

C2.2 Activity Schedule

C2.2.1 Summary Activity Schedule for Value Based Fees for all Professional Services comprising the Service Provider

MULTI-DISCIPLINARY PROFESSIONAL SERVICES

SUMMARY ACTIVITY SCHEDULE FOR VALUE BASED FEES FOR ALL PROFESSIONAL SERVICES COMPRISING THE SERVICE PROVIDER

Tenderer's Tender for Value Based Fees for:		
PROFESSIONAL SERVICE	*Percentage of respective normal fees tendered by professional service	*Financial Offer by Tenderer for Value Based Fees
1. Civil Engineering Services	% (b)	R (3)
2. Electrical Engineering Services	% (d)	R (4)
3. Mechanical Engineering Services	% (f)	R (7)
	% (h)	R (10)
	% (j)	R (13)
	% (l)	R (16)
Sub-total		R (17)
Add VAT @ 15%		R (18)
<u>TOTAL FINANCIAL OFFER FOR VALUE BASED FEES</u>⁽¹⁷⁺¹⁸⁾		R (19)

[* Mark "N/A" should the specific professional Service comprising the Service Provider not be required (not listed in C1.1 Form of Offer and Acceptance).]

- NOTE:**
1. Total Financial Offer for Value Based Fees, (19) above, **must be carried over to C1.1 Form of Offer and Acceptance**. Failure to carry this over to the Form of Offer and Acceptance **will render the tender non-responsive**.
 2. Remuneration for value based appointments will be calculated as determined in C2.1.2 (i.e. the percentage of the normal fee tendered multiplied by the value fee scale *vis-à-vis* the actual cost of construction) calculated separately for each professional Service comprising the Service Provider.



C2.2.C Activities for Civil Engineers

C2.2.C.1 The services as defined in C3 Scope of Services are required. The activity schedule below lists the normal services as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), clause 3 and as further defined in C3 Scope of Services, as well as additional services as defined in C3 Scope of Services, of this document. (The clause references refer to the corresponding clauses in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees.)

C2.2.C.2 The estimated normal fees have been calculated using the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), by applying the applicable fee scale given in clause 4.2.1 (1)-(2) for an engineering project or clause 4.2.2 (1) for a multi-disciplinary project, to determine the basic fee and by multiplying the basic fee by the applicable multiplication factor given in clause 4.2.1 (4) or clause 4.2.2 (2) respectively. The cost of the works and the values used to determine the multiplication factors are defined in C 3.C.2.2.3 'Project Cost Estimate'.

No allowance has been made in the estimated normal fees below for the additional services in C2.1.3.E.5 'Additional services' that have been specified to be included in the normal fees. The tenderer shall make provision for the cost of the additional services that are to be included under normal services by adjusting the percentage tendered in column (f) of C2.2.C.4 'Activity schedule for value based fees for civil engineers'.

C2.2.C.2 The services are to be provided in stages and the proportioning of the fee for normal services over the various stages shall be as set out in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees (appendix A), clause 4.2.8.

C2.2.C.3 The tenderer must make provision for all activities necessary for the execution of the service as set out in C3 Scope of Services.



C2.2.C.4 Activity schedule for value based fees for Civil Engineers

ACTIVITY SCHEDULE FOR VALUE BASED FEES FOR CIVIL ENGINEERS

Tenderer's Tender for Value Based Fees for Civil Engineers

Fee for Normal Services inclusive of certain additional services as specified in C2.1.3.En.5

Latest estimate of the construction cost for the civil works	(e) Estimated normal fees	Unit	(f) Percentage of normal fees tendered by Tenderer	(e)x(f) Financial Offer by Tenderer for Value Based Fees for Civil Engineers (VAT excluded)
R2, 614, 950.09	R296, 995.01	%	%	= R (5)

Additional Services – C2.1.3.En.5

Description	Quantity	Unit	Rate	
Occupational Health and Safety Agent	36	month	R	= R

Sub-total Additional Services R (6)

TOTAL FINANCIAL OFFER FOR VALUE BASED FEES FOR CIVIL ENGINEERS (VAT EXCLUDED) R (7)
(5+6)

- NOTE:**
- The Total Financial Offer for Value Based Fees for Civil Engineers (VAT excluded), (7) above, as well as the percentage of normal fees tendered, (f) above, must be carried over to C2.2.1 Summary Activity Schedule for Value Based Fees for all Professional Services comprising the Service Provider, the total of which must then be carried over to C1.1 Form of Offer and Acceptance. Failure to carry these over to the above-mentioned respective forms will render the tender non-responsive.
 - Remuneration for value based appointments will be calculated as determined in C2.1.2 (i.e. the percentage of the normal fee tendered multiplied by the value fee scale *vis-à-vis* the actual cost of construction) calculated separately for each professional Service comprising the Service Provider. The percentage of the normal fee shall apply to each stage for services provided in stages.



C2.2.E Activities for Electrical Engineers

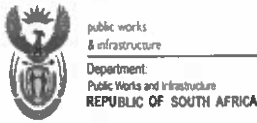
C2.2.E.1 The services as defined in C3 Scope of Services are required. The activity schedule below lists the normal services as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), clause 3 and as further defined in C3 Scope of Services, as well as additional services as defined in C3 Scope of Services, of this document. (The clause references refer to the corresponding clauses in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees.)

C2.2.E.2 The estimated normal fees have been calculated using the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), by applying the applicable fee scale given in clause 4.2.6 (1) for an engineering project or clause 4.2.7 (1) for a multi-disciplinary project, to determine the basic fee and by multiplying the basic fee by the applicable multiplication factor given in clause 4.2.6 (2) or clause 4.2.7 (2) respectively. The cost of the works and the values used to determine the multiplication factors are defined in C 3.E.2.2.3 'Project Cost Estimate'.

No allowance has been made in the estimated normal fees below for the additional services in C2.1.3.E.5 'Additional services' that have been specified to be included in the normal fees. The tenderer shall make provision for the cost of the additional services that are to be included under normal services by adjusting the percentage tendered in column (h) of C2.2.E.4 'Activity schedule for value based fees for electrical engineers'.

C2.2.E.2 The services are to be provided in stages and the proportioning of the fee for normal services over the various stages shall be as set out in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), clause 4.2.8.

C2.2.E.3 The tenderer must make provision for all activities necessary for the execution of the service as set out in C3 Scope of Services.



C2.2.E.4 Activity schedule for value based fees for Electrical Engineers

ACTIVITY SCHEDULE FOR VALUE BASED FEES FOR ELECTRICAL ENGINEERS

Tenderer's Tender for Value Based Fees for Electrical Engineers

Fee for Normal Services inclusive of certain additional services as specified in C2.1.3.En.5

Latest estimate of the construction cost for the electrical works	(g) Estimated normal fees	Unit	(h) Percentage of normal fees tendered by Tenderer	(g)x(h) Financial Offer by Tenderer for Value Based Fees for Electrical Engineers (VAT excluded)
R599, 441.06	R93, 966.16	%	%	= R (8)

Additional Services – C2.1.3.En.5

Description	Quantity	Unit	Rate	
Sub-total Additional Services				R (9)
<u>TOTAL FINANCIAL OFFER FOR VALUE BASED FEES FOR ELECTRICAL ENGINEERS (VAT EXCLUDED)</u>⁽⁸⁺⁹⁾				R (10)

- NOTE:**
- The Total Financial Offer for Value Based Fees for Electrical Engineers (VAT excluded), (10) above, as well as the percentage of normal fees tendered, (h) above, must be carried over to C2.2.1 Summary Activity Schedule for Value Based Fees for all Professional Services comprising the Service Provider, the total of which must then be carried over to C1.1 Form of Offer and Acceptance. Failure to carry these over to the above-mentioned respective forms will render the tender non-responsive.
 - Remuneration for value based appointments will be calculated as determined in C2.1.2 (i.e. the percentage of the normal fee tendered multiplied by the value fee scale *vis-à-vis* the actual cost of construction) calculated separately for each professional Service comprising the Service Provider. The percentage of the normal fee shall apply to each stage for services provided in stages.



C2.2.M Activities for Mechanical Engineers

C2.2.M.1 The services as defined in C3 Scope of Services are required. The activity schedule below lists the normal services as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), clause 3 and as further defined in C3 Scope of Services, as well as additional services as defined in C3 Scope of Services, of this document. (The clause references refer to the corresponding clauses in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees.)

C2.2.M.2 The estimated normal fees have been calculated using the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), by applying the applicable fee scale given in clause 4.2.4 (1) for an engineering project or clause 4.2.5 (1) for a multi-disciplinary project, to determine the basic fee and by multiplying the basic fee by the applicable multiplication factor given in clause 4.2.4 (2) or clause 4.2.5 (2) respectively. The cost of the works and the values used to determine the multiplication factors are defined in C 3.M.2.2.3 'Project Cost Estimate'.

No allowance has been made in the estimated normal fees below for the additional services in C2.1.3.E.5 'Additional services' that have been specified to be included in the normal fees. The tenderer shall make provision for the cost of the additional services that are to be included under normal services by adjusting the percentage tendered in column (j) of C2.2.M.4 'Activity schedule for value based fees for mechanical engineers'.

C2.2.M.2 The services are to be provided in stages and the proportioning of the fee for normal services over the various stages shall be as set out in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees(appendix A), clause 4.2.8.

C2.2.M.3 The tenderer must make provision for all activities necessary for the execution of the service as set out in C3 Scope of Services.



C2.2.M.4 Activity schedule for value based fees for Mechanical Engineers

ACTIVITY SCHEDULE FOR VALUE BASED FEES FOR MECHANICAL ENGINEERS

Tenderer's Tender for Value Based Fees for Mechanical Engineers

Fee for Normal Services inclusive of certain additional services as specified in C2.1.3.En.5

Latest estimate of the construction cost for the mechanical works	(i) Estimated normal fees	Unit	(j) Percentage of normal fees tendered by Tenderer	(i)x(j) Financial Offer by Tenderer for Value Based Fees for Mechanical Engineers (VAT excluded)
R706, 708.85	R110, 056.33	%	%	= R (11)

Additional Services – C2.1.3.En.5

Description	Quantity	Unit	Rate	
Sub-total Additional Services				R (12)
<u>TOTAL FINANCIAL OFFER FOR VALUE BASED FEES FOR MECHANICAL ENGINEERS (VAT EXCLUDED)</u>⁽¹¹⁺¹²⁾				R (13)

- NOTE:**
- The Total Financial Offer for Value Based Fees for Mechanical Engineers (VAT excluded), (13) above, as well as the percentage of normal fees tendered, (j) above, must be carried over to C2.2.1 Summary Activity Schedule for Value Based Fees for all Professional Services comprising the Service Provider, the total of which must then be carried over to C1.1 Form of Offer and Acceptance. Failure to carry these over to the above-mentioned respective forms will render the tender non-responsive.
 - Remuneration for value based appointments will be calculated as determined in C2.1.2 (i.e. the percentage of the normal fee tendered multiplied by the value fee scale *vis-à-vis* the actual cost of construction) calculated separately for each professional Service comprising the Service Provider. The percentage of the normal fee shall apply to each stage for services provided in stages.



C3: SCOPE OF SERVICE

C3.1 Principal agent

C3.1.1 In the event of a construction project manager not being separately appointed, this multi-disciplinary professional services practice will act as the principal agent on this project.

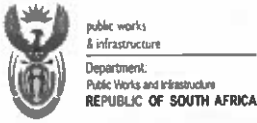
No additional remuneration or any remuneration provided for in the different professions' fee scales will be paid to the Service Provider for providing the services as principal agent. Tenderers must make provision for and include all such costs in their tender when calculating the percentage as described in C2.1.1.2 above.

C3.1.2 Regarding an appointment as principal agent, duties over and above those of the different professions comprising the Service Provider will include *inter alia*:

- receiving of instructions from the departmental project manager and distributing to the relevant parties
- co-ordinating of consultants
- compiling and updating the planning programme
- co-ordinating and arranging site meetings and inspections
- liaising with client department only if specifically so instructed
- close liaising and co-operating with the departmental project manager
- furnishing of monthly project reports
- issuing of written instructions
- receiving notices according to the building contract
- issuing of monthly interim payment certificates, final payment certificates for practical and final completion
- making recommendations in respect of the extension of the building contract period and periods where penalties are applicable
- ensuring that all final accounts will be corrected and handed in on time
- administrating of and supervising the building contract in accordance with the requirements, where applicable, as set out in Manual for Private Architects PW 147, and
- other duties not listed above but which could reasonably be expected of a principal agent as well as those listed in the Tariff of Professional Fees for Architects.

C3.2 Labour-intensive works

(a) The Service Provider shall not perform any significant portion of a project involving labour-intensive works under the direction of a staff member who has not completed the NQF level 7 unit standard "Develop and Promote Labour-Intensive Construction Strategies" or equivalent QCTO



qualifications (See Appendix C of the Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)).

(b) The staff member of the Service Provider who is responsible for the administration of any works contract involving labour-intensive works must have completed the NQF level 5 unit standard "Manage Labour-Intensive Construction Projects" or equivalent QCTO qualifications (See Appendix C of the Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)).

The Service Provider must provide the Employer with satisfactory evidence (e.g. letter of competency) that staff members satisfy the requirements of (a) and (b) above.

(c) The Service Provider must design and implement the construction/maintenance works in accordance with the latest version (download at www.epwp.gov.za) of the Guidelines for the Implementation of the Labour-Intensive Projects under the Expanded Public Works Programme (EPWP) published by the Department of Public Works. The Service Provider must sign the undertaking (Appendix E of the Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)) confirming they have complied with EPWP requirements at design and implementation stages.

(d) The Service Provider shall, for monitoring purposes, keep monthly records and transmit to the Employer data on the following indicators with regard to the Project:

- Project budget and planned output according to EPWP requirements
- Actual Project Expenditure and actual output according to EPWP requirements
- Planned and achieved labour intensity
- Number of work opportunities created
- Demographics of workers employed (disaggregated by women, youth and persons with disabilities)
- Wage rate earned on project
- Number of person-days of employment created
- Copies of Identity documents of workers
- Number of persons who have attended training including the nature and duration of training provided
- Assets created, rehabilitated or maintained in accordance with indicators in the EPWP M & E Framework
- Services provided or delivered in accordance with indicators in the EPWP M & E Framework

(e) The values for the indicators shall be submitted to the Employer according to agreed time frames on the prescribed reporting template (from the EPWP Unit in the Department of Public Works) and obtainable from www.epwp.gov.za.

(f) The Service Provider shall, before certifying a contractor's payment certificate, ensure that the contractor has submitted labour information in a format and timeframe specified by the Employer. If the information submitted by the contractor is inadequate the Service Provider shall not submit the payment certificate to the Employer for payment of the relevant outputs.

(g) The Service Provider shall certify that the works have been completed in accordance with the requirements of the Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP) and the Contract:

- whenever a payment certificate is presented to the Employer for payment; and
- immediately after the issuing of a practical completion certificate that signifies that the whole of the works have reached a state of readiness for occupation or use for the purposes intended although some minor work may be outstanding.



C3.C Scope of Services for Civil Engineers

C3.C.1 Employer's objectives regarding civil engineering work

This tender is *inter alia* for:

A Service Provider performing civil engineering work on a **Multi-disciplinary Project**.

C3.C.2 Description of the Services

C3.C.2.1 Services

The general descriptions of the services required are as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees, (appendix A).

Specific services required are set out in **C3.C.3 Extent of Services** as well as in the most recent publication of the Departmental: Manual for Civil Consulting Engineers. Should there be any discrepancies between this Tender Document and the Manual for Civil Consulting Engineers, the former shall take precedence.

Where a quantity surveyor is included in the project team on a multi-disciplinary project, the quantity surveyor will compile bills of quantities for all work ("all work" shall include *inter alia* electrical, mechanical and any other engineering work).

C3.C.2.2 Project description

C3.C.2.2.1 Scope

The Scope of the Project includes the Repair, Maintenance and Servicing on the following installations of the Project:

Note: The contract period is 36 months with a 6 Months Repair phase and Maintenance prior to the completion of repair (Maintenance during Repair phase) and Maintenance after completion of the Repair phase.

Civil & Structural:

- **Structural & Building**
- **Plumbing, Drainage and Wet Services**
- **Fencing, Cleaning & Site Keeping**
- **External Water & Sewer Network**
- **Roads & Storm Water Drainage**

C3.C.2.2.2 Location of the Project

Kosi Bay Land Port of Entry is situated on the Southern borderline of Mozambique, approximately 198km from Golela LPoE and 270km North of Richards Bay. Approximately 20km North East of Manguzi town. The housing is situated at Manguzi town within the Manguzi Police Station area.

GPS coordinate: **26° 51' 52.65" S, 32° 49' 45.86" E.**



C3.C.2.2.3 Project Cost Estimate

VAT included, CPA Excluded.

- **Civil & Structural: R3, 007, 192.60**
- Electrical: R689, 357.22
- Mechanical: R812, 715.18

Total cost for the project: R4, 509, 265.00.

C3.C.2.2.4 Project Programme

- **Briefing of the Professional Service Provider:** Within 14 calendar days (2 weeks) from the date of appointment.
- **Project Execution Plan (PEP):** Within 14 calendar days (2 weeks) from the date of the briefing meeting.
- **Site Visit:** Within 14 calendar days (2 weeks) from the date of the briefing meeting. The purpose of the site visit is for the Professional Service Provider to familiarise themselves with the local conditions of the site and conduct a survey of the infrastructure and installations at the Land Port of Entry.
- **Comprehensive Status Quo Report (SQR) & Preliminary Design Report (PDR),** including a pre-tender estimate, in compliance with departmental standards: within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the PEP.
- **Final Design Report,** including a pre-tender estimate: Within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the PDR.
- **Draft Bid document,** including drawings: Within 14 calendar days from the date of instruction to proceed after acceptance of the final design report.
- **Final Bid document,** including drawings: Within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the draft bid document.
- **Procurement of a Contractor:** Within 6 months from the date of the Professional Service Provider's appointment, including a risk assessment and a tender period of 4.5 weeks.
- **Construction Program:** Within 14 calendar days (2 weeks) from date of the contractor's appointment, the professional service provider must obtain a construction program, from the appointed contractor, covering the 36 months contract period, linked to the cash-flow and expenditure. **No Site Handover may be done until the said construction program is submitted and accepted.**
- **Occupational Health and Safety Plan:** Within 14 calendar days (2 weeks) from the date of the contractor's appointment, the professional service provider must obtain an Occupational Health and Safety Plan, from the appointed contractor. **No Site Handover may be done until the said OHS Plan is submitted and accepted.**
- **Access Certificate for Maintenance** to be issued on site Hand-over date.



- **Access Certificates for each Repair installation** to be issued within 1 month of site handover date.
- **In Depth Evaluation Report** of all civil & structural equipment / assets / infrastructure within first 2 months of the repair phase.
- **Practical Completion, Completion and Final Approval Certificates** shall be issued by the Professional Service Provider, in accordance with GCC 2010.
- **Defects & Liability Period:** As per GCC 2010.
- **Final Account:** The Professional Service Provider shall, within 3 Months from the effective date of the Final Approval Certificate, submit an acceptable final account in accordance with the Department's format.
- **Final Fee Account:** The Professional service Provider shall, within 1 Month from the final Account's approval date, submit an acceptable final fee account.

Note: The program must be synchronized with all other Professions (Electrical & Mechanical) to avoid unnecessary delays.

C3.C.2.2.5 Information available from Employer

Information such as drawings will be made available on request.

Standard forms that are required for managing the project can be obtained from the Departmental web-site: www.publicworks.gov.za and all other information can be obtained from the Departmental Project Manager.

It is the responsibility of the Professional Service Provider to ensure that all the documentation used is the latest.

C3.C.2.2.6 Other Contracts on Site

It must be taken into account that other contracts may be implemented before and / or during the 36 months period. Therefore special attention must be given to effect liaison, management and cooperation between the different contracts on site.

C3.C.2.2.7 Reporting Requirements and Approval Procedure

Notwithstanding any other requirements as listed elsewhere, the Professional Service Provider shall submit a monthly report indicating progress of the service.

It will be expected from the Professional Service Provider to attend meetings on request from the Departmental Project Manager at the Employer's offices.

General procedures and requirements are given in the relevant Departmental manuals for the different professions.

The appointed Professional Service Provider will be required to attend meetings with the Departmental Project Manager, together with the Department's professional team if the need arises. These meetings will be held at regular intervals during the design up to and to completion of all working drawings and tender documentation; minutes are to be kept and signed by all members of the professional team and submitted to the Departmental Project Manager for monitoring and follow-up.



The Professional Service Provider will be responsible to attend and manage all site meetings, i.e. **site handover meeting** (once off); **technical & general monthly site progress inspection/meetings** (repair phase); **monthly maintenance control inspection/meetings** (maintenance phase); **practical completion inspection/meeting** (once off); **completion & final approval inspection/meeting** (once off); etc.

Monthly Occupational Health and Safety meetings must be held by the accredited Safety Agent as prescribed by the OHS Act. The Safety Agent will chair all safety meetings and taking of minutes which must be handed to the Professional Service Provider for distribution thereof as well of any other requirements as set out by the Department as per the tender documentation.

The Professional Service Provider will be required to provide financial reports on a monthly basis, or as and when requested by the Departmental Project Manager. The financial reports will be inclusive of design and expected construction cash-flow for the project as well as for the professional team based on their specific area of appointment and the value of their scope of works as designed and expected fees.

The Department's Bid Specification Committee will be responsible to approve the bid document.

The following reports (not limited to) shall be submitted by the Professional Service Provider:

- **Status Quo Report (SQR) and Preliminary Design Report (PDR)**, including all PRM16 forms shall be developed and submitted in accordance with the Departmental generic format.
- **Final Design Report**, including a pre-tender estimate, shall be developed and submitted in accordance with the Departmental generic format.
- **Draft Bid documentation** shall be submitted in accordance with the Department's generic format.
- **Final Bid documentation** to procure a Contractor shall be submitted in accordance with the Departmental generic format.

During the 36 months contract period, the following reports must be compiled and submitted on a monthly basis, by the appointed Professional Service Provider, in compliance with the Department's format:

- **Site Diary** report.
- **Progress** report, including a construction program, linked to the expenditure and projected cash-flow.
- **Financial** report for consultant & contractor, including CPA & Retention calculation.
- **Progress payment** report (Contractor and Consultant).
- **Contract** report.
- **Water** management & quality report.
- **Sewer** management & quality report.
- **Diesel / Fuel** management report.
- **Occupational Health and Safety** report, including toolbox talk minutes.
- **Maintenance** report (Includes: Break-down maintenance; Corrective maintenance & Preventative maintenance site record keeping)
- **EPWP & Labour Intensive (LI)** report.
- **HIV/AIDS** report.
- **Covid-19** report



- **Damage report.**
- **Call-Centre report.**
- **Penalty report, including calculation for: (1) Late completion; (2) Payment reduction for late closing of logged calls; (3) Score-card deduction; (4) OHS target not reached; (5) EPWP target not reached.**

Note: The Service provider will be responsible to combine all documentation / reports, received from all professions, into one (1) complete / consolidated document / report, before submitting it to the Departmental Project Manager.

Other reports as per Department's request:

Note that all documents must be made available / submitted as a hard copy, PDF and Word / Excel, etc. if and when required.

- Interim Close-out report
- Final Close-out report
- Interim Final account
- Contract Completion Report, including a cost reconciliation report of the project.
- Final account
- Test reports including stress tests, if applicable.
- Report on work done by others on site.
- Audit reports.
- End of life-cycle reports for machinery / equipment.
- In depth evaluation report of all civil & structural equipment / assets within first 2 months of repair phase.
- Operational & Maintenance manuals.
- Updating site Key Plans.
- Extension of time submission(s)
- Variation order submission(s)
- Certificate of Compliance & Indemnity by Consultants.
- Easter and Festive Season requirements.

The above-mentioned reporting stages are **not** exhaustive and may include other requests from the Department from time to time during the life cycle of the project.

C3.C.3 Extent of the Services

The following services as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees, clause 3, are required: (The clause references refer to the corresponding clauses in the Tariff of Fees.)

C3.C.3.1 Normal Services (clause 3.2) including:

- Clause 3.2.2 Stage 2 - Preliminary Design: Concept and Viability, including Stage 1 - Inception
- Clause 3.2.3 Stage 3 - Detail Design
- Clause 3.2.4 Stage 4 - Documentation and Procurement
- Clause 3.2.5 Stage 5 - Contract Administration and Inspection
- Clause 3.2.6 Stage 6 - Completion of all consulting engineering services.

The appointed Professional Service Provider (Consulting Engineer) and/or his representative(s) will arrange with the Departmental Project Manager, within 2 week after the

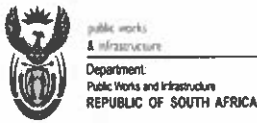


briefing, to visit the sites in order to make themselves conversant with the local conditions of the sites and conduct a survey of the installations and facilities located at the Land Port of Entry.

Completion of all consulting engineering services.

The following tasks (not limited to) shall be executed by the Professional Service Provider:

1. A register containing of all facilities and installations.
2. Compile and submit a **comprehensive status quo report**, including a photo report which must include:
 - Identification photographs for each facility.
 - Photographs of the facilities located at the Land Port of Entry.
 - Photographs depicting the general condition of each installation.
 - Photographs depicting specific problems areas at each installation.
 - Complete assessment (status quo) of repair work required at each installation.
3. A **cost estimate** is to be provided for the maintenance; servicing; repair and operational works for the 36 months contract period as based on the results of the survey conducted. The cost estimate shall be divided into separate installations.
4. The professional service provider will be responsible for the design and tender documentation (Performance based).
5. A Water & Sewer management plan shall be developed and kept up to date, including Blue & Green drop compliance, if found to be applicable. Includes: (1). Water safety plan; Risk assessment; Monitoring & Incident management; Monthly potable water quality testing and reporting. Water demand management; loss reduction plan and monthly reporting. (2). Waste water risk plan & management; Classification, licensing of the works and process controllers, if found to be applicable; Monthly effluent water quality testing and reporting.
6. A Diesel / Fuel management plan shall be developed; managed and kept up to date (Done by the Electrical Engineer).
7. Certificates of Compliance must be issued for all electrical installations (Done by the Electrical Engineer).
8. As built-drawings & key plans must be compiled / updated.
9. Operational & maintenance manuals must be compiled / updated.
10. Site instructions to be issued for all works done by the contractor.
11. A maintenance; servicing and operation control plan shall be developed; managed and site record keeping be kept up to date. Monthly scoring of maintenance activities is to be performed.
12. Implementation of the maintenance and servicing Call-Centre processes. Call-Centre to log break-downs with the Engineer (Engineer to be available 24 hours a day). Engineer to log break-downs with the contractor and ensure repairs are executed within specific down-times.



13. Occupational Health and Safety duties, including OHS-Plan, monthly inspections; meetings and reporting.
14. Covid-19 requirements and reporting.
15. Chair all site meetings, including Site Handover meeting, compile and distribute minutes.
16. Co-ordination and issuing of access certificates for repair; maintenance and operation.
17. EPWP to be managed in terms of Labour Intensive (LI), including monthly reporting.
18. HIV / AIDS to be managed in terms of the Department's regulations, including monthly reporting.
19. Covid-19 to be managed in terms of the Department's regulations, including monthly reporting.
20. Manage the process of disagreement and disputes in accordance with the General Conditions of Contract for Construction Works; GCC 2010.
21. Facilities for the disables must be complied with and be in accordance with the applicable SANS and DPW regulations.
22. Energy efficiency must be taken into account and complied with in accordance to the applicable SANS regulations.
23. Easter and Festive Season Requirements.
24. Manage and assist with the Local Councillor, regarding work opportunities from the local area.

C3.C.3.2 Additional Services (clause 3.3) including:

C3.C.3.2.1 Clause 3.3.1 Additional Services pertaining to all Stages of the Project

C3.C.3.2.2 Clause 3.3.2 Construction Monitoring

(i) General

The consultant must make available construction monitoring staff for Level One, (part time), monitoring. Only for the Repair phase which is estimated to be 6 months from the time of access granted by the consultant to the contractor for the Repair phase.

The competence and experience of the tenderer's proposed site personnel shall be an integral part of the Employer's tender evaluation process. On acceptance of their tender by the Employer, the Service Provider shall not be permitted to offer alternative core personnel unless such alternative offer is as a result of a bona fide unforeseen circumstance. In such an event, the Employer shall only accept alternative personnel possessing at least similar qualifications and experience to those persons proposed in the tender.

The Employer shall be entitled to instruct the Service Provider to remove from the Works any person employed by the Service Provider on or about the execution of the Works who, in the opinion of the Employer, misconducts himself or is incompetent or negligent in the proper performance of his duties, or whose presence on site is otherwise considered by the Employer, on reasonable grounds, to be undesirable.



(ii) **Accommodation**

Appropriate housing for the site staff shall be provided by the Service Provider. Site staff shall be housed as near to the location of the Works as may be practically possible. No separate payment will be made for the accommodation of site staff and rates tendered for the relevant site staff shall include full compensation for all accommodation costs.

(iii) **Establishment of site office**

Provision and maintenance of a site office building, all related services and supply of office furniture will be made under the Works Contract. The Service Provider shall however provide all office equipment and incidentals required for carrying out administration, supervision and inspection of the Works and shall include:

- a) Cell phones, including rental and call charges.
- b) All safety equipment for supervisory staff in accordance with the OHS requirements (e.g. safety jackets, boots, etc.).
- c) All equipment including copier rental, fax machine, consumables, stationary, digital camera, etc.
- d) All necessary computer hardware, software, printers and modems and associated consumables.
- e) Any other items necessary for the capture of all relevant data required for administering the contract and reporting to the Employer.

One landline, including rental and call costs for work related office and fax usage shall be provided through the Works Contract.

(iv) **Transport for site staff**

The Service Provider shall provide sufficient appropriate vehicles on site for site staff.

C3.C.3.2.3 Clause 3.3.3 Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

The Service Provider (Appointed Consultant) 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 85 of 1993).

The Service Provider under this contract shall make provision for the incorporation of the Occupational Health and Safety specifications, in the tender documentation.

It is a firm requirement that in the designs, planning and supervision of the execution of the work done under the contract resulting from this tender, all applicable regulations and stipulations under OH&SA, (Act 85 of 1993) including regulations and codes of practice etc. are complied with and that the final product shall be in full compliance with said legislation, standards, etc.

Furthermore, the Service Provider shall be fully responsible for the compliance of his operation, equipment as well as staff and persons under his supervision on site whether by invitation instruction or otherwise and regardless of the capacity, purpose and relationship of any such persons to the appointment, to all aspects of all applicable regulations and stipulations under OH&SA, (Act 85 of 1993).



C3.C.3.2.4 Clause 3.3.4 Quality Assurance System

The appointed Service Provider shall ensure that all designs/drawings/specifications/calculations and any other documents, produced for the contract, are formally signed off by the registered (ECSA) Professional Engineer or Professional Engineering Technologist in the relevant fields.

C3.C.3.2.5 Clause 3.3.5 Lead Consulting Engineer

N/A

C3.C.3.2.6 Clause 3.3.6 Principal Agent of the Client:

The principal agent is named in C3.3.2.1.

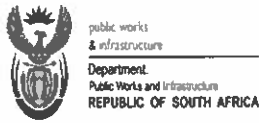
C3.C.3.3 Additional Services (Other)

C3.C.3.3.1 Environmental Impact Assessment

N/A

The Service Provider is required to lodge an application on behalf of the Employer in compliance with the Environmental Impact Assessment Regulations: Regulations 1182 and 1183 of the Environmental Conservation Act, 1989 (Act 73 of 1989) for the proposed construction of the project. The Service Provider is furthermore required to compile a specification setting out the minimum requirements regarding the Environmental Management Plan (EMP) for the construction process, evaluate and approve the contractor's EMP and monitor his adherence thereto.

C3.C.3.3.2 The Employer may order duties that fall outside the scope of the project as tendered. Any such additional services that may be required will be remunerated as set out in C2 Pricing Data.



C3.E Scope of Services for Electrical Engineers

C3.E.1 Employer's objectives regarding electrical engineering work

This tender is *inter alia* for:

A Service Provider performing electrical engineering work on a **Multi-Disciplinary Project**.

C3.E.2 Description of the Services

C3.E.2.1 Services

The general descriptions of the services required are as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees.

Specific services required are set out in C3.E.3 Extent of Services as well as in the most recent publication of the Departmental: Manual for Electrical/Electronic and Mechanical Consulting Engineers. Should there be any discrepancies between this tender document and the Manual for Electrical/Electronic and Mechanical Consulting Engineers, the former shall take precedence.

Where a quantity surveyor is included in the project team on a multi-disciplinary project, the quantity surveyor will compile bills of quantities for all work ("all work" shall include *inter alia* electrical, mechanical and any other engineering work).

C3.E.2.2 Project description

C3.E.2.2.1 Scope

The Scope of the Project includes the Repair, Maintenance and Servicing on the following installations of the Project:

Note: The contract period is 36 months with a 6 Months Repair phase and Maintenance prior to the completion of repair (Maintenance during Repair phase) and Maintenance after completion of the Repair phase.

Electrical Work:

- Building & Site electrical
- Standby power generation & Incinerator
- External lighting & medium & low voltage

C3.E.2.2.2 Location of the Project

Kosi Bay Land Port of Entry is situated on the Southern borderline of Mozambique, approximately 198km from Golela LPoE and 270km North of Richards Bay. Approximately 20km North East of Manguzi town. The housing is situated at Manguzi town within the Manguzi Police Station area.

GPS coordinate: **26° 51' 52.65" S, 32° 49' 45.86" E.**

C3.E.2.2.3 Project Cost Estimate

VAT included, CPA Excluded.

- Civil & Structural: R3, 007, 192.60
- Electrical: **R689, 357.22**



- Mechanical: R812, 715.18

Total cost for the project: R4, 509, 265.00.

C3.E.2.2.4 Project Programme

- **Briefing of the Professional Service Provider:** Within 14 calendar days (2 weeks) from the date of appointment.
- **Project Execution Plan (PEP):** Within 14 calendar days (2 weeks) from the date of the briefing meeting.
- **Site Visit:** Within 14 calendar days (2 weeks) from the date of the briefing meeting. The purpose of the site visit is for the Professional Service Provider to familiarise themselves with the local conditions of the site and conduct a survey of the infrastructure and installations at the Land Port of Entry.
- **Comprehensive Status Quo Report (SQR) & Preliminary Design Report (PDR),** including a pre-tender estimate, in compliance with departmental standards: within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the PEP.
- **Final Design Report,** including a pre-tender estimate: Within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the PDR.
- **Draft Bid document, including drawings:** Within 14 calendar days from the date of instruction to proceed after acceptance of the final design report.
- **Final Bid document, including drawings:** Within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the draft bid document.
- **Procurement of a Contractor:** Within 6 months from the date of the Professional Service Provider's appointment, including a risk assessment and a tender period of 4.5 weeks.
- **Construction Program:** Within 14 calendar days (2 weeks) from date of the contractor's appointment, the professional service provider must obtain a construction program, from the appointed contractor, covering the **36 months contract period**, linked to the cash-flow and expenditure. **No Site Handover may be done until the said construction program is submitted and accepted.**
- **Occupational Health and Safety Plan:** Within 14 calendar days (2 weeks) from the date of the contractor's appointment, the professional service provider must obtain an Occupational Health and Safety Plan, from the appointed contractor. **No Site Handover may be done until the said OHS Plan is submitted and accepted.**
- **Access Certificate for Maintenance** to be issued on site Hand-over date.
- **Access Certificates for each Repair installation** to be issued within 1 month of site handover date.
- **In Depth Evaluation Report** of all civil & structural equipment / assets / infrastructure within first 2 months of the repair phase.



- **Practical Completion, Completion and Final Approval Certificates** shall be issued by the Professional Service Provider, in accordance with GCC 2010.
- **Defects & Liability Period:** As per GCC 2010.
- **Final Account:** The Professional Service Provider shall, within 3 Months from the effective date of the Final Approval Certificate, submit an acceptable final account in accordance with the Department's format.
- **Final Fee Account:** The Professional service Provider shall, within 1 Month from the final Account's approval date, submit an acceptable final fee account.

Note: The program must be synchronized with all other Professions (Electrical & Mechanical) to avoid unnecessary delays.

C3.E.2.2.5 Information available from Employer

Information such as drawings will be made available on request.

Standard forms that are required for managing the project can be obtained from the Departmental web-site: www.publicworks.gov.za and all other information can be obtained from the Departmental Project Manager.

It is the responsibility of the Professional Service Provider to ensure that all the documentation used is the latest.

C3.E.2.2.6 Other Contracts on Site

It must be taken into account that other contracts may be implemented before and / or during the 36 months period. Therefore special attention must be given to effect liaison, management and cooperation between the different contracts on site.

C3.E.2.2.7 Reporting Requirements and Approval Procedure

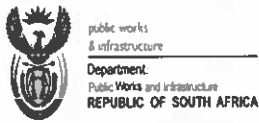
Notwithstanding any other requirements as listed elsewhere, the Professional Service Provider shall submit a monthly report indicating progress of the service.

It will be expected from the Professional Service Provider to attend meetings on request from the Departmental Project Manager at the Employer's offices.

General procedures and requirements are given in the relevant Departmental manuals for the different professions.

The appointed Professional Service Provider will be required to attend meetings with the Departmental Project Manager, together with the Department's professional team if the need arises. These meetings will be held at regular intervals during the design up to and to completion of all working drawings and tender documentation; minutes are to be kept and signed by all members of the professional team and submitted to the Departmental Project Manager for monitoring and follow-up.

The Professional Service Provider will be responsible to attend and manage all site meetings, i.e. **site handover meeting** (once off); **technical & general monthly site progress inspection/meetings** (repair phase); **monthly maintenance control inspection/meetings** (maintenance phase); **practical completion inspection/meeting** (once off); **completion & final approval inspection/meeting** (once off); etc.



Monthly Occupational Health and Safety meetings must be held by the accredited Safety Agent as prescribed by the OHS Act. The Safety Agent will chair all safety meetings and taking of minutes which must be handed to the Professional Service Provider for distribution thereof as well of any other requirements as set out by the Department as per the tender documentation.

The Professional Service Provider will be required to provide financial reports on a monthly basis, or as and when requested by the Departmental Project Manager. The financial reports will be inclusive of design and expected construction cash-flow for the project as well as for the professional team based on their specific area of appointment and the value of their scope of works as designed and expected fees.

The Department's Bid Specification Committee will be responsible to approve the bid document.

The following reports (not limited to) shall be submitted by the Professional Service Provider:

- **Status Quo Report (SQR) and Preliminary Design Report (PDR)**, including all PRM16 forms shall be developed and submitted in accordance with the Departmental generic format.
- **Final Design Report**, including a pre-tender estimate, shall be developed and submitted in accordance with the Departmental generic format.
- **Draft Bid documentation** shall be submitted in accordance with the Department's generic format.
- **Final Bid documentation** to procure a Contractor shall be submitted in accordance with the Departmental generic format.

During the 36 months contract period, the following reports must be compiled and submitted on a monthly basis, by the appointed Professional Service Provider, in compliance with the Department's format:

- **Site Diary** report.
- **Progress** report, including a construction program, linked to the expenditure and projected cash-flow.
- **Financial** report for consultant & contractor, including CPA & Retention calculation.
- **Progress payment** report (Contractor and Consultant).
- **Contract** report.
- **Diesel / Fuel** management report.
- **Occupational Health and Safety** report, including toolbox talk minutes.
- **Maintenance** report (Includes: Break-down maintenance; Corrective maintenance & Preventative maintenance site record keeping)
- **EPWP & Labour Intensive (LI)** report.
- **HIV/AIDS** report.
- **Covid-19** report
- **Damage** report.
- **Call-Centre** report.
- **Penalty** report, including calculation for: (1) Late completion; (2) Payment reduction for late closing of logged calls; (3) Score-card deduction; (4) OHS target not reached; (5) EPWP target not reached.



Note: The Service provider will be responsible to combine all documentation / reports, received from all professions, into one (1) complete / consolidated document / report, before submitting it to the Departmental Project Manager.

Other reports as per Department's request:

Note that all documents must be made available / submitted as a hard copy, PDF and Word / Excel, etc. if and when required.

- Interim Close-out report
- Final Close-out report
- Interim Final account
- Contract Completion Report, including a cost reconciliation report of the project.
- Final account
- Test reports including stress tests, if applicable.
- Report on work done by others on site.
- Audit reports.
- End of life-cycle reports for machinery / equipment.
- In depth evaluation report of all civil & structural equipment / assets within first 2 months of repair phase.
- Operational & Maintenance manuals.
- Updating site Key Plans.
- Extension of time submission(s)
- Variation order submission(s)
- Certificate of Compliance & Indemnity by Consultants.
- Easter and Festive Season requirements.

The above-mentioned reporting stages are **not** exhaustive and may include other requests from the Department from time to time during the life cycle of the project.

C3.E.3 Extent of the Services

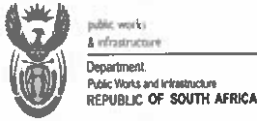
The following services as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees, clause 3, are required: (The clause references refer to the corresponding clauses in the Tariff of Fees.)

C3.E.3.1 Normal Services (clause 3.2) including:

- Clause 3.2.2 Stage 2 - Preliminary Design: Concept and Viability, including Stage 1 - Inception
- Clause 3.2.3 Stage 3 - Detail Design
- Clause 3.2.4 Stage 4 - Documentation and Procurement
- Clause 3.2.5 Stage 5 - Contract Administration and Inspection
- Clause 3.2.6 Stage 6 - Completion of all consulting engineering services.

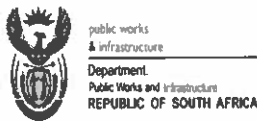
The appointed Professional Service Provider (Consulting Engineer) and/or his representative(s) will arrange with the Departmental Project Manager, within 2 week after the briefing, to visit the sites in order to make themselves conversant with the local conditions of the sites and conduct a survey of the installations and facilities located at the Land Port of Entry.

Completion of all consulting engineering services.



The following tasks (not limited to) shall be executed by the Professional Service Provider:

1. A register containing of all facilities and installations.
2. Compile and submit a **comprehensive status quo report**, including a photo report which must include:
 - Identification photographs for each facility.
 - Photographs of the facilities located at the Land Port of Entry.
 - Photographs depicting the general condition of each installation.
 - Photographs depicting specific problems areas at each installation.
 - Complete assessment (status quo) of repair work required at each installation.
3. A **cost estimate** is to be provided for the maintenance; servicing; repair and operational works for the 36 months contract period as based on the results of the survey conducted. The cost estimate shall be divided into separate installations.
4. The professional service provider will be responsible for the design and tender documentation (Performance based).
5. A Diesel / Fuel management plan shall be developed; managed and kept up to date (Done by the Electrical Engineer).
6. Certificates of Compliance must be issued for all electrical installations (Done by the Electrical Engineer).
7. As built-drawings & key plans must be compiled / updated.
8. Operational & maintenance manuals must be compiled / updated.
9. Site instructions to be issued for all works done by the contractor.
10. A maintenance; servicing and operation control plan shall be developed; managed and site record keeping be kept up to date. Monthly scoring of maintenance activities is to be performed.
11. Implementation of the maintenance and servicing Call-Centre processes. Call-Centre to log break-downs with the Engineer (Engineer to be available 24 hours a day). Engineer to log break-downs with the contractor and ensure repairs are executed within specific down-times.
12. Occupational Health and Safety duties, including OHS-Plan, monthly inspections; meetings and reporting.
13. Covid-19 requirements and reporting.
14. Chair all site meetings, including Site Handover meeting, compile and distribute minutes.
15. Co-ordination and issuing of access certificates for repair; maintenance and operation.
16. EPWP to be managed in terms of Labour Intensive (LI), including monthly reporting.
17. HIV / AIDS to be managed in terms of the Department's regulations, including monthly reporting.



18. Covid-19 to be managed in terms of the Department's regulations, including monthly reporting.
19. Manage the process of disagreement and disputes in accordance with the General Conditions of Contract for Construction Works; GCC 2010.
20. Facilities for the disables must be complied with and be in accordance with the applicable SANS and DPW regulations.
21. Energy efficiency must be taken into account and complied with in accordance to the applicable SANS regulations.
22. Easter and Festive Season Requirements.
23. Manage and assist with the Local Councillor, regarding work opportunities from the local area.

C3.E.3.2 **Additional Services (clause 3.3) including:**

C3.E.3.2.1 **Clause 3.3.1 Additional Services pertaining to all Stages of the Project**

C3.E.3.2.2 **Clause 3.3.2 Construction Monitoring**

(i) **General**

The consultant must make available construction monitoring staff for Level One, (part time), monitoring. Only for the Repair phase which is estimated to be 6 months from the time of access granted by the consultant to the contractor for the Repair phase.

The competence and experience of the tenderer's proposed site personnel shall be an integral part of the Employer's tender evaluation process. On acceptance of their tender by the Employer, the Service Provider shall not be permitted to offer alternative core personnel unless such alternatively offer is as a result of a bona fide unforeseen circumstance. In such an event, the Employer shall only accept alternative personnel possessing at least similar qualifications and experience to those persons proposed in the tender.

The Employer shall be entitled to instruct the Service Provider to remove from the Works any person employed by the Service Provider on or about the execution of the Works who, in the opinion of the Employer, misconducts himself or is incompetent or negligent in the proper performance of his duties, or whose presence on site is otherwise considered by the Employer, on reasonable grounds, to be undesirable.

(ii) **Accommodation**

Appropriate housing for the site staff shall be provided by the Service Provider. Site staff shall be housed as near to the location of the Works as may be practically possible. No separate payment will be made for the accommodation of site staff and rates tendered for the relevant site staff shall include full compensation for all accommodation costs.

(iii) **Establishment of site office**

Provision and maintenance of a site office building, all related services and supply of office furniture will be made under the Works Contract. The Service Provider shall however provide all office equipment and incidentals required for carrying out administration, supervision and inspection of the Works and shall include:



- a) Cell phones, including rental and call charges.
- b) All safety equipment for supervisory staff in accordance with the OHS requirements (e.g. safety jackets, boots, etc.).
- c) All equipment including copier rental, fax machine, consumables, stationary, digital camera, etc.
- d) All necessary computer hardware, software, printers and modems and associated consumables.
- e) Any other items necessary for the capture of all relevant data required for administrating the contract and reporting to the Employer.

One landline, including rental and call costs for work related office and fax usage shall be provided through the Works Contract.

(iv) Transport for site staff

The Service Provider shall provide sufficient appropriate vehicles on site for site staff.

C3.E.3.2.3 Clause 3.3.3 Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

The Service Provider (Appointed Consultant) 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 85 of 1993).

The Service Provider under this contract shall make provision for the incorporation of the Occupational Health and Safety specifications, in the tender documentation.

It is a firm requirement that in the designs, planning and supervision of the execution of the work done under the contract resulting from this tender, all applicable regulations and stipulations under OHS Act, (Act 85 of 1993) including regulations and codes of practice, etc. are complied with and that the final product shall be in full compliance with said legislation, standards etc.

Furthermore, the Service Provider shall be fully responsible for the compliance of his operation, equipment as well as staff and persons under his supervision on site whether by invitation instruction or otherwise and regardless of the capacity, purpose and relationship of any such persons to the appointment, to all aspects of all applicable regulations and stipulations under OHS Act, (Act 85 of 1993).

C3.E.3.2.4 Clause 3.3.4 Quality Assurance System

The appointed Service Provider shall ensure that all designs/drawings/specifications/calculations and any other documents, produced for the contract, are formally signed off by the registered (ECSA) Professional Engineer or Professional Engineering Technologist in the relevant fields.

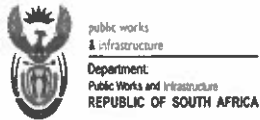
C3.E.3.2.5 Clause 3.3.5 Lead Consulting Engineer

N/A

C3.E.3.2.6 Clause 3.3.6 Principal Agent of the Client

The principal agent is named in C3.3.2.1.

C3.E.3.3 Additional Services (Other)

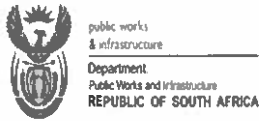


C3.E.3.3.1 Environmental Impact Assessment

N/A

The Service Provider is required to lodge an application on behalf of the Employer in compliance with the Environmental Impact Assessment Regulations: Regulations 1182 and 1183 of the Environmental Conservation Act, 1989 (Act 73 of 1989) for the proposed construction of the project. The Service Provider is furthermore required to compile a specification setting out the minimum requirements regarding the Environmental Management Plan (EMP) for the construction process, evaluate and approve the contractor's EMP and monitor his adherence thereto.

C3.E.3.3.2 The Employer may order duties that fall outside the scope of the project as tendered. Any such additional services that may be required will be remunerated as set out in C2 Pricing Data.



C3.M Scope of Services for Mechanical Engineers

C3.M.1 Employer's objectives regarding mechanical engineering work

This tender is *inter alia* for:

A Service Provider performing mechanical engineering work on a **Multi-Disciplinary Project**.

C3.M.2 Description of the Services

C3.M.2.1 Services

The general descriptions of the services required are as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees.

Specific services required are set out in C3.M.3 Extent of Services as well as in the most recent publication of the Departmental: Manual for Electrical/Electronic and Mechanical Consulting Engineers. Should there be any discrepancies between this Tender Document and the Manual for Electrical/Electronic and Mechanical Consulting Engineers, the former shall take precedence.

Where a quantity surveyor is included in the project team on a multi-disciplinary project, the quantity surveyor will compile bills of quantities for all work ("all work" shall include *inter alia* electrical, mechanical and any other engineering work).

C3.M.2.2 Project description

C3.M.2.2.1 Scope

The Scope of the Project includes the Repair, Maintenance and Servicing on the following installations of the Project:

Note: The contract period is 36 months with a 6 Months Repair phase and Maintenance prior to the completion of repair (Maintenance during Repair phase) and Maintenance after completion of the Repair phase.

Mechanical Work:

- Heating, Ventilation & Air-conditioning
- Conventional Fire-fighting Equipment

C3.M.2.2.2 Location of the Project

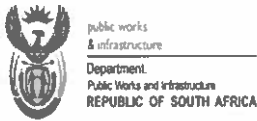
Kosi Bay Land Port of Entry is situated on the Southern borderline of Mozambique, approximately 198km from Golela LPoE and 270km North of Richards Bay. Approximately 20km North East of Manguzi town. The housing is situated at Manguzi town within the Manguzi Police Station area.

GPS coordinate: **26° 51' 52.65" S, 32° 49' 45.86" E.**

C3.M.2.2.3 Project Cost Estimate

VAT included, CPA Excluded.

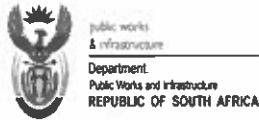
- Civil & Structural: R3, 007, 192.60
- Electrical: R689, 357.22
- Mechanical: R812, 715.18



Total cost for the project: R4, 509, 265.00.

C3.M.2.2.4 Project Programme

- **Briefing of the Professional Service Provider:** Within 14 calendar days (2 weeks) from the date of appointment.
- **Project Execution Plan (PEP):** Within 14 calendar days (2 weeks) from the date of the briefing meeting.
- **Site Visit:** Within 14 calendar days (2 weeks) from the date of the briefing meeting. The purpose of the site visit is for the Professional Service Provider to familiarise themselves with the local conditions of the site and conduct a survey of the infrastructure and installations at the Land Port of Entry.
- **Comprehensive Status Quo Report (SQR) & Preliminary Design Report (PDR),** including a pre-tender estimate, in compliance with departmental standards: within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the PEP.
- **Final Design Report,** including a pre-tender estimate: Within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the PDR.
- **Draft Bid document,** including drawings: Within 14 calendar days from the date of instruction to proceed after acceptance of the final design report.
- **Final Bid document,** including drawings: Within 14 calendar days (2 weeks) from the date of instruction to proceed after the acceptance of the draft bid document.
- **Procurement of a Contractor:** Within 6 months from the date of the Professional Service Provider's appointment, including a risk assessment and a tender period of 4.5 weeks.
- **Construction Program:** Within 14 calendar days (2 weeks) from date of the contractor's appointment, the professional service provider must obtain a construction program, from the appointed contractor, covering the **36 months contract period**, linked to the cash-flow and expenditure. **No Site Handover may be done until the said construction program is submitted and accepted.**
- **Occupational Health and Safety Plan:** Within 14 calendar days (2 weeks) from the date of the contractor's appointment, the professional service provider must obtain an Occupational Health and Safety Plan, from the appointed contractor. **No Site Handover may be done until the said OHS Plan is submitted and accepted.**
- **Access Certificate for Maintenance** to be issued on site Hand-over date.
- **Access Certificates for each Repair installation** to be issued within 1 month of site handover date.
- **In Depth Evaluation Report** of all civil & structural equipment / assets / infrastructure within first 2 months of the repair phase.



- **Practical Completion, Completion and Final Approval Certificates** shall be issued by the Professional Service Provider, in accordance with GCC 2010.
- **Defects & Liability Period:** As per GCC 2010.
- **Final Account:** The Professional Service Provider shall, within 3 Months from the effective date of the Final Approval Certificate, submit an acceptable final account in accordance with the Department's format.
- **Final Fee Account:** The Professional service Provider shall, within 1 Month from the final Account's approval date, submit an acceptable final fee account.

Note: The program must be synchronized with all other Professions (Electrical & Mechanical) to avoid unnecessary delays.

C3.M.2.2.5 Information available from Employer

Information such as drawings will be made available on request.

Standard forms that are required for managing the project can be obtained from the Departmental web-site: www.publicworks.gov.za and all other information can be obtained from the Departmental Project Manager.

It is the responsibility of the Professional Service Provider to ensure that all the documentation used is the latest.

C3.M.2.2.6 Other Contracts on Site

It must be taken into account that other contracts may be implemented before and / or during the 36 months period. Therefore special attention must be given to effect liaison, management and cooperation between the different contracts on site.

C3.M.2.2.7 Reporting Requirements and Approval Procedure

Notwithstanding any other requirements as listed elsewhere, the Professional Service Provider shall submit a monthly report indicating progress of the service.

It will be expected from the Professional Service Provider to attend meetings on request from the Departmental Project Manager at the Employer's offices.

General procedures and requirements are given in the relevant Departmental manuals for the different professions.

The appointed Professional Service Provider will be required to attend meetings with the Departmental Project Manager, together with the Department's professional team if the need arises. These meetings will be held at regular intervals during the design up to and to completion of all working drawings and tender documentation; minutes are to be kept and signed by all members of the professional team and submitted to the Departmental Project Manager for monitoring and follow-up.

The Professional Service Provider will be responsible to attend and manage all site meetings, i.e. **site handover meeting** (once off); **technical & general monthly site progress inspection/meetings** (repair phase); **monthly maintenance control inspection/meetings** (maintenance phase); **practical completion inspection/meeting** (once off); **completion & final approval inspection/meeting** (once off); etc.



Monthly Occupational Health and Safety meetings must be held by the accredited Safety Agent as prescribed by the OHS Act. The Safety Agent will chair all safety meetings and taking of minutes which must be handed to the Professional Service Provider for distribution thereof as well of any other requirements as set out by the Department as per the tender documentation.

The Professional Service Provider will be required to provide financial reports on a monthly basis, or as and when requested by the Departmental Project Manager. The financial reports will be inclusive of design and expected construction cash-flow for the project as well as for the professional team based on their specific area of appointment and the value of their scope of works as designed and expected fees.

The Department's Bid Specification Committee will be responsible to approve the bid document.

The following reports (not limited to) shall be submitted by the Professional Service Provider:

- **Status Quo Report (SQR) and Preliminary Design Report (PDR)**, including all PRM16 forms shall be developed and submitted in accordance with the Departmental generic format.
- **Final Design Report**, including a pre-tender estimate, shall be developed and submitted in accordance with the Departmental generic format.
- **Draft Bid documentation** shall be submitted in accordance with the Department's generic format.
- **Final Bid documentation** to procure a Contractor shall be submitted in accordance with the Departmental generic format.

During the 36 months contract period, the following reports must be compiled and submitted on a monthly basis, by the appointed Professional Service Provider, in compliance with the Department's format:

- **Site Diary** report.
- **Progress** report, including a construction program, linked to the expenditure and projected cash-flow.
- **Financial** report for consultant & contractor, including CPA & Retention calculation.
- **Progress payment** report (Contractor and Consultant).
- **Contract** report.
- **Diesel / Fuel** management report.
- **Occupational Health and Safety** report, including toolbox talk minutes.
- **Maintenance** report (Includes: Break-down maintenance; Corrective maintenance & Preventative maintenance site record keeping)
- **EPWP & Labour Intensive (LI)** report.
- **HIV/AIDS** report.
- **Covid-19** report
- **Damage** report.
- **Call-Centre** report.
- **Penalty** report, including calculation for: (1) Late completion; (2) Payment reduction for late closing of logged calls; (3) Score-card deduction; (4) OHS target not reached; (5) EPWP target not reached.



Note: The Service provider will be responsible to combine all documentation / reports, received from all professions, into one (1) complete / consolidated document / report, before submitting it to the Departmental Project Manager.

Other reports as per Department's request:

Note that all documents must be made available / submitted as a hard copy, PDF and Word / Excel, etc. if and when required.

- Interim Close-out report
- Final Close-out report
- Interim Final account
- Contract Completion Report, including a cost reconciliation report of the project.
- Final account
- Test reports including stress tests, if applicable.
- Report on work done by others on site.
- Audit reports.
- End of life-cycle reports for machinery / equipment.
- In depth evaluation report of all civil & structural equipment / assets within first 2 months of repair phase.
- Operational & Maintenance manuals.
- Updating site Key Plans.
- Extension of time submission(s)
- Variation order submission(s)
- Certificate of Compliance & Indemnity by Consultants.
- Easter and Festive Season requirements.

The above-mentioned reporting stages are **not** exhaustive and may include other requests from the Department from time to time during the life cycle of the project.

C3.M.3 Extent of the Services

The following services as defined in the 2016 NDPW - Scope of Engineering Services and Tariff of Fees, clause 3, are required: (The clause references refer to the corresponding clauses in the Tariff of Fees.)

C3.M.3.1 Normal Services (clause 3.2) including:

- Clause 3.2.2 Stage 2 - Preliminary Design: Concept and Viability, including Stage 1 - Inception
- Clause 3.2.3 Stage 3 - Detail Design
- Clause 3.2.4 Stage 4 - Documentation and Procurement
- Clause 3.2.5 Stage 5 - Contract Administration and Inspection
- Clause 3.2.6 Stage 6 - Completion of all consulting engineering services.

The appointed Professional Service Provider (Consulting Engineer) and/or his representative(s) will arrange with the Departmental Project Manager, within 2 week after the briefing, to visit the sites in order to make themselves conversant with the local conditions of the sites and conduct a survey of the installations and facilities located at the Land Port of Entry.

Completion of all consulting engineering services.



The following tasks (not limited to) shall be executed by the Professional Service Provider:

1. A register containing of all facilities and installations.
2. Compile and submit a **comprehensive status quo report**, including a photo report which must include:
 - Identification photographs for each facility.
 - Photographs of the facilities located at the Land Port of Entry.
 - Photographs depicting the general condition of each installation.
 - Photographs depicting specific problems areas at each installation.
 - Complete assessment (status quo) of repair work required at each installation.
3. A **cost estimate** is to be provided for the maintenance; servicing; repair and operational works for the 36 months contract period as based on the results of the survey conducted. The cost estimate shall be divided into separate installations.
4. The professional service provider will be responsible for the design and tender documentation (Performance based).
5. A Diesel / Fuel management plan shall be developed; managed and kept up to date (Done by the Electrical Engineer).
6. Certificates of Compliance must be issued for all electrical installations (Done by the Electrical Engineer).
7. As built-drawings & key plans must be compiled / updated.
8. Operational & maintenance manuals must be compiled / updated.
9. Site instructions to be issued for all works done by the contractor.
10. A maintenance; servicing and operation control plan shall be developed; managed and site record keeping be kept up to date. Monthly scoring of maintenance activities is to be performed.
11. Implementation of the maintenance and servicing Call-Centre processes. Call-Centre to log break-downs with the Engineer (Engineer to be available 24 hours a day). Engineer to log break-downs with the contractor and ensure repairs are executed within specific down-times.
12. Occupational Health and Safety duties, including OHS-Plan, monthly inspections; meetings and reporting.
13. Covid-19 requirements and reporting.
14. Chair all site meetings, including Site Handover meeting, compile and distribute minutes.
15. Co-ordination and issuing of access certificates for repair; maintenance and operation.
16. EPWP to be managed in terms of Labour Intensive (LI), including monthly reporting.
17. HIV / AIDS to be managed in terms of the Department's regulations, including monthly reporting.



18. Covid-19 to be managed in terms of the Department's regulations, including monthly reporting.
19. Manage the process of disagreement and disputes in accordance with the General Conditions of Contract for Construction Works; GCC 2010.
20. Facilities for the disabled must be complied with and be in accordance with the applicable SANS and DPW regulations.
21. Energy efficiency must be taken into account and complied with in accordance to the applicable SANS regulations.
22. Easter and Festive Season Requirements.
23. Manage and assist with the Local Councillor, regarding work opportunities from the local area.

C3.M.3.2 Additional Services (clause 3.3) including:

C3.M.3.2.1 Clause 3.3.1 Additional Services pertaining to all Stages of the Project

C3.M.3.2.2 Clause 3.3.2 Construction Monitoring

(i) General

The consultant must make available construction monitoring staff for Level One, (part time), monitoring. Only for the Repair phase which is estimated to be 6 months from the time of access granted by the consultant to the contractor for the Repair phase.

The competence and experience of the tenderer's proposed site personnel shall be and integral part of the Employer's tender evaluation process. On acceptance of their tender by the Employer, the Service Provider shall not be permitted to offer alternative core personnel unless such alternatively offer is as a result of a bona fide unforeseen circumstance. In such an event, the Employer shall only accept alternative personnel possessing at least similar qualifications and experience to those persons proposed in the tender.

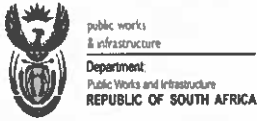
The Employer shall be entitled to instruct the Service Provider to remove from the Works any person employed by the Service Provider on or about the execution of the Works who, in the opinion of the Employer, misconducts himself or is incompetent or negligent in the proper performance of his duties, or whose presence on site is otherwise considered by the Employer, on reasonable grounds, to be undesirable.

(ii) Accommodation

Appropriate housing for the site staff shall be provided by the Service Provider. Site staff shall be housed as near to the location of the Works as may be practically possible. No separate payment will be made for the accommodation of site staff and rates tendered for the relevant site staff shall include full compensation for all accommodation costs.

(iii) Establishment of site office

Provision and maintenance of a site office building, all related services and supply of office furniture will be made under the Works Contract. The Service Provider shall however provide



all office equipment and incidentals required for carrying out administration, supervision and inspection of the Works and shall include:

- a) Cell phones, including rental and call charges.
- b) All safety equipment for supervisory staff in accordance with the OHS requirements (e.g. safety jackets, boots, etc.).
- c) All equipment including copier rental, fax machine, consumables, stationary, digital camera, etc.
- d) All necessary computer hardware, software, printers and modems and associated consumables.
- e) Any other items necessary for the capture of all relevant data required for administrating the contract and reporting to the Employer.

One landline, including rental and call costs for work related office and fax usage shall be provided through the Works Contract.

(iv) Transport for site staff

The Service Provider shall provide sufficient appropriate vehicles on site for site staff.

C3.M.3.2.3 Clause 3.3.3 Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

The Service Provider (Appointed Consultant) 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 85 of 1993).

The Service Provider under this contract shall make provision for the incorporation of the Occupational Health and Safety specifications, in the tender documentation.

It is a firm requirement that in the designs, planning and supervision of the execution of the work done under the contract resulting from this tender, all applicable regulations and stipulations under OHS Act, (Act 85 of 1993) including regulations and codes of practice, etc. are complied with and that the final product shall be in full compliance with said legislation, standards, etc.

Furthermore, the Service Provider shall be fully responsible for the compliance of his operation, equipment as well as staff and persons under his supervision on site whether by invitation instruction or otherwise and regardless of the capacity, purpose and relationship of any such persons to the appointment, to all aspects of all applicable regulations and stipulations under OHS Act, (Act 85 of 1993).

C3.M.3.2.4 Clause 3.3.4 Quality Assurance System

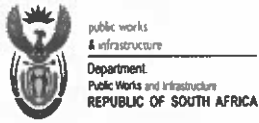
The appointed Service Provider shall ensure that all designs/drawings/specifications/calculations and any other documents, produced for the contract, are formally signed off by the registered (ECOSA) Professional Engineer or Professional Engineering Technologist in the relevant fields.

C3.M.3.2.5 Clause 3.3.5 Lead Consulting Engineer

N/A

C3.M.3.2.6 Clause 3.3.6 Principal Agent of the Client

The principal agent is named in C3.3.2.1.



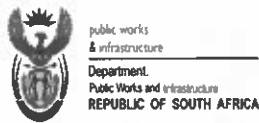
C3.M.3.3 Additional Services (Other)

C3.M.3.3.1 Environmental Impact Assessment

N/A

The Service Provider is required to lodge an application on behalf of the Employer in compliance with the Environmental Impact Assessment Regulations: Regulations 1182 and 1183 of the Environmental Conservation Act, 1989 (Act 73 of 1989) for the proposed construction of the project. The Service Provider is furthermore required to compile a specification setting out the minimum requirements regarding the Environmental Management Plan (EMP) for the construction process, evaluate and approve the contractor's EMP and monitor his adherence thereto.

C3.M.3.3.2 The Employer may order duties that fall outside the scope of the project as tendered. Any such additional services that may be required will be remunerated as set out in C2 Pricing Data.



C3.3 General for all professions

C3.3.1 Use of reasonable skill and care

It will be expected of the Service Provider to apply reasonable skills and due diligence in the execution of the duties stipulated in this document which shall include *inter alia* the following:

Although the Service Provider's documents may be scrutinised by the Employer, this shall in no way relieve him of his professional responsibility for the proper and prompt execution of his duties. The Employer shall also be entitled to have any documentation or calculations verified by Others. In the event of malperformance, default or negligence, the Employer shall have the right to claim compensation or damages and set off such against any amount payable.

During assessment of any existing facilities, which may have a direct bearing on the Project, the Service Provider shall determine deficiencies with such facilities in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), the SANS 10400, etc. and recommend measures to rectify those during the project execution phase.

The departmental project manager shall be notified by the Service Provider and his personnel of any transgression of *inter alia* the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and environmental legislation during the Service Provider's operation pertaining to the Contract regardless of who may be involved.

C3.3.2 Co-operation with other services providers

It will be required of the Service Provider to co-operate with the following:

C3.3.2.1 Service Providers

Service Providers from the following professions are/will be appointed on the Project to form the professional team:

Multi-Disciplinary Professional Services Practice

and other service providers as may from time to time be deemed necessary.

The required professional services will be executed by the professional team under the control and management of the designated departmental project manager who, at the time of invitation to perform professional services, will be the person mentioned in T1.1.6. The Employer reserves the right to replace the mentioned departmental project manager with another member of its staff or any individual/firm from the private sector should it be deemed necessary at any stage during the execution of the Project.

C3.3.2.2 Occupational Health and Safety Act, 1993 (Act 85 of 1993)

The Service Provider (Appointed Consultant) 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 85 of 1993).

The Service Provider under this contract shall make provision for the incorporation of the Occupational Health and Safety specifications, in the tender documentation.

Furthermore, the Service Provider shall be fully responsible for the compliance of his operation, equipment as well as staff and persons under his supervision on site whether by invitation, instruction or otherwise and regardless of the capacity, purpose and relationship of any such



persons to the appointment, to all aspects of all applicable regulations and stipulations under the act.

C3.3.2.3 Other role players

Local, provincial and national authorities, statutory bodies, governmental departments, Others, as may be required from time to time, including the client department/end user(s).

C3.3.3 Brief

C3.3.3.1 Target dates and times

The Service Provider will be expected throughout to give preference to the execution of the work involved in this commission.

The work of all Service Providers will be co-ordinated by the principal agent. All work is to be performed by the persons listed as Key Persons and persons under their supervision and further be executed as described in the Programme according to clause 3.15 of the Contract Data (and/or PEP according to the same clause, if applicable).

During the construction phase of the Project it will be expected of the principal agent to obtain a construction programme from the main contractor, to continuously monitor his progress against that programme for compliance and to take whichever steps have been described in the relevant manual and the Working Guideline for Project Managers. This should be done in collaboration with the rest of the professional team, should the progress not be according to the said programme.

C3.3.3.2 Reporting requirements

Notwithstanding any other requirements as listed elsewhere, the Service Provider shall submit a monthly report indicating progress of the Services.

C3.3.3.3 Local content

It is the policy of the Employer to give preference to materials and equipment of South African manufacture. The Service Provider is to ensure that, wherever feasible, designs are based on locally manufactured equipment and materials which can meet requirements at competitive prices.

C3.3.3.4 Design innovation

Given the need for energy efficiency and environmental sustainability in the built environment, each member of the professional team is required, wherever possible and applicable, to demonstrate design innovation in all aspects of the Service towards "green" design solutions. Aspects to be considered and incorporated in all new building and/or maintenance designs are, *inter alia* but not limited to:

- (a) sustainable development
e.g. in building form, material choice, construction detailing and methods, recycling ability;
- (b) energy efficiency
e.g.
 - (i) passive design methods towards energy conservation and consumption: building orientation, exploitation of nature's inherent energy sources);
 - (ii) energy efficient solutions and installations for lighting, ventilation, cooling, heating, etc. (e.g. energy efficient light fittings);
 - (iii) alternative or renewable energy sources where practical/feasible/economical;
- (c) water conservation/saving/re-use methods and



- (d) environmental friendliness (e.g. respect for natural habitat, blending of building with site/ environment/surrounding fabric, positioning of buildings, consideration of neighbouring sites' access to sun, wind, view, etc.).

C3.3.3.5 Final disposal of documents

Upon approval and finalisation of the final account of projects requiring a security clearance, it is a requirement that the Service Provider forward to the Employer all documents relating to this service. The same may also be requested on projects not requiring a security clearance.

C3.3.4 Reference data

C3.3.4.1 Space norms

Space norms are not applicable on this service.

The space norms of the Department of Public Works, space norms as may be published in the government gazette, norms determined by the Employer, when applicable to this/these Project(s), are the norms as set hereunder and shall not be exceeded without prior written approval. Any re-planning resulting from the norms as set, being exceeded, shall be for the Service Provider's account.

The professional team must apply cost control and submit elemental estimates at each stage, reduced to a common date. The Service Provider must set appropriate procedures in place with the other members of the professional team to ensure compliance in this regard.

Space must be controlled and reconciled with the approved norm(s). All planning units are to be provided and if not, this must be pointed out.

The Employer must, at least at completion of each work stage, be provided by the principal agent with certificates which specify that the space norms are not being exceeded, before the next stage may be proceeded with.

The space norm(s) are not applicable:

- (a) SPACE NORM(S):

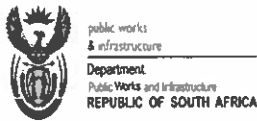
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C3.3.5 Applicable legislation and standards

This section applies to legislation emanating from national and provincial governments as well as that of any local authorities in whose area of jurisdiction the subject of the appointment falls and which has a bearing on the activities and facilities under this appointment.

All the applicable legislation, which do not specifically allow discretion in respect of compliance by the State, shall be followed exactly as intended by such legislation regardless of any instructions, verbal or in writing, to the contrary. (Refer *inter alia* to Section 41 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993)).

Should any applicable legislation allow discretion in respect of compliance by the State, it shall be followed exactly as intended by the relevant legislation as if no discretion is allowed until such



time as specific instructions in writing are issued to the appointed professional team by the departmental project manager.

The Service Provider undertakes to ensure that his actions and outcome thereof including, but not limited to, the facilities to be affected by the Service shall be in accordance with all relevant legislation and upon delivery, will function as required by said relevant legislation. The Service Provider's actions and the outcome thereof will in no way be detrimental to the health and safety of the occupants or persons present therein or in the vicinity thereof. Similarly it must not be detrimental to any aspects of the environment in its structure or operation if operated as specified in operation manual(s). The relevant legislation meant herein, as amended, consist of *inter alia* the following, but not limited to:

- Architectural Profession Act, 2000 (Act 444 of 2000);
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965);
- Construction Industry Development Board Act, 2000 (Act 38 of 2000);
- Council for the Built Environment Act, 2000 (Act 43 of 2000);
- Electricity Act, 1987 (Act 41 of 1987);
- Engineering Profession Act, 2000 (Act 46 of 2000);
- Environmental Conservation Act, 1989 (Act 73 of 1989);
- Fire Brigade Services Act, 1987 (Act 99 of 1987);
- Local Government Municipal Systems Act, 2000 (Act 32 of 2000), municipal by-laws and any special requirements of the local service supply authority;
- National Building Regulations and Building Standards Act, 1977 (Act 103 of 1977);
- National Environmental Management Act, 1998 (Act 107 of 1998);
- National Heritage Resources Act, 1999 (Act 25 of 1999);
- National Water Act, 1998 (Act 36 of 1998);
- Occupational Health and Safety Act, 1993 (Act 85 of 1993);
- Project and Construction Management Profession Act, 2000 (Act 48 of 2000);
- Quantity Surveying Profession Act, 2000 (Act 49 of 2000);
- Telecommunications Act, 1996 (Act 103 of 1996);
- Water Services Act, 1997 (Act 108 of 1997) and general authorizations;
- the latest issue of SANS 10142: "Code of Practice for the Wiring of Premises";
- the Regulations of the local Gas Board, where applicable and
- all regulations promulgated under the above Acts.

Although the more salient legislation has been referred to above, the *onus* remains on the Service Provider to adhere to, and apply, any and all Acts and/or Regulations not specifically mentioned in the list above but which will have an effect on the Project.

This will be a continuous process throughout the appointment, which will manifest itself during the following phases:

- development of plans and documentation;
- supervision of any Service Provider under the appointment;
- ensuring compliance of the end product;
- compiling and issuing of Instruction/Operational Manuals indicating *inter alia* what the legal and safety requirements entail for the user(s)/operator(s) of the facilities;
- providing instruction to the intended users/operators.

The Service Provider accepts full and complete responsibility (both contractually and/or in delict) regarding compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) for his acts and omissions as well as those of his employees and indemnifies the Employer against any legal action in this regard.



The Service Provider undertakes to ensure that the requirements of the Occupational Health and Safety Act, 1993 will similarly apply to the agreement with any sub service providers inclusive of indemnifying the Employer against any legal action regarding the actions and/or omissions by them.

C3.3.6 Access to land/buildings/sites

Access to the land/buildings/sites shall be negotiated in consultation with the departmental project manager.

C3.3.7 Software application for programming

The Service Provider must avail himself of software to be used in the Project documentation for compatibility with other Service Providers as well as the Employer. Specific requirements for compatibility are specified in the relevant manuals.

C3.3.8 Security clearance

It is an explicit condition of this agreement that partners, directors and/or the members of staff who will have insight into the planning of projects requiring security clearance, be kept to a minimum and that such persons will not object to being submitted to a security clearance, if the Employer so requires.

If the latter is applicable, the necessary forms will accompany this tender or be provided to the Service Provider at any stage thereafter. These forms must be completed, if attached, and returned with the tender. It is important to furnish information which is complete in every respect.

Should the authority responsible for the clearance, for security reasons not be satisfied with the classification obtained by any of the staff members of the Service Provider, it will be a further condition of this appointment that none of such staff members be involved with any aspect of the Project.

All documents pertaining to these projects must be stored in a safe place when not in use so as to ensure that the level of security of the projects is maintained.

The Employer will not accept liability for any costs in this regard.

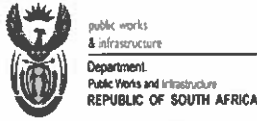
FINGER PRINTS (except Defence projects)

Persons of whom security clearance is required can obtain a finger print form SAP 91(a) from any police station. Kindly ensure that the police official responsible for taking the finger prints certifies the form since non-certification will result in the form being unacceptable.

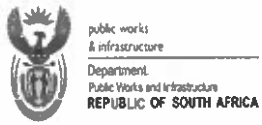
C3.3.9 Forms for contract administration

All forms required during contract administration, called PRM forms, are obtainable on the Employer's website at [http://www.publicworks.gov.za/under "Documents"; "Consultants Guidelines"; item 14](http://www.publicworks.gov.za/under%20Documents%20Consultants%20Guidelines). The agreement and conditions of contract to be entered into with the main contractor shall be the most recent version of the JBCC, if it is a multi-disciplinary contract, or GCC, if it is an engineering contract, as approved and in use by the National Department of Public Works.

C3.3.10 Condition to accept unregistered persons with suitable built environment qualifications on secondment



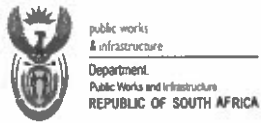
It is an express term of the contract that the Service Provider, after award of tender, accept unregistered, suitably qualified (built environment) persons in his office for the purpose of exposing the latter to the full extent of professional work, or as may be required according to specific circumstances, in order to gain experience which can be presented to the relevant Council for consideration towards professional registration. The secondment of such unregistered persons will be negotiated with the Service Provider in terms of numbers, periods of training and extent of professional work opportunity to be afforded. The conditions of secondment will be the subject of a separate Memorandum of Understanding with the Service Provider which will serve as an annexure hereto. Any secondment arrangements will cease upon the professional registration of the seconded person or as agreed on and so included in the aforesaid Memorandum of Understanding. The responsibility for salaries of seconded persons will remain with the Employer, but responsibility for operational expenses, necessary for the execution of the work, will vest with the Service Provider, all of which will be dealt with in the Memorandum of Understanding.



C4: SITE INFORMATION

(Refer to the heading "Description of the Services", sub-heading "Information available from Employer" under C3 above for each professional Service comprising the Service Provider.)

Tender no. H21/012 AI
WCS no 055330



Appendix A

PROFESSIONAL FEES IN RESPECT OF AN ENGINEER'S APPOINTMENT (ALL DISCIPLINES)

**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 2016

2016 NDPW - Scope of Engineering Services and Tariff of Fees



public works
infrastructuur
Department
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

2016 NDPW – Scope of Engineering Services and Tariff of Fees for the Persons Registered in terms of the Engineering Profession Act, 2000, (Act No. 46 of 2000)

Tender no. H21/012 AI
WCS no 055330

**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)**

The commencement date of this document

shall be

1 April 2016



2016 National Department of Public Works: Scope of Engineering Services and Tariff of Fees for Registered Professionals

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1. PREAMBLE

This document is based on the "Guideline Scope of Services and Tariff of Fees for Persons Registered in terms of the Engineering Profession Act, 2000, (Act No.46 of 2000)" determined by the Engineering Council of South Africa under Section 34(2) of the Engineering Profession Act, 2000 (Act No. 46 of 2000) and published under Government Gazette No 34875 Board Notice 206 of 20 December 2011 (ECSA Guideline Fee Scales).

Changes have been made to the ECSA Guideline Fee Scales to reflect the specific requirements of the National Department of Public Works for professional engineering appointments/contracts. 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 were determined with consideration of the factors put forward in the ECSA Guideline Fee Scales.

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 "2016 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.

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 detailed estimates, 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.
 - Electrical Certificate of Compliance.

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 advice 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:-

- (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



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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 598,000	R 0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R 74,800	12,5% on the balance over R 598 000
R 1,419,000	R 6,985,000	R 177,400	10,0% on the balance over R 1 419 000
R 6,985,000	R 14,248,000	R 734,000	9,0% on the balance over R 6,985,000
R 14,248,000	R 35,480,000	R 1,387,600	8,0% on the balance over R 14,248,000
R 35,480,000	R 70,961,000	R 3,086,200	6,0% on the balance over R 35,480,000
R 70,961,000	R 427,427,000	R 5,215,100	5,5% on the balance over R 70,961,000
R 427,427,000		R 24,820,700	5,0% on the balance over R 427,427,000

- (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 598,000	R 0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R 29,900	5,0% on the balance over R 598,000
R 1,419,000	R 6,985,000	R 71,000	4,5% on the balance over R 1,419,000
R 6,985,000	R 14,248,000	R 321,400	4,0% on the balance over R 6,985,000
R 14,248,000	R 35,480,000	R 611,900	3,0% on the balance over R 14,248,000
R 35,480,000	R 70,961,000	R 1,248,900	2,0% on the balance over R 35,480,000
R 70,961,000	R 427,427,000	R 1,958,500	1,5% on the balance over R 70,961,000
R 427,427,000		R 7,305,500	1,5% on the balance over R 427,427,000

- (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.

- (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 598,000	R 0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R 74,800	12,5% on the balance over R 598,000
R 1,419,000	R 6,985,000	R 177,400	10,0% on the balance over R 1,419,000
R 6,985,000	R 14,248,000	R 734,000	9,0% on the balance over R 6,985,000
R 14,248,000	R 35,480,000	R 1,387,600	8,0% on the balance over R 14,248,000
R 35,480,000	R 70,961,000	R 3,086,200	7,0% on the balance over R 35,480,000
R 70,961,000	R 427,427,000	R 5,569,900	7,0% on the balance over R 70,961,000
R 427,427,000		R 30,522,500	7,0% on the balance over R 427,427,000

- (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



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Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25
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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 598,000	R 0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R 74,800	12,5% on the balance over R 598,000
R 1,419,000	R 6,985,000	R 177,400	10,0% on the balance over R 1,419,000
R 6,985,000	R 14,248,000	R 734,000	9,0% on the balance over R 6,985,000
R 14,248,000	R 35,480,000	R 1,387,600	8,0% on the balance over R 14,248,000
R 35,480,000	R 70,961,000	R 3,086,000	7,0% on the balance over R 35,480,000
R 70,961,000	R 427,427,000	R 5,570,000	7,0% on the balance over R 70,961,000
R 427,427,000		R 30,523,000	7,0% on the balance over R 427,427,000

- (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 598,000	R0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R74,800	12,5% on the balance over R 571 000
R 1,419,000	R 6,985,000	R177,400	10,0% on the balance over R 1 353 000
R 6,985,000	R 14,248,000	R734,000	8,0% on the balance over R 6 659 000
R 14,248,000	R 35,480,000	R1,315,000	7,0% on the balance over R 13 582 000
R 35,480,000	R 70,961,000	R2,801,300	6,0% on the balance over R 33 824 000
R 70,961,000	R 427,427,000	R4,930,100	5,5% on the balance over R 67 648 000
R 427,427,000		R24,535,700	5,5% on the balance over R 407 474 000

- (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 598,000	R0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R89,700	15,0% on the balance over R 571 000
R 1,419,000	R 6,985,000	R212,900	12,5% on the balance over R 1 353 000
R 6,985,000	R 14,248,000	R908,600	10,5% on the balance over R 6 659 000
R 14,248,000	R 35,480,000	R1,671,200	9,5% on the balance over R 13 582 000
R 35,480,000	R 70,961,000	R3,688,300	9,0% on the balance over R 33 824 000
R 70,961,000	R 427,427,000	R6,881,500	8,5% on the balance over R 67 648 000
R 427,427,000		R37,181,200	8,5% on the balance over R 407 474 000

- (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 572,000 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 598,000	R0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R74,800	12,5% on the balance over R 571 000
R 1,419,000	R 6,985,000	R177,400	10,0% on the balance over R 1 353 000
R 6,985,000	R 14,248,000	R734,000	8,0% on the balance over R 6 659 000
R 14,248,000	R 35,480,000	R1,315,000	7,0% on the balance over R 13 582 000
R 35,480,000	R 70,961,000	R2,801,300	6,0% on the balance over R 33 824 000
R 70,961,000	R 427,427,000	R4,930,100	5,5% on the balance over R 67 648 000
R 427,427,000		R24,535,700	5,5% on the balance over R 407 474 000

- (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 598,000	R0	A Lump Sum or on Time Basis
R 598,000	R 1,419,000	R89,700	15,0% on the balance over R 571 000
R 1,419,000	R 6,985,000	R212,900	12,5% on the balance over R 1 353 000
R 6,985,000	R 14,248,000	R908,600	10,5% on the balance over R 6 659 000
R 14,248,000	R 35,480,000	R1,671,200	9,5% on the balance over R 13 582 000
R 35,480,000	R 70,961,000	R3,688,300	9,0% on the balance over R 33 824 000
R 70,961,000	R 427,427,000	R6,881,500	8,5% on the balance over R 67 648 000
R 427,427,000		R37,181,200	8,5% on the balance over R 407 474 000

- (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 572,000 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: <ul style="list-style-type: none"> • Inception • Preliminary Design: Concept and Viability • Detail Design • Documentation and Procurement • Contract Administration and Inspection • Close-Out 	<p style="text-align: center;">5 20 30 15 25 5</p>
Structural: Engineering Projects: <ul style="list-style-type: none"> • Inception • Preliminary Design: Concept and Viability • Detail Design • Documentation and Procurement • Contract Administration and Inspection • Close-Out 	<p style="text-align: center;">5 20 30 15 25 5</p>
Civil: Multi-disciplinary Projects: <ul style="list-style-type: none"> • Inception • Preliminary Design: Concept and Viability • Detail Design • Documentation and Procurement • Contract Administration and Inspection • Close-Out 	<p style="text-align: center;">5 20 30 15 25 5</p>
Structural: Multi-disciplinary Projects: <ul style="list-style-type: none"> • Inception • Preliminary Design: Concept and Viability • Detail Design • Documentation and Procurement • Contract Administration and Inspection • Close-Out 	<p style="text-align: center;">5 20 30 15 25 5</p>
Mechanical, electrical and electronic projects: <ul style="list-style-type: none"> • Inception • Preliminary Design: Concept and Viability • Detail Design • Documentation and Procurement • Contract Administration and Inspection • Close-Out 	<p style="text-align: center;">5 20 30 15 25 5</p>

- (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 for a period of more than six months, the **consulting engineer** shall be remunerated for **services** performed, plus a surcharge equal to such losses (excluding future profits) and expenses as may have been caused by such termination of the **agreement** as can be substantiated by the **consulting engineer**.

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



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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.