeway bridges
  - Power-station building civil works
  - River bridges
  - Stormwater structures, breakwater and canals (designed)
  - Water retaining structures
  - Water towers
- ii) Structural building works
- Iconic and unique buildings and structural alterations
  - Hospitals, hotels, airports, stadia, exhibition halls and retail shopping centers.
  - Residential, offices, educational and industrial
  - Warehouses

"contractor" means any person, firm or company engaged under a contract with the client to perform any work or to supply goods in connection with the works or both, and includes a sub-contractor;

"cost of works" means the fair estimate amount or value of the works at the onset, inclusive of value added tax and all applicable taxes, as certified, or which would, normally, be certifiable for payment to contractors (irrespective of who actually carries out the works) in respect of the works designed, specified or administered by the professional engineer, before deduction of liquidated damages or penalties, including-

- Escalation, assuming continuity of the project through to completion. Where delays occur in the project cycle the client and the professional engineer should come to an agreement on the escalation that will be applicable to various stages of services.
- A pro-rata portion of all preliminary and general items applicable to the works and;
- The cost of new materials, goods or equipment, or a

fair valuation of any labour, of such material, goods or equipment as if new whether supplied new or otherwise by, or to, the client and including the cost or a fair evaluation of the cost of installation (the sourcing, inspection and testing of such will comprise additional services by the professional engineer)

The cost of works excludes;

- Administration expenses incurred by the client;
- Costs incurred by the client under the agreement between the client and the professional engineer for professional engineering services for the works.
- Salaries, travelling, out of pocket and office expenses of resident site staff, unless the works are carried out by direct labour;
- Interest on capital during construction, and cost of raising moneys required for carrying out the construction of the works;
- Cost of land and way leaves.
- External services designed, documented and supervised by others e.g. power and water authority mains.

“cost of the project” means all costs involving cost of all elements (fields) of the project, inclusive of Value Added Tax (VAT).

“electrical, electronic and telecommunication engineering services” are described as follows;

“electrical engineering services” refers to the design, installation supervision and maintenance of electrical control systems, machinery and equipment. These include high voltage (HV), medium voltage (MV), low voltage (LV) systems and related reticulation and accessories.

Electrical Engineering works comprises of;

- Green building design and energy management
- Communication, data and IT cabling systems, audio-visual and tele-conferencing/video-conferencing facilities.
- Energy generation and transmission including solar and other renewable energy systems.
- Fire protection, security and access control.
- Industrial process, wiring and instrumentation
- Electrical Services related Mining and Marine.
- Motor control and electrical installation for machinery and equipment
- MV and LV distribution
- Street, area and sports field lighting

Electrical engineering building services comprises of;

- Electric lighting and power installations and related fi

t-outs.

- Street lighting
- Telephone equipment and distribution systems, radio and television installations.
- Fire detection and alarm systems
- Lightning protection systems
- Incoming electrical supplies and electrical distribution systems.
- Data centre or server room and related infrastructure.
- Integrated building management systems.

The buildings where the above-mentioned services will be required include;

- Industrial building services and utilities
- General-commercial, retail, offices, schools, hostels, clinics, hotels and resorts
- Specialized-airport buildings, museums, theatres, libraries, public entertainment, hospitals, research facilities, universities, laboratories, conference facilities, institutional buildings and facilities.
- Residential-individual luxury housing units and apartment buildings
- Residential-Multiple (>50) standard housing units

“electronic and telecommunications engineering services” refers to services related to the design, installation supervision and maintenance of electronic, telecommunications and Information Communication & Telecommunication (ICT) systems and detailing the terminations, signals and interconnections of the electronic components as distinct from conventional High Voltage(HV), Medium Voltage (MV) and Low Voltage (LV) systems and related reticulation.

“engineering systems” refer to any engineering services, which are outside the direct ambit of the conventional civil, structural, mechanical and electrical engineering services, such as but not limited to; lifts, escalators and other transportation systems in buildings, security systems, access control, structured cabling and other ICT systems, video conferencing, public address systems and other telecommunication systems; generators, electrical sub-stations, solar and other renewable energy sources, integrated building/parking management systems, extensive civil works etc.

“engineering management” is the application of management principles to the engineering practise. This involves technical problem solving ability of engineering and the organizational, administrative and planning abilities of management in order to oversee the operational performance of a complex engineering driven enterprise or project.

"installation or shop drawings" means the drawings, prepared by the contractor for approval by the professional engineer, which show details of the contractor's proposals for the execution of the engineering project;

"lead consultant" means the project leader appointed by the client to act as the person in charge of the project, which may be a professional engineer or otherwise.

"marine engineering services" deals with the design, development, operation and maintenance of watercraft propulsion and on-board systems/structures such as boats, ships, submarines, off-shore platforms and drilling equipment and oceanographic technology.

"mining engineering services" entails extraction of minerals from underneath, above or on the ground. Mining engineering works include exploration and discovery of mineral resources, design of mines to safely and efficiently remove minerals, development of plans, production and operations to mine closure.

"mechatronics engineering services" entails efficient and effective integration of precision mechanical engineering systems, electronic control, information systems (computer science) to design and produce intelligent or smart products, processes and systems. Mechatronics engineering works include design and production of robots of all types and artificial organs, mobile machines such as unmanned aerial vehicles, autonomous underwater vehicles, autonomous ground vehicles and automated manufacturing plants.

"mechanical engineering services" refers to design, construction, installation and maintenance of various plant, equipment and systems. Mechanical engineering services may be classified as general mechanical engineering services (Mechanical Engineering Services) or when provided in Buildings as Mechanical Engineering Building Services as given hereunder;

Mechanical Engineering Services comprises of;

- Green building design and energy management
- Fire protection systems and equipment.
- Hazardous material systems
- Air conditioning and mechanical ventilation systems
- Industrial process, piping and instrumentation
- Mechanical plant and equipment
- Pressure vessel design and installation.
- Pumping and pipeline systems
- Refrigeration and cold storage
- Conveyor systems and materials handling equipment.
- Water treatment, filtration and reticulation.
- Acoustic design and vibration control.

Mechanical Engineering Building Services comprises of;

- Heating, air-conditioning and mechanical ventilation systems
- Hot and cold water services
- Specialized fire protection systems such as gas, foam extinguishing etc.
- Compressed air and vacuum equipment services
- Medical gases installations.
- Rainwater harvesting and disposal
- Waste collection and disposal systems.
- Plumbing, drainage and sanitary fittings
- Refrigeration installation and cold stores
- Cooling water systems
- Laundry equipment and services
- Food preparation, cooking and handling equipment
- Gymnasium equipment

The buildings where the above-mentioned services will be required include;

- Industrial building services and utilities
- General-commercial, retail, offices, schools, hostels, clinics, hotels and resorts
- Specialized-airport buildings, museum, theatres, libraries, public entertainment, hospitals, research facilities, universities, laboratories, conference facilities, institutional buildings and facilities.
- Residential-individual luxury housing units and apartment buildings
- Residential-multiple (>50) standard housing units
- Wet services

“MEP” means the combination of Mechanical, Electrical and Plumbing professional engineering services particularly in buildings.

“memorandum of agreement” means the memorandum of agreement entered into between the client and the professional engineer in connection with the provision of professional engineering services for the works.

"project" means the project of which the works form a part;

“Professional Engineering Services” means engineering services and advice in connection with any feasibility study, planning, survey, design, sketch, drawing, specifications, construction, commissioning, operation, maintenance, supply of specialized engineering equipment and management of engineering works or projects and includes any other engineering services approved by the Board;

"Professional Engineer" for purposes of this scale of fees means any registered professional engineer or consulting engineer, body corporate, partnership or sole-proprietorship registered by the Board practising as professional or

consulting engineers engaged by the client to provide professional engineering services;

“CPI” means Consumer Price Index, which is a group of indexes that examines the weighted average of prices of various consumer goods and services.

"Record/As-Built drawings" means drawings, prepared by the contractor for approval by the professional engineer, which show clearly the general scheme and the details of the engineering system in the Project as completed;

“stage” means a stage of standard professional engineering services set out in Part III, clauses 3.1 to 3.6 of this document.

“structural engineering works in buildings” means all works in structural reinforced concrete, prestressed concrete, steel, timber, masonry and other materials or a combination of any of these, which are designed to transmit the weight of, and the loads on, the building to the ground and includes the foundations and excavations connected with them;

"tender drawings" means the drawings prepared by the professional engineer with sufficient detail to enable those persons tendering to interpret correctly the design of the works and to submit competitive bids for the execution of the works;

"the works" means the activities on a project for which contractors are under contract to the client to perform or are intended to be performed, including the supply of materials, goods and equipment. In addition, it means the works in connection with which the client has engaged the professional engineer to perform professional services.

## **PART II : PREAMBLE TO THE SCALE OF FEES**

**2.1** (1) The objective of the scale of fees for professional engineers is to provide a framework for provision of technically feasible, economically viable and sustainable engineering solutions in an ethical and professionally accountable manner with while in return receiving reasonable compensation for the professional engineering services.

### **Object of the Scale of Fees**

(2) The professional engineer will invest his or her time, effort, intellect, expertise and other resources in the form of professional engineering services rendered to the client on a project. The basis for remuneration is therefore pegged on the value or magnitude of the contribution the professional engineer delivers to the realization of the project.

(3) Common to the procurement of other professional services, a low fee is not necessarily a reflection of good value or in the best interest of the client. Appropriate professional fees are required by the professional



engineer to deliver appropriate professional engineering services to clients with particular emphasis on the safety and welfare of the public.

(4) The practise of procuring professional engineering services by competitive bidding based on the magnitude of a financial discount and/or price undercutting offered by the professional engineer or determined by any other party is to be discouraged and is counter-productive to good engineering and life cycle costs. This practise is contrary to all accepted best practice methods of competitive tendering for professional services and because discounts/price undercutting are typically determined without any consideration of actual design costs, fees discounting/undercutting leads to declining standards of quality of service, which is the cornerstone of the profession. Furthermore, it has a negative impact on the entire industry and the infrastructural development of the Country.

## **2.2**

(1) It is evident that professional input or contribution will vary from one project to another. Therefore, the value of the input of the professional engineer shall be qualified and quantified in terms of monetary value.

### **Application of the Scale of Fees**

(2) The determination of the payable fees for professional engineering services shall be subject to this scale of fees and shall take into consideration the project complexity, monetary value of the works, the duration of the project, the level of risk and responsibility of the professional engineer, the level of skills, experience and expertise required, the technology required, any duplication of works, the client requirements and generally the scope of the project.

(3) The cost of engineering design services only constitutes a relatively small part of the total life-cycle costs of the facility being designed and implemented and the client shall be made aware that professional fees that are too low can lead to significantly increased costs of the works. Furthermore, the consequences will inevitably emerge in the long-term operations and maintenance costs that may overshadow any savings made in the cost of the professional services.

(4) All the taxes including Value Added Tax (VAT) shall be applicable to the costs where appropriate.

## **PART III : STANDARD PROFESSIONAL ENGINEERING SERVICES**

### **3.1**

For projects where the nature, form and function of the facility has not been defined through previous investigations, the professional engineering services shall involve planning, carrying out studies, investigations and assessments, preparation and submission of

### **Inception Stage**

preliminary proposals or initial feasibility studies with regard to the project. These include;

- i. Consultations with the client or client's authorized representative.
- ii. Conducting site investigation of the proposed project.
- iii. Carrying out preliminary investigations, route location, planning and a level of design appropriate to allow decisions on feasibility.
- iv. Consultation with any local or approving authorities, the public and stakeholder groups in matters of principle in connection with the works.
- v. Offering advice to the client with regard to any statutory and regulatory requirements and approvals, environmental management and the need for surveys, investigations and analysis whereby reports may need to be submitted.
- vi. Conducting a search to obtain and collate available data, drawings and plans relating to the works.

Key deliverables include reports on;

- i. Technical and financial feasibility and related implications.
- ii. Consents and approvals
- iii. Information on the project

For projects where the nature, form and function of the facility has been defined through previous investigations and reports, the professional engineering services required shall be to actualize the successful implementation of the project. These involves establishment of client requirements, assess user needs and options, appointment of the required consultants and development of the project brief. The services include;

- i. Investigating data and information relevant to the works and considering any reports relating to the works;
- ii. Development of a clear project brief including project objectives, priorities, constraints, assumptions and strategies.
- iii. Advice on the procurement strategy of the project and criteria that could influence the project lifecycle cost significantly.
- iv. Advice on the required rights, consents and approvals.
- v. Define the scope of works and services of the project. This can be achieved through conducting site inspection(s) and advice on required surveys, analyses, tests and other investigations.
- vi. Determine the necessary information available for the project such as data, drawings, and plans.
- vii. Provide necessary information within the agreed scope of the project to other consultants involved.
- viii. Conclude the terms of agreement with the client.

Key deliverables include;

- i. Signed agreement with the client
- ii. Agreed scope of works and services
- iii. Report on project requirements

**3.2** In the preliminary stage, the professional engineer prepares and finalises the project concept in accordance with the brief, including project scope, scale and function including preliminary programme. The services include;

- i. Establishment of the concept design criteria.
- ii. Preparation of the initial concept design and related documentation; process designs (where required) and preliminary designs for approval by authorities and client and for costing.
- iii. Advising the client with regard to further or special analyses, surveys, tests and in-depth investigations required to supplement the available information. Arranging for the investigations, certifying the amount of any payments to be made by the client to the persons, firms or companies carrying out the investigations under the professional engineer's direction and advising the client on the results of the investigation (s).
- iv. Establish access, utilities, services and connections required for the design.
- v. Determine the projects risks involved and establish mitigation measures.
- vi. Establish local or regulatory authorities' requirements and incorporate into the design to ensure conformity to all the regulatory and statutory requirements.
- vii. Coordinate design interfaces with other consultants involved in the project.
- viii. Consulting the lead consultant appointed by the client in connection with the overall direction of the project and documentation programme.
- ix. Liaise, co-operate and provide necessary information to the client, lead consultant and other consultants involved to enable the client consider the professional engineer's proposals including cost estimates and life cycle costs as required, with alternative proposals. This is for the successful implementation of the project in the light of the investigations carried out by the professional engineer at this stage. Moreover, it will enable the client make timely and appropriate decisions. For instance, applying for approvals from the appropriate authorities for the execution of the works in accordance with the proposals, division of the project in phases etc.

Key deliverables include;

- i. Concept design
- ii. Preliminary design
- iii. Cost estimates
- iv. Reports on investigations, surveys conducted.

**3.3** In the detailed design stage, the professional engineer develops the approved concept to finalise the design, outline specifications, cost plan, financial viability and programme for the project. The services include;

**Detailed Design Stage**

- i. Conducting a review of the documentation programme with the lead consultant and other consultants involved.
- ii. Incorporation of clients' and authorities' detailed requirements into the design.
- iii. Incorporation of other consultants' designs and requirements into the design.
- iv. Preparation of design development drawings including technical details and specifications.
- v. Compute the cost of risks involved and implications on the project.
- vi. Preparation of detailed estimates of the project implementation costs.
- vii. Liaise, co-operate and provide necessary information to the lead consultant and other consultants involved.
- viii. Submit the necessary design documentation to the local and other authorities for approval.

Key deliverables include;

- i. Detailed design drawings, for those considered final, be stamped and signed by the design engineer and the professional engineer.
- ii. Clear and complete contract drawings, schedules and bills of quantities.
- iii. Project specifications
- iv. Local and other authorities' submission drawings and reports.
- v. Detailed estimates of the project costs.

**3.4** The professional engineering services to be provided by the professional engineer at this stage entails preparation of procurement and tender documentation, confirmation and implementation of the procurement strategies and procedures for effective and efficient procurement of the necessary resources for successful execution of the project. This involves advising the client with regard to the suitability for carrying out the works by the persons, firms or companies tendering and as to the relative merits of the tenders, but excluding the relative merits of alternative tenders, prices and estimates received for carrying out the works. The services in particular include;

**Tender Stage**

- i. Checking of cost estimates and adjusting designs and documents where appropriate to remain within the budget agreed with the client after the preliminary and detailed design stages.
- ii. Formulation of the procurement strategy for contractors or assisting the lead consultant where applicable.
- iii. Preparation of tender drawings or documentation for procurement.
- iv. Review of designs, drawings and schedules for compliance with

- v. the approved budget.
- vi. Assist in calling for tenders and/or negotiation of prices and/or assisting the lead consultant where applicable.
- vii. Assisting in tender evaluation, at the professional engineers' office.
- viii. Advising on and preparing formal contract documents, including the letter of acceptance for carrying out the works or any part of them.
- ix. Assessment of samples and products for compliance and the design intent.

Key deliverables include;

- i. Specifications and stamped working drawings.
- ii. Tender documentation including priced tenders.
- iii. Tender evaluation report and recommendations.
- iv. Priced contract documentation.

**3.5** The professional engineering services offered by the professional engineer at the Contract Administration and Construction entails the management, administration and monitoring of the contracts and processes including preparation and coordination of procedures and documentation to facilitate practical completion of the works. The services include;

- i. Witness site handover.
- ii. Issue construction documentation in accordance with the documentation schedule. Examining and approving the contractor's proposals and his working drawings relating to the works;
- iii. Carry out contract administration procedures in terms of the contract; attend periodic site, technical and progress meetings, inspect works for conformity to the contract.
- iv. Witness and review inspections, tests and mock-ups carried out both on and off site. For instance, during manufacture and installation of electrical and mechanical materials, machinery and plant supplied for incorporation in the works as are necessary where the inspection and test are within the technical competence of the professional engineer, and arranging and witnessing the acceptance test;
- v. Preparation of schedules of predicted cash flow and preparation of pro-active estimates of proposed variations for client decision-making.
- vi. Advising the client on the need for a special inspection.
- vii. Advising the client on the appointment of site staff
- viii. Preparation of any further designs and drawings relating to the works;
- ix. Establish and maintain a financial control system;
- x. Making such visits to the site as the professional engineer considers necessary to satisfy himself as to the performance of any site staff appointed pursuant to clause 3.5 (iii) of this Part and

**Contract  
Administration  
and  
Construction  
Stage**

to satisfy himself/herself that the works are executed generally according to contract or otherwise in accordance with good engineering practice;

- xi. Giving all necessary instructions relating to the works to the contractor;
- xii. Preparation and issuance of all certificates as are required in the contract such as valuation for payment certificates.
- xiii. Performing any duties, which the professional engineer may be required to carry out under any document that he has prepared for the execution of the works;
- xiv. Adjudicate and resolve contractual/financial claims by the contractor(s),
- xv. Delivering to the client on the completion of the works such records and manufacturer's manuals, guarantee certificates and warranties as are reasonably necessary to enable the client to operate and maintain the works;
- xvi. Inspect the works and issue practical completion and defects lists.
- xvii. Arranging for the delivery of all tests certificates, including electrical certificates of compliance, statutory and other approvals, as-built drawings and operating manuals.
- xviii. Deciding any dispute or difference arising between the client and the contractor in connection with the works and submitted to the consulting engineer for his decision, provided that this professional engineering service shall not extend to advising the client following the taking of any step in or towards any arbitration or litigation in connection with the works.

Key deliverables include;

- i. Construction documentation and schedules of predicted cash flow.
- ii. Contract instructions
- iii. Estimates for proposed variations and variations for payment certificates.
- iv. Progressive and draft final account(s).
- v. Practical completion and defects list.
- vi. Certificates of compliance.
- vii. Financial control reports.

**3.6** The professional engineering services rendered by the professional engineer at the close out stage is geared towards necessary documentation to facilitate effective completion, hand-over and operation of the project. The services include;

- i. Carrying out inspections and verification of defects.
- ii. Receiving, commenting and approving relevant payment valuations and completion certificates.
- iii. Preparation and/or acquisition of operations and maintenance manuals, guarantees and warranties.
- iv. Preparation and/or acquisition of as-built drawings and documentation.

**Close-Out Stage**

- v. Preparation of project final accounts.
- vi. Preparation and issue of project completion report.

#### **PART IV : ADDITIONAL PROFESSIONAL ENGINEERING SERVICES**

**4.1** The additional professional engineering services to be provided by the professional engineer, if requested or consented to by the client, include the following:

**Additional  
professional  
engineering  
services of  
general nature**

- i. Enquiries not directly concerned with the works and its subsequent utilization.
- ii. Preparing any report or other additional documents required for consideration of proposals for the carrying out of alternative works;
- iii. Carrying out work consequent upon a decision by the client to seek or comply with amendments to existing laws affecting the works;
- iv. Carrying out work in connection with any application made by the client for any order, sanction, licence, permit or other consent, formal approvals (not including the normal approval required from the relevant authorities, such as construction authorities, water-works authorities, electricity authorities, telecommunications authorities etc.) or authorisation necessary to enable the works to proceed; including the making of such revisions as may be required as a result of decisions of such Authorities arising out of changes in policy, undue delay, or other causes beyond the professional engineer's control.
- v. Carrying out works and services arising from the failure of a client and/or contractor or others to perform their required duties adequately and timely. For instance the failure of the client to award a contract in time;
- vi. Preparing of drawings for manufacture and installation or detailed checking of such for erection or installation. For instance, details for shop fabrication of ductwork, metal, plastic and timber framework;
- vii. Additional services, duties and/or work resulting from project scope changes, alterations and/or instructions by the client, or his duly authorized agents, requiring the professional engineer to advise upon, review, adapt and/or alter his completed designs and/or any other documentation and/or change the scope of his services and/or duties. Such additional services are subject to agreement in writing between the professional engineer and the client prior to the execution of the project thereof.
- viii. Checking and advising upon any part of the project not designed by the professional engineer;
- ix. Reviewing the work of another professional engineer;
- x. Negotiating and arranging for the provision or diversion of utility services;
- xi. Preparing interim or other reports or detailed valuations including

- estimates or cost analysis based on measurement or forming an element of a cost planning service;
- xii. Carrying out detailed inspection, reviewing and checking of designs and drawings, preliminary estimates for works not prepared by the professional engineer and submitted by architects, quantity surveyors, contractors and other parties as alternative to those embodied in tender or similar documents prepared by the professional engineer.
  - xiii. Carrying out work consequent upon any abandonment of a contract by the contractor or upon the failure of the contractor to properly perform any contract or upon delay by the client in fulfilling his obligations or in taking any other step necessary for the due execution of the works;
  - xiv. Advising the client and carrying out work following the taking of any step in or towards any litigation or arbitration relating to the works;
  - xv. Negotiating any contract or sub-contract with a contractor selected otherwise than by competitive tendering including checking and agreeing on the quantities and net costs of materials and labour, arithmetical checking and agreeing on the added percentages to cover overhead costs and profit;
  - xvi. Providing project management services or construction management services;
  - xvii. Carrying out special cost investigations or detailed valuations including estimates or cost analysis based on measurement or forming an element of a cost planning service;
  - xviii. Preparing detailed operation and maintenance manuals and other documents describing the design and operation of the works;
  - xix. Preparing builder's work drawings, record drawings or any detailed schedules where necessary;
  - xx. Carrying out work in conjunction with others employed to provide any of the specified services as stipulated in clauses 4.1 viii & xii of this Part.
  - xxi. Carrying out such other additional services, if any, as are specified in the memorandum of agreement;
  - xxii. Undertaking exceptional arrangements, communication, facilitation and agreements with any stakeholders other than the client and contractors appointed for the works on which the consulting engineer provides services.
  - xxiii. Any other additional services, of whatever nature, specifically agreed to in writing between the professional engineer and the client.

**4.2 Specialist professional engineering services shall include :**

- i. Obtaining specialist technical advice on any abnormal aspects of the works;
- ii. Providing investigation on the nature and strength of existing works and the making of model tests or special investigations;

**Specialist  
professional  
engineering  
services**



- iii. Obtaining architectural, legal, cost consultancy, financial and other professional services;
- iv. Providing services in connection with the valuation, purchase, sale or leasing of land and the obtaining of wayleaves;
- v. Geotechnical and geospatial services, topographical and environmental surveys, analyses, tests and site or foundation or other investigations, model tests, laboratory tests and analyses carried out on behalf of the client.
- vi. Carrying out special inspection or test advised or recommended by the professional engineer.
- vii. Carrying out commissioning procedures or performance tests.

**4.3** The professional engineer shall be in full control of, and be responsible for, the construction supervision of the works on site unless otherwise agreed to by the approving authorities concerned or the client.

**Supervision on Site**

- i. If in the opinion of the professional engineer the nature of the work including the carrying out of any of the aforementioned tests and investigations under clause 4.2 (vi) warrants full-time or part-time supervision on site in addition to the site visits made by the professional engineer (typically expected to be up to four (4) visits per month), he shall advise the client of the fact and also the desired qualification and experience which the site staff shall possess.

All site staff shall be under the control of, and take instructions from, the professional engineer only.

**4.4** (1) If the construction monitoring is deemed to be insufficient by the professional engineer, the professional engineer may,

**Construction Monitoring**

- i. With prior written approval having been obtained from the client, appoint or make available additional staff for such construction monitoring as are necessary to undertake additional construction monitoring on site to the extent specifically defined and agreed with the client. The functions in respect of additional construction monitoring are to be limited to detailed inspections or;
  - ii. Appoint or make available staff, as intended in clause (i) of this clause (4.4(1)), subject to approval by the professional engineer.
- (2) Staff, as intended in clauses (i) and (ii) of this clause (4.4 (1)), shall report to and take instructions from the professional engineer or an authorized representative of the professional engineer only and shall be deemed to be in the employ of the professional engineer.

(3) Should any change regarding the persons utilized for additional on-site monitoring or their remuneration be necessary, the utilization of

such persons and/or their remuneration must be agreed in writing with the client prior to the implementation thereof.

(4) If, for any reason, no additional staff or inadequate staff for construction monitoring is appointed, the professional engineer shall provide additional services, including additional site visits, as required and agreed to in writing with the client prior to commencement thereof.

(5) The duties of the professional engineer for the following four defined levels of construction monitoring, respectively, are as follows:

*(NB; Standard services will only include Level 1 of supervision, unless agreed otherwise with the client)*

(a) Level 1:

The construction monitoring staff shall:-

- Monitor the outputs from another party's quality assurance programme against the requirements of the plans and specifications.
- Visit the works at a frequency agreed with the client, preferably twice a month to review important materials, critical work procedures and/or completed elements or components. In the event the project needs more attention and therefore more visits, additional fee will be required from the client.
- Be available to advise the contractor on the technical interpretation of the plans and specifications.

(b) Level 2:

The construction monitoring staff shall:-

- Review, preferably at the earliest opportunity, a sample of each important work procedure, construction material for compliance with the requirements of the plans and specifications and review representative samples of important completed work prior to enclosure or completion as appropriate.
- Visit the works at a frequency agreed with the client to review important materials, critical work procedures and/or completed elements or components.
- Be available to provide the contractor with technical interpretation of the plans and specifications.

(c) Level 3:

Monitoring staff shall:

- Maintain a part-time presence on site as agreed with the client to review random samples and review important completed work prior to enclosure or on completion as appropriate.

- Where the professional engineer is the sole consultant or principal agent, carry out such administration of the project as is necessary on behalf of the client.
- Be available to provide the contractor with technical interpretation of the plans and specifications.

(d) Level 4:

The construction monitoring staff shall:-

- Maintain a full time presence on site to constantly review work procedures construction materials for compliance with the requirements of the plans and specifications and review completed work prior to enclosure or on completion as appropriate.
- Where the professional engineer is the sole consultant or principal agent, carry out such administration of the project as is necessary on behalf of the client.
- Be available to provide the contractor with technical interpretation of the plans and specifications

**4.5** Should the client require the professional engineer to undertake duties falling under the Occupational Safety and Health Act, 2007 and the Construction Regulations in terms thereof, on behalf of the client, the additional services may include the following:

- i. The professional engineer must arrange, formally and in writing, for the contractor to provide documentary evidence of compliance with all the requirements of the Occupational Safety and Health Act, 2007.
- ii. The professional engineer must execute the duties of the client, as his appointed agent, as contemplated in the Occupational Safety and Health Act, 2007.

**The  
Occupational  
Safety and  
Health Act, 2007**

**4.6** Where the client requires that a quality management system or quality assurance services, over and above construction monitoring services be applied to the project, these are in addition to standard services provided by the professional engineer and to be specifically defined and separately agreed in writing prior to commencement thereof. This can also include conducting of technical and financial audits of an ongoing or already commissioned project(s). The purpose is for the professional engineer enable the client to determine the value for money for a given project (s).

**Quality  
Assurance  
System**

<p><b>4.7</b> Should the client require the professional engineer to assume the leadership of a joint venture, consortium or team of professional engineers, of the same discipline, prescribed or requested by the client, the additional services may include the following:</p> <ol style="list-style-type: none"> <li>i. Responsibility for the overall administration of all sections of the services, including those portions of the services, which fall within the ambit of the other consulting engineers.</li> <li>ii. Responsibility for the overall co-ordination, programming of design and financial control of all the works included in the services.</li> <li>iii. Processing certificates or recommendations for payment of contractors.</li> </ol>	<p><b>Lead Professional Engineer</b></p>
<p><b>4.8</b> Should the client require the professional engineer to undertake duties of an engineering management nature on behalf of the client, the additional services will include the following:</p> <p><b>Stage 1 Services</b></p> <ol style="list-style-type: none"> <li>i. Facilitate development of a clear project brief.</li> <li>ii. Establish the procurement policy for the project.</li> <li>iii. Assist the client in the procurement of necessary and appropriate other consultants including the clear definition of their roles and responsibilities.</li> <li>iv. Establish in conjunction with the client, other consultants and all relevant authorities, the site characteristics, rights and constraints for the proper design of the intended project.</li> <li>v. Define the consultant's scope of work and services.</li> <li>vi. Conclude the terms of the agreement with the client.</li> <li>vii. Facilitate a schedule of the required consents and approvals.</li> <li>viii. Prepare, co-ordinate and monitor a project initiation programme.</li> <li>ix. Facilitate client approval of all Stage 1 documentation</li> </ol> <p>Typical deliverables:</p> <ul style="list-style-type: none"> <li>• Project brief</li> <li>• Agreed scope of work</li> <li>• Agreed services</li> <li>• Project procurement policy</li> <li>• Signed agreements</li> <li>• Integrated schedule of consents and approvals.</li> <li>• Project initiation programme.</li> <li>• Record of all meetings.</li> </ul>	<p><b>Engineering Management Services (Lead Consultant)</b></p>

## **Stage 2 services**

- i. Assist the client in procurement of the other consultants
- ii. Advise the client on the requirement to appoint a health and safety consultant
- iii. Communicate the project brief to the other consultants and monitor the development of the concept and viability
- iv. Agree format and procedures for cost control and reporting by the other consultants
- v. Prepare a documentation programme and indicative construction programme
- vi. Co-ordinate concept and viability documentation for presentation to the client for approval
- vii. Facilitate approval of the concept and viability by the client
- viii. Facilitate approval of the concept and viability by statutory authorities

### Typical deliverables

- Signed consultant/client agreements.
- Indicative documentation programme and construction programme.
- Approval by the client to proceed to Stage 3

## **Stage 3 Services**

- i. Agree and implement communication processes and procedures for the design development of the project
- ii. Assist the client in the procurement of the necessary other consultants including the clear definition of their roles and responsibilities
- iii. Prepare, co-ordinate, agree and monitor a detailed design and documentation program
- iv. Conduct and record consultants' and management meetings
- v. Facilitate input required by health and safety consultant
- vi. Facilitate design reviews for compliance and cost control
- vii. Facilitate timeous technical co-ordination
- viii. Facilitate client approval of all Stage 3 documentation

### Typical deliverables

- Additional signed client/consultant agreements
- Documentation programme
- Record of all meetings
- Approval by the client to proceed to Stage 4

## **Stage 4 services**

- i. Recommend and agree procurement strategy for contractors,

- subcontractors and suppliers with the client and the other consultants
- ii. Prepare and agree the procurement programme
  - iii. Advise the client, in conjunction with the other consultants on the appropriate insurances
  - iv. Co-ordinate and monitor preparation of procurement documentation by consultants in accordance with the project procurement programme.
  - v. Manage procurement process and recommended contractors for approval by the client
  - vi. Agree the format and procedures for monitoring and control by the quantity surveyor of the cost of the works
  - vii. Co-ordinate and assemble the contract documentation for signature

#### Typical deliverables

- Procurement programme
- Tender/contract conditions
- Record of all meetings
- Obtain approval by the client of tender recommendation(s)
- Contract documentation for signature

#### **Stage 5 services**

- i. Arrange site handover to the contractor
- ii. Establish construction documentation issue process
- iii. Agree and monitor issue and distribution of construction documentation
- iv. Instruct the contractor on behalf of the client to appoint subcontractors
- v. Conduct and record regular site meetings
- vi. Monitor, review and approve the preparation of the construction programme by the contractor
- vii. Regularly monitor performance of the contractor against the construction programme
- viii. Adjudicate entitlements that arise from changes required to the construction programme
- ix. Receive, co-ordinate and monitor approval of all contract documentation provided by contractor(s)
- x. Agree quality assurance procedures and monitor implementation thereof by the other consultants and the contractors
- xi. Monitor preparation and auditing of the contractor's health and safety plan and approval thereof by the health and safety consultant
- xii. Monitor preparation of the environmental management plan by the environmental consultant
- xiii. Establish procedures for monitoring scope and cost variations

- xiv. Monitor, review, approve and issue certificates
- xv. Receive, review and adjudicate any contractual claims
- xvi. Monitor preparation of financial control reports by the other consultants
- xvii. Prepare and submit progress reports
- xviii. Coordinate, monitor and issue practical completion lists and the certificate of practical completion.
- xix. Facilitate and expedite receipt of the occupation certificate where relevant.

#### Typical deliverables

- Signed contracts
- Approved construction programme
- Construction documentation
- Payment certificates
- Progress reports
- Record of meetings
- Certificate(s) of practical completion

#### Stage 6 services

- i. Co-ordinate and monitor rectification of defects
- ii. Manage procurement of operations and maintenance manuals, guarantees and warranties
- iii. Manage preparation of as-built drawings and documentation
- iv. Manage procurement of outstanding statutory certificates
- v. Monitor, review and issue payment certificates
- vi. Issue completion certificates
- vii. Manage agreement of final account(s)
- viii. Prepare and present the project close-out report Typical deliverables
- ix. Completion certificates
- x. Record of necessary meetings
- xi. Project close-out report

**4.9** Where the client requires the professional engineer to, on his behalf, perform the services listed hereunder or similar work, the extent thereof and remuneration therefore is subject to agreement between the client and the consulting engineer:

- i. Dealing with matters of law, obtaining parliamentary or other statutory approval, licenses or permits.
- ii. Assisting with or participating in contemplated or actual mediation, arbitration or litigation proceedings.

**Mediation,  
Arbitration and  
Litigation  
proceedings and  
similar Services**

Officiating at or attending courts and commissions of enquiry, select committees and similar bodies convened by statute, regulation or decree.

**Principal Agent  
of the Client**

- 4.10** When a professional engineer is, in addition to his normal functions as professional engineer, appointed as the principal agent of the client for the purposes of procurement and construction on a project, the professional engineer will also be responsible for the following:

**Stage 3 services**

Prepare, co-ordinate, agree and monitor a detailed design and documentation programme

**Stage 3 deliverables**

Detailed design and documentation programme

**Stage 4 services**

- i. Recommend and agree procurement strategy for contractors, subcontractors and suppliers with the client and the other consultants
- ii. Prepare and agree the procurement programme
- iii. Advise the client, in conjunction with the other consultants on the appropriate insurances
- iv. Manage procurement process and recommended contractors for approval by the client
- v. Agree the format and procedures for monitoring and control by the quantity surveyor of the cost of the works
- vi. Co-ordinate and assemble the contract documentation for signature

**Stage 4 deliverables**

- Procurement programme
- Tender/contract conditions
- Contract documentation for signature

**Stage 5 services**

- i. Arrange site handover to the contractor
- ii. Establish construction documentation issue process
- iii. Agree and monitor issue and distribution of construction documentation
- iv. Instruct the contractor on behalf of the client to appoint subcontractors
- v. Conduct and record regular site meetings
- vi. Review, approve and monitor the preparation of the



- construction programme by the contractor
- vii. Regularly monitor performance of the contractor against the construction programme
  - viii. Adjudicate entitlements that arise from charges required to the construction programme
  - ix. Receive, co-ordinate and monitor approval of all contract documentation provided by contractor(s)
  - x. Agree quality assurance procedures and monitor implementation thereof by the other consultants and the contractors
  - xi. Monitor preparation and auditing of the contractor's health and safety plan and approval thereof by the health and safety consultant
  - xii. Monitor preparation of the environmental management plan by the environmental consultant
  - xiii. Establish procedures for monitoring scope and cost variations
  - xiv. Monitor, review, approve and issue certificates
  - xv. Receive, review and adjudicate any contractual claims
  - xvi. Monitor preparation of financial control reports by the other consultants
  - xvii. Prepare and submit progress reports
  - xviii. Co-ordinate, monitor and issue practical completion lists and the certificate of practical completion

#### **Stage 5 deliverables**

- Signed contracts
- Approved construction programme
- Construction documentation
- Payment certificates
- Progress reports
- Record of meetings
- Certificate(s) of practical completion
- Facilitate and expedite receipt of occupation certificates

#### **Stage 6 services**

- i. Manage procurement of operations and maintenance manuals, guarantees and warranties
- ii. Coordinate and monitor rectification defects
- iii. Manage preparation of as-built drawings and documentation
- iv. Manage procurement of outstanding statutory certificates
- v. Monitor, review and issue payment certificates
- vi. Issue completion certificates
- vii. Manage agreement of final account(s)
- viii. Prepare and present the project close out report

## Stage 6 deliverables

- Completion certificates
- Record of necessary meetings
- Project close-out report

## PART V : SCALE OF FEES FOR STANDARD PROFESSIONAL ENGINEERING SERVICES

**5.1** (1) There are various factors that can determine the scale of fees. For instance; project complexity, monetary value of the works, the duration of the project, the level of risk and responsibility, the level of skills, experience and expertise required, the technology required, any duplication of works, the client requirements and generally the scope of the project.

### Determination of Scale of Fees

(2) A combination of one or more of the aforementioned factors (Clause 5.1 of this Part) could result in a significant adjustment of the scale of fees that is required to fairly compensate the professional engineer and this adjustment factor should be negotiated in good faith by both the client and the professional engineer.

(3) Agreement on any fees should be reached at the time of the engagement of the professional engineer or as soon as possible thereafter, but in all cases prior to the professional engineer rendering services which may be affected by the agreed fees. *The agreement must be documented and be registered by the Board for monitoring of compliance.*

(4) Where the standard professional engineering services required on a project relate to more than one of the disciplines of professional engineering namely agricultural, aerospace, civil, structural, marine, mining, mechanical, electrical and electronic engineering services, a separate fee for the services in each discipline should be agreed.

(5) There are various ways of determining the scale of fees for engineers. These are;

- i. Percentage fee based on the cost of works (standard professional engineering services)
- ii. Fees for additional professional engineering services in addition to fee charged for the standard professional engineering services.
- iii. Time based fees (man-hours or man-months)
- iv. Reimbursable expenses

(6) In a case where the scope of works is uncertain, the fees shall be based on time and reimbursable expenses. In the case where the location, size and nature of the works has been previously defined either through previous investigations that have formed part of the client's normal practise or have been the subject of previous separate

engagements paid for on a time and cost basis, the fees can then be determined using the guideline tariffs that are based on the cost of the works and/or cost of the project. However, in cases where application of tariffs would not be appropriate, then computation of the fees using man-hours would suffice.

**5.2** The professional engineer in performing the standard professional engineering services described in clauses 3.1, 3.2, 3.3, 3.4, 3.5 & 3.6 of Part III shall be paid in accordance with one or a combination of several of the modes of remuneration described above in clause 5.1 (5) of this Part, depending on the different stages/parts of the project.

**Minimum fees payable for Standard Professional Engineering Services**

**5.3** (1) The actual percentage fee that is appropriate will depend on many factors, including general factors applicable to all project types, as outlined in Table 1 below, as well as specific factors applicable to particular project types.

**Payment Depending Upon the Cost of the Works**

**Table 1: General factors influencing fees**

<b>Description of works</b>	<b>Influencing factors</b>	<b>Typical factor the basic fee is multiplied with</b>
Alteration of existing works	Whether major alterations involving extensive assessments and investigations of the existing works which cost has little to do with the cost of works	1.50
Duplication and repetitive work	Whether complete designs can be duplicated and reused for a different project or site but alteration is required on the drawings and/or specifications. In addition, whether elements of a design can be repeated extensively resulting in a substantial reduction in effort or all elements must be designed individually.  <i>Only applicable to design, not supervision.</i>	0.25 to 1.0
Integration with existing works	Whether there is minimal alteration or there is extensive integration with many detailed surveys required to facilitate good integration and involving extensive re-use of the existing works	0.85

Project administration	Whether it is simple administration with few organisations involved or whether many parties are involved with complex administration, many meetings, many interfaces and communications.	1.0 to 1.50
Project complexity	Simple projects where the designs are based on well, established common practises and industry standards (typical projects) or whether complex projects where the works call for the application of new, unusual or untried techniques and systems (extensive works)	1.0 to 1.50
Level of risk, liability and responsibility	Whether the levels are low or high, hazardous undertakings	1.0 to 1.35

(2) The fee to be paid to the professional engineer shall be an amount equal to the product of the total cost of the works or the cost of the project and the percentage determined from the scale of fees set out in Table 2 in the next clause (5.4) and adjusted with the factors as determined in Table 1 above.

Note; *This shall not apply to supervision, which shall be on full fees as calculated using the relevant table.*

**5.4** (1) The minimum fees for standard professional engineering services in the different engineering disciplines pertaining to engineering projects depending on the nature and scope of the projects.

(2) The fee is for the specific cost of works in respect of which the services were rendered on the project excluding the report stage described in clause 3.1 of Part III that is normally reimbursed on a time basis in terms of clause 5.7 of this Part.

**Table 2: Percentage charges based on Cost of Works for professional engineering services for, but not limited to aerospace, marine, mining, civil, structural, mechatronic, mechanical, electrical, electronic and telecommunications, agricultural and chemical engineering.**

Cost of Works in Kshs.	Fees as % of Cost of Works
Up to 10,000,000 and below	12.50
Above 10,000,000 up to 20,000,000	10.0
Above 20,000,000 up to 40,000,000	8.50
Above 40,000,000 up to 80,000,000	7.50
Above 80,000,000 up to 160,000,000	7.00
Above 160,000,000 up to 240,000,00	6.50
Above 240,000,000 up to 320,000,000	6.00
Above 320,000,000 up to 400,000,000	5.50

**Minimum fees for standard professional engineering services pertaining to Engineering Projects.**

Above 400,000,000 up to 480,000,000	5.00
Above 480,000,000 up to 640,000,000	4.80
Above 640,000,000 up to 800,000,000	4.60
Above 800,000,000 up to 1,200,000,000	4.40
Above 1,200,000,000 up to 1,600,000,000	4.30
Above 1,600,000,000 up to 2,000,000,000	4.20
Above 2,000,000,000 to 3,000,000,000	3.95
Above 3,000,000,000 up to 4,000,000,000	3.70
Above 4,000,000,000 up to 5,000,000,000	3.55
Above 5,000,000,000 up to 10,000,000,000	3.10
Above 10,000,000,000 up to 15,000,000,000	2.85
Above 15,000,000,000 up to 20,000,000,000	2.67
Above 20,000,000,000 to 25,000,000,000	2.54
Over 25,000,000,000	2.20

*All costs are exclusive of reimbursable expenses*

(3) For standard professional engineering services relating to a description of the works mentioned in the first column of the following table (Table 3), the proportion of the basic fee relating to the specific item calculated in terms of clause 5.4 of this Part shall be multiplied by the category factor mentioned against that description in the second column of Table 3. In case of more than one of the descriptions below applies, the effective factor will typically be the product of the factors involved. These factors do not apply when fees are a lump sum or on a time basis.

**Table 3: Typical factors by which basic fee is multiplied with based on the description of works.**

<b>Description of Works</b>	<b>Typical factor by which basic fee is multiplied with</b>
Alterations to existing works (only applicable to the fees on the portion or section of works affected)	1.50
Water and waste-water treatment works	1.25
Wet services, for domestic hot and cold water drainage pipe work inside buildings	1.25
Water and sanitation in rural areas	1.35
Internal water and drainage for buildings upon specific agreement with the client to render such services	1.25
Rural freeways and dual carriageways, excluding bridges	0.95
Mass concrete foundations and brickwork designed and cladding designed and detailed by the professional engineer (Only applicable to the design portion of the fees on such works)	0.33

Where the bills of quantities are not required from/compiled by the professional engineer and all financial, tender and contractual matters are dealt with by the quantity surveyor or other parties but with input from the professional engineer	0.95
Duplication of works (Only applicable to the design portion of the fees on duplicated works and shall not apply to supervision which shall be based on full fees as calculated using the relevant table)	0.25 to 1.0

Note: This shall apply to all other works except the following as listed below.

(4) For building services, where the building units are essentially repeats of one design for which one type of drawings and specification can be re-used without alterations or with only minor modification such as in multi-story buildings where floors repeat, in housing estates whether detached/or terraced or block of flats, the fees shall reduce in accordance with the table below;

**Table 4: Typical factor for Repetitive Work/Duplication of Works applied in design in buildings including structural and MEP.**

	Number of units	Factors
1	The first one unit	1.0 per unit
2	The next 4 units	0.6 per unit
3	The next 5 units	0.35 per unit
4	The next 15 units	0.30 per unit
5	The remainder	0.25 per unit

NB; This shall not apply to supervision which shall be on full fees as calculated using the relevant table

**5.5** (1) The professional fee for professional services by various engineering disciplines in the different engineering disciplines pertaining to engineering projects will depend on the nature and scope of the projects as guided by Tables 5,6,7,8,9,10,11 and 12.

**Professional fee based on percentage charges based on the cost of the project by various engineering disciplines**

**Table 5: Typical percentage charges in building projects (in a consortium, where the engineer is not the lead consultant)-This excludes internal fit-outs/fittings, extensive civil works and large-scale housing estates.**

Professional engineering service(s)	% charge on the cost of the project
Civil	1.0% to 1.5%

Structural	3.5% to 4.5%
Electrical	2.0% to 2.5%
Mechanical	2.0% to 2.5%

**NB:** With regard to electrical and mechanical services, when the interior fit-out (partitioning, office fit outs, data centers and other telecommunications and ICT facilities etc.) is required as part of the services, refer to clause 5.4 (3) of this Part whereby the typical factors of Table 3 shall apply. The percentage shall be a minimum of 4.0% of the Cost of Works.

**Table 6: Typical percentage charges in projects that are predominantly structural engineering in nature and scope (structural engineer as the lead consultant)**

Professional engineering service(s)	% charge on the cost of the project
Structural	7.0 % to 10.0%
Civil	2.5% to 3.5%
Electrical	2.0% to 2.5%
Mechanical	2.0% to 2.5%

**Table 7: Percentage charges in projects that are predominantly mechanical engineering in nature and scope (mechanical/mechatronics as the lead consultant)**

Professional engineering service(s)	% charge on the cost of the project
Mechanical/mechatronics	7.0% to 10.0%
Structural	2.0% to 2.5%
Electrical/electronics	3.5% to 4.5%
Civil	2.0% to 2.5%

**Table 8: Percentage charges in projects that are predominantly civil engineering in nature and scope (civil engineers as the lead consultant)**

Professional engineering service(s)	% charge on the cost of the project
Civil	7.0% to 10.0%
Structural	2.0% to 3.0%

Electrical	2.0% to 2.5%
Mechanical	2.0% to 2.5%

**Table 9: Percentage charges in projects that are predominantly electrical, electronic and telecommunications engineering in nature and scope (electrical engineer as the lead consultant)**

Professional engineering service(s)	% charge on the cost of the project
Electrical	7.0% to 10.0%
Structural	2.0% to 2.5%
Civil	2.0% to 2.5 %
Mechanical	2.5% to 3.5%

**Table 10: Percentage charges in projects that are predominantly agricultural and chemical engineering in nature and scope (agricultural/chemical engineer as the lead consultant)**

Professional engineering service(s)	% charge on the cost of the project
Agricultural and chemical	7.0% to 10.0%
Civil and Structural	2.0% to 2.5 %
Mechanical	2.5% to 3.5%
Electrical	2.5% to 3.5%

**Table 11: Percentage charges in projects that are predominantly marine engineering in nature and scope (marine engineer as the lead consultant)**

Professional engineering service(s)	% charge on the cost of the project
Marine	7.0% to 10.0%
Civil and Structural	2.5% to 3.5 %
Mechanical	2.5% to 3.5%
Electrical	2.5% to 3.5%

**Table 12: Percentage charges in projects that are predominantly mining engineering in nature and scope (mining engineer as the lead consultant)**



Professional engineering service(s)	% charge on the cost of the project
Mining	7.0% to 10.0%
Civil and Structural	2.5% to 3.5 %
Mechanical	2.5% to 3.5%
Electrical	2.5% to 3.5%

**Table 13: Percentage charges in projects that are predominantly aerospace engineering in nature and scope (aerospace engineer as the lead consultant)**

Professional engineering service(s)	% charge on the cost of the project
Aerospace	7.0% to 10.0%
Mechanical	2.5% to 3.5%
Civil and Structural	2.5% to 3.5%
Electrical	2.5% to 3.5%

- 5.6** (1) The basic fee for standard services over the various stages of the services shall be proportioned using typical percentage as shown under Table 14 below. The actual percentage used should be adjusted for individual projects through negotiation and depending on the work involved in each stage, the value that can be added in each stage and any commercial considerations that may be applicable.

**Services Provided Partially or In Stages**

**Table 14: The minimum fees payable with regard to the stage(s) of work (Applicable for all disciplines of professional engineering services)**

Item	Stage of Work	Fee Payable
1	Preliminary Design Stage	30%
2	Detailed Design Stage	45%
3	Tender Stage	5%
4	Construction and Installation	20%

(2) Interim payments shall be calculated on the cost of works (or any portion thereof) as designed by the professional engineer or Cost of the Project and before allowing for the modifications required by the client to be made to the designs after his/her approval.

(3) For the purpose of calculating fees for the interim payments for Design Stage services, the Cost of Works or Cost of the Project shall be the consultant's reasonable estimate of the value of the works designed

less contingency sums and provisional sums as described in the definitions.

(4) Where not all the stages of the standard professional engineering services are provided for by the professional engineer, the fee is, subject to clause 5.2 calculated as a percentage of the total fee calculated in terms of this clause, which percentage is the sum of the percentage points appropriate to each stage as set out in the Table 15 below against those stages of the services provided by the professional engineer, typically plus 5 % to 10% of the total fee to allow the engineer to become familiar with the project.

**Table 15: The minimum fees payable with regard to the stage(s) of work where the professional engineer is required to design and document but services don't include construction supervision**

Item	Stage of Work	Fee Payable (percentage of the cost apportioned to the particular stage)
1	Preliminary Design Stage	60%
2	Detailed Design Stage	40%

Note: When the professional engineer will be required to implement the project, then the supervision of works will be time-based.

**5.7** (1) Time based fees are all-inclusive fees charged by the professional engineer (excluding Value Added Tax), incorporating allowances for overhead charges incurred by the professional engineer as part of normal business operations, the payroll costs of all technical staff including management, payments to administrative, clerical and secretarial staff used to support professional and technical staff and all other costs incurred by the business in general and not on a specific project only.

**Time Based fees**

(2) Time based fees shall be based on hourly rates, daily rates or monthly rate depending on the appropriate rates as provided for the following categories of engineers given below;

E1 –Specialist; A recognised authority and/or top practitioner in a field of major importance and generally exercises authority over a group of highly qualified professionals engaged in complex engineering applications. Registered as a Consulting Engineer with the Board.

E2 – Principal; A partner, sole proprietor, a director or a member who jointly or with other partners bears the risks of the business. Provides strategic guidance in planning and executing a project and has authority over several related professional groups in different fields. Registered as a Consulting Engineer with the Board.

E3- Senior Engineer; Has adequate expertise and relevant experience performing work of engineering nature (at least 5 years as a registered professional engineer). Successfully managed large projects, responsible for a large site team. Has exercised sound financial control on projects. Has undertaken budget planning and have full awareness of professional liability and role. Has demonstrated that they can successfully manage a team. They have undertaken courses to improve their management ability. They are technical leaders. Innovative in design. Have established a quality assurance system. Are able to prepare technical proposals for bids. Registered with the Board as a professional engineer or consulting engineer

E4-Engineer; Demonstrate that they are able to take responsibility for project work with limited/minimal supervision. Demonstrate that they have been responsible for varied engineering assignments of limited scope and complexity, for instance, project managers on a small project or responsible for a section in a larger project. Registered with the Board as a professional engineer.

E5- Graduate Engineer; University graduate registered with the Board as a graduate engineer.

(3) The applicable time based fee are given under Table 14 below and shall be applied as follows:

- i. *Hourly rates are applicable for short-term assignments with a total input not exceeding 40 hrs (one week), daily rates are applicable for assignments with a total input between 40 hrs and 200 hrs and monthly rates are applicable for assignments exceeding 200hrs.*
- ii. *The lower range within each band should normally be applied for less complex projects and the specific rate to apply is to be discussed and agreed between the client and the professional engineer depending on the nature/complexity of the project.*

**Table 14: Engineers' Time Charge Rates**

Categories of Engineers/Positions	Rates in Kshs.		
	HOURLY	DAILY	MONTHLY
E1	12,500-16,000	75,000-96,000	1,250,000-1,600,000
E2	10,500-12,500	63,000-75,000	1,050,000-1,250,000
E3	8,500-10,500	51,000-63,000	850,000-1,050,000
E4	7,000-8,500	42,000-51,000	700,000-850,000
E5	4,500-7,000	27,000-42,000	450,000-700,000

*Note: The fees are recommended by the Board and will be reviewed according to the Consumer Price Index, but all procurement fees to be adopted by the financing party*

**PART VI : SCALE OF FEES FOR ADDITIONAL PROFESSIONAL ENGINEERING SERVICES**

- 6.1** (1) The professional engineer who has rendered any of the additional professional services described in clauses 4.1 and 4.2 of Part IV shall be paid in accordance with the following scale of fees:
- a) the input of partners and consultants shall be paid for at the hourly rate or rates agreed between the client and the professional engineer.
  - b) the time spent by partners, consultants, technical and supporting staff in travelling in connection with Additional Professional Engineering Services shall be paid for as provided in clause 7.1(1)&2 Part VII;
  - c) professional engineer shall not be entitled to any payment in respect of time spent by secretarial staff or by staff engaged on general accountancy or administration duties in the professional engineer's office;
- 6.2** If the professional engineer has obtained the advice of a specialist under clause 4.2 (i) of Part IV, the professional engineer shall be paid by the client a co-ordinating fee of 5% of the specialist fee paid to the specialist by the client provided that such co-ordinating fee shall not be applicable when the method of payment for the professional engineering services rendered is agreed between the professional engineer and the client to be as described in clause 5.1(5).

**Determination of Payment for additional professional engineering services**

## **PART VII : OTHER PAYMENTS**

**7.1** (1) Minor disbursements shall be charged at a minimum 8% of the professional fees. They may include;

- Local communication cost (phone, cell phone)
- Long distance phone expenses
- Routine production of drawings and documents
- Local travel expenses (up to 25km from the office)
- Courier and messenger services
- Standard software and computer costs
- Office supplies

(2) Other disbursements shall be charged at a minimum of cost plus 10%. These may include;

- Travel beyond the local area by appropriate means
- Living expenses for personnel engaged in the project
- Project-related advertising costs.
- Specialized project specific computer software and/or services
- Use of specialized equipment
- Testing services
- Approvals, permits, licenses and specific tasks applied to fees
- Project-specific insurance if required by the client
- Any other third party expenses paid by the consultant on the client's behalf
- Tender documents and other non-routine documents.

(3) Sub consultant invoices shall be charged at cost plus 5%.

(4) The client and the professional engineer should review the projected expenses prior to the start of the project and agree on the applicable disbursements category and reimbursement method.

**7.2** (1) The following shall be charges to be made to the professional engineer for bills of quantities in building works:

- i. Taking out and preparing bills of quantities
  - i. New works-2.5 % of the cost of the works
  - ii. Alternative works- 3.5 % of the cost of the works
- ii. Measuring and making up accounts of variations upon contracts, including pricing and agreeing totals with contractors/subcontractors
  - i. 3 % of the gross amount of addition
  - ii. 1.5 % of the gross amount of omission less the total of the provisional sums omitted or work omitted as a whole.
- iii. Measuring from drawings and specifications and preparing

**Charges for Disbursements (Reimbursable expenses)**

**Preparation of Bills of Quantities in Building Works**

bills of quantities of labour only or materials only the fee shall be double the forgoing rates.

- iv. Pricing of bills of quantities- 0.5 % of the cost of works.
- v. Preparing approximate quantities and estimating upon the same- 0.5 % of the cost of the works.
- vi. Surveying work in progress, taking particulars and reporting for interim payments;- 0.5 % upon each valuation less the amount of any previous valuations upon which fees shall have been paid.
- vii. Taking particulars on site and writing specifications for works of alteration or repair:- 7.5 % of the cost of works.
- viii. Measuring from completed works and preparing bills of quantities;- 3 % of the cost of works.
- ix. Preparing a full cost analysis 0.5 % of the cost of works.
- x. Preparing and giving information to another professional/consultant to enable him/her incorporate the engineering services quantities in the main bills of quantities:- 1.5 % of the cost of works.

**7.3** If after the completion by the professional engineer of his professional engineering services under clause 3.1 of Part III, whichever is applicable, any design whether completed or in progress or any specifications, drawings or other documents prepared in whole or in part by the professional engineer is required to be modified or revised by reason of instructions received by the professional engineer from the client, or by reason of circumstances which could not reasonably have been foreseen by the professional engineer, the professional engineer shall be paid ;

**Payment for  
Alteration or  
Modification of  
Design**

- i. an additional fees by the client as provided in clause 5.4.(2) of Part V calculated in accordance with clause 5.4.(3) of Part V, and
- ii. any appropriate reimbursements provided in clauses 7.1.(1) and 7.1.(2) of this Part for making any necessary modification or revision and for any consequential reproduction of documents.

**7.4** (1) In addition to any other payments to be made by the client to the professional engineer under Part IV, the professional engineer shall be reimbursed for;-

**Payment for Site  
Supervision**

- a. all payroll costs incurred by the professional engineer on his own staff seconded to the site in the discharge of the professional engineer's responsibilities under clauses 4.3 of Part IV using the charges rates given in the Table 14; and
- b. reimbursed for the expenses made by the professional engineer to site staff specially recruited by the professional engineer in the discharge of his responsibilities under clause 4.3 of Part IV using the charge rates given in the Table 14 and for all other

expenditures actually incurred by the professional engineer in connection with the selection, engagement and employment of the site staff.

(2) The professional engineer shall also in all cases be reimbursed for the actual cost of providing such site office accommodation, furniture, telephones, equipment and transport as shall be reasonably necessary for the use of the professional engineer's site staff, and for the actual running costs of the site accommodation and other facilities including those of any stationery, telephone calls, telegrams, telex, facsimile, courier service and postage unless they are provided by the client.

**7.5** If at any time before completion of the works, any part of the works or any materials, plant or equipment whether incorporated in the works or not are damaged or destroyed, resulting in additional work being required by the client to be carried out by the professional engineer, then the professional engineer shall be paid by the client on a time basis for the additional works together with any reimbursements as provided in clause 4.1 of Part IV.

**Payment When Works Are Damaged Or Destroyed**

**7.6** (1) In the event of a termination or suspension by the client of the works or of the professional engineer's services (unless in the case of the latter where the termination or suspension had been occasioned by the default or negligence of the professional engineer), the professional engineer shall be paid the following sums (less the amount of payments previously made to the consulting engineer):

**Payment Following Termination or Suspension by the Client**

- a) a sum deducible from the stage of professional services completed at the time of termination or suspension with regard to clause 5.6 (1) of Part V.
- b) a disruption charge equal to one sixth of the difference between the sum, which would have been payable to the professional engineer under clauses 5.4.(2) and 5.4.(3) of Part V depending on nature of works (engineering discipline), whichever may be applicable (as if the full scope of professional services has been completed by the professional engineer under the terms of his engagement), but for the termination or suspension, and the sum payable under clause 7.6.1 (a) of this Part, provided that the professional services have advanced beyond the preliminary stage; and
  - a. amounts due to the professional engineer under any other clause of both Parts IV and V.

(2) If the professional engineer is required to recommence his professional services for the works suspended by the client, the professional engineer shall be paid for the performance of his professional services the sum payable to the professional engineer clause 5.4 (2) and/or clause 5.4 (3) of Part V, whichever may be applicable, the payments under clauses 7.6.1 (a) and (c) of this Part being treated as payments on account, provided that the professional

engineer shall retain as an additional payment the disruption charge referred to in clause 7.6.1 of this Part.

(3) If tendering for the works (or any part of them) is or is likely to be delayed for more than nine months or postponed at the request of the client, then for the purpose of computing the fee to be paid to the professional engineer for the performance of his professional services the cost of the works applicable shall be the estimated cost of the works (or any relevant part of them) at the time of completion of the design.

(4) If the works are suspended or postponed after tenders have been called, the fees payable to the professional engineer shall be as follows:

- a. for the inception stage, preliminary design stage, detailed design stage and tender stage, the fees shall be computed on the lowest acceptable tender provided that if no acceptable tender is received then the fees shall be computed on the estimate made by the professional engineer of the cost of the works at the date of calling for tenders;
- b. if the works subsequently resumed and the tenders recalled, the total fees payable to the professional engineer, inclusive of the fees paid under clause 7.6.2 of this Part, shall be as follows:
  - i. for the inception stage, preliminary design stage, detailed design stage and tender stage, the fees shall be as computed in clause 7.6.2 of this Part; and
  - ii. for the contract administration and construction stage, the fees shall be computed on the final contract sum of the works at the time of completion of the works.

(5) If the professional engineer is required to perform any additional services in connection with the resumption of his professional services in accordance with clause 7.2 of this Part, the professional engineer shall be paid for the performance of the additional professional services on a time basis with regard to clause 4.2 of Part IV and also any appropriate reimbursements in accordance with clause 7.1 of this Part.

**7.7** If there is a termination by the professional engineer of his professional services (unless the termination had been occasioned by the default or negligence of the professional engineer), the professional engineer shall be entitled to be paid the sums specified in clauses 7.6.1 (a) and (c) of this Part less the amount of payments previously made to the professional engineer.

**Payment Following Termination by The Professional Engineer**



## Miscellaneous Provisions

- 8 (1) The scale of fees is subject to periodic review as may be determined by the Board, preferably after 3 years in line with international best practises, regional agreements among other applicable factors. Adjustments on time-based fees will be done annually based on the prevailing Consumer Price Index (CPI) as published by the Kenya National Bureau of Statistics.

**Review of the scale of fees**

Made:

Eng. Erastus K. Mwongera, CE, FIEK, CBS  
*Chairman,  
Engineers Board of Kenya*

Approved:

Mr. James W. Macharia, EGH  
*Cabinet Secretary,*

*Ministry of Transport, Infrastructure, Housing, Urban  
Development & Public Works*