

Appendix A

PROFESSIONAL FEES IN RESPECT OF AN ENGINEER'S APPOINTMENT (ALL DISCIPLINES)
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**National Department of Public Works
Scope of Engineering Services and Tariff of Fees
for Persons Registered in terms of the
Engineering Profession Act, 2000 (Act No. 46 of 2000)**

1 April 2022

2021 NDPW - Scope of Engineering Services and Tariff of Fees

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The commencement date of this document

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1 April 2022

2021 National Department of Public Works: Scope of Engineering Services and Tariff of Fees for Registered Professionals

INDEX

1.	PREAMBLE.....	3
2.	GENERAL PROVISIONS.....	3
2.1	Generality of terms.....	3
2.2	Definitions.....	3
2.3	Short Title.....	4
3.	SCOPE OF SERVICES.....	4
3.1	Planning, Studies, Investigations and Assessments Reports.....	4
3.2	Normal Services.....	5
3.2.1	Stage 1 - Inception.....	5
3.2.2	Stage 2 - Preliminary Design: Concept Viability.....	6
3.2.3	Stage 3 - Detail Design.....	6
3.2.4	Stage 4 - Documentation and Procurement.....	7
3.2.5	Stage 5 - Contract Administration and Inspection.....	8
3.2.6	Stage 6 - Close-Out.....	9
3.2.7	Targeted (Preferential) Procurement.....	9
3.3	Additional Services.....	9
3.3.1	Additional Services pertaining to all Stages of the Project.....	9
3.3.2	Construction Monitoring.....	10
3.3.3	Occupational Health and Safety Act 1993 (Act No. 85 of 1993).....	11
3.3.4	Quality Assurance System.....	11
3.3.5	Lead Consulting Engineer.....	11
3.3.6	Principal agent of the Client.....	12
3.3.7	Mediation, Arbitration and Litigation proceedings and similar Services.....	12
4.	TARIFF OF FEES.....	12
4.1	Application of Tariff of Fees.....	12
4.2	Fees for Normal Services.....	14
4.2.1	Civil and Structural Engineering Services pertaining to Engineering Projects.....	14
4.2.2	Civil Engineering Services pertaining to Multi-disciplinary Projects.....	16
4.2.3	Structural Engineering Services pertaining to Multi-disciplinary Projects.....	17
4.2.4	Mechanical Engineering Services pertaining to Engineering Projects.....	18
4.2.5	Mechanical Engineering Services pertaining to Multi-disciplinary Projects.....	19
4.2.6	Electrical and Electronic Engineering Services pertaining to Engineering Projects.....	20
4.2.7	Electrical and Electronic Engineering Services pertaining to Multi-disciplinary Projects.....	21
4.2.8	Services provided partially or in stages.....	22
4.2.9	Cancellation or Abandonment.....	23
4.3	Fees for Additional Services.....	23
4.4	Time Based Fees.....	23
4.5	Expenses and Costs.....	25

1. PREAMBLE

The **services** to be provided by the **consulting engineer** and the corresponding remuneration have been set out herein for projects implemented by or on behalf of the National Department of Public Works and Infrastructure.

The Scope of Services and Tariff of Fees described herein are generally applicable and are referred to in the **agreement**. Specific requirements with regards to the Scope of Services and the Tariff of Fees shall be set out in the **agreement** and should any requirement of the **agreement** be in conflict with the requirement of this document, the requirement of the Agreement shall prevail.

Any amount mentioned in or fee calculated in terms of this document is exclusive of Value Added Tax.

This document allows for four different methods of remuneration namely:

- (1) Fees for Normal Services (percentage fee based on the cost of works),
- (2) Fees for Additional Services (fees for services additional to those provided for in the Normal Services),
- (3) Time based fees and
- (4) Expenses and costs.

Words or expressions in bold font are defined in clause 2.2.

2. GENERAL PROVISIONS

2.1 Generality of Terms

In this document, except where the context otherwise requires or indicates:

- (1) the masculine includes the feminine,
- (2) the singular includes the plural, and
- (3) any reference to a natural person includes a juristic person.

2.2 Definitions

In this Schedule, any word or expression defined in **the Act** has that meaning, unless the context otherwise indicates:

- (1) **Agreement** means the Letter of Appointment/Acceptance or the Professional Services Contract.
- (2) **Client** means any juristic person or organ of the State engaging a **consulting engineer** for services on a **project**.
- (3) **Construction monitoring** means the process of administering the construction contract and over-seeing and/or inspecting the works, to the extent of the **consulting engineer's** engagement, for the purpose of verification that the works are being completed in accordance with the requirements of the contract that the designs are being correctly interpreted and that appropriate construction techniques are being utilized. **Construction monitoring**, to whatever extent, shall not diminish the **contractor's** responsibility for executing and completing the works in accordance with his contract.
- (4) **Consulting engineer** for purposes of these rules only, means any professional registered in terms of **the Act**, or a juristic person who employs such professional, engaged by a **client** on a **project**.
- (5) **Contractor** means any person or a juristic person under contract to a **client** to perform the **works** or part of it on a **project**, including a subcontractor under contract to such **contractor**.
- (6) **Cost of the works** means the total amount, exclusive of value added tax, certified or which would normally be certifiable for payment to **contractor(s)** (irrespective of who actually carries

- out the works) in respect of the **works** designed, specified or administered by the **consulting engineer**, before deduction of liquidated damages or penalties, including –
- a *pro rata* portion of all preliminary and general items applicable to the **works** and
 - the costs of new materials, goods or equipment, or a fair evaluation, 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 **consulting engineer**.
- (7) **Electronic Engineering Services** means **services** related to the provision of electronic systems and detailing the terminations, signals and interconnections of electronic components as distinct from conventional electrical HV, MV and LV systems and related reticulation.
 - (8) **Engineering Project** means a project of which the scope comprises mainly engineering work of one discipline only and all financial and administrative matters are dealt with by the **consulting engineer** or where the **consulting engineer** will act as **principal agent** where other disciplines are also involved.
 - (9) **Multi-disciplinary Project** means a project comprising building work, together with its associated engineering work, where the engineer is subject to the authority of another professional acting as the Principal Agent while financial and administrative matters are dealt with by another professional.
 - (10) **Normal services** means the **services** set out in clause 3.2.
 - (11) **Principal Agent** means the Professional Service Provider appointed as such.
 - (12) **Project** means any total scheme envisaged by a **client**, including all the **works** and **services** concerned.
 - (13) **Services** means the services contemplated in clause 3 on a **project** for which a **consulting engineer** is engaged.
 - (14) **Stage** means a stage of **normal services** set out in clause 3.2.
 - (15) **The Act** means the Engineering Profession Act, 2000 (Act No. 46 of 2000).
 - (16) **Total annual cost of employment** means the total annual cost of employment as defined in clause 4.4(4).
 - (17) **Works** means the activities on a **project** for which **contractor(s)** are under contract to the **client** to perform or are intended to be performed, including the supply of goods and equipment.

2.3 Short Title

This document is called the “2021 NDPW – Scope of Engineering Services and Tariff of Fees”.

3. SCOPE OF SERVICES

3.1 Planning, Studies, Investigations and Assessments Reports

These services, as indicated below, relate to carrying out studies and investigations as well as the preparation and submission of reports embodying preliminary proposals or initial feasibility studies and will normally be remunerated on a time and cost basis.

- (1) Consultation with the **client** or **client's** authorized representative.
- (2) Inspection of the site of the **project**.
- (3) Preliminary investigation, route location, planning and a level of design appropriate to allow decisions on feasibility.
- (4) Consultation with authorities having rights or powers of sanction as well as consultation with the public and stakeholder groups.
- (5) Advice to the **client** as to regulatory and statutory requirements, including environmental management and the need for surveys, analyses, tests and site or other investigations, as well as approvals, where such are required for the completion of the report, and arranging for these to be carried out at the **client's** expense.
- (6) Searching for, obtaining, investigating and collating available data, drawings and plans relating to the **works**.
- (7) Investigating financial and economic implications relating to the proposals, feasibility studies and/or option analysis and recommendations.

- (8) Clause 3.1(7) does not normally apply to civil and structural **services** on **multi-disciplinary projects**, except as far as the interpretation of cost figures for civil and structural **services** are concerned.

Deliverables:

- Submission of a report for consideration by the **client**, including all or any of the above, with emphasis on the following:
 - Collation of information.
 - Reports on technical and financial feasibility and related implications.
 - List of consents and approvals.
 - Schedule of required surveys, tests, analyses, site and other investigations.
 - Comparison of **project** options, including life cycle costing and recommendations where required.

3.2 Normal Services

These services are applicable to projects where the nature, form and function of the facility has been defined through previous investigations and reports and the engineering services are required to take the **project** through to successful completion of construction.

3.2.1 Stage 1 – Inception

(Defined as: Establish **client** requirements and preferences, assess user needs and options, appointment of necessary consultants, and establish the **project** brief including **project** objectives, priorities, constraints, assumptions aspirations and strategies.)

- (1) Assist in developing a clear **project** brief.
- (2) Attend **project** initiation meetings.
- (3) Advise on procurement policy for the **project**.
- (4) Advise on the rights, constraints, consents and approvals.
- (5) Define the scope of **services** and scope of work required.
- (6) Conclude the terms of the **agreement** with the **client**.
- (7) Inspect the site and advise on the necessary surveys, analyses, tests and site or other investigations where such information will be required for **Stage 2** including the availability and location of infrastructure and services.
- (8) Determine the availability of data, drawings and plans relating to the **project**.
- (9) Advise on criteria that could influence the **project** life cycle cost significantly.
- (10) Provide necessary information within the agreed scope of the **project** to other consultants involved.

Deliverables:

- Submission of a report for consideration by the **client**, including all or any of the above, with emphasis on the following:
 - Agreed scope of **services** and scope of work.
 - Signed **agreement**.
 - Report on **project**, site and functional requirements.
 - Schedule of required surveys, tests, analyses, site and other investigations.
 - Schedule of consents and approvals within related timeframes.

3.2.2 Stage 2 – Preliminary Design: Concept and Viability

(Defined as: Prepare and finalise the **project** concept in accordance with the brief, including project scope, scale, character, form and function, plus preliminary programme and viability study/assessment of the **project**.)

Following the **client's** instructions to proceed with the development of preliminary proposals or the basic planning of the **project**, comprising all or any of the following:

- (1) Agree documentation programme with principal consultant and other consultants involved.
- (2) Attend design and consultants' meetings.
- (3) Establish the concept design criteria.
- (4) Prepare initial concept design and related documentation.
- (5) Advice to the **client** as to the regulatory and statutory requirements, including environmental management and the need for any further surveys, analyses, tests and site or other investigations, as well as approvals, which may be required and arranging for these to be carried out at the **client's** expense. This advice is to be presented by the **consulting engineer** based on the interpretation of the results of these tests and investigations including geotechnical and/or foundation investigations, in a report containing recommendations to be applied to and incorporated in designs. The **consulting engineer** will also take the environmental management plan into account for the full life cycle of the **project**.
- (6) Preparation and submission to the **client** of any preliminary plans, drawings and estimates required for seeking the approval of statutory authorities and the **client**.
- (7) Refine and assess the concept design to ensure conformance with all regulatory requirements and consents.
- (8) Establish access, utilities, services and connections required for the design of the **project**.
- (9) Coordinate design interfaces with other consultants involved.
- (10) Prepare process designs (where required), preliminary designs including preliminary drawings and plans, and related documentation for approval by authorities and **client**, including costing of the aforementioned.
- (11) Provide cost estimates and life cycle costs including financial implications and preliminary programmes.
- (12) Liaise, co-operate and provide necessary information to the **client**, principal consultant and other consultants involved.

Deliverables:

- Submission of a report for consideration by the **client**, including all or any of the above, with emphasis on the following:
 - Concept design report.
 - Schedule of required surveys, tests and other investigations and related reports.
 - Process design report.
 - Preliminary design report.
 - Cost estimates, concept and viability reports which include all or any of the above.

3.2.3 Stage 3 – Detail Design

(Defined as: Finalise the design, outline specifications, cost plan, financial viability and programme for the **project**.)

- (1) Review documentation programme with principal consultant and other consultants involved.
- (2) Attend design and consultants' meetings.
- (3) Incorporate **client's** and authorities' detailed requirements into the design.
- (4) Incorporate other consultant's designs and requirements into the design.
- (5) Prepare design development drawings including draft technical details and specifications.
- (6) Prepare detail designs, and design drawings including draft technical details and specifications:
 - In the case of reinforced concrete **works**, drawings must include bending schedules.
 - In the case of structural steel **works**, drawings and details provided by the **consulting engineer** must include full information, dimensions and specifications on all sections, connections, plates, fasteners, bolts and welding, to such an extent that no further designs by **contractor(s)** or other parties are required. The **consulting engineer** need not provide shop drawings for the manufacture of the structural steel **works**.

- (7) Review and evaluate design, specifications and estimates of the **cost of works** in order to finalise the detail design **stage**.
- (8) Advice to the **client** on any alternative designs and tenders, but excluding detailed inspection, reviewing and checking of alternative designs and drawings not prepared by the **consulting engineer** and submitted by any **contractor** or potential **contractor**.
- (9) Liaise, co-operate and provide necessary information to the principal consultant and other consultants involved.
- (10) Submit the necessary design documentation to local and other authorities for approval and obtain said approval or alternatively for record purposes where approval is not required by Building Regulations.
- (11) Accommodate services design.

Deliverables:

- Submission of a report for consideration by the **client**, including all or any of the above, with emphasis on the following:
 - Detail design drawings.
 - Outline specifications.
 - Local and other authority submission drawings, reports and approvals.
 - Detailed estimates of construction costs.

3.2.4 Stage 4 – Documentation and Procurement

(Defined as: Prepare procurement and construction documentation, confirm and implement the procurement strategies and procedures for effective and timeous procurement of necessary resources for execution of the **project**.)

- (1) Attend design and consultants' meetings.
- (2) Prepare and finalise specifications, schedule of quantities and preambles for the **works**.
- (3) Submission of priced document with a detailed estimate, capital and life cycle costs, financial implications and programmes for implementation of the **works**.
- (4) Reaffirm detailed cost estimates and adjust designs and documents if necessary to remain within approved budget.
- (5) Prepare and finalise the procurement strategy for **contractor(s)** or assist the principal consultant where relevant.
- (6) Prepare documentation for **contractor** procurement.
- (7) Assist in calling for tenders/bids and/or negotiation of prices and/or assist the principal consultant where relevant.
- (8) Liaise, co-operate and provide necessary information to the principal consultant and the other consultants as required.
- (9) Assist in the evaluation of tenders/bids.
- (10) Assist with the preparation of contract documentation for signature.
- (11) Assess samples and products for compliance and design intent.
- (12) Advice to the **client** on any alternative designs and tenders, but excluding detailed inspection, reviewing and checking of alternative designs and drawings not prepared by the **consulting engineer** and submitted by any **contractor** or potential **contractor**.
- (13) Placing orders for the **works** on behalf of the **client**.

Deliverables:

- Submission of a report for consideration by the **client**, including all or any of the above, with emphasis on the following:
 - Finalised Specifications.
 - Service co-ordination.
 - Detail design drawings.
 - Tender/bid documentation.
 - Tender/bid evaluation and report.
 - Tender/bid recommendation.
 - Priced contract documentation.

3.2.5 Stage 5 – Contract Administration and Inspection

(Defined as: Manage, administer and monitor the construction contracts and processes including preparation and coordination of procedures and documentation to facilitate practical completion of the **works**.)

- (1) Attend site handover.
- (2) Issue construction documentation in accordance with the documentation schedule including, in the case of structural engineering, reinforcing bending schedules and detailing and specifications of structural steel sections and connections.
- (3) Execute the contract administration in terms of the contract between the **client** and the **contractor**.
- (4) Prepare schedules of predicted cash flow.
- (5) Prepare pro-active estimates of proposed variations for **client** decision making.
- (6) Preparation of and issuing variation orders on behalf of and after consultation with the **client**.
- (7) Attend regular site, technical and progress meetings.
- (8) Inspect **works** for conformity to contract documentation.
- (9) Adjudicate and resolve financial claims by **contractor(s)**.
- (10) Assist in the resolution of contractual claims by the **contractor**.
- (11) Assist the **client** in the resolution of disputes or differences that may arise between the **client** and the **contractor**, except mediation, arbitration and/or litigation.
- (12) Establish and maintain a financial control system.
- (13) Clarify details and descriptions during construction as required.
- (14) Assist and/or prepare valuations for payment certificates to be issued by the **principal agent**.
- (15) Witness and review of all tests and mock ups carried out both on and off site.
- (16) Check and approve **contractor** drawings for design intent.
- (17) Update and issue drawings and drawings register.
- (18) Issue contract instructions as and when required.
- (19) Agreeing and verifying final quantities during construction with the **contractor**.
- (20) Review and comment on operation and maintenance manuals, guarantee certificates and warranties.
- (21) Inspect the **works** and issue practical completion certificates and defects lists.
- (22) Arranging for the delivery of all test certificates, including the Electrical Certificate of Compliance, statutory and other approvals, as built drawings and operating manuals.
- (23) Advice to the **client** on any further alternative designs, but excluding detailed inspection, reviewing and checking of alternative designs and drawings not prepared by the **consulting engineer** and submitted by any **contractor**.

Deliverables:

- Submission of a report for consideration by the **client**, including all or any of the above, with emphasis on the following:
 - Schedules of predicted cash flow.
 - Construction documentation.
 - Register of drawings issued.
 - Estimates for proposed variations.
 - Contract instructions.
 - Financial control reports.
 - Valuations for payment certificates.
 - Progressive and draft final account(s).
 - Practical completion and defects list.
 - All statutory certificates and certificate of compliance as required by the local authorities and by the department.

Where a quantity surveyor is included in the project team in Multi-Disciplinary works, items 4, 5, 9 and 12 will not be required from the engineer.

3.2.6 Stage 6 – Close-Out

(Defined as: Fulfil and complete the **project** close-out including necessary documentation to facilitate effective completion, handover and operation of the **project**).

- (1) Inspect and verify the rectification of defects.
- (2) Prepare comments for relevant payment valuations and completion certificates.
- (3) Prepare and/or procure operations and maintenance manuals, guarantees and warranties.
- (4) Prepare and/or procure as-built drawings and documentation.
- (5) Agreeing final quantities with **contractor(s)**, compiling final accounts and issuing final payment certificates.

Deliverables:

- Valuations for payment certificates.
- Works and final completion lists.
- Operations and maintenance manuals, guarantees and warranties.
- As-built drawings and documentation.
- Final accounts.

3.2.7 Targeted (Preferential) Procurement

Should the **client** during any **stage** of the **project**, require the **consulting engineer** to perform work or **services** pertaining to targeted procurement, such work and or **services** could entail, but are not limited to, any or all of the following:

- (1) incorporation of any targeted (preferential) participation goals;
- (2) the measuring of key participation indicators;
- (3) the selection, appointment and administration of participation and;
- (4) auditing compliance to the above by any **contractor s** and/or professional consultant.

3.3 Additional Services

The following **services** are additional to the **normal services** provided by the **consulting engineer**, unless specifically agreed otherwise between the **consulting engineer** and the **client**. The **agreement** on the scope of **services** and remuneration shall be in writing and should, if at all possible, be concluded before such **services** are rendered.

3.3.1 Additional Services pertaining to all Stages of the Project

- (1) Enquiries not directly concerned with the **works** and its subsequent utilisation.
- (2) Valuation for purchase, sale or leasing of plant, equipment, material, systems, land or buildings or arranging for such valuation.
- (3) Making arrangements for way leaves, servitudes or expropriations.
- (4) Negotiating and arranging for the provision or diversion of services not forming part of the **works**.
- (5) Additional work in obtaining the formal approval of the appropriate Government Departments or Public Authorities, including the making of such revisions as may be required as a result of decisions of such Departments or Authorities arising out of changes in policy, undue delay, or other causes beyond the **consulting engineer's** control.
- (6) Topographical and environmental surveys, analyses, tests and site or foundation or other investigations, model tests, laboratory tests and analyses carried out or procured on behalf of the **client**.
- (7) Setting out or staking out the **works** and indicating any boundary beacons and other reference marks.
- (8) Preparation of drawings for manufacture and installation or detailed checking of such for erection or installation fit.

- (9) Detailed inspection, reviewing and checking of designs and drawings not prepared by the **consulting engineer** and submitted by any **contractor** or potential **contractor** as alternative to those embodied in tender or similar documents prepared by the **consulting engineer**.
- (10) Preparing and setting out particulars and calculations in a special form required by any relevant authority.
- (11) Abnormal additional **services** by or costs to the **consulting engineer** due to the failure of a **contractor** or others to perform their required duties adequately and on time.
- (12) Executing or arranging for the periodic monitoring and adjustment of the **works**, after final handover and completion of construction and commissioning, in order to optimise or maintain proper functioning of any process or system.
- (13) Investigating or reporting on tariffs or charges leviable by or to the **client**.
- (14) Advance ordering or reservation of materials and obtaining licenses and permit.
- (15) 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 **consulting 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 **consulting engineer** and the **client** prior to the execution thereof.
- (16) Exceptional arrangements, communication, facilitation and agreements with any stakeholders other than the **client** and **contractor(s)** appointed for the **works** on which the **consulting engineer** provides **services**.
- (17) Any other additional **services**, of whatever nature, specifically agreed to in writing between the **consulting engineer** and the **client** prior to the execution thereof.

3.3.2 Construction Monitoring

- (1) If the **construction monitoring**, as set out in clause 3.2.5(3), is deemed to be insufficient by the **consulting engineer**, the **consulting engineer** may, 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 and exclude those mentioned under clause 3.2.5.

Applications for additional staff must be made on the department's prescribed format, together with which the **consulting engineer** must submit a proper motivation, containing *inter alia*, a schedule indicating the envisaged time to be spent on additional **construction monitoring** as applied for, as well as the envisaged time to be spent on normal **construction monitoring** as set out in clause 3.2.5(3).

- (2) Alternatively, the **client** may appoint or make available staff, as intended in clause 3.3.2(1), subject to approval by the **consulting engineer**.
- (3) Staff, as intended in clauses 3.3.2(1) and 3.3.2(2), shall report to and take instructions from the **consulting engineer** or an authorized representative of the **consulting engineer** only and shall be deemed to be in the employ of the **consulting engineer**.
- (4) Should any change regarding the persons utilized for additional on-site monitoring or their remuneration or duration of services be necessary, the utilization of such persons and/or their remuneration must be agreed to in writing with the **client** prior to the implementation thereof.
- (5) If, for any reason, no additional staff or inadequate staff for **construction monitoring** is appointed, the **consulting engineer** shall provide additional **services**, including additional site visits, as required and agreed to in writing with the **client** prior to commencement thereof.
- (6) Where provided for in the **agreement**, the duties of the **consulting engineer** for the following defined levels of **construction monitoring**, respectively, are as follows:

(a) **Level 1:**

The **construction monitoring** staff shall:-

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- (i) 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.
- (ii) Where the **consulting engineer** is the sole consultant or **principal agent**, carry out such administration of the **project** as is necessary on behalf of the **client**.
- (iii) Where the **principal agent**, other than the **consulting engineer**, has been appointed for the **project**, provide such information as to enable the **principal agent** to fulfil his responsibilities.
- (iv) Be available to provide the **contractor** with technical interpretation of the plans and specifications.

(b) **Level 2:**

The **construction monitoring** staff shall:-

- (i) Maintain a full time presence on site to constantly review –
 - (a) Work procedures
 - (b) Construction materialsfor compliance with the requirements of the plans and specifications and review completed work prior to enclosure or on completion as appropriate.
- (ii) Where the **consulting engineer** is the sole consultant or **principal agent**, carry out such administration of the **project** as is necessary on behalf of the **client**.
- (iii) Where the **principal agent**, other than the **consulting engineer** has been appointed for the **project**, provide such information as to enable the **principal agent** to fulfil his responsibilities.
- (iv) Be available to provide the **contractor** with technical interpretation of the plans and specifications.

3.3.3 Occupational Health and Safety Act, 1993 (Act No.85 of 1993)

Should the **client** require the **consulting engineer** to undertake duties falling under the Occupational Health and Safety Act, 1993 (Act No.85 of 1993) and the Construction Regulations in terms thereof, on behalf of the **client**, the additional **services** may include the following:

- (1) The **consulting engineer** must arrange, formally and in writing, for the **contractor** to provide documentary evidence of compliance with all the requirements of the Occupational Health and Safety Act, 1993 (Act No.85 of 1993).
- (2) The **consulting engineer** must execute the duties of the **client**, as his appointed agent, as contemplated in the Construction Regulations to the Occupational Health and Safety Act, 1993 (Act No.85 of 1993).

3.3.4 Quality Assurance System

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 **normal services** provided by the **consulting engineer** and to be specifically defined and separately agreed in writing prior to commencement thereof.

3.3.5 Lead Consulting Engineer

Should the **client** require the **consulting engineer** to assume the leadership of a joint venture, consortium or team of consulting engineers, of the same discipline, prescribed or requested by the **client**, the additional **services** may include the following:

- (1) 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.
- (2) Responsibility for the overall co-ordination, programming of design and financial control of all the **works** included in the **services**.
- (3) Processing certificates or recommendations for payment of **contractor(s)**.

3.3.6 Principal Agent of the Client

When a **consulting engineer** is, in addition to his normal functions as **consulting engineer**, appointed as the **principal agent** of the **client** on a project, the **consulting engineer** will also be responsible for the following:

- (1) Leadership of the professional team.
- (2) Submission of preliminary and developed proposals in the form of consolidated reports, drawings and specifications together with estimates of time required and **cost of the works**.
- (3) The overall administration of all sections of the **project** including those, which fall within the ambit of the other professional members in the team.
- (4) The overall coordination, programming of design and financial control of the **project**.
- (5) Resolving differences that may arise between the **client** and the **contractor(s)**, excluding mediation, arbitration or litigation.
- (6) Approval of certificates for payment to **contractor(s)** issued by the other professional members in the team before their presentation to the **client** for settlement.
- (7) Making arrangements to provide the **client**, on completion of the **works**, with such record drawings as may be required for a proper record of the **works** as constructed and such manuals as may be required for the operation and maintenance of the relevant parts of the **works**.
- (8) Approval of the final contract account and provision of a close out report for the **project**.
- (9) Manage targeted procurement **services** as indicated in clause 3.2.7.

3.3.7 Mediation, Arbitration and Litigation proceedings and similar Services

Where the **client** requires the **consulting 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**:

- (1) Dealing with matters of law, obtaining parliamentary or other statutory approval, licenses or permits.
- (2) Assisting with or participating in contemplated or actual mediation, arbitration or litigation proceedings.
- (3) Officiating at or attending courts and commissions of enquiry, select committees and similar bodies convened by statute, regulation or decree.

4. TARIFF OF FEES

4.1 Application of Tariff of Fees

- (1) The tariff of fees contained in this Schedule applies in respect of the **services** set out in clause 3 "Scope of Services".
- (2) The **client** shall remunerate the **consulting engineer**, for the **services** rendered, on the basis of clauses 4.2 and 4.5. In cases where the **client** and **consulting engineer** have agreed that clauses 4.2 and 4.3 are not applicable, payment should be on the basis of clause 4.4 or as agreed according to clause 4.1(4).
- (3) The **client** shall reimburse the **consulting engineer** for all expenses and costs incurred in terms of clause 4.5 in performing his **services**, irrespective of whether fees are charged in terms of clauses 4.2 and 4.3 or clause 4.4 as well as for all costs incurred on behalf, and with the approval of the **client**.
- (4) While the tariff of fees contained in this document can be applied to many projects the factors that influence the fees to be paid for **services** are complex and depend on a number of contributing factors. These contributing factors that should be taken into account may include, inter alia, all or any of the following:

- (a) **Project complexity:** Projects may range from relatively simple projects where it is based on well established, common practices to more complex projects where it calls for the application of new, unusual or untried practices.
 - (b) **Cost of the works:** This may range from a situation where the **cost of the works** is abnormally high relative to the **services** being rendered to a project where the **cost of the works** is abnormally low relative to the **services** required from the **consulting engineer**.
 - (c) **Time duration:** This may involve projects where the **works** are executed over appreciably shorter or longer periods than would normally be expected for any of the **stages** defined in 3 "Scope of Services".
 - (d) **Level of responsibility, liability and risk:** These may range from relatively low levels of responsibility and/or risks to projects with unusually high responsibilities and/or risks that are expected to be carried by the **consulting engineer**.
 - (e) **Level of expertise, qualifications, skills and experience:** Some works do not require a high degree of expertise while other works may require more specialized expertise or substantial skills and experience that cost more to develop and retain.
 - (f) **Level of technology** required and changes in technology that may influence the costs of the **services** provided.
 - (g) Whether aspects related to labour intensive works need to be considered in the design.
- (5) Combinations of one or more of the above factors may require an adjustment of the tariffs to fairly compensate the **consulting engineer** and this adjustment should be negotiated in good faith by both parties.
 - (6) Agreement on any adjustment of or special fees should be reached at the time of the engagement of the **consulting engineer** or as soon after circumstances warrant such as practically possible, but in all cases prior to the **consulting engineer** rendering **services** which may be affected.
 - (7) Where the **normal services** relate to more than one of the disciplines of consulting engineering contemplated in clauses 4.2.1 to 4.2.7 namely civil, structural, mechanical, electrical and **electronic engineering services**, a separate fee for **services** in each discipline should be calculated in accordance with the relevant clause. Where a **consulting engineer** is appointed for either or both electronic and electrical services, his payment shall be according to the electrical fee scales based on the combined value of these **services**.
 - (8) Where at the instance and with the consent of the **client** the **works** are undertaken on separate non-contiguous sites, continuity is interrupted or are unusually fragmented or are constructed as separately documented phases or sections, the fee for **normal services** is:
 - (a) The sum of the fees calculated separately for each site, contract, phase or section as if they were separate works; or
 - (b) A fee agreed to between the **client** and the **consulting engineer** and which fee lies between the fee calculated on the total **cost of the works** and the sum of the fees contemplated in clause 4.1(8)(a) above.
 - (9) For the calculation of fees, "duplication of works" is defined as the re-use of designs, drawings and details done by a consultant to duplicate a complete unit (e.g. a building or bridge).
 - (10) The following fees may be claimed after each **stage** of **services** or monthly or as agreed between the **consulting engineer** and the **client**:
 - (a) Percentage fees determined on the basis of the **cost of the works** prevailing at the time of the fee calculation and *pro rata* to the completed **services**, or a portion of the total fee based on completion of the **stages** along the lines indicated in 4.2.8.
 - (b) Time based fees applicable when the **services** were rendered.
 - (11) Disbursements as set out in clause 4.1(3) may be claimed monthly.

4.2 Fees for Normal Services

4.2.1 Civil and Structural Engineering Services pertaining to Engineering Projects

- (1) The basic fee for **normal services** in the disciplines of civil and structural engineering, pertaining to **engineering projects**, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific **cost of the works** in respect of which the **services** were rendered on the **project**.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R 0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R 102,000	12,5% on the balance over R 815 000
R 1,935,000	R 9,525,000	R 241,900	10,0% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R 1,000,900	9,0% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R 1,892,200	8,0% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R 4,208,500	6,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R 7,111,700	5,5% on the balance over R 96,767,000
R 582,868,000		R 33,847,200	5,0% on the balance over R 582,868,000

- (2) The following additional fee shall be applicable to the value of the reinforced concrete and structural steel portions of the **works**, inclusive of the costs of concrete, reinforcing, formwork, structural steel work and any *pro rata* preliminary and general amounts. Where structures of identical design are repeated on the same **project**, the combined costs shall be cumulated for the determination of the cost of the reinforced concrete and structural steel works.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R 0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R 40,800	5,0% on the balance over R 815 000
R 1,935,000	R 9,525,000	R 96,800	4,5% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R 438,300	4,0% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R 834,400	3,0% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R 1,703,000	2,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R 2,670,700	1,5% on the balance over R 96,767,000
R 582,868,000		R 9,962,300	1,5% on the balance over R 582,868,000

- (3) To calculate the fee for railway track work in terms of this item, 50 per cent of the cost of the permanent way materials is excluded from the **cost of the works**, but the full cost of ballast and equipment specially designed by the **consultant** is included in the **cost of the works**.
- (4) For **normal services** relating to a description of the **works** mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause 4.2.1(1) and 4.2.1(2) is multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will be the product of the factors involved, except for the fee for targeted procurement.

2021 NDPW - Scope of Engineering Services and Tariff of Fees for Persons Registered in terms of the Engineering Profession Act, 2000, (Act No.46 of 2000)

- (5) These factors do not apply when fees are a lump sum or on a time basis.
- (6) In the case of road works, where the road traverses both rural and urban areas, an adjustment *pro rata* to the length of road in rural and urban area should be made.
- (7) In the case of road rehabilitation a combination of factors applies depending on the situation of the road (rural or urban) and the category factor for alterations to existing works.

Description of the Works	Factor by which basic fee is multiplied
Rural roads (single carriageways), excluding bridges	0,85
Rural freeways and dual carriageways, excluding bridges	0,95
Freeways and dual carriageways through existing peri-urban areas, excluding bridges	1,00
Single Carriageways through existing urban areas	1.00
Freeways and dual carriageways through existing urban areas	1,25
Gravel roads: Primary roads	1,25
Secondary roads	1,00
Informal roads	0,75
Water and waste water treatment works	1,25
Services (Excluding roads for existing informal settlements including roads and to reduced standards or supplies)	1,25
Water and sanitation in rural areas	1,35
Alterations to existing works (Only applicable to the fees on the portion or section of works affected)	1,25
Mass concrete foundations, brickwork and cladding designed and detailed by the consulting engineer (Only applicable to the design portion of the fees on such works)	0,33
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25
Targeted procurement (Additional fee based on the basic fees before the application of any of the other factors. Only applicable where specifically appointed for service)	0,07

4.2.2 Civil Engineering Services pertaining to Multi-disciplinary Projects

- (1) The basic fee for **normal services** in the discipline of civil engineering, pertaining to **multi-disciplinary projects**, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific **cost of the works** in respect of which the **services** were rendered on the **project**.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R 0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R 102,000	12,5% on the balance over R 815 000
R 1,935,000	R 9,525,000	R 241,900	10,0% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R 1,000,900	9,0% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R 1,892,200	8,0% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R 4,208,500	7,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R 7,595,500	7,0% on the balance over R 96,767,000
R 582,868,000		R 41,622,500	7,0% on the balance over R 582,868,000

- (2) For **normal services** relating to a description of the **works** mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause 4.2.2(1) is multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will be the product of the factors involved.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Factor by which basic fee is multiplied
Alterations to existing works (Only applicable to the fees on the portion or section of works affected)	1,25
Internal water and drainage for buildings upon specific agreement with the client to render such services	1,25
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25

4.2.3 Structural Engineering Services pertaining to Multi-disciplinary Projects

- (1) The basic fee for **normal services** in the discipline of structural engineering, pertaining to **multi-disciplinary projects**, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific **cost of the works** in respect of which the **services** were rendered on the project.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R 0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R 102,000	12,5% on the balance over R 815 000
R 1,935,000	R 9,525,000	R 241,900	10,0% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R 1,000,900	9,0% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R 1,892,200	8,0% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R 4,208,500	7,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R 7,595,500	7,0% on the balance over R 96,767,000
R 582,868,000		R 41,622,500	7,0% on the balance over R 582,868,000

- (2) For **normal services** relating to a description of the **works** mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause 4.2.3(1) is multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will be the product of the factors involved.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Factor by which basic fee is multiplied
Alterations to existing works (Only applicable to the fees on the portion or section of works affected)	1,25
Mass concrete foundations and brickwork designed and cladding designed and detailed by the consulting engineer (Only applicable to the design portion of the fees on such works)	0,33
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25

4.2.4 Mechanical Engineering Services pertaining to Engineering Projects

- (1) The basic fee for **normal services** in the discipline of mechanical engineering, pertaining to **engineering projects**, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific **cost of the works** in respect of which the **services** were rendered on the **project**.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R 0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R 102,000	12,5% on the balance over R 815 000
R 1,935,000	R 9,525,000	R 241,900	10,0% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R 1,000,900	8,0% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R 1,793,200	7,0% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R 3,820,000	6,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R 6,723,000	5,5% on the balance over R 96,767,000
R 582,868,000		R 33,459,000	5.5% on the balance over R 582,868,000

- (2) For **normal services** relating to a description of the **works** mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause 4.2.4(1) is multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will be the product of the factors involved, except for the fee for targeted procurement.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Factor by which basic fee is multiplied
Alterations to existing works (Only applicable to the fees on the portion or section of works affected)	1,25
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25
Targeted procurement (Additional fee based on the basic fees before the application of any of the other factors. Only applicable where specifically appointed for service)	0,07

4.2.5 Mechanical Engineering services pertaining to Multi-disciplinary Projects

- (1) The basic fee for **normal services** in the discipline of mechanical engineering or wet services, pertaining to **multi-disciplinary projects**, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific **cost of the works** in respect of which the **services** were rendered on the **project**.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R122,300	15,0% on the balance over R 815 000
R 1,935,000	R 9,525,000	R290,300	12,5% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R1,239,000	10,5% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R2,279,000	9,5% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R5,030,000	9,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R9,384,000	8,5% on the balance over R 96,767,000
R 582,868,000		R50,703,000	8.5% on the balance over R 582,868,000

- (2) For **normal services** relating to a description of the **works** mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause 4.2.5(1) is multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will be the product of the factors involved, except for the fee for targeted procurement.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Factor by which basic fee is multiplied
Multi-tenant installations: <i>The Multi-tenant factor only becomes applicable if substantial fragmentation of services, which would otherwise not be divided, occurs as a result of the multi-tenant application. Normal multi-zoning, even if applied in multi-tenant accommodation, does not qualify for the application of the Multi-tenant factor.</i>	1,25
Alterations to existing works (Only applicable to the fees on the portion or section of works affected)	1,25
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25
For projects where the cost of the works exceeds R 815,000 and where bills of quantities are not required from the consulting engineer and all financial, tender and contractual matters are dealt with by the Quantity Surveyor or other parties	0,75
Targeted procurement (Additional fee based on the basic fees before the application of any of the other factors. Only applicable where specifically appointed for service)	0,07

4.2.6 Electrical and Electronic Engineering Services pertaining to Engineering Projects

- (1) The basic fee for **normal services** in the discipline of electrical and electronic engineering, pertaining to **engineering projects**, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific **cost of the works** in respect of which the services were rendered on the **project**.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R 0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R 102,000	12,5% on the balance over R 815 000
R 1,935,000	R 9,525,000	R 241,900	10,0% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R 1,000,900	8,0% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R 1,793,200	7,0% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R 3,820,000	6,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R 6,723,000	5,5% on the balance over R 96,767,000
R 582,868,000		R 33,459,000	5.5% on the balance over R 582,868,000

- (2) For **normal services** relating to a description of the **works** mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause 4.2.6(1) is multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will be the product of the factors involved, except for the fee for targeted procurement.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Factor by which basic fee is multiplied
Alterations to existing works (Only applicable to the fees on the portion or section of works affected)	1,25
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25
Targeted procurement (Additional fee based on the basic fees before the application of any of the other factors. Only applicable where specifically appointed for service)	0,07

4.2.7 Electrical and Electronic Engineering services pertaining to Multi-disciplinary Projects

- (1) The basic fee for **normal services** in the discipline of electrical and electronic engineering, pertaining to **multi-disciplinary projects**, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific **cost of the works** in respect of which the **services** were rendered on the **project**.

Cost of the Works		Basis of Fee Calculation	
Where the costs of the works:		Primary Fee	Secondary fee
Exceeds	But does not exceed		
R 0	R 815,000	R0	A Lump Sum or on Time Basis
R 815,000	R 1,935,000	R122,300	15,0% on the balance over R 815 000
R 1,935,000	R 9,525,000	R290,300	12,5% on the balance over R 1 935 000
R 9,525,000	R 19,430,000	R1,239,000	10,5% on the balance over R 9,525,000
R 19,430,000	R 48,383,000	R2,279,000	9,5% on the balance over R 19,430,000
R 48,383,000	R 96,767,000	R5,030,000	9,0% on the balance over R 48,383,000
R 96,767,000	R 582,868,000	R9,384,000	8,5% on the balance over R 96,767,000
R 582,868,000		R50,703,000	8,5% on the balance over R 582,868,000

- (2) For **normal services** relating to a description of the **works** mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause 4.2.7(1) is multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will be the product of the factors involved, except for the fee for targeted procurement.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Factor by which basic fee is multiplied
Multi-tenant installations: <i>The Multi-tenant factor only becomes applicable if substantial fragmentation of services, which would otherwise not be divided, occurs as a result of the multi-tenant application. Normal multi-zoning, even if applied in multi-tenant accommodation, does not qualify for the application of the Multi-tenant factor.</i>	1,25
Alterations to existing works (Only applicable to the fees on the portion or section of works affected)	1,25
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25
For projects where the cost of the works exceeds R 815,000 and where bills of quantities are not required from the consulting engineer and all financial, tender and contractual matters are dealt with by the Quantity Surveyor or other parties.	0,75
Targeted procurement (Additional fee based on the basic fees before the application of any of the other factors. Only applicable where specifically appointed for service)	0,07

4.2.8 Services provided partially or in Stages

- (1) The following table shall be used for proportioning the basic fee for **normal services** over the various **stages** of the **services**.

Stage of Services	Percentage points for each stage
Civil: Engineering Projects: - Inception - Preliminary Design: Concept and Viability - Detail Design - Documentation and Procurement - Contract Administration and Inspection - Close-Out	5 20 30 15 25 5
Structural: Engineering Projects: - Inception - Preliminary Design: Concept and Viability - Detail Design - Documentation and Procurement - Contract Administration and Inspection - Close-Out	5 20 30 15 25 5
Civil: Multi-disciplinary Projects: - Inception - Preliminary Design: Concept and Viability - Detail Design - Documentation and Procurement - Contract Administration and Inspection - Close-Out	5 20 30 15 25 5
Structural: Multi-disciplinary Projects: - Inception - Preliminary Design: Concept and Viability - Detail Design - Documentation and Procurement - Contract Administration and Inspection - Close-Out	5 20 30 15 25 5
Mechanical, Electrical and Electronic: Engineering Projects: - Inception - Preliminary Design: Concept and Viability - Detail Design - Documentation and Procurement - Contract Administration and Inspection - Close-Out	5 20 30 15 25 5
Mechanical, Electrical and Electronic: Multi-disciplinary Projects: - Inception - Preliminary Design: Concept and Viability - Detail Design - Documentation and Procurement - Contract Administration and Inspection - Close-Out	5 20 30 15 25 5

- (2) Where not all the **stages** of the **normal services** are provided by the **consulting engineer**, the fee is, subject to clause 4.1(7), 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 above table against those **stages** of the **services** provided by the **consulting engineer**.

4.2.9 Cancellation or Abandonment

Should instructions having been given by the **client** to the **consulting engineer** to proceed with any of the **stages** of **services** set out in clause 4.2.8(1) and the whole or part of the **works** is cancelled or abandoned or postponed payments will be according to the stipulations of this **agreement** (C2.1.3.9 Pricing Assumptions in this tender document).

4.3 Fees for Additional Services

- (1) Subject to clauses 4.2.8(2), 4.3(2), 4.3(3), 4.3(4), 4.3(5), 4.3(6) and 4.3(7), the fees for additional **services**, contemplated in clause 2.2, are agreed to between the **client** and the **consulting engineer** as set out in clause 4.1.
- (2) For additional **services** as a result of the resumption of such **services** or the alteration or modification of designs on the instructions of the **client**, the **consulting engineer** is entitled to time based fees and actual costs incurred.
- (3) For the provision of a **construction monitoring** service, as contemplated in clause 3.3.2, the **consulting engineer** is entitled to recover from the **client** the fees as agreed between the **consulting engineer** and the **client**:
 - (a) for part time **construction monitoring** staff costs, the amount payable to such staff shall be at the hourly rates contemplated in clause 4.4(3);
 - (b) for full time **construction monitoring** service the fee shall be based on the **total annual cost of employment** plus a surcharge of twelve percentage points (12%);
 - (c) a maximum of 50 hours may be applied for part time **construction monitoring** per month. Time spent on site in excess hereof will be without further remuneration; and
 - (d) distances for travelling applied for may not be exceeded without prior written approval of the departmental project manager. Remuneration of travelling will be calculated according to actual distances per month at the applicable rate of the time of travel.
- (4) For all other costs, as set out in clause 4.5, the actual expenses incurred.
- (5) For duties under the Occupational Health and Safety Act, 1993 (Act No.85 of 1993), as contemplated in clause 3.3.3, the **consulting engineer** shall, if so appointed by the **client**, be remunerated on a time and cost basis as agreed with the **client**.
- (6) For assuming the leadership of a joint venture, a consortium or team of consulting engineers, as contemplated in clause 3.3.5, the fee for the lead **consulting engineer** shall be ten percentage points (10%), which is not an additional fee but is that portion of the fee for **services** rendered by the team, which shall be allocated to the lead **consulting engineer**. The apportionment of the fee to **services** is as stated in clause 4.2.8(1).
- (7) For **services** as **principal agent** of the **client**, as contemplated in clause 3.3.6, the **consulting engineer** is entitled to an additional fee calculated at one percentage point (1%) of the total **cost of the works** comprising the **project**. The **consulting engineer** is not entitled to any fees for **principal agent** if he is not explicitly appointed as such.

4.4 Time Based Fees

- (1)
 - (a) Time based fees are all-inclusive fees, including allowances for overhead charges incurred by the **consulting engineer** as part of normal business operations, including the cost of management, as well as payments to administrative, clerical and secretarial staff used to support professional and technical staff in general and not on a specific project only.
 - (b) Time based fees are calculated by multiplying the hourly rate contemplated in clause 4.4(3), which is applicable to the **consulting engineer** for professional and any other technical staff employed by the **consulting engineer**, with the actual time spent by such staff in rendering the **services** required by the **client**.
 - (c) Professional and technical staff include all staff performing work directly related to the execution of the **services** the **consulting engineer** is engaged for by the **client** and

2021 NDPW - Scope of Engineering Services and Tariff of Fees for Persons Registered in terms of the Engineering Profession Act, 2000, (Act No.46 of 2000)

excludes all administrative, clerical and secretarial staff used to support professional and technical staff in general and not on a specific project only, but includes the typing of letters, minutes, reports and documents for **projects**.

- (2) To determine the time based fee rates the professional and technical staff concerned is divided into:-
- (a) **Category A**, in respect of a private consulting practice in engineering, shall mean a top practitioner whose expertise and relevant experience is nationally or internationally recognized and who provides advice at a level of specialization where such advice is recognized as that of an expert.
 - (b) **Category B**, in respect of a private consulting practice in engineering, shall mean a partner, a sole proprietor, a director, or a member who, jointly or severally with other partners, co-directors or co-members, bears the risks of the business or takes full responsibility for the projects and related liabilities of such practice and where his/her level of expertise and relevant experience is commensurate with the position performs work of a conceptual nature in engineering design and development, provides strategic guidance in planning and executing a project and/or carries responsibility for quality management pertaining to a project.
 - (c) **Category C**, in respect of a private consulting practice in engineering, shall mean all salaried professional staff with adequate expertise and relevant experience performing work of an engineering nature and who carry the direct technical responsibility for one or more specific activities related to a project. A person referred to in Category B may also fall in this category if such person performs work of an engineering nature at this level.
 - (d) **Category D**, in respect of a private consulting practice in engineering, shall mean all other salaried technical staff with adequate expertise and relevant experience performing work of an engineering nature with direction and control provided by any person contemplated in *categories A, B or C*.
- (3) The scale of fees on a time basis, on which Value Added Tax is excluded, shall be at the following rates per hour, rounded off to the nearest rand:
- (a) for a person in *category A and B*: 18.75 cents for each R100 of the total annual remuneration package (lowest notch) attached to a Director's grading (level 13) in the Public Service;
 - (b) for a person in *category C*: 17,5 cents for each R100 of the total annual remuneration package (lowest notch) attached to a Deputy Director's grading (level 12) in the Public Service;
 - (c) for a person in *category D*: 16,5 cents for each R100 of his/her **total annual cost of employment**; provided that this hourly rate shall not exceed 16,5 cents for each R100 of the total annual remuneration package (lowest notch) attached to an Assistant Director's grading (level 11) in the Public Service.

Hourly rates calculated in terms of (a), (b) and (c) above shall be deemed to include overheads and charges in respect of time expended by clerical personnel, which shall, therefore, not be chargeable separately.

Unless otherwise specifically agreed in writing, remuneration for the time expended by *Category B persons* in terms of (a) above on a project shall be limited to 5 per cent of the total time expended on the **project**. Any time expended by principals in excess of the 5 per cent limit shall be remunerated at the rates determined in (b) or (c) above.

Notwithstanding the above, where work is of such a nature that personnel as described in paragraph (c) above are capable of performing such work, it shall be remunerated at that level and not at the rates described in paragraphs (a) and (b) above, irrespective of who in fact executed the work.

The salaries referred to in (a) to (c) above can change from time to time, which will, therefore, change the rates applicable. These rates will, however, only be adjusted on the first day of each calendar year irrespective of any changes in salary ranges during the relevant year.

The rate as set out in Table 8 of the "Rates for Reimbursable Expenses", as amended from time to time may be used as bases for relevant claims.

- (4) For the purposes of clause 4.4(3)(c), the **total annual cost of employment** (gross annual remuneration) of a person contemplated in clause 4.4(2) means the total amount borne by an employer in respect of the employment of such a person per year, calculated at the amounts applicable to such a person at the time of appointment of the person.

4.5 Expenses and Costs

All expenses and costs shall be claimed for in accordance with the provisions of the **agreement** subject to the submission of substantiating documentation.