

CALEDONSPORT AND FICKSBURG BRIDGE: LAND PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATION FOR A PERIOD OF 36 MONTHS

H20/031AI



public works
& infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

VOLUME 3 OF 3 THE CONTRACT

H20/031AI

CALEDONSPORT AND FICKSBURG BRIDGE: LAND PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATION FOR A PERIOD OF 36 MONTHS



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Part C1: Agreement and Contract Data

DPW-05: (EC) CONTRACT DATA - (GCC (2010) 2nd EDITION: 2010)

Project title:	<i>Caledonspoort and Ficksburg Bridge: Land Port of Entry: Appointment of a service provider for the maintenance and repairs of building, civil, mechanical, electrical infrastructure and installation for a period of 36 months</i>		
Tender no:	H20/031AI	Reference no:	N/A

	PART 1: DATA PROVIDED BY THE EMPLOYER
	CONDITIONS OF CONTRACT
	The General Conditions of Contract for Construction Works, Second Edition, 2010, published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from www.saice.org.za

CONTRACT SPECIFIC DATA

The following contract specific data, referring to the General Conditions of Contract for Construction Works, Second Edition, 2010, are applicable to this Contract:

CLAUSES	COMPULSORY DATA
1.1.1.8	Amend Clause 1.1.1.8 to include the word "rights" to read as follows: "Contract Data" means the specific data which, together with these General Conditions of Contract, collectively describe the rights, risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.
1.1.1.13	Amend Clause 1.1.1.13 as follows, clarify when the defects liability period starts: "Defects Liability Period" means the period stated in the Contract Data, commencing on the date indicated on the Certificate of Completion or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract. Defects liability period is: 12 months .
1.1.1.14 & 5.14.7	The time for achieving Practical Completion of the whole of the works is: 36 months measured from the <u>Commencement</u> Date. The time thus stated includes special non-working days and the year-end break. <u>or, if Practical Completion in portions is required,</u> The times for achieving Practical Completion for the portions as set out in the Scope of Works are <i>mutatis mutandi</i> : Maintenance and Operation –36 months shall be reserved for the Works related to Corrective Maintenance, to be completed within the period for the individual installations as out below, and as defined in the Scope of Work and the Bill of Quantities. Access to the various installations may be staggered, or the status quo and condition of the installations, which shall not be construed to justify extension of time, or remuneration for establishment on site more than once. All repair work will be 06 months Staggered access to different installations is likely and will not be construed to be reason for granting extension of time or re-compensation for establishment on site.

	<p>Corrective maintenance will be performed on certain of the installations upon written site instruction and in agreement with the Departmental Project Manager from the Engineer when so required. Tendered rates will be used for operational damaged, evident repairs and corrective maintenance.</p> <p>The whole of the works shall be completed within: Repair Work – 06 months Maintenance and Operational Work – 36 months</p> <p>The time for achieving Practical Completion of the whole of the Works is: 30 months, measured from the commencement date. The time thus stated includes special non-working days and the year-end break.</p>
1.1.1.15	<p>The name of the Employer is: The Government of the Republic of South Africa in its Department of Public Works.</p>
1.1.1.16	<p>The name of the Engineer is: Delta Built Environment Consultants (Pty) Ltd</p>
1.1.1.26	<p>The Pricing Strategy is a: Re-measurement Contract.</p>
1.1.1.31	<p>Not applicable to this Contract.</p>
1.1.1.35	<p>Insert the definition of “Value of Works” as Clause 1.1.1.35: “Value of Works” means the value of the Works certified by the Engineer as having been satisfactorily executed and shall include the value of the works done, the value of the materials and/or plant and Contract Price Adjustments.</p>
1.2.1.2	<p>Employer’s address:</p> <p>Physical Address: Central Government Office C/o Bosman and Madiba Streets Pretoria 0001</p> <p>Postal Address: Private Bag X65 Pretoria 0001</p> <p>Facsimile: N/A Telephone: (012) 406 1118</p>

	<p>Engineer's address:</p> <p>Physical Address: 320 The Hillside Road Rynlal Building, 3rd Floor, Suite 35 Lynnwood, Pretoria, 0181</p> <p>Postal Address: P.O. Box 35703 Menlo Park 0102</p> <p>Facsimile: (012) 348-4738</p> <p>Telephone: (012) 368-1850</p>
1.3.4	Not applicable to this Contract.
1.3.5	<p>Replace Clause 1.3.5 with the following provisions:</p> <p>(a) The Employer will become the owner of the information, documents, advice, recommendation and reports collected, furnished and/or compiled by the Contractor during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer on request, but in any event on the termination and/or cancellation of this Contract for whatever reason. The Contractor relinquishes its retention or any other rights thereon to which it may be entitled.</p> <p>(b) The copyright of all documents, recommendations and reports compiled by the Contractor during the course of and for the purposes of finalizing the Works will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of information or payment to the Contractor.</p> <p>(c) The copyright of all electronic aids, software programmes etc. prepared or developed in terms of the Contract shall vest in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Contractor.</p> <p>(d) In case of the Contractor providing documents, electronic aids, software programs or like material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not vest in the Employer. The Contractor shall be required to indicate to which documents, electronic aids, software programs or like material this provision applies.</p> <p>(e) The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright, patents or any other intellectual property right in connection with the Works outlined in this Contract.</p> <p>(f) All information, documents, recommendations, programs and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.</p>

<p>3.1.3</p>	<p>1. The Engineer's authority to act and/or to execute functions or duties or to issue instructions are expressly excluded in respect of the following:</p> <ul style="list-style-type: none"> (a) Appointment of nominated Sub-contractors – clause 4.4.3; (b) Granting of an extension of time and/or ruling on claims associated with claims for extension of time – clauses 5.12.3, 10.1.5; (c) Acceleration of the rate of progress and determination of the cost for payment of such acceleration – clause 5.12.4; (d) Rulings on claims and disputes – clauses 10.1.5, 10.2.3 and 10.3.3; (e) Suspension of the Works – clause 5.11.1; (f) Final Payment Certificate – clause 6.10.9; (g) Issuing of <i>mora</i> notices to the Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1; (h) Cancellation of the contract between the Employer and Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1.
	<p>2. In order to be legally binding and have legal bearing and consequence, any ruling in respect of the above matters (a) to (h) must be on an official document, signed and issued by the Employer to the Contractor.</p> <p>3. The Contractor must submit claims, demands, notices, notifications, updated particulars and reports in writing, as well as any other supporting documentation pertaining thereto, in respect of any of the above listed matters (a) to (h), to the Engineer within the time periods and in the format(s) as determined in the relevant clauses of the Conditions of Contract. Failing to deliver such to the Engineer timeous and in the correct format will invalidate any claim and the consequences of such failure will <i>mutatis mutandis</i> be as stated in clause 10.1.4.</p> <p>4. Clauses 6.10.9 and 10.1.5 shall be amended as follows to indicate the limitation on the Engineer's authority in respect thereof:</p> <p>Clause 6.10.9 – Amend to read as follows:</p> <p>Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Engineer a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved). The Employer shall within 14 days issue to the Contractor a Final Payment Certificate the amount of which shall be paid to the Contractor within 28 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved).</p> <p>Clause 10.1.5 – Amend to read as follows:</p> <p>Unless otherwise provided in the Contract, the Employer shall, within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1 as read with Clause 10.1.2, deliver to the Contractor his written and adequately reasoned ruling on the claim (referring specifically to this Clause). The amount thereof, if any, allowed by the Employer shall be included to the credit of the Contractor in the next payment certificate.</p>

	<p>5. Insert the following under 3.1.3: Provided that, notwithstanding any provisions to the contrary in the Contract, the Employer shall have the right to reverse and, should it deem it necessary, to amend any certificate, instruction, decision or valuation of the Engineer and to issue a new one, and such certificate instruction, decisions or valuations shall for the purposes of the Contract be deemed to be issued by the Engineer, provided that the Contractor shall be remunerated in the normal manner for work executed in good faith in terms of an instruction issued by the Engineer and which has subsequently been rescinded.</p>
3.2.2.1	<p>Amend Clause 3.2.2.1 to insert the word "Plant" to read as follows: Observe the execution of the Works, examine and test material, Plant and workmanship, and receive from the Contractor such information as he shall reasonably require.</p>
3.2.3.2	<p>Amend Clause 3.2.3.2 to insert the word "Plant" to reads as follows: Notwithstanding any authority assigned to him in terms of Clauses 3.2.2 and 3.2.4, failure by the Engineer's Representative to disapprove of any work, workmanship, Plant or materials shall not prejudice the power of the Engineer thereafter to disapprove thereof and exercise any of his powers in terms of the Contract in respect of thereof.</p>
4.8.2.1	<p>Amend Clause 4.8.2.1 to include the word "person", as follows: Makes available to the Employer, or to any such contractor, person or authority, any roads or ways for the maintenance of which the Contractor is responsible, or</p>
4.8.2.2	<p>Amend Clause 4.8.2.2 to include "Employer" and "contractors", as follows: Provides any other facility or service of whatsoever nature to the Employer or to any of the said contractors, persons or authorities,</p>
5.3.1	<p>The documentation required before commencement with Works execution are: Health and Safety Plan (Refer to Clause 4.3) Initial programme (Refer to Clause 5.6) Security (Refer to Clause 6.2) Insurance (Refer to Clause 8.6)</p>
5.3.2	<p>The time to submit the documentation required before commencement with Works execution is: 21 days.</p>
5.4.2	<p>The access to, and possession of, the Site referred to in Clause 5.4.1 shall be "not exclusive" to the Contractor. In the event of access to, and possession of, the Site is not exclusive to the Contractor, the following limitations apply: Access shall be arranged with the Engineer regarding repair work</p>
5.8.1	<p>The non-working days are: Saturdays and Sundays</p> <p>The special non-working days are:</p> <p>(1) Public Holidays; (2) The year-end break commencing on 16 December until the Sunday preceding the first working Monday of January of the succeeding year.</p>

5.9.1	<p>Amend Clause 5.9.1 as follows:</p> <p>On the Commencement Date, the Engineer shall deliver to the Contractor three (3) copies, at no cost to the Contractor, of the drawings and any instructions required for the commencement of the Works. The cost of any additional copies of such drawings and/or instructions, as may be required by the Contractor, will be for the account of the Contractor.</p>
5.13.1	<p>The penalty for failing to complete the Works is: AS PER INSTALLATION</p> <ul style="list-style-type: none"> • Structural and building related works – R 500.00 / Day • Plumbing, drainage and wet services – R 500.00 / Day • Fencing, cleaning and site keeping – R 500.00 / Day • Bulk water and external water reticulation and water purification works – R 500.00 / Day • Wastewater and sewer network – R 500.00 / Day • Roads and storm water drainage – R 200.00 / Day • Building electrical – R 200.00 / Day • External lighting – R 200.00 / Day • Standby power generators – R 1 000.00 / Day • Medium and low voltage equipment – R 200.00 / Day • Heating, ventilation and air-conditioning systems – R 300.00 / Day • Connectional firefighting equipment, etc. – R 500.00 / Day
5.14.1	<p>Amend the second paragraph of Clause 5.14.1 as follows:</p> <p>When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Engineer shall, within 14 days after receiving such request, issue to the Contractor a written list setting out the work to be completed to justify Practical Completion. Should the Engineer not issue such a list within the 14 days, the Contractor shall notify the Employer accordingly. Should the Employer not issue such a list within 7 days of receipt of such notice, Practical Completion shall be deemed to have been achieved on the 14th day after the contractor requested the Certificate of Practical Completion.</p>
5.16.1	<p>Amend Clause 5.16.1 to delete the proviso in the third paragraph of this clause.</p>
5.16.2	<p>Amend Clause 5.16.2 as follows:</p> <p>No certificate other than the Final Approval Certificate referred to in Clause 5.16.1 shall be deemed to constitute approval of the Works or shall be taken as an admission of the due performance of the Contract or any part thereof, nor of the accuracy of any claim made by the Contractor, nor shall any other certificate exclude or prejudice any of the powers of the Engineer and/or the Employer.</p>
5.16.3	<p>The latent defect period for all works is: 5 years.</p>
6.2.1	<p>The type of security for the due performance of the Contract, as selected by the Contractor in the Contract Data, must be delivered to the Employer.</p>

6.2.3	<p>Amend Clause 6.2.3 as follows:</p> <p>If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable as required in terms of the Contract.</p>
6.5.1.2.3	<p>The percentage allowance to cover overhead charges is:</p> <p>33%, except on material cost where the percentage allowance is 10%.</p>
6.8.2	<p>Contract Price Adjustment (CPA) will be applicable: "Yes".</p> <p>If CPA is indicated as 'Yes' above the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor:</p> <p>The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:</p> <p>The value of "x" is 0.15.</p> <p>The values of the coefficients are: a = 0.25. (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel)</p> <p>The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are: a = 0.35 (Labour) b = 0.20 (Contractor's equipment) c = 0.35 (Material) d = 0.10 (Fuel)</p> <p>The urban area closest to Caledonspoor site is Fouriesburg (Free State Province) The applicable industry for the Producer Price Index for materials is CONSTRUCTION The area for the Producer Price Index for fuel is Fouriesburg (Free State Province) The base month is October 2019 (The month prior to the closing of the tender)</p>
6.8.3	<p>Price adjustments for variations in the costs of special materials are not allowed.</p>
6.10.1.5	<p>The percentage advance on materials not yet built into the Permanent Works is: 85 %.</p>
6.10.3	<p>The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1.</p>

6.10.5	<p>Replace Clause 6.10.5 with the following:</p> <p><u>In respect of contracts up to R2 million and in respect of contracts above R2 million where the Contractor elects a security by means of a 10% retention</u>, 50% of the retention shall be released to the Contractor when the Engineer issues the Certificate of Completion in terms of clause 5.14.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</p> <p><u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 5% of the Contract Sum (excl. VAT) and a 5% retention of the Value of the Works (excl. VAT)</u>, the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or return to the guarantor, respectively, when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The 5% retention of the Value of the Works (excl. VAT) shall become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</p> <p><u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT)</u>, the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The balance of the cash deposit shall become due and payable or the variable guarantee shall expire when the Contractor becomes entitled in terms of Clause 5.16.1 to receive the Final Approval Certificate.</p>
7.9.1	<p>Insert the following at the end of Clause 7.9.1:</p> <p>Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other previous or subsequent contract between the Contractor and the Employer.</p>
8.2.2.1	<p>Insert the following as a second paragraph to Clause 8.2.2.1:</p> <p>The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, failing which the Employer may cause same to be done and recover the reasonable costs associated therewith from the Contractor.</p>
8.4.3	<p>Insert a new Clause 8.4.3 as follows:</p> <p>The Contractor shall on receiving a written instruction from the Engineer immediately proceed at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.</p>
8.6.1.1.1	<p>Amend Clause 8.6.1.1.1 to read as follows: Contract Sum plus 10%.</p>
8.6.1.1.2	<p>The value of Plant and materials supplied by the Employer to be included in the insurance sum is: Nil</p>
8.6.1.1.3	<p>The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is: Nil</p>

	<p>Amend Clause 8.6.1.3 to delete reference to limit of indemnity, to read as follows:</p> <p>Liability insurance that covers the Contractor against liability for the death of, or injury to any person, or loss of, or damage to any property (other than property while it is insured in terms of Clause 8.6.1.1) arising from or in the course of the fulfillment of the Contract, from the Commencement Date to the date of the end of the Defects Liability Period, if there is one, or otherwise to the issue of the Certificate of Completion.</p>
8.6.1.5	<p>1. Public liability insurance to be effected by the Contractor to a minimum value of:</p> <p><input type="checkbox"/> R5 million</p> <p>Or</p> <p><input type="checkbox"/> R 10 000 000.00 (Ten million rand)</p> <p>With a deductible not exceeding 5% of each and every claim.</p> <p>2. Support insurance is to be effected by the Contractor to a minimum value</p> <p>Of: R 0.00 (Not applicable to this contract)</p> <p>With a deductible not exceeding 5% of each and every claim.</p>
8.6.5	<p>Amend Clause 8.6.5 as follows:</p> <p>Save as otherwise provided in the Contract Data, the insurances referred to in Clause 8.6.1 shall be effected with an insurance company registered in the Republic of South Africa. The Contractor shall submit the insurance policy to the Employer for approval, if so requested.</p>
8.6.7	<p>Amend Clause 8.6.7 as follows:</p> <p>If the Contractor fails to effect and keep in force any of the insurances referred to in Clause 8.6.1, the Employer may cancel the Contract in terms of Clause 9.2.</p>

<p>8.6.8</p>	<p>Insert a new Clause 8.6.8 in provide for high risk insurance for projects executed on areas classified as “High Risk Areas”.</p> <p>HIGH RISK INSURANCE</p> <p>In the event of the project being executed in a geological area classified as a “High Risk Area”, that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:</p> <p>(1) Damage to the Works</p> <p>The Contractor shall, from the date of Commencement of the Works until the date of the Certificate of Completion, bear the full risk of and hereby indemnifies and holds harmless the Employer against any damage to and/or destruction of the Works consequent upon a catastrophic ground movement as mentioned above. The Contractor shall take such precautions and security measures and other steps for the protection of the Works as he may deem necessary.</p> <p>When so instructed to do so by the Engineer, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, at the Contractor’s own costs.</p> <p>(2) Injury to Persons or Loss of or damage to Properties</p> <p>The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising during the Contract Period whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above.</p> <p>The Contractor shall be liable for and hereby indemnifies the Employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the Contract Period.</p> <p>(3) It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 8.6.8(1) and 8.6.8 (2) above. Without limiting his obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date and before Commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so.</p> <p>(4) The Employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the Contractor’s default of his obligations as set out in Clauses 8.6.8 (1), 8.6.8 (2) and 8.6.8 (3). Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other existing or subsequent contract between the Contractor and the Employer.</p>
<p>9.1.4</p>	<p>Amend Clause 9.1.4 as follows:</p> <p>In the circumstances referred to in Clauses 9.1.1, 9.1.2 or 9.1.3 (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents), and whether or not the Contract is terminated under the provisions of this Clause, the Contractor shall be entitled to payment of any increased cost of or incidental to the execution of the Works which is specifically attributable to, or consequent upon the circumstances defined in Clauses 9.1.1, 9.1.2 or 9.1.3;</p>

9.1.5	<p>Amend Clause 9.1.5 as follows:</p> <p>If the Contract is terminated on any account in terms of this Clause (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents) , the Contractor shall be paid by the Employer (insofar as such amounts or items have not already been covered by payments on account made to the Contractor) for all measured work executed prior to the date of termination, the amount (without retention), payable in terms of the Contract and, in addition:</p>
9.1.6	<p>This Clause is not applicable to this Contract.</p>
9.2.1.3.8	<p>Insert a new Clause 9.2.1.3.8 as follows:</p> <p>Has failed to effect and keep in force any of the insurances referred to in Clause 8.6.1,</p>
9.2.4	<p>Insert a new Clause 9.2.4 as follows, to provide for unilateral termination by the Employer:</p> <p>The Employer shall be entitled at any time to unilaterally terminate or cancel this Contract or any part thereof. Save for the following, the Contractor shall not be entitled to claim any other amounts whatsoever in respect of such termination or cancellation of this Contract. The Employer shall be obliged to pay the Contractor as damages and/or loss of profit the lesser of:</p> <p>9.2.4.1 An amount not exceeding 10% of the Contract Sum;</p> <p>9.2.4.2 10% of the value of incomplete work; or</p> <p>9.2.4.3 The Contractor's actual damage or loss as determined by the Employer after receipt of evidence substantiating any such damage or loss.</p>
9.3.2.2	<p>Amend Clause 9.3.2.2 as follows to delete the proviso on lien:</p> <p>The ownership of Plant and unused materials brought onto the Site by the Contractor, and for which the Employer has not made any payment, shall revert to the Contractor and he shall, with all reasonable dispatch, remove from the Site such Plant, materials and all Construction Equipment and Temporary Works.</p>
9.3.3	<p>Insert the following at the end of Clause 9.3.3</p> <p>After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any other right whatsoever.</p>
10.1.3.1	<p>Amend Clause 10.1.3.1 as follows to insert the word "Plant":</p> <p>All facts and circumstances relating to the claims shall be investigated as and when they occur or arise. For this purpose, the Contractor shall deliver to the Engineer, records in a form approved by the Engineer, of all the facts and circumstances which the Contractor considers relevant and wishes to rely upon in support of his claims, including details of all Construction Equipment, labour, Plant and materials relevant to each claim. Such records shall be submitted promptly after the occurrence of the event giving rise to the claim.</p>
10.1.6	<p>Insert a new Clause 10.1.6 as follows:</p> <p>If the Employer fails to give his ruling within the period referred to in Clause 10.1.5 he shall be deemed to have given a ruling dismissing the claim.</p>
10.2.1	<p>Amend Clause 10.2.1 as follows:</p> <p>In respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer shall have the right to deliver a written dissatisfaction claim to the Engineer. This written claim shall be supported by particulars and substantiated.</p>

10.2.2	<p>Amend Clause 10.2.2 as follows:</p> <p>If, in respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer fails to submit a claim within 28 days after the cause of dissatisfaction, he shall have no further right to raise any dissatisfaction on such matter.</p>
10.3.2	<p>Amend Clause 10.3.2 as follows to replace “adjudication” with “court”:</p> <p>If either party shall have given notice in compliance with Clause 10.3.1, the dispute shall be referred to court proceedings in terms of Clause 10.8, unless amicable settlement is contemplated.</p>
10.3.3	<p>Replace “Engineer” with “Employer”.</p>
10.4.2	<p>Amend Clause 10.4.2 as follows to provide for submission to court:</p> <p>If the other party rejects the invitation to amicable settlement in writing or does not respond in writing to the invitation with 14 days, or amicable settlement is unsuccessful, either party may submit the dispute to court.</p>
10.4.4	<p>Amend Clause 10.4.4 to delete reference to “adjudication” and “arbitration” to read as follows:</p> <p>Save for reference to any portion of any settlement or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the amicable settlement.</p>
10.5 10.6 & 10.7	<p>The entire provisions of these Clauses are not applicable to this Contract.</p>
10.10.3	<p>Amend Clause 10.10.3 as follows to reword and remove reference to “arbitrator”:</p> <p>The court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Engineer and Employer and neither party shall be limited in such proceedings before such court to the evidence or arguments put before the Engineer or Employer for the purpose of obtaining his ruling.</p>

PART 2: DATA PROVIDED BY THE CONTRACTOR	
1.1.1.9	The name of the Contractor is: _____
1.2.1.2	<p>The address of the Contractor is:</p> <p>Physical Address:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Postal Address:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Facsimile: _____</p> <p>Telephone: _____</p>
6.2.1	<p>The security to be provided by the Contractor shall be one of the following:</p> <p>(a) Cash deposit of 10% of the Contract Sum (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(b) Variable performance guarantee of 10% of the Contract Sum (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(c) Retention of 10% of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(d) Cash deposit of 5% of the Contract Sum (excl. VAT) plus retention of 5% of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(e) Performance guarantee of 5% of the Contract Sum (excl. VAT) plus retention of 5% of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>NB: Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 5 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.</p>

DPW-10.2 (EC): VARIABLE CONSTRUCTION GUARANTEE – (GCC (2010) 2nd EDITION: 2010)

Director-General
 Department of Public Works
 Government of the Republic of South Africa

To: **Department of Public Works**
 Private Bag X65
Pretoria
0001

Sir,

VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC (2010) 2nd EDITION 2010

1. With reference to the contract between _____

_____ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works (hereinafter referred to as the “**employer**”), Contract/Tender No: **H20/031AI**, for the **Caledonspoort and Ficksburg Bridge: Land Port of Entry: Appointment of a service provider for the maintenance and repairs of building, civil, mechanical, electrical infrastructure and installation for a period of 36 months** (hereinafter referred to as the “**contract**”) for the sum of R _____, (_____), (hereinafter referred to as the “**contract sum**”).

I / We, _____

in my/our capacity as _____ and hereby

representing _____ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer’s** disposal the sum of R _____, (_____) being 10% of the **contract sum** (excluding VAT), for the due fulfilment of the **contract**.

2. I / We advise that the **guarantor’s** liability in terms of this guarantee shall be as follows:

- (a) From and including the date on which this guarantee is issued and up to and including the day before the date on which the last **certificate of completion** of works is issued, the **guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);
- (b) The **guarantor’s** liability shall reduce to 5 % of the **value of the works** (excluding VAT) as determined at the date of the last **certificate of completion** of works, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT);
- (c) This guarantee shall expire on the date of the last **final approval certificate**.

3. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis*; and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer’s** opinion and sole discretion):

- (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**; or
- (b) the **contractor’s** estate is sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.

4. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
5. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
6. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
8. This guarantee is neither negotiable nor transferable, and
 - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 5 above, or
 - (b) shall lapse in accordance with clause 2 (c) above.
9. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

SIGNED AT _____ **ON THIS** _____ **DAY OF**
 _____ **200**__

AS WITNESS

1. _____
2. _____

By and on behalf of

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked Annexure A)

DATE: _____

- A. No alterations and/or additions of the wording of this form will be accepted.**
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**

C. This GUARANTEE must be returned to: _____

DPW-10.4 (EC): FIXED CONSTRUCTION GUARANTEE - (GCC (2010) 2nd EDITION: 2010)

Director-General
 Department of Public Works
 Government of the Republic of South Africa

To: **Department of Public Works**
 Private Bag X65
Pretoria
0001

Sir,

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC (2010) 2ND EDITION 2010

1. With reference to the contract between _____

_____ (hereinafter referred to as the "**contractor**") and the Government of the Republic of South Africa in its Department of Public Works (hereinafter referred to as the "**employer**"), Contract/Tender No: **H20/013AI**, for the **Caledonspoort and Ficksburg Bridge: Land Port of Entry: Appointment of a service provider for the maintenance and repairs of building, civil, mechanical, electrical infrastructure and installation for a period of 36 months** (hereinafter referred to as the "**contract**"), for the sum of R _____, (_____), (hereinafter referred to as the "**contract sum**").

I / We, _____

in my/our capacity as _____ and hereby

representing _____ (hereinafter referred to as the "**guarantor**") advise that the **guarantor** holds at the **employer's** disposal the sum of R _____, (_____) being 5% of the **contract sum** (excluding VAT), for the due fulfillment of the **contract**.

2. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis; and de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer's** opinion and sole discretion):
 - (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**; or
 - (b) the **contractor's** estate is sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
3. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
4. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
5. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the

aforegoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.

- 6. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
- 7. This guarantee is neither negotiable nor transferable, and
 - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
 - (b) shall lapse on the date of the last **certificate of completion** of works.
- 8. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than the payment of the amount guaranteed.

SIGNED AT _____ **ON THIS** _____ **DAY OF**
 _____ **20** _____.

AS WITNESS

- 1. _____
- 2. _____

By and on behalf of

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked Annexure A)

DATE: _____

- A. No alterations and/or additions of the wording of this form will be accepted.**
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**
- C. This GUARANTEE must be returned to:** _____

H20/031AI

CALEDONSPORT AND FICKSBURG BRIDGE: LAND PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATION FOR A PERIOD OF 36 MONTHS



public works
& infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

Part C2: Pricing Data

PG-02.1 (EC) PRICING INSTRUCTIONS – (GCC (2010) 2nd EDITION: 2010)

Project title:	<i>Caledonspoor and Ficksburg Bridge: Land Port of Entry: Appointment of a service provider for the maintenance and repairs of building, civil, mechanical, electrical infrastructure and installation for a period of 36 months</i>		
Tender no:	H20/031AI	Reference no:	N/A

C2.1 Pricing Instructions

1. GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Standard, Project and Particular Specifications) and the Drawings.

2. DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardized Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

3. QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Standard, Project and Particular Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

4. PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract 2010. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

5. PRICING OF THE BILL OF QUANTITIES

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

Tender no: H20/031AI

Each item shall be priced and extended to the “Total” column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Tenderer omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as “inclusive” or “not applicable” have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words “rate only” appear in the “Total” column. “Rate Only” items have been included where:

- (a) an alternative item or material is contemplated;
- (b) variations of specified components in the make-up of a pay item may be expected; and
- (c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For ‘Rate Only’ items no quantities are given in the “Quantity” column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

All rates and amounts quoted in the Bill of Quantities shall be in rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities.

The Tenderer shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

- (a) the form and nature of the Site and its surroundings, including subsurface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works,
- (d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender.

6. CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialed by the Tenderer.

7. ARITHMETICAL ERRORS

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication or addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

Tender no: H20/031AI

8. UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
m ³ .km	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
m ² .pass	=	square metre – pass
l		litre
m		metre
m ²		cubic metre
m ³		square metre
t		ton

8. LEDGEND: ABBREVIATIONS

CR	=	Civil works repair
ER	=	Electrical works repair
MR	=	Mechanical works repair
CM	=	Civil works maintenance
EM	=	Electrical works maintenance
MM	=	Mechanical works maintenance

Tender no: H20/031AI

C2.1 Bill of Quantities

CIVIL REPAIR WORK

SCHEDULE NO 1:	GENERAL	
SCHEDULE NO 2.1:	INSTALLATION CR 1:	STRUCTURAL AND BUILDING RELATED WORK
SCHEDULE NO 2.2:	INSTALLATION CR 2:	PLUMBING, DRAINAGE AND WET SERVICES
SCHEDULE NO 2.3:	INSTALLATION CR 3:	FENCING, CLEANING AND SITE KEEPING
SCHEDULE NO 2.4:	INSTALLATION CR 4:	BULK WATER SUPPLY AND EXTERNAL WATER NETWORKS
SCHEDULE NO 2.5:	INSTALLATION CR 5:	WASTE WATER AND SEWER NETWORKS
SCHEDULE NO 2.6:	INSTALLATION CR 6:	ROADS AND STORM WATER DRAINAGE

CIVIL MAINTENANCE WORK

SCHEDULE NO 3.1:	INSTALLATION CM 1:	CALEDONSPOORT: STRUCTURAL AND BUILDING RELATED WORK
SCHEDULE NO 3.2:	INSTALLATION CM 2:	CALEDONSPOORT: PLUMBING, DRAINAGE AND WET SERVICES
SCHEDULE NO 3.3:	INSTALLATION CM3:	CALEDONSPOORT: FENCING, CLEANING AND SITE KEEPING
SCHEDULE NO 3.4:	INSTALLATION CM 4:	CALEDONSPOORT: BULK WATER SUPPLY AND EXTERNAL WATER NETWORKS
SCHEDULE NO 3.5:	INSTALLATION CM 5:	CALEDONSPOORT: WASTE WATER AND SEWER NETWORKS
SCHEDULE NO 3.6:	INSTALLATION CM 6:	CALEDONSPOORT: ROADS AND STORM WATER DRAINAGE
SCHEDULE NO 4.1:	INSTALLATION CM 1:	FICKSBURG: STRUCTURAL AND BUILDING RELATED WORK
SCHEDULE NO 4.2:	INSTALLATION CM 2:	FICKSBURG: PLUMBING, DRAINAGE AND WET SERVICES
SCHEDULE NO 4.3:	INSTALLATION CM 3:	FICKSBURG: FENCING, CLEANING AND SITE KEEPING
SCHEDULE NO 4.4:	INSTALLATION CM 4:	FICKSBURG: BULK WATER SUPPLY AND EXTERNAL WATER NETWORKS
SCHEDULE NO 4.5:	INSTALLATION CM 5:	FICKSBURG: WASTE WATER AND SEWER NETWORKS
SCHEDULE NO 4.6:	INSTALLATION CM 6:	FICKSBURG: ROADS AND STORM WATER DRAINAGE

ELECTRICAL REPAIR WORK

- SCHEDULE NO 1: INSTALLATION ER 1: CALEDONSPOORT AND FICKSBURG:
BUILDING ELECTRICAL SERVICES
- SCHEDULE NO 2: INSTALLATION ER 2: CALEDONSPOORT AND FICKSBURG: STANBY
POWER SYSTEMS
- SCHEDULE NO 3: INSTALLATION ER 3: CALEDONSPOORT AND FICKSBURG:
EXTERNAL ELECTRICAL

ELECTRICAL MAINTENANCE WORK

- SCHEDULE NO 4: INSTALLATION EM 1: FICKSBURG PREVENTATIVE MAINTENANCE
AND MANDATORY PERIODICAL SERVICING
- SCHEDULE NO 5: INSTALLATION EM 2: CALEDONSPOORT PREVENTATIVE
MAINTENANCE AND MANDATORY
PERIODICAL SERVICING

MECHANICAL REPAIR WORK

- SCHEDULE NO 1: INSTALLATION MR 1: HVAC INSTALLATION
- SCHEDULE NO 2: INSTALLATION MR 2: FIRE PROTECTION INSTALLATION
- SCHEDULE NO 3: INSTALLATION MR 3: WET SERVICES

MECHANICAL MAINTENANCE WORK

- SCHEDULE NO 1: INSTALLATION MM 1: HVAC INSTALLATION
- SCHEDULE NO 2: INSTALLATION MM 2: FIRE PROTECTION INSTALLATION
- SCHEDULE NO 3: INSTALLATION MM 3: WET SERVICES

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 1: GENERAL

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS 1200 A PSA 8.3.1	100.00	PRELIM AND GENERAL				
	100.01	Scheduled fixed-charge and value-related items:				
		.01 Fixed preliminary and general charges (Release 80% after site establishment and 20% after contract completion)	Sum	1.00		
		.02 Details of contract	Sum	1.00		
PS 3 PSA 8.4.1	100.02	Scheduled time-related items:				
		.01 Caledonspoort Port of Entry	No	36.00		
		.02 Ficksburg Port of Entry	No	36.00		
		<u>TEMPORARY WORKS</u>				
8.12	100.03	Call centre:				
		.01 Call centre for breakdown calls logged	PC Sum	1.00	65 000.00	65 000.00
		.02 Charge required by Contractor on subitem .01 above	%	65 000.00	%	
		<u>OCCUPATIONAL HEALTH AND SAFETY ACT</u>				
SI.01	100.04	.01 Compliance to OHS Act Requirements and Construction Regulations 2014	Month	36.00		
		<u>HIV/AIDS AWARENESS</u>				
SI.01	100.05	It is required of the Contractor to thoroughly study the Additional Specification SH: HIV/AIDS Requirements (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities. Provision for pricing of HIV/AIDS awareness is made under the items hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained.				
		Carried forward				

SCHEDULE NO 1: GENERAL

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SH07		<p>The Contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the Representative/Agent, notwithstanding the provisions of Clause 52 of the General Conditions of Contract for Works of Civil Engineering Construction or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.</p> <p>.01 Awareness Campaign</p> <p>Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services.</p>	Sum	1.00		
SH 04.01		<p>.02 Awareness Workshops</p> <p>Selection and appointment of a competent Service Provider approved by the Representative/Agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-meø techniques, including follow-up courses, making available all tuition material and performing assessment procedures.</p>	No	2.00		
SH 04.03		<p>.03 Posters, Booklets, Videos, etc.</p> <p>Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period.</p>	Sum	1.00		
SH 05		<p>.04 Access to Condoms</p> <p>Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period.</p>	Sum	1.00		
SH 08		<p>.05 Monitoring</p> <p>Monitoring HIV/AIDS awareness of workers, providing the Representative/Agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out.</p>	Sum	1.00		
		Carried forward				

SCHEDULE NO 1: GENERAL

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
BF PSA 8.6	100.06	<u>PEST CONTROL</u>				
		.01 Preventive pest control	PCSum	1.00	110 000.00	110 000.00
		.02 Charge required by Contractor on sub item .01	%	110 000.00	%	
PSA 8.6	100.07	<u>BCOCC CONTINGENCY</u>				
		.01 Provide contingency measures during festive seasons at Caledonspoort and Ficksburg Port of Entry	PCSum	1.00	420 000.00	420 000.00
		.02 Charge required by Contractor on sub item .01	%	420 000.00	%	
		<u>EMPLOYMENT AND TRAINING OF LABOUR ON THE EPWP-NYS INFRASTRUCTURE PROJECTS</u>				
		<u>PREAMBLES</u>				
SN 10.03		Tenderers are advised to study the Additional Specification SN & SL: Employment and Training of Labour on the Expanded Public Works Programme (EPWP) Infrastructure Projects: National Youth Service, as bound elsewhere in the Technical Specification, and then price this Bill accordingly.				
		<u>Training of youth workers (Target: 20 youth workers)</u>				
SN 10.01/ SL11.01	100.08	Orientation, Life skills development and technical Training:				
SL 10.01.01		.01 Orientation and Life Skills development training for youth workers for an average of 10 days per youth worker	PC Sum	1.00	56 000.00	56 000.00
SL 11.01.02		.02 Technical skills training for youth workers for an average of 80 days per youth worker	PC Sum	1.00	373 450.00	373 450.00
		.03 Provision of Medical Surveillance	PC Sum	1.00	15 000.00	15 000.00
SL 11.01.03		.04 Payment reduction due to not meeting the training target (SL 11.01.03)	Youth Worker	-	-2 500.00	Rate only
SL 11.01.04		.05 Profit and attendance for administration of items .01, .02 and 03 above	%	444 450.00	%	
SL 11.02.01	100.09	<u>TRAVELLING DURING ON-SITE TRAINING:</u> Practical Work based Experimental training for 30				
		.01 Travelling (based on R30 per day return trip/youth	PC sum	1.00	42 500.00	42 500.00
		.02 Profit and attendance for administration of item .01 above	%	42 500.00	%	
		Carried forward				

SCHEDULE NO 1: GENERAL

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		<u>EMPLOYMENT OF YOUTH WORKERS</u>				
		Employment of Youth Workers				
SL 11.04.01	100.10	The unit of measurement shall be the number of Youth Workers (20) at the statutory labour rates of R96.60 per day per stipend multiplied by the period employed in months and the rate tendered shall include full compensation for all costs associated with the employment of Youth Workers and for complying with the conditions of contract. The cost for the training shall be excluded from this item. This item is based on 9 Months appointment for youth workers or for the minimum criteria.				
		.01 Employment of Youth workers	PC sum	1.00	382 536.00	382 536.00
		.02 Profit and attendance for administration of items 0.01	%	382 536.00	%	
SL 11.06.02	100.10	PROVISION OF BASIC TOOLS FOR YOUTH WORKERS				
		.01 Supply of BASIC tools to youth workers. Specification to be supplied by the EPWP-NYS Service Provider for the respective trades (ref SL 11.06.01). @ R1 800 p / worker (20)	PC sum	20.00	1 800.00	36 000.00
		.02 Profit and attendance for administration of items .01 above	%	36 000.00	%	
SL 11.06/ SL 11.07	419.11	APPOINTMENT OF YOUTH TRAINING COORDINATOR (TEAM LEADER/S)				
SL 11.07		.01 Appointment of Youth Team Leader/s for the duration of the contract 6 Months (ref. SL 11.07)	Prov sum	1.00	21 000.00	21 000.00
SL 11.08		.02 Liaison with Service Provider (ref. SL 11.08)	N/A	-	-	
		.03 Logistics for Exit/Graduation Provide logistics items for Exit workshop (Catering, Orange Golf T Shirts, Venue Hire and Sound System)	PC Sum	1.00	30 321.95	30 321.95
		Carried forward				

SCHEDULE NO 1: GENERAL

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
EJ 05	419.12	<u>TESTING</u> Potable water quality testing:				
		.01 Potable water quality tests to be performed by an approved SANAS laboratory on a monthly basis on the water delivered to the consumers for determinants specified in EJ04.07	No	36.00		
		.02 Potable water quality tests to be performed by an approved SANAS laboratory on a regular basis on the water abstracted from boreholes for determinants specified in EJ04.07	No	36.00		
PSA 8.9	419.13	Additional tests:				
		.01 Additional tests required by the Engineer	PC Sum	1.00	35 000.00	35 000.00
		.02 Attendance and profit of item .01 above	%	35 000.00	%	
EG 07.01	419.14	SLUDGE DISPOSAL				
		.01 Pumping out of septic tank sludge into a suitable waste containment vehicle for transportation on the instruction of the Engineer/Department's representatives	m ³	60.00		
		.02 Disposal of septic tank sludge at a certified and approved municipal wastewater treatment works and submitting a certificate to detail and verify the safe disposal	m ³ .km	15 000.00		
DW 06.01	419.15	EMERGENCY WATER SUPPLY Supply and delivery of potable water in batches of 1 000L from commercial sources on the instruction of the Engineer/Department's representatives	m ³	5 000.00		
EN.01	419.16	WATER LEGISLATION COMPLIANCE LICENSING				
		.01 Water Quality Management Report i.t.o Aide	PC Sum	1.00	20 000.00	20 000.00
		.02 Profit and attendance on item .01	%	20 000.00	%	
SA.07	419.17	<u>RECORD KEEPING</u> Site Maintenance Record Keeping (monthly)				
		.01 Caledonspoort Port of Entry	Month	36.00		
		.02 Ficksburg Port of Entry	Month	36.00		
TOTAL CARRIED TO REPAIR SUMMARY: GENERAL						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<u>STRUCTURAL AND BUILDING</u>				
	201.00	<u>ROOFS: CLADDING AND SHEETING</u>				
BA.02.03	201.01	ROOF COVERING 01. New roof sheeting shall be 0,6 mm thick galvanised baked silicone polyester enamel paint (baked enamel) IBR or equivalent approved for roof slopes exceeding 15°. Concealed fixed type Galvanised baked enamel roof sheeting will in general be used to cover roofs with slopes not exceeding 15°.	m2	20		
BA.02.05	202.00	<u>RAINWATER GOODS</u> Gutters: 01. 125 x 100 x 0,8 thick standard baked enamel self-supporting beaded gutter 01. Gutters 02. 100 x 100mm Rainwater downpipe Gutter accessories and ancillary items 01. Barge board 02. Extra over rainwater pipe for shoe, bend, stopped end	m m	11 100		
	202.00	<u>ROOFS: CARPENTRY AND JOINERY</u>				
BB.03,01,04	202.01	Ceilings: 01. Gypsum plasterboard cornices 01. 75mm Coved cornices 02. Pre-painted 600 x 600 x 15mm Thick panels on T24 pre-painted exposed tee suspension system including main and cross tees, necessary hangers, grids, etc 01. Ceilings suspended not exceeding 1m below concrete soffits	m m2	295 3		
		Carried forward				

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
BB.04	202.02	Alterations and repairs to existing structures:				
		01. Remove:				
		01. 2000 x 2800 x 600mm Deep built-in cupboard	No	1		
		02. Suspended ceilings including suspension grid, hangers, etc	m2	3		
		03. 2000 x 600 x 32mm Thick basin floor cupboard	No	10		
		04. 2000 x 600 x 32mm Thick countertop	No	10		
		05. 2580 x 600 x 32mm Thick countertop	No	4		
		06. 2857 x 600 x 32mm Thick countertop	No	4		
		07. 3989 x 600 x 32mm Thick countertop	No	1		
		08. 4096 x 600 x 32mm Thick countertop	No	1		
		09. 10656 x 600 x 32mm Thick countertop	No	1		
		02. Items measured by linear metre:				
		01. Timber skirting	m	79		
BB.03	202.03	Joinery:				
		01. Items measured by number:				
		01. 2000 x 2800 x 600mm Deep built-in cupboard	No	1		
		02. 2000 x 600 x 32mm Thick basin floor cupboard	No	10		
		03. 2000 x 600 x 32mm Thick countertop	No	10		
		04. 2580 x 600 x 32mm Thick countertop	No	4		
		05. 2857 x 600 x 32mm Thick countertop	No	4		
		06. 3989 x 600 x 32mm Thick countertop	No	1		
		07. 4096 x 600 x 32mm Thick countertop	No	1		
		08. 10656 x 600 x 32mm Thick countertop	No	1		
		02. Items measured by linear metre:				
		01. 19 x 120mm Skirting nailed	m	110		
		Carried forward				

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
BD.04	202.05	Ironmongery, steelwork, glass, wall finishings, etc:				
		01. Items measured by number:				
		01. 100mm Brass hinge to match existing	No	9		
		02. 230mm High two lever lock set to match existing	No	1		
		03. Set of two 230mm chrome plated pull handles fixed back to back to match existing	No	11		
		04. Garage door handle	No	4		
		05. Built-in cupboard handle	No	8		
		06. Door stop	No	9		
		07. Indicator bolts	No	12		
		08. 230mm High Cupboard two lever lock set to match existing	No	21		
		09. Garage roller shutter lock	No	4		
	203.00	<u>MISCELLANEOUS</u>				
	203.01	Various items:				
		01. Items measured by linear metre:				
		01. 1500mm High window blinds	m	21		
		02. Hand Railing	m	12		
		02. Items measured by area				
		01. Panes exceeding 0,5m2 and not exceeding 2m2	m2	1		
		02. Gypsum ceilings	m2	444		
		03. Items measured by number:				
		01. 40mm Hollow Door 813 x 2032mm high	No	16		
		02. 40mm Solid Door 813 x 2032mm high	No	6		
		03. Aluminium door frame 900 x 2032mm high	No	2		
		04. Aluminium door 1510 x 2032mm high	No	1		
		05. Steel Door frame for 900 x 2032mm high timber door	No	1		
		Carried forward				

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
BD 03,06,02		Steel windows				
		01. Windows 475mm x 900mm High New	No	5		
BD 03,06,04		Aluminium windows				
		01. New Windows 1000mm x 1000mm High	No	5		
		02. New Windows 1200mm x 1500mm High	No	5		
BD 03,09		Ironmongery: New				
		01. 440 x 630 mm High Mirror	No	1		
		02. Toilet roll holder	No	17		
		03. Soap dispenser	No	7		
		04. Soap holder	No	6		
		05. Hand dryer	No	1		
		06. Sanitary bins	No	7		
		07. Door Handles	No	13		
		08. Garage door handle	No	4		
		09. Built-in cupboard handle	No	15		
		10. 1 Pair of butt hinges	No	37		
		11. Door stop	No	13		
		12. Indicator bolts	No	13		
BE.04	203.02	Alterations and repairs to existing structures:				
		01. Remove:				
		01. Wall tiling	m2	133		
		02. Gypsum ceilings	m2	436		
		03. Cornice	No	346		
		04. 40mm Timber door 813 x 2032mm high	No	9		
		05. Toilet roll holder	No	17		
		06. Soap dispenser	No	7		
		07. Hand dryer	No	1		
		08. 40mm Timber door 900 x 2032mm high	No	13		
		09. 440 x 630 mm High Mirror	No	6		
		Carried forward				

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT		
		Brought forward						
BE.03	204.00	10. Single Door Frame and prepare surface to receive new frame	No	1				
		11. Soap holder	No	6				
		12. Hand railing	m	12				
		13. Cupboard two way lock set	No	15				
		14. 230mm High two lever lock set to match existing	No	1				
		15. Roof covering	m2	20				
		02. Sand down timber skirting is existing position (varnish measured elsewhere)						
		01. Existing timber skirtings	m	749				
		03. Sand down previously painted surfaces and prepare to receive new paint (paint measured elsewhere)						
		01. To timber doors	m2	851				
		01. On built-in cupboards, countertops, etc	m2	335				
		02. To steel door frames	m2	28				
		03. To fascia and barge boards	m2	257				
		04. Timber skirting	m	920				
		04. Sheet metal gutters	m	785				
		05. 100mm Diameter sheet metal downpipes	m	596				
		06. To roller shutter garage doors	m2	25				
		07. To steel gate	m2	97				
		08. On bathroom benches	m2	2				
		09. To concrete floors	m2	71				
		03. Refix:						
		01. Cornice	m	2				
			204.00 FLOORS					
			204.01 Floor Tiling and Finishes:					
			01. Items measured by area					
			01. 300 x 300 x 3 mm semi-flexible vinyl tiles to match existing (PC Amount R280 /m2)	m2	25			
			Carried forward					

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		02. On floors				
		01. 300 x 300 x 5mm Ceramic floor tiles with approved tile adhesive mixed with bonding liquid in lieu of water and joints grouted with tile grout with 5mm joints continuous in both directions to match existing floor tiles (PC R200)				
		01. On floors	m2	850		
		02. Tile Skirting	m	29		
		03. 152 x 152 x 5mm White glazed ceramic tiles (PC amount: R1200) with approved tile adhesive mixed with bonding liquid in lieu of water and joints grouted with tile grout with 5mm joints continuous in both directions to match existing floor tiles (PC R200)				
		01. On walls and splashbacks	m2	107		
		04. Carpets				
		01. Carpets, including underfelt flooring	m2	231		
		05. Grouting				
		01. Grouting to floors	m2	28		
		06. Granolithic				
		01. Granolithic to floors	m2	4		
BE.04	204.02	Alterations and repairs to existing structures:				
		Items measured by area				
		01. 152 x 152 x 5mm White glazed ceramic tiles (PC amount: R1200/m2) with approved tile adhesive mixed with bonding liquid in lieu of water and joints grouted with tile grout with 5mm joints continuous in both directions to match existing floor tiles (PC R200/m2)				
		01. On walls and splashbacks	m2	5		
		02. Making good internal cement plaster/screeds				
		01. Floors in patches	m2	7		
		02. Walls in patches	m2	32		
		Alterations and repairs to existing structures:				
		01. Remove:				
		01. 300 x 300mm Tiles to floors	m2	175		
		Carried forward				

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		02. Vinyl tile floor covering including preparing screed for new vinyl floor covering	m2	25		
		02. Pressure cleaning of surfaces:				
		01. Existing internal walls	m2	2278		
		02. Existing internal floors - carpets	m2	231		
		03. Existing internal floors - tiles	m2	1113		
		04. Existing internal floors - screeds, granolithic finishes, etc	m2	16		
		03. Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc				
		01. 25mm Screed from floors	m2	148		
		04. Remove				
		01. 300 x 300mm Tiles to floors	m2	410		
		02. Carpets, including underfelts	m2	146		
		03. Granolithic	m2	4		
	205.00	<u>PAIN T WORK</u>				
BJ.01	205.01	Paint to new unpainted surfaces:				
		01. Plaster board:				
		01. Two coats interior quality PVA emulsion paint on work in good condition				
		01. On ceilings and cornice.	m2	733		
		02. On Ceilings and prepare surface	m2	4647		
		02. One coat prime universal undercoat and finish with two coats super acrylic exterior paint				
		01. On fascias and barge boards exceeding 300 mm girth	m2	20		
		02. Down pipes, gutters etc	m	659		
		03. One coat self-etching primer, one coat undercoat and two coats alkyd enamel paint				
		01. On roof coverings	m2	20		
		Carried forward				

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
BJ.02	205.02	04. Three coats clear varnish 01. On doors 02. On skirtings, rails, etc not exceeding 300 mm girth Paint to Previously painted surfaces: 01. Plaster Surfaces 02. Two coats interior quality PVA emulsion paint on work in good condition 01. On internal walls 03. Concrete Surfaces 01. One coat primer and two coats interior quality PVA emulsion paint 01. On ceilings and beams 01. Two coats interior quality PVA emulsion paint on work in good condition 01. On Ceilings and cornice 04. On Wood 01. Three coats clear varnish 01. On doors 02. On window frames 03. On built-in cupboards, countertops, etc 04. On skirtings, rails, etc not exceeding 300 mm girth 05. Metal Surfaces 01. Two coats polyurethane velvet enamel paint on previously painted steel surfaces in good condition 01. On door frames 02. On windows 02. One coat primer and two coats enamel 01. On structural steel 03. One coat self-etching primer, one coat undercoat and two coats alkyd enamel paint 01. On gates, grilles, burglar screens, balustrades, etc				
		Carried forward				

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
		02. Down pipes, gutters, shoes, etc	m	919			
		03. On roller shutter doors	m2	25			
		06. Fibre Cement Surfaces					
		01. Two coats One coat prime universal undercoat and finish with two coats super acrylic exterior paint					
		01. On fascias and barge boards exceeding 300 mm girth	m2	237			
		07. One coat primer, and two coats exterior quality PVA emulsion paint					
		01. On External walls	m2	300			
		08. Two coats primer, two coats epoxy paint and one coat sealer					
		01. Paint to screeds	m2	71			
		TOTAL:					
		SCHEDULE 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING - CARRIED TO SUMMARY					

DEPARTMENT OF PUBIC WORKS

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36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

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SCHEDULE NO 2.2: INSTALLATION C 2: PLUMBING & DRAINAGE WORK

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	300.00	<u>PLUMBING, DRAINAGE AND WET SERVICES</u>				
	301.00	<u>DETAIL WORK</u>				
PAA.03	301.01	Isolation, stripping, dismantling and removal of existing brassware, sanitary ware and piping:				
		01. Water closet				
		01. Paraplegic vitreous china WC pan	No	1		
		02. Vitreous china WC pan	No	22		
		03. Water closet seat	No	4		
		04. Water closet lid	No	1		
		02. Wash hand basins:				
		01. Wash hand basin	No	22		
		03. Shower:				
		01. Shower rose and taps	No	4		
		02. Shower	No	4		
		04. Urinals:				
		01. Urinal	No	4		
		05. Baths:				
		01. Bath mixer	No	4		
		06. Sinks:				
		01. 800 x 460mm Wide single sink	No	4		
		02. 1200 x 460mm Wide double sink	No	4		
PAA.05	301.02	Supply and installation of sanitary ware and brassware:				
		01. Water closets:				
		01. Double flap plastic seat	No	11		
		02. Paraplegic vitreous china WC pan	No	1		
		03. Vitreous china WC pan	No	22		
		04. Water closet lid	No	1		
		02. Wash hand basins:				
		01. 400 x 365mm Wash hand basin to match existing	No	22		
		Carried forward				

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SCHEDULE NO 2.3: INSTALLATION C3: FENCING, CLEANING AND SITE KEEPING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	300.00	<u>FENCING, CLEANING AND SITE KEEPING</u>				
		<u>SOLID WASTE MANAGEMENT</u>				
CG.05	300.01	Supply of waste bins:				
		.01 Square black 240 litre waste bins including wheels	number	1.00		
		.02 Round black 90 litre waste bin	number	1.00		
CG.07 SANS 1200 C		Overhaul on material for haul in excess of 1.0 km:	m ³ .km	30 600.00		
CC.03	300.02	<u>SITE MAINTENANCE</u>				
	300.04	<u>REPAIR WORK TO FENCES</u>				
		.01 Repair of wire and mesh fences less than 1.3 m high	m	425.00		
		.02 Repair of wire and mesh fences between 1.3 m and 2.0 m high	m	530.00		
		.03 Repair of wire and mesh fences between 2.0 m and 3.0 m high	m	1 600.00		
CC.06	300.05	<u>REPAIR, RE-FIXING, PAINTING AND ALIGNING OF GATES</u>				
		.01 Repair, refix and align single or double gates 1.2 m high and up to 3.0 m wide	number	10.00		
		.02 Repair, refix and align single or double gates 3.0 m high and up to 15.0 m wide	number	13.00		
CC.04	300.06	<u>OPERATIONAL FENCE 1.8 m STEEL PALISADE FENCE</u>				
		Redress, treating and painting of:				
		.01 Paliside fence				
		.01 1.8 m High Paliside Fence	m	700.00		
SANS 1200 ME 8.3.2	300.07	<u>BACKFILLING FOR FENCING</u>				
		.01 Importing, placing and compacting approved G6 material in layers of 150 mm from commercial sources or from borrow pits to 95% MOD AASHTO density	m ³	200.00		
		Carried forward				

SCHEDULE NO 2.3: INSTALLATION C3: FENCING, CLEANING AND SITE KEEPING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
CC.02	300.08	<p><u>RESIDENTIAL FENCE 1.2 m DIAMOND MESH, TUBULAR STEEL POSTS AND STANDARDS</u></p> <p>Supply and erection of new fencing material to replace old material:</p> <p>.01 Diamond mesh:</p> <p>.01 1.2 m diamond mesh fence</p> <p>.02 1.8 m diamond mesh fence</p> <p>.03 3.0 m diamond mesh fence</p> <p>.02 High security welded mesh panel fencing (as per specification CC 06.07):</p> <p>.01 3.0 m welded mesh fence</p> <p>.03 Industrial galvanised steel palisade fence (as per specification CC 06.09)</p> <p>.01 3.0 m fence</p> <p>.04 Precast concrete panel fencing including posts</p> <p>.01 1.8 m fence</p> <p>.05 Posts (capped and founded in concrete) for:</p> <p>.01 1.2 m fence: Galvanised tubular post</p> <p>.02 1.8 m fence with 450 mm additional overhang at 45°: Galvanised tubular post</p> <p>.03 3.0 m fence: Galvanised tubular post</p> <p>.06 Stays (founded in concrete) for posts for:</p> <p>.01 1.2 m fence: Galvanised tubular</p> <p>.02 1.8 m fence: Galvanised tubular</p> <p>.03 3.0 m fence: Galvanised tubular</p> <p>.07 Y-Standards for:</p> <p>.01 1.2 m fence</p> <p>.08 Straining wire</p> <p>.09 Barbed wire</p> <p>.10 Barbed Tape Concertina: 450 mmø</p> <p>.11 300 mm x 300 mm 20 MPa/19 mm concrete beam under 3.0 m high security fence</p>				
		Carried forward				

SCHEDULE NO 2.3: INSTALLATION C3: FENCING, CLEANING AND SITE KEEPING

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
CC.04	300.09	Redress, treat and painting of:				
		.01 Gates:				
		.01 Single gate up to 3.0 m wide	number	7.00		
		.02 Double gate up to 3.0 m wide	number	8.00		
		.03 Single gate up to 1.5 m wide	number	25.00		
		.04 Double gate up to 1.5 m wide	number	5.00		
		<u>CONCRETE (STRUCTURAL) SCHEDULED CONCRETE ITEMS</u>				
SANS 1200 G 8.4.3	300.11	Strength concrete:				
		.01 Class 25 MPa/19 mm concrete in foundation	m ³	1.00		
		.02 Class 25 MPa/19 mm in concrete walls	m ³	2.00		
		New pedestrian (Single) gate for:				
		.01 2.1 m x 1.0 m steel palisade (as per specification CC 06.09)	number	1.00		
		Retaining wall				
		.01 Dismantle and stockpile existing precast concrete blocks	m ²	150		
		.02 Rip and compact fill behind existing retaining wall to 93% modified AASHTO in 150 mm thick increments	m ³	335		
		.03 Reconstruct retaining wall using stockpile blocks including geosynthetic reinforcement every second layer.	m ²	250		
		.04 Reconstruct retaining wall using blocks similar to the existing including geosynthetic reinforcement every second layer.	m ²	568		
	TOTAL:	SCHEDULE 2.3: INSTALLATION C3: FENCING, CLEANING AND SITE KEEPING - CARRIED TO SUMMARY				

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SCHEDULE NO 2.4: INSTALLATION C4: BULK WATER SUPPLY SYSTEM AND EXTERNAL

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS 1200 L 8.2.1	400.00	<u>BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS</u>				
	400.01	Supply, lay and bed pipes complete with couplings, including testing:				
		.01 Galvanised mild steel (GMS) medium duty quality pipes to SABS 62 with screw couplings, normalised pipes:				
		.01 ø25 mm	m	240.00		
		.02 ø32 mm	m	240.00		
		.03 ø63 mm	m	320.00		
	400.02	Repair of water fountain	number	2.00		
SANS 1200 DB 8.3.2	400.03	<u>EXCAVATIONS</u>				
		Excavate in all materials for trenches, backfill, compact, and dispose of surplus unsuitable material, for the following total trench depths:				
		.01 Not exceeding 1.0 m deep x 600 mm wide	m ³	320.00		
		.02 Extra-over sub-item .01 for:				
		.01 intermediate excavation	m ³	50.00		
		.02 Hard rock excavation	m ³	100.00		
		.03 Excavation ancillaries				
		.01 Compaction in road reserves	m ³	2.00		
SANS 1200 LB 8.2.1	400.04	Provision of bedding from trench excavations:				
		.01 300 mm x 600 mm bedding of selected granular material	m ³	10.00		
8.2.2	400.05	Supply only of bedding from borrow pits:				
		.01 300 mm x 600 mm bedding of selected granular material	m ³	115.00		
CE.02	400.06	Replacement of damaged valve chamber covers	number	3.00		
CE.05.02	400.07	<u>BULK WATER SUPPLY</u>				
		Cleaning of existing manholes, chambers and other structures:				
		.01 Manholes, valve chambers, etc.	number	90.00		
	Carried forward					

SCHEDULE NO 2.4: INSTALLATION C4: BULK WATER SUPPLY SYSTEM AND EXTERNAL

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
	400.08	Supply and installation of 7.0 m high steel stand and fixing of existing 32.685 kL pressed steel tank to the stand including all pipes and fittings necessary to complete the installation	number	1.00		
		WATER DISTRIBUTION NETWORKS				
DH09.04	400.09	Environmental Management Plan (EMP) during repair and operation	number	1.00		
	TOTAL:	SCHEDULE 2.4: INSTALLATION C4: BULK WATER SUPPLY SYSTEM AND EXTERNAL - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 2.5: INSTALLATION C5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	500.00	<u>WASTEWATER AND SEWER NETWORKS</u>				
CF.01.04	500.01	Manholes and inspection chambers:				
		.01 Lowering uPVC cleaning eye	number	1.00		
		.01 Repair of concrete and brickwork including reinstating the plaster	number	3.00		
CF,02,01	500.02	Cleaning of sewerage network:				
		.01 Mechanical cleaning of sewer pipes and structures with internal diameters of:				
		.01 Up to 150 mm	m	1 090.00		
CF,02,02		.02 Chemical cleaning of sewer pipes and structures with internal diameters of:				
		.01 Up to 150 mm	m	120.00		
EA.06	500.04	Reconditioning/servicing of wastewater inlet works units and structures				
		.01 Clean screen chambers, grit channels and inlet work structure and treat corroded surfaces with quick-setting epoxy grouting	m ²	30.00		
		.02 Decommissioning, servicing, testing, re-commissioning and calibration of flow measuring equipment:				
		.01 ø160 mm electromagnetic flow meter	number	1.00		
EB.01	500.05	Supply and delivery of pumping equipment				
		.01 Ficksburg sewer pump station cast iron submersible sludge pump 1.5 kW, head of 6.0 m with delivery of 150 L/min	number	1.00		
EB.02	500.06	Installation, testing and commissioning of pumping equipment				
		.01 Ficksburg sewer pump station	number	1.00		
EB.03	500.07	Decommissioning and removal of pumping equipment				
		.01 Ficksburg sewer pump station	number	1.00		
EB.06	500.08	Servicing of pumping equipment				
		.01 Cast iron submersible sludge pump 1.1 kW, head of 5.0 m with delivery of 100 L/min	number	2.00		
		.02 Cast iron submersible sludge pump 1.2 kW, head of 3.0 m with delivery of 150 L/min	number	2.00		
		.03 Cast iron submersible sludge pump 1.5 kW, head of 6.0 m with delivery of 150 L/min	number	2.00		
		Carried forward				

SCHEDULE NO 2.5: INSTALLATION C5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
EB.08	500.08	.04 0.37 kW, 380 V aerator Servicing of hypo-chlorite dosing system	number	2.00		
EB.13	500.09	Replace, test and commissioning of float level switches or other level probes	number	1.00		
EB.14	500.10	.01 Ficksburg sewer pump station float Pumping out, cleaning and reconditioning of waste water pump sumps and related infrastructure	number	1.00		
		.01 Caledonspoort 10 kL and 30.5 kL sump	number	2.00		
		.02 Ficksburg 16.8 kL sump	number	1.00		
EK07.03	500.11	Service gate valves, air release valves, non-return valves and sluice gates	number	6.00		
EM05.01	500.12	Pump out of sludge into a suitable waste containment vehicle for transportation	m ³	873.00		
EM05.02	500.13	Disposing of sludge at a registered commercial source on the instruction of the Engineer/ Department's representatives	m ³ .km	26 190.00		
	TOTAL:	SCHEDULE 2.5: INSTALLATION C5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

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SCHEDULE NO 2.6: INSTALLATION C6: ROADS AND STORMWATER DRAINAGE

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	600.00	<u>ROADS AND STORMWATER DRAINAGE</u>				
		SURFACE REPAIRS OF CONCRETE PAVEMENTS				
CA.02.01	600.01	Preparation and sealing or resealing of old joints and cracks in existing concrete pavements:				
		.01 Expansion joints	m	128.00		
		.02 Cracks, less than 10.0 mm wide	m	250.00		
CA.02.02	600.02	Patching of concrete:				
		.01 20 mm thick, 30 MPa/19 mm	m ²	10.00		
		.02 100 mm thick, 30 MPa/19 mm	m ²	30.00		
		.03 250 mm thick, 30 MPa/19 mm	m ²	60.00		
		PAVEMENT LAYERS AND ASPHALT SURFACE REPAIR				
CA.03.01	600.03	Excavation in existing pavements for patching	m ³	5.00		
CA.03.02	600.04	Backfilling of excavations for patching with:				
		.01 Cement-stabilized gravel excavated from the existing pavement:				
		.01 Areas up to and including 10 m ²	m ³	5.00		
		SURFACE TREATMENT OF SURFACED ROADS				
CA.04.03	600.05	Pothole repair using cold mix asphalt surfacing from the following sources				
		.01 Commercial sources	ton	0.10		
CA.04.06	600.06	Cleaning of cracks with compressed air	km			
		REPAIR OF SEGMENTED PAVING				
CA.05.02	600.07	Excavation for the repair of segmented paving:				
		.01 Stockpile and re-use paving blocks	m ³	50.00		
CA.05.03	600.08	Backfilling and reinstatement of pavement layers:				
		.01 Selected layers compacted to 93% of modified AASHTO density	m ³	10.00		
		.02 Cement stabilized subbase layers compacted to 95% of modified AASHTO density	m ³	10.00		
CA.05.04	600.09	Cast-in-situ concrete and formwork in edge beams, intermediate beams and kerbing:				
		.01 Class 30 concrete	m ³	15.00		
		Carried forward				

SCHEDULE NO 2.6: INSTALLATION C6: ROADS AND STORMWATER DRAINAGE

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
CA.05.05	600.10	Breaking up and removing concrete edge beams, intermediate beams, etc.	m ³	5.00		
CA.05.07	600.11	Concrete block paving:				
		.01 Class 35 Type-SA 80 mm thick paving blocks similar to existing pavement for areas carrying vehicular traffic	m ²	20.00		
		.02 Class 25 Type-SA 60 mm thick paving blocks similar to existing pavement for areas carrying pedestrian traffic	m ²	20.00		
CA.05.08	600.12	Replacement of jointing sand	m ²	1 000.00		
		REPAIR OF KERBING				
CA.06.01	600.13	Patching of kerbs	m	12.00		
CA.06.02	600.14	Reinstalling pre-cast kerbs	m	12.00		
CA.06.03	600.15	Replacing of kerbing:				
		.01 Barrier kerbs similar to existing undamaged barrier kerbs	m	20.00		
		.02 Semi-mountable kerbs similar to existing undamaged semi mountable kerbs	m	20.00		
		.03 Mountable kerbs similar to existing undamaged mountable kerbs	m	20.00		
		ERECTION AND REPAIR OF ROAD TRAFFIC SIGNS AND TRAFFIC-CONTROL DEVICES				
CA.07	600.16	Erection and repair of road traffic signs				
		.01 Erection or reinstatement of road sign boards				
		.01 Area not exceeding 2.0 m ²	m ²	15.00		
		.02 Area exceeding 2.0 m ²	m ²	15.00		
		.02 Road sign supports (overhead road sign structures)				
		.01 Steel tubing of 76 mm \varnothing and 3.0 mm	m	90.00		
		.03 Excavation and backfilling for road sign supports	m ³	13.00		
		.04 Extra over item CA.07.03 for cement-treated soil	m ³	13.00		
		.05 Repair of road sign faces	m ²	15.00		
		Carried forward				

SCHEDULE NO 2.6: INSTALLATION C6: ROADS AND STORMWATER DRAINAGE

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
CA.08	600.17	Road markings:				
		.01 Retro-reflective roadmarking paint:				
		.01 Longitudinal lines:				
		.01 White lines (broken or unbroken) - 100 mm width	m	1 044.00		
		.02 Yellow lines (broken or unbroken) - 100 mm width	m	1 044.00		
		.02 Transverse lines and other markings:				
		.01 Broken or unbroken lines, white, red or yellow	m ²	250.00		
		.02 Lettering and symbols, white, red or yellow, repainting existing markings	m ²	652.00		
		.03 Traffic island markings, white or yellow repainting existing markings	m ²	461.00		
		.02 Setting out and pre-marking of lines (excluding traffic island markings, lettering and symbols)	km	3.00		
		.03 Painting of concrete kerbs by hand using road marking paint, yellow and white	m ²	850.00		
		.04 Painting of manhole and valve chamber covers to match existing colours	m ²	120.00		
CA.09	600.18	Chemical Control of Vegetation & Eradiction of Undesired Vegetation				
		.01 Chemical control of vegetation (the tenderer shall state the method he intends to use):	m ²	13 170.00		
		.02 Eradication of undesirable vegetation (The tenderer shall state the method he intends to use):	m ²	12 000.00		
		Carried forward				

SCHEDULE NO 2.6: INSTALLATION C6: ROADS AND STORMWATER DRAINAGE

CIVIL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		<u>STORMWATER DRAINAGE</u>				
CB.03.01	600.19	Excavation:				
		.01 Soft Material	m ³	4.00		
		.02 Hard Material	m ³	3.00		
CB.03.02	600.20	Cast in situ concrete (v-drains):				
		.01 Class 20 concrete	m ³	2.00		
CB.03.03	600.21	Backfill below channels	m ³			
CB.03.05	600.22	Steel reinforcement:				
		.01 Welded steel mesh	kg	94.00		
CB.04	600.32	Cleaning of concrete drains and channels				
		.01 Remove of dispose of material from				
		.01 Drains and channels within the following invert with ranges				
		.01 Less than 1.0 m	m	60.00		
		.02 1.0 m up to and including 2,0 m	m	60.00		
		.02 Overhaul on material for hual in excess of 1.0 km	m ³ .km	350.00		
CB.02	600.33	Cleaning of prefabricated culverts				
		.01 Cleaning of prefabricated culverts and inlet structures (average depth of material removed not more than 100 mm):				
		.01 Prefabricated concrete pipes and portal culverts with maximum cross-sectional dimension of-				
		.01 Up to and including 500 mm	m	115.00		
		.02 501 mm to 750 mm	m	215.00		
	TOTAL:	SCHEDULE 2.6: INSTALLATION C6: ROADS AND STORMWATER DRAINAGE - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SUMMARY OF SCHEDULE OF QUANTITIES: CIVIL REPAIR WORK

		TENDER
Schedule No. 1.0	General	R
Schedule No. 2.1	Structural and Building	R
Schedule No. 2.2	Plumbing, Drainage & Wet Services	R
Schedule No. 2.3	Fencing, Cleaning and Site Keeping	R
Schedule No. 2.4	Bulk Water Supply System and and External Waterreticulation	R
Schedule No. 2.5	Wastewater Treatment Works and Sewer Networks	R
Schedule No. 2.6	Roads and Storm Water Drainage	R

TOTAL OF BILL OF QUANTITIES: CIVIL REPAIR WORK	R
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SIGNED ON BEHALF OF THE TENDERER:

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DEPARTMENT OF PUBIC WORKS

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CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and

BILL OF QUANTITIES

SCHEDULE NO 1: INSTALLATION ER 1: BUILDING ELECTRICAL INSTALLATIONS

FICKSBURG AND
CALEDONSPORT
ELECTRICAL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<u>ELECTRICAL INSTALLATIONS</u>				
AB.01.01	3.001	Service Distribution Boards	No	79		
AB 04	3.002	Electrical Tests				
		.01 Earth and electrode resistance	No	41		
		.02 Insulation resistance	No	41		
		.03 Polarity	No	2		
		.04 Phase Voltage	No	2		
		.05 Operation of electricity metering devices	No	41		
		.06 Current per Phase	No	2		
		.07 Illumination levels in lux	No	2		
AB.01.13	3.003	Circuit breakers (SABS approved)				
		.01 10-40A, 6kA Single pole	No	6		
		.02 40-60A, 6kA Single pole	No	2		
		.03 80-100A, 15kA Triple pole	No	1		
		.04 100-160A, 15kA Triple pole	No	1		
AB.01.14	3.004	Isolators (SABS approved)				
		.01 60A, 6kA Double pole	No	1		
		.02 60A, 6kA Triple pole	No	1		
AB.01.15	3.005	Contactors (SABS approved)				
		.01 30A, 3 Pole	No	2		
AB.01.17	3.006	Earth leakage units (SABS approved)				
		.01 60A, 5kA Single pole + Neutral	No	2		
		.02 60A, 5kA Triple pole + Neutral	No	2		
AB.01.19	3.007	Surge arrestors				
		.01 1 Pole and Neutral 275V 5kA with indication	No	10		
		.02 3 Pole and Neutral 275V 5kA with indication	No	5		
		Carried forward				

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
AB.01.03	3.008	Cabling				
	.01	95 mm ² ×4-core PVC/SWA/PVC Cu	m	20		
	.02	70 mm ² ×4-core PVC/SWA/PVC Cu	m	2		
	.03	50 mm ² ×4-core PVC/SWA/PVC Cu	m	2		
	.04	35 mm ² ×4-core PVC/SWA/PVC Cu	m	2		
	.05	25 mm ² ×4-core PVC/SWA/PVC Cu	m	2		
	.06	16 mm ² ×4-core PVC/SWA/PVC Cu	m	10		
	.07	10 mm ² ×4-core PVC/SWA/PVC Cu	m	10		
	.08	16 mm ² ×3-core PVC/SWA/PVC Cu	m	40		
	.09	10 mm ² ×3-core PVC/SWA/PVC Cu	m	12		
	.10	6 mm ² ×3-core PVC/SWA/PVC Cu	m	10		
	.10	4 mm ² ×3-core PVC/SWA/PVC Cu	m	20		
	.10	2.5 mm ² ×3-core PVC/SWA/PVC Cu	m	60		
AB.01.04	3.009	Wiring				
	.01	2,5 mm ² PVC insulated	m	120		
	.02	4 mm ² PVC insulated	m	40		
	.03	6 mm ² PVC insulated	m	20		
	.04	2,5 mm ² BCEW	m	60		
	.05	4 mm ² BCEW	m	20		
	.06	6 mm ² BCEW	m	10		
	.06	10 mm ² BCEW	m	10		
	.06	16 mm ² BCEW	m	10		
	.06	25 mm ² BCEW	m	2		
	.06	35 mm ² BCEW	m	2		
	.06	50 mm ² BCEW	m	2		
	.06	70 mm ² BCEW	m	2		
	.06	95 mm ² BCEW	m	20		
		Carried forward				

SCHEDULE NO 1: INSTALLATION ER 1: ELECTRICAL INSTALLATIONS

FICKSBURG AND
CALEDONSPORT
ELECTRICAL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought forward						
AB.02.01	3.010	Re-lamp luminaire .01 58W Fluorescent .02 70W MV Lamp .03 PL9 W .04 11W E27 CFL .05 PL 26W CFL .06 125W MV .07 250W MV .08 250W HPS .09 400W MV	No	436		
AB.02.02	3.011	Service Luminaire .01 Type A (2x58W Florescent) .02 Type J (2x58W Prismatic diffuser) .03 Type E (2x58W Watertight diffuser) .04 Type K (B40 Bulkhead-70W MV) .05 Type R (400W MV High Bay) .06 Type L (B10 with 2xPL9) .07 Type AB (125W MV Floodlight) .08 Type S (Bowl Type) .09 Type U (Spot Light) .10 Type W (Spot 2-way) .11 Type X (Spot 3-way)	No	218		
Carried forward						

SCHEDULE NO 1: INSTALLATION ER 1: ELECTRICAL INSTALLATIONS

FICKSBURG AND
CALEDONSPORT
ELECTRICAL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward					
AB.02.03	3.012	Replace Luminaire with LED Equivalent				
		.01 Type A (2x58W Open channel)	No	20		
		.02 Type K (B40 Bulkhead-70W MV)	No	16		
		.03 Type L (B10 with 2xPL9)	No	10		
AB.02.07	3.013	Service Light switch	No	390		
AB.02.04	3.014	Replace Light switch (Similar to existing)				
		.01 16A, one lever, one way	No	10		
		.02 16A, two lever, one way	No	4		
		.03 16A, water tight, robust	No	6		
AB.03.07	3.015	Service Socket outlet	No	626		
AB.03.01	3.016	Replace Socket outlet (Similar to existing)				
		.01 16A, Double SSO	No	45		
AB.03.09	3.017	Replacing power skirting				
		.01 2-tier powder-coated galvanised steel	m	10		
AB.02.05	3.018	Replace Photo-electric switch				
		.01 16A unit with bracket	No	4		
AB.03.19	3.019	Geyser components				
		.01 Domestic geyser element 3KW	No	2		
		.02 Geyser thermostat	No	2		
	Carried forward					

SCHEDULE NO 1: INSTALLATION ER 1: ELECTRICAL INSTALLATIONS

FICKSBURG AND
CALEDONSPORT
ELECTRICAL REPAIR
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
AB.03.18	3.020	Domestic stove components				
	.01	150-160 dia solid plate	No	6		
	.02	170-190 dia solid plate	No	6		
	.03	Five/six heat switch	No	3		
	.04	Oven element (1900 W Bake element)	No	3		
	.05	Oven element (1800W Grill element)	No	2		
	.06	Oven thermostat	No	3		
AB 10.02.04	3.021	Testing of earthing and lightning per building by a specialist contractor	No	61		
AB.03.20	3.022	Supply and install 4 plate stove with oven and warm drawer, similar or equal to Defy model 621-640×600×1190	No	1		
	3.023	Supply and install insect electrocutors (outdoor) 620mm×130mm×48mm with 2×20W tubes including heavy duty galvanised steel bracket mounted to existing pole or wall (or similar approved)	No	5		
	3.024	Provide Certificate of Compliance	No	79		
	3.025	Electrical Site Personnel				
	.01	Caledonspoort Port of Entry Site inspection qualified electrician 4 days per week	month	36		
	.02	Ficksburg Bridge Port of Entry Site inspection by qualified electrician 4 days per week	month	36		
		GATE MOTOR INSTALLATION				
		Supply and install automated gate opener system as listed below include and compile a complete set of operating and Maintenance Manuals.				
	3.026	Automated sliding gate opener motor unit, complete with DC backup system, limit switches and security bracket.	No	1		
	3.027	Cable 6-core Solid Strand	m	10		
	3.028	Infrared sensors	No	2		
	3.029	Installation per gate	No	1		
	3.030	Remote & programming	No	1		
		TOTAL: SCHEDULE NO 1: CARRIED TO SUMMARY: BUILDING ELECTRICAL INSTALLATIONS				

DEPARTMENT OF PUBIC WORKS

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CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and

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SCHEDULE NO 2: INSTALLATION ER 2: STANDBY POWER SYSTEMS

FICKSBURG AND
CALEDONSPORT
ELECTRICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<u>STANDBY POWER GENERATORS</u>				
HB 10.03.01	3.031	Clean generator plant room	No	3		
HB 10.03.02/ HB 10.03.03/	3.032	Service 40 kVA genset and engine	No	1		
HB 10.03.02/ HB 10.03.03/	3.033	Service 125 kVA genset and engine	No	1		
HB 10.03.02/ HB 10.03.03/	3.034	Service 250 kVA genset, engine and replace battery	No	1		
HB 10.03.05	3.035	Execute dummy load test at start of contract	No	3		
HB 10.03.06	3.036	Service change-over switchgear & controls	No	3		
HB 10.03.09	3.037	Supply of tools and spares as per HB 03	set	2		
	3.038	First Aid Kit (FAK 02A)	No	3		
	3.039	Wall-mounted paper towel dispenser complete with paper cartridge	No	2		
HB 10.03.04	3.040	Replace starter battery	No	3		
HB 10.03.07	3.041	Supply and install padlocks	No	3		
HB 10.03.16	3.042	Repair work to existing 40kVA generator at water purification plant. Rewire control system, replace charge controler, replace battery, test and commssion.	Sum	1		
	Carried forward					

SCHEDULE NO 2: INSTALLATION ER 2: STANDBY POWER SYSTEMS

FICKSBURG AND
CALEDONSPORT
ELECTRICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward					
		<u>UPS</u>				
HB 11.03.01	3.043	Service UPS Units				
		.01 Tower 1100 15 kVA Unit	No	1		
HB 11.03.02	3.044	Execute dummy load test	No	1		
HB 11.03.03	3.045	Replace UPS batteries				
		.01 Tower 1100 15 kVA 7.2Ah batteries	set	36		
TOTAL: SCHEDULE NO 2: CARRIED TO SUMMARY: STANDBY POWER SYSTEMS						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

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SCHEDULE NO 3: INSTALLATION ER 3: EXTERNAL ELECTRICAL

FICKSBURG AND
CALEDONSPORT
ELECTRICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		EXTERNAL ELECTRICAL				
HE 09.03 (a)	3.047	Re-lamp luminaire:				
		.01 400W HPS Floodlight	No	51		
		.02 250W HPS Floodlight	No	16		
		.03 250W HPSE Floodlight	No	2		
		.04 70W MV Post Top	No	21		
HE 09.03 (b)	3.048	Service luminaire:				
		.01 400W HPS Floodlight	No	51		
		.02 250W HPS Floodlight	No	16		
		.03 250W HPSE Floodlight	No	2		
		.04 70W MV Post Top	No	21		
HE 09.03 (f)	3.049	Replace luminaire with LED equivelent:				
		.01 400W HPS Floodlight	No	4		
		.02 250W HPS Floodlight	No	4		
		.03 250W HPSE Floodlight	No	4		
		.04 125W MV Floodlight	No	4		
		.05 70W MV Post Top	No	4		
HE 09.03 (e)	3.050	Service light pole	No	63		
HE 09.03 (c)	3.051	Service lighting distribution kiosk or DB or DB on pole	No	31		
	3.052	Service Centurion gate motor and align guide rails	No	21		
HC.03	3.053	Supply and installation of domestic electricity meter	No	1		
HC 11.03 (d)	3.054	Supply and installation of 3-phase electricity meter in Ficksburg Main low voltage panel, one for each section.	No	3		
	Carried forward					

SCHEDULE NO 3: INSTALLATION ER 3: EXTERNAL ELECTRICAL

FICKSBURG AND CALEDONSPORT ELECTRICAL REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward					
	3.055	Distribution Kiosks				
HC 12.03 (a)		.01 Service Distribution kiosk	No	5		
HC 12.03 (b)		.02 Remove dust and paint kiosk	No	2		
HC 12.03 (c)		.03 Label kiosk	No	5		
HC 12.03 (f)		.04 Replace door hinges	No	2		
HC 12.03 (a)		.05 Supply and install door handles	No	2		
		MAIN LOW VOLTAGE PANEL REPLACEMENT				
HC 11.03 (b)	3.056	Supply and install a new Main Low Voltage Distribution Panel to replace the existing panel at Caledonspoort The panel is to include equipment along with 30% spare space as per the specification document.	No	1		
HC 11.03 (b)	3.057	Allow for the identification, disconnection, extension and termination of existing cabling ranging from 2.5mm ² GP wiring to 95mm ² 4 core cables to accommodate the termination into the new MLV panel.	No	1		
		MAIN LOW VOLTAGE PANEL REPAIR				
HC 11.03 (c)	3058	Ficksburg main low voltage panel - remove and refit two 100A three pole, 25kA circuit breakers, modify fitment of breakers and modify cover panel to ensure proper fitment and compliance with SANS 10142. Install required blanks and label the panel. Verify and paint the normal, essential and UPS sections of the panel.	No	1		
TOTAL: SCHEDULE NO 3: INSTALLATION ER 3: EXTERNAL ELECTRICAL - CARRIED TO SUMMARY						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SUMMARY OF SCHEDULE OF QUANTITIES: ELECTRICAL REPAIR WORKS

		<u>TENDER</u>
<u>FICKSBURG AND CALEDONSPOORT</u>		
SCHEDULE NO 1	ELECTRICAL INSTALLATIONS	R
SCHEDULE NO 2	STANDBY POWER SYSTEMS	R
SCHEDULE NO 3	EXTERNAL ELECTRICAL	R
TOTAL OF BILL OF QUANTITIES: ELECTRICAL REPAIR WORK CARRIED TO CALCULATION OF TENDER SUM		R

SIGNED ON BEHALF OF THE TENDERER:

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 1: INSTALLATION MR1: HVAC INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
PFD 04.02.01	1000.00	AIR CONDITIONING				
	1000.01	Allowance to repair Air-conditioning units extraction fan and air-curtains				
	1000.01.01	Air-conditioning units and air-curtains for Caledonspoort operational and residential areas:				
		01 Clean air intake screen	No	10		
		02 Replace filters	Set	3		
		03 De-rust neutralize and touch up paintwork	No	5		
		04 Check settings and operation of all pressure switches and reset	No	5		
		05 Check settings and operation of all safety switches i.e. LP & HP switches, oil pressure switches	No	5		
		06 Check setting and operation of thermostat	No	5		
		07 Check running current of fans and compressor and settings and operations of overloads	No	5		
		08 Check tightness of electrical terminals	No	5		
		09 Ensure operation of local and remote isolators	No	3		
		10 Reposition and strap cables	No	10		
		11 Carry out a leak test on all refrigeration piping and components inclusive of evaporator and	No	5		
		12 Replace compressor vibration mounts	Set	5		
		13 Check refrigerant charge sight glass	No	5		
		14 Clean condensate tray and test drainage operation	No	5		
	15 Clean evaporator and condenser fan blades and check unbalance	No	5			
	1000.01.02	Fans for Caledonspoort operational and residential areas:				
		16 Extraction fan (0.37kW, 220V 1PH 50Hz, 1440 rpm)	No	1		
	Carried forward					

SCHEDULE NO 1: INSTALLATION MR1: HVAC INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
	1000.01. 03	Air-conditioning units and air-curtains for Ficksburg operational and residential areas: 01 Clean air intake screen 02 Replace filters 03 De-rust neutralize and touch up paintwork 04 Check settings and operation of all pressure switches and reset 05 Check settings and operationof all safety switches i.e. LP & HP switches, oil pressure switches 06 Check setting and operation of thermostat 07 Check running current of fans and compressor and settings and operations of overloads 08 Check tightness of electrial terminals 09 Ensure operation of local and remote isolators 10 Reposition and strap cables 11 Carry out a leak test on all refrigeration piping and components inclusive of evaporator and condenser 12 Replace compressor vibration mounts 13 Check refrigerant charge sight glass 14 Clean condensate tray and test drainage operation 15 Clean evaporator and condenser fan blades and check unbalance					
	Carried forward						

SCHEDULE NO 1: INSTALLATION MR1: HVAC INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
PFD 05.01.04	1000.02	Allowance to replace AC Conditioning Unit					
	1000.02.01	Caledonspoor operational and residential areas:					
		01 10kW mid wall split unit	No	1			
		03 5.2kW mid wall split unit	No	1			
		04 3.5kW mid wall split unit	No	1			
		05 3.5kW window shaker	No	1			
		06 900mm air curtain	No	1			
	1000.02.02	Ficksburg operational and residential areas:					
		01 10kW mid wall split unit	No	1			
		02 8kW mid wall split unit	No	1			
		03 5.2kW mid wall split unit	No	1			
		04 3.5kW mid wall split unit	No	1			
		05 3.5kW window shaker	No	1			
		Carried forward					

SCHEDULE NO 1: INSTALLATION MR1: HVAC INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
PFD 05.01.02	1000.03	Allowance to replace temperature control unit (Remote) 01 Caledonspoor operational and residential area's temperature control unit (Remote) 02 Ficksburg operational and residential area's temperature control unit (Remote)	No	10			
PFD 05.01.05	1000.04	Allowance to replace 25mm Thermaflex isolation 01 Caledonspoor operational and residential area's 25mm Thermaflex isolation 02 Ficksburg operational and residential area's 25mm Thermaflex isolation	m	100			
	1000.06	Allowance to install/replace Condensate piping 01 Caledonspoor operational and residential install/replace Condensate piping 02 Ficksburg operational and residential install/replace Condensate piping	m	100			
	Carried forward						

SCHEDULE NO 1: INSTALLATION MR1: HVAC INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
	1100.00	<u>LABELLING</u>				
	1100.01	Supply and install traffolite labels for				
		01 Caledonspoor operational and residential area's labels for identification of all types of air conditioning units	No	4		
		02 Ficksburg operational and residential area's labels for identification of all types of air conditioning units	No	4		
TOTAL: SCHEDULE 1: INSTALLATION MR 1: HVAC INSTALLATIONS - CARRIED TO SUMMARY						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 2: INSTALLATION MR2: FIRE PROTECTION INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
JC/PJC 04.02.01	1200.00	CONVENTIONAL FIRE FIGHTING EQUIPMENT					
	1200.01	Allowance to supply and install fire fighting equipment, firecabinet keys, backboards and brackets fire panels, smoke detectors and manual call points and cabling at:					
	1200.01.01	Caledonspoort operational and residential areas:					
		01 9kg Dry chemical powder (STP) fire extinguisher	No	3			
		02 4.5kg Dry chemical powder (STP) fire extinguisher	No	3			
		03 5kg CO ₂ fire extinguisher	No	3			
		04 2kg CO ₂ fire extinguisher	No	3			
		05 Fire hydrant	No	1			
		06 Fire hose reel	No	1			
		07 8-zone adressable fire panel	No	1			
		08 PH120 or PH30 fire resistance calble	m	500			
		09 Fire pump system	No	1			
		09 Fire extinguisher cabinet keys	No	2			
	1200.01.02	Ficksburg operational and residential areas:					
		01 9kg Dry chemical powder (STP) fire extinguisher	No	3			
		02 4.5kg Dry chemical powder (STP) fire extinguisher	No	3			
		03 5kg CO ₂ fire extinguisher	No	3			
		04 2kg CO ₂ fire extinguisher	No	3			
		05 Fire hydrant	No	1			
		06 Fire hose	No	1			
		07 40-zone adressable fire panel	No	1			
		08 Smoke detector with base	No	5			
		09 Surface mount Manual call points with LED, galss/flex element	No	5			
		Carried forward					

SCHEDULE NO 2: INSTALLATION MR2: FIRE PROTECTION INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
	1300.01	<u>LABELLING</u>				
	1300.01.01	Supply and install traffolite labels for identification of all types of air conditioning units				
		01 Caledonspoort operational and residential area's labels for identification of all types of air conditioning units	No	4		
		02 Ficksburg operational and residential area's labels for identification of all types of air conditioning units	No	4		
	TOTAL:					
SCHEDULE NO 2: INSTALLATION MR2: FIRE PROTECTION INSTALLATIONS - CARRIED TO SUMMARY						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3: INSTALLATION MR3: WET SERVICES INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1400.00	WET SERVICES				
	1400.01	Allowance to repair of geysers and water pumps				
	1400.01.01	Caledonspoort operational and residential areas:				
		01 Replace Non return valve	No	10		
		02 Replace expansion relief valves	No	10		
		03 Replace ball valve	No	10		
		04 Replace element	No	10		
		05 Replace drain cock	No	10		
		06 Replace thermostat	No	10		
		07 Replace coper pipe	m	10		
		08 Replace galvanised pipe	m	10		
		09 Replace seals	No	10		
	1400.01.02	Ficksburg operational and residential areas:				
		01 Replace Non return valve	No	10		
		02 Replace expansion relief valves	No	10		
		03 Replace ball valve	No	10		
		04 Replace element	No	10		
		05 Replace drain cock	No	10		
		06 Replace thermostat	No	10		
		07 Replace coper pipe	m	10		
		08 Replace galvanised pipe	m	10		
		09 Replace seals	No	10		
		Carried forward				

SCHEDULE NO 3: INSTALLATION MR3: WET SERVICES INSTALLATIONS

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
	1400.02	Allowance to replace geysers				
		Caledonspoor operational and residential areas:				
		01 150 litre electric geyser	No	1		
	1400.02.02	Ficksburg operational and residential areas:				
		01 150 litre electric geyser	No	1		
	TOTAL:					
	SCHEDULE NO 3: INSTALLATION MR3: WET SERVICES INSTALLATIONS - CARRIED TO SUMMARY					

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SUMMARY OF SCHEDULE OF QUANTITIES: CIVIL REPAIR WORK

			<u>TENDER</u>
Schedule No. 1.0	HVAC Installations		R
Schedule No. 2.0	Fire Protection Installations		R
Schedule No. 3.0	Wet Services Installations		R

**TOTAL OF BILL OF QUANTITIES: MECHANICAL REPAIR WORK
CARRIED TO CALCULATION OF TENDER SUM**

R

SIGNED ON BEHALF OF THE TENDERER:

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3.1: INSTALLATION CM1: STRUCTURAL & BUILDING

CALEDONSPOORT
CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	800.00	<u>SCHEDULE NO. 4.1: INSTALLATION CM: CALEDONSPOORT - STRUCTURAL AND BUILDING - RELATED MAINTENANCE WORK</u>				
	800.01	<p><u>STRUCTURAL AND BUILDING RELATED WORK</u></p> <p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to the following during daily inspections of all structural components and elements of buildings and facilities: Preventative maintenance work and minor corrections of all structural and building related facilities, including components and elements such as, but not limited to:</p> <ul style="list-style-type: none"> • Doors (hinges, locksets, strike plates, indicator locks) • Windows (pegs, stays, etc.) • Pull handles • Glass putty • Fascia boards • Roof cladding and sheeting • Cornices • Ceiling boards and jointing strips • Sealant • Skirtings, etc. <p>.01 Caledonspoort: Proper maintenance of Structural and Building related work of operational area and residential area. Maintenance is not limited to the above-mentioned</p> <p>Breakdown maintenance: Repair of damages is remunerated for from the payment items, within the maximum allowable downtime:</p>	points	360.00		
	Carried forward					

SCHEDULE NO 3.1: INSTALLATION CM1: STRUCTURAL & BUILDING

CALEDONSPORT
CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SA.04	800.03	<p>Payment reduction:</p> <p>Payment reduction due to exceeding of maximum allowable down-time during damage repair</p> <p>Maintenance of tools and equipment on following page:</p>	days	-	-250.00	Rate only
SA.01 PS 5.1	800.04	<p>Maintenance tools and equipment</p> <p>The Contractor shall carry out his inspections with the necessary tools and consumables required for on-the-spot maintenance and corrections of all structural elements and components. An updated asset register shall be provided:</p> <p>.01 Maintenance: Designated lockable store room, tools/equipment and consumables for proper maintenance on-the-spot/ on-site. Lockable cabinet with duplicate keys and updated register for port of entry</p>	points	360.00		
SA.01 PS 4	800.05	<p>Programme of the Works (Construction</p> <p>The Contractor shall compile and submit a complete and accurate Programme of the Works 14 days after site handover and updated monthly which is linked to the expenditure and project cash flow</p> <p>.01 Caledonspoort Programme of the Works</p> <p><u>LATE SUBMISSION OF ACCEPTABLE</u></p> <p>Payment reduction:</p>	points	360.00		
SA.04 PS 4	800.06	<p>Caledonspoort: Payment reduction due to late submission of an adequate/acceptable Programme of the Works</p>	days	-	-250.00	Rate only
SA.01	800.07	<p>Maintenance Control Plan</p> <p>The Contractor shall compile and submit a complete and accurate monthly Maintenance Control Plan (see Additional Specification SA), which shall be utilised to log and record all faults, system checks, breakdowns and site inspections</p> <p>.01 Caledonspoort: Complete and accurate Maintenance Control Plan</p>	points	360.00		
		Carried forward				

SCHEDULE NO 3.1: INSTALLATION CM1: STRUCTURAL & BUILDING

CALEDONSPOORT
CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SA.04 SA.05	800.08	<p>Payment reduction for late submission of the <u>LATE SUBMISSION OF ACCEPTABLE</u> Payment reduction: Caledonspoort: Payment reduction due to late submission of an adequate/acceptable Maintenance Control Plan</p>	days	-	-250.00	Rate only
TOTAL: SCHEDULE NO 3.1: INSTALLATION CM1: STRUCTURAL & BUILDING - CARRIED TO SUMMARY						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3.2: INSTALLATION CM2: PLUMBING & DRAINAGE SERVICES

CALEDONSPORT
CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	900.00	<p><u>SCHEDULE NO. 3.2: INSTALLATION CM2: PLUMBING, DRAINAGE AND WET SERVICES RELATED MAINTENANCE WORK</u></p> <p><u>MAINTENANCE OF PLUMBING, DRAINAGE, WET SERVICES AND SEWER NETWORKS AT OPERATIONAL AND RESIDENTIAL BUILDINGS AND MOBILE HOMES</u></p>				
	900.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specification AA:</p> <ul style="list-style-type: none"> - Plumbing and Drainage Installations: Table AA 10.02/1 - Rainwater Disposal System, Table AA 10.02/2 - Wastewater Drainage System, Table AA - Domestic Water Distribution and Reticulation Systems, Table AA 10.02/4 - Sanitary and Brassware Equipment, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Checking, inspecting, cleaning, unblocking, re-adjusting, painting, fixing, repairing or replacing, inclusive of appurtenances of all drains and sewers including: <ul style="list-style-type: none"> - Pipes - Gutters - Catch pits - Channel drains - Floor outlets - Gullies - Manhole covers and frames - Brackets - Grease traps, oil separators, etc. - Plumbing - Water distribution including: <ul style="list-style-type: none"> -Pipes -isolation -non-return valves -control valves -air release valves -other valves -strainers • Water closets (WC): <ul style="list-style-type: none"> - Seats and covers - Cisterns - Sanitary ware mountings, etc. • Fixing of leaks and replacing of materials and components, etc: 				
	Carried forward					

SCHEDULE NO 3.2: INSTALLATION CM2: PLUMBING & DRAINAGE SERVICES

CALEDONSPORT
CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		.01 Caledonspoort: Maintenance work: Plumbing, drainage, wet services and sewer networks of operational and residential areas and mobile homes. Maintenance is not limited to the above-mentioned	point	360.00		
		.02 Service and replace filters of residential under sink 5 stage reverse osmosis water filtration system by specialist delivering 11 - 15 litres per hour	No	14.00		
		Payment reduction:				
SA.03	900.02	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04	900.03	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-250.00	Rate only
SA.05	900.04	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-250.00	Rate only
TOTAL: SCHEDULE NO 3.2: INSTALLATION CM2: PLUMBING AND DRAINAGE SERVICES - CARRIED TO SUMMARY						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3.3: INSTALLATION C3: CALEDONSPOORT: FENCING, CLEANING OF BUILDINGS & SITE KEEPING

CALEDONSPOORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1000.00	<u>SCHEDULE NO. 3.3: INSTALLATION CM3: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING - RELATED MAINTENANCE WORK</u>				
SA.01 SN.01	1000.01	<p><u>MAINTENANCE OF FENCING AND GATES</u></p> <p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CC: Fencing and Gates, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Clearing 2.5 m wide of fence lines (both side) • Cleaning fire break areas • Inspection and repair of damages • Corrosion protection on fencing, gates and tubular posts • Inspection of fence for tightness to straining wire and redress or repair where required • Inspection of gate hinges and repair or replace if necessary, ensuring alignment of gates • Painting of previously painted posts, stays, gates, mesh fences, etc. at: <p>.01 Caledonspoort: Maintenance work: Perimeter fence line, at operational area and at residential area. Maintenance is not limited to the above-mentioned</p>	point	360.00		
SA.03	1000.02	<p>Payment reduction:</p> <p>Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p>	hour	-	-1 000.00	Rate only
SA.04	1000.03	<p>Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p>	days	-	-250.00	Rate only
SA.05	1000.04	<p>Payment reduction due to exceeding of maximum allowable down-time during damage repair maintenance of installations on the following page:</p>	days	-	250.00	Rate only
	Carried forward					

SCHEDULE NO 3.3: INSTALLATION CM3: CALEDONSPOORT: FENCING, CLEANING OF BUILDINGS & SITE KEEPING

CALEDONSPOORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SA.01 SN.01	1000.05	<p><u>MAINTENANCE OF SITE KEEPING INSTALLATION</u></p> <p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.01 and CJ.04.02.01), shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Cleaning out of and supply of black refuse bags to all waste bins in public areas • Watering of plants, shrubs, grass and trees upon strict instruction from the Engineer (in line with water restrictions) • Removal of weeds, clearing of weeds and grass along the edges of paved areas • Cutting of grass • Trimming of dense shrubs • Fertilisation of lawns, fertilisation of flower beds and trees • Removal of undesirable shrubs • Trimming of trees • Collecting of litter and foreign objects, removal of waste, etc. at: <p>.01 Caledonspoort: Maintenance work: All areas included within the perimeter fence of the port of entry which includes the operational area and the residential area as well as site keeping 20 m around the outside of the perimeter fence line</p>	point	360.00		
SA.03	1000.06	<p>Payment reduction:</p> <p>Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p>	hour	-	-1 000.00	Rate only
SA.04	1000.07	<p>Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p>	days	-	-250.00	Rate only
SA.05	1000.08	<p>Payment reduction due to exceeding of maximum allowable down-time during damage repair maintenance and cleaning of buildings on the following page:</p>	days	-	-250.00	Rate only
		Carried forward				

SCHEDULE NO 3.3: INSTALLATION CM3: FENCING, CLEANING OF BUILDINGS & SITE KEEPING

CALEDONSPORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		<u>MAINTENANCE AND CLEANING OF BUILDINGS</u>				
SA.01 CJ.05 SN.01	1000.09	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.02), shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Dusting/wet wiping of counter tops • Dusting under counter shelves and floors in public areas and open plan offices (daily, before opening of port of entry) • Sweeping/washing and polishing office • Vacuum cleaning carpets • Emptying and cleaning of waste baskets in offices • Service and polishing fittings • Washing interior and exterior walls • Cleaning and maintaining ablution facilities in a sanitary condition • Emptying and cleaning of all waste receptacles • Cleaning of all bowls, basins and urinals • Cleaning and polishing of all fittings and mirrors • Washing and cleaning out of She-bins • Washing of windows • Dusting of window sills, ledges, pipes and fittings • Dusting of buildings interiors • Deep cleansing of toilets and ablution blocks every six months, etc. at: <p>.01 Caledonspoort: Maintenance work: Operational buildings, ablution blocks, public areas, paving areas, concrete screeds, etc.</p>	point	360.00		
SA.03	1000.10	<p>Payment reduction:</p> <p>Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p>	hour	-	-1 000.00	Rate only
SA.04	1000.11	<p>Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p>	days	-	-250.00	Rate only
SA.05	1000.12	<p>Payment reduction due to exceeding of maximum allowable down-time during damage repair</p>	days	-	-250.00	Rate only
	TOTAL:	SCHEDULE NO 3.3: INSTALLATION CM3: FENCING, CLEANING OF BUILDINGS & SITE KEEPING - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3.4: INSTALLATION CM4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS

CALEDONSPOORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1100.00	SCHEDULE NO. 3.4: INSTALLATION CM4: MAINTENANC BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS				
SA.01	1100.01	Maintenance of a complete installation: The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specifications CE: Water Distribution Networks, DA: Borehole Pump Systems, and DL Chlorination Systems for Disinfection and Reverse Osmosis Units of Drinking Water, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Routine checking, inspection, and repair of leaks/replacement of corroded pipes • Clean out all strainers • Fix and maintain all bracketing systems • Paint repairs to piping, fittings and equipment • Scour reservoirs and pipes to remove silt and deposits, empty and clean bulk water reservoirs • Check V-belts, MCC panels with level sensing devices and electric motors where applicable • Remove, inspect and service repair or replace submersible pumps • Service re-adjust and calibrate pressure gauges and water meters • Service, repair and clean chlorine dosing apparatus from blockages, etc. • All maintenance required to ensure efficient and sustained operation of plant at: 				
		.01 Caledonspoort: Maintenance work: Bulk water supply systems and external water networks	point	360.00		
SA	1100.02	Payment reduction:				
SA.03		.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum down-time during damage repair Operating of bulk water supply system on following page:	day	-	-250.00	Rate only
		Carried forward				

SCHEDULE NO 3.4: INSTALLATION CM4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS

CALEDONSPORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SF.01 DH.09.05	1100.03	<p><u>OPERATING OF BULK WATER SUPPLY SYSTEM</u></p> <p>Operating of installation:</p> <p>Operation as per Technical Specification</p> <ul style="list-style-type: none"> • DH: Operation of Potable Water Works • DA: Borehole Pump Systems • DL: Chlorination Systems for the Disinfection of Drinking Water • DN: Dosing systems <p>shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Logging and recording of all pressure gauges, water meters, water level in reservoir, borehole water levels at start and stop of pump, amperes, volts and hour meter readings of borehole pumps (and calculate kW-hours) • Drafting of a water balance of the bulk water system (spread sheet based), as well as measuring and recording residual chlorine in the drinking water system at reservoir and furthest distribution point user • Recording of rainfall (date, precipitation and duration per event) • Checking integrity of power supply at MCC and verify correct switching of pumps • Logging of all failures, malfunctions, spills, pollution events, power failures and detail of corrective measures implemented, ensuring correct borehole pump flow rate by adjusting control valve • Visual inspection daily, clean installation weekly, Check dosing room weekly, check and repair leaks monthly • Supply chemicals and ensure optimal dosing of all chemicals • Supply of reverse osmosis plant replacement membranes and filters • Keeping facilities neat and controlling access to the site • Report in electronic format of: Turbidity readings of raw and purified water, concentration of chemical solutions, percentage setting on dosing pumps, actual volume of chemicals consumed and monthly water analysis • Maintaining safety conditions on site, etc. at: <p>.01 Caledonspoort: Operating work: Bulk water supply systems</p>	point	360.00		
SA	1100.04	<p>Payment reduction:</p>				
SA.03		<p>.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p>	hour	-	-1 000.00	Rate only
SA.04		<p>.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p>	day	-	-250.00	Rate only
SA.05		<p>.03 Payment reduction due to exceeding of maximum down-time during damage repair</p>	day	-	-250.00	Rate only
	Carried forward					

SCHEDULE NO 3.4: INSTALLATION CM4:BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS

**CALEDONSPORT
CIVIL MAINTENANCE
WORK**

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SF.01	1100.05	<p>Operation of a complete installation: Water Audit:</p> <p>Water demand management, data logging and recording, as per: Technical Specification KA Water Audit (KA.04.01). Comprising of:</p> <ul style="list-style-type: none"> • Checking operation of water meters • Cleaning strainer units at water meters • Read water meters • Verification of sample meter readings • Updating of water demand database (spreadsheet) • Measuring sewer night flows • Analysis of data and identification of water • Adjust operation of pressure-reducing valves • Compilation of monthly water balance on volume and costs and issue of consumer accounts at: <p>.01 Caledonspoort: Operation work: Water audit: Operational area, residential area and mobile homes</p>	point	360.00		
DA 04.03	1100.06	<p>BOREHOLES AT CALEDONSPORT PORT OF ENTRY:</p> <p>Testing and servicing</p> <p>.01 Pump testing of boreholes</p> <p>.02 Extra over on sub item .01 above</p> <p>.01 Groundwater sampling</p> <p>.02 Compilation of borehole project</p>	number	3.00		
DA 03.05	1100.07	<p>Decommissioning and removal of submersible pumping equipment</p> <p>.01 Borehole submersible pump</p>	number	3.00		
DA 03.06	1100.08	<p>Servicing of submersible pumping equipment</p> <p>.01 Borehole submersible pump</p>	number	3.00		
DA 03.02	1100.09	<p>Commissioning of submersible pumping equipment</p> <p>.01 Borehole submersible pump</p>	number	3.00		
	TOTAL:	SCHEDULE NO 3.4: SCHEDULE NO 3.4: INSTALLATION CM4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS

CALEDONSPOORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1200.00	<u>SCHEDULE NO. 3.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS, SEWER NETWORKS AND PUMP STATION AND INLET WORKS</u>				
		<u>MAINTENANCE AND OPERATION WASTE WATER TREATMENT WORKS AT CALEDONSPOORT:</u>				
SA.01 EG.06	1200.01	Maintenance and operation of complete installation: The Contractor shall attend to scheduled and unscheduled preventative maintenance and breakdown maintenance as per Technical Specifications EM, which consist of but not limited to: <ul style="list-style-type: none"> • General housekeeping • Log and report spills, pollution events, power failures, extraordinary process phenomena, etc. • Calibrate and set flow measuring equipment • Remove screenings • Check whether pumps are operating • Check operation of chlorination facilities 				
		.01 Caledonspoort: Operation and Maintenance work: Waste water treatment works	point	360.00		
SA	1200.02	Payment reduction:				
SA.03		.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-250.00	Rate only
		Carried forward				

SCHEDULE NO 3.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS

CALEDONSPORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				-
SA.01 EG.06	1200.00	<p><u>SCHEDULE NO. 3.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS, SEWER NETWORKS AND PUMP STATION AND INLET WORKS</u></p> <p><u>MAINTENANCE OF SEPTIC TANKS AND SEWER NETWORKS AT CALEDONSPORT:</u></p>				
	1200.01	<p>Maintenance and operation of complete installation:</p> <p>The Contractor shall attend to scheduled and unscheduled preventative maintenance and breakdown maintenance as per Technical Specifications EG, which consist of but not limited to:</p> <ul style="list-style-type: none"> • Routine inspection of septic tanks • Inspection chambers covers and frames • Routine inspection of inlet works or as required • Necessary cleaning and rodding and unblocking of the bulk sewer network • Repair of manhole benching • Fixing of leaks • Removal of invasive plants, trees and bushes around septic tanks, etc. 				
SA		.01 Caledonspoort: Maintenance work: Septic tank and sewer networks:	point	360.00		
SA.03	1200.02	<p>Payment reduction:</p> <p>.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p>	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-250.00	Rate only
		Carried forward				

SCHEDULE NO 3.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS

CALEDONSPOORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SF.01 EG.01 EG.06	1200.03	<p><u>SEPTIC TANKS</u></p> <p>Desludge septic tanks:</p> <p>The Contractor shall attend to preventative maintenance, which consist of, but not limited to:</p> <ul style="list-style-type: none"> • Check and log scum, water and sludge depths in septic tank. If sludge depth exceeds 50% of tank depth, desludge the tank. Desludge tank once per year. Inspection is monthly • Monitor pollution risk of septic tanks close to boreholes. <p>.01 Caledonspoort septic tanks: Check, desludge, cleaning out and dispose of contents off-site and provide certificate in accordance with specifications. Fill septic tank with water just above inlet pipe (T-piece)</p>	point	60.00		
SA SA.03	1200.04	<p>Payment reduction:</p> <p>.01 Payment reduction due to exceeding of maximum allowable sludge build-up in collector tanks</p>	day	-	-500.00	Rate only
	TOTAL:	SCHEDULE NO 3.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3.6: INSTALLATION CM6 : ROADS AND STORMWATER DRAINAGE

CALEDONSPOORT
CIVIL MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1300.00	SCHEDULE NO. 3.6: INSTALLATION C6.MG: CALEDONSPOORT: ROADS AND STORMWATER DRAINAGE - RELATED MAINTENANCE WORK				
		MAINTENANCE OF ROADS AND STORMWATER DRAINAGE				
SA.01	1300.01	Maintenance of a complete installation: The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CA and CB: Roads, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Routine inspection of roads, gravel shoulders, pavements, road signs and road markings • Blading all gravel roads and parking areas • Removing loose material from road surfaces and the surface of parking areas by means of mechanical brooming • Repair of all surfaces, road pavements, kerbs, road markings and signs, as well as Technical Specification CB: Stormwater drainage, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Inspection, cleaning, unblocking and repair of all storm water infrastructure components such as: <ul style="list-style-type: none"> - Culverts - drains - Manholes - Inlet covers - Inlet benching, grids and frames, etc. at: 				
SA		.01 Caledonspoort: Maintenance work: Roads and stormwater drainage at operational area and residential area	point	360.00		
SA.03	1300.02	Payment reduction: .01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-250.00	Rate only
		TOTAL: SCHEDULE NO 3.6: INSTALLATION CM6 : ROADS AND STORMWATER DRAINAGE - CARRIED TO				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 4.1: INSTALLATION CM1: STRUCTURAL AND BUILDING

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1400.00	<p><u>SCHEDULE NO. 4.1: INSTALLATION CM: FICKSBURG - STRUCTURAL AND BUILDING - RELATED MAINTENANCE WORK</u></p> <p><u>STRUCTURAL AND BUILDING RELATED WORK</u></p> <p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to the following during daily inspections of all structural components and elements of buildings and facilities: Preventative maintenance work and minor corrections of all structural and building related facilities, including components and elements such as, but not limited to:</p> <ul style="list-style-type: none"> • Doors (hinges, locksets, strike plates, indicator locks) • Windows (pegs, stays, etc.) • Pull handles • Glass putty • Fascia boards • Roof cladding and sheeting • Cornices • Ceiling boards and jointing strips • Sealant • Skirtings, etc. 				
SA.01	1400.01	<p>.01 Ficksburg: Proper maintenance of Structural and Building related work of operational area and residential area. Maintenance is not limited to the above-mentioned</p> <p>Maintenance report</p> <p>The Contractor shall compile and submit a monthly facilities inspection report, in which damaged structural components and elements of buildings and facilities ("damages") shall be listed and quantified, only if such components and elements could not be maintained or corrected at the time of inspections, due to the nature of the damage, or the need for replacement of such components and elements.</p>	points	360.00		
SA.01	1400.02	<p>.01 Ficksburg: Comprehensive monthly facilities inspection report</p> <p>Breakdown maintenance: Repair of damages is remunerated for from the payment items, within the maximum allowable downtime:</p>	points	360.00		
	Carried forward					

SCHEDULE NO 4.1: INSTALLATION CM1: STRUCTURAL & BUILDING

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
SA.04	1400.03	Payment reduction: .01 Payment reduction due to exceeding of maximum allowable down-time during damage repair Maintenance of tools and equipment on following page:	days	-	250.00	Rate only
SA.01 PS 5.1	1400.04	Maintenance tools and equipment The Contractor shall carry out his inspections with the necessary tools and consumables required for on-the-spot maintenance and corrections of all structural elements and components. An updated asset register shall be provided: .01 Maintenance: Designated lockable store room, tools/equipment and consumables for proper maintenance on-the-spot/ on-site. Lockable cabinet with duplicate keys and updated register for port of entry	points	360.00		
SA.01 PS 4	1400.05	Programme of the Works (Construction) The Contractor shall compile and submit a complete and accurate Programme of the Works 14 days after site handover and updated monthly which is linked to the expenditure and project cash flow .01 Ficksburg Programme of the Works	points	360.00		
SA.04 PS 4	1400.06	Payment reduction: .01 Ficksburg: Payment reduction due to late submission of an adequate/acceptable Programme of the Works	days	-	-250.00	Rate only
SA.03 SA.04	1400.07	Maintenance Control Plan The Contractor shall compile and submit a complete and accurate monthly Maintenance Control Plan (see Additional Specification SA), which shall be utilised to log and record all faults, system checks, breakdowns and site inspections .01 Ficksburg: Complete and accurate Maintenance Control Plan	points	360.00		
		Carried forward				

SCHEDULE NO 4.1: INSTALLATION CM1: STRUCTURAL & BUILDING

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
SA.04	1400.08	<p>Payment reduction for late submission of the Maintenance Plan:</p> <p><u>LATE SUBMISSION OF ACCEPTABLE</u></p> <p>Payment reduction:</p> <p>.01 Ficksburg: Payment reduction due to late submission of an adequate/acceptable Maintenance Control Plan</p>	days	-	-250.00	Rate only	
TOTAL: SCHEDULE NO 4.1: INSTALLATION CM1: STRUCTURAL & BUILDING - CARRIED TO SUMMARY							

SCHEDULE NO 4.2: INSTALLATION CM2: PLUMBING & DRAINAGE SERVICES

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
		.01 Ficksburg: Maintenance work: Plumbing, drainage, wet services and sewer networks of operational and residential areas and mobile homes. Maintenance is not limited to the above-mentioned	point	360.00			
		.02 Service and replace filters of residential under sink 5 stage reverse osmosis water filtration system by specialist delivering 11 - 15 litres per hour	No	9.00			
		Payment reduction:					
SA.03	900.02	Payment reduction due to exceeding of maximum	hour	-	-1 000.00	Rate only	
SA.04	900.03	Payment reduction due to exceeding of maximum	days	-	-250.00	Rate only	
SA.05	900.04	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-250.00	Rate only	
TOTAL: SCHEDULE NO 4.2: INSTALLATION CM2: PLUMBING AND DRAINAGE SERVICES - CARRIED TO SUMMARY							

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 4.3: INSTALLATION CM3: FENCING, CLEANING OF BUILDINGS & SITE KEEPING

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1600.00	SCHEDULE NO. 4.3: INSTALLATION C3.MG: FICKSBURG FENCING, CLEANING OF BUILDINGS AND SITE KEEPING - RELATED MAINTENANCE WORK				
SA.01 SN.01	1600.01	<u>MAINTENANCE OF FENCING AND GATES</u> Maintenance of a complete installation: The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CC: Fencing and Gates, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Clearing 2.5 m wide of fence lines (both side) • Cleaning fire break areas • Inspection and repair of damages • Corrosion protection on fencing, gates and tubular posts • Inspection of fence for tightness to straining wire and redress or repair where required • Inspection of gate hinges and repair or replace if necessary, ensuring alignment of gates • Painting of previously painted posts, stays, gates, mesh fences, etc. at: 				
		01 Ficksburg: Maintenance work: Perimeter fenceline, at operational area and at residential area. Maintenance is not limited to the above-mentioned	point	360.00		
SA SA.03	1600.02	Payment reduction: .01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum allowable down-time during damage repair Maintenance of installations on the following page:	days	-	-250.00	Rate only
	Carried forward					

SCHEDULE NO 4.3: INSTALLATION CM3: FENCING, CLEANING OF BUILDINGS & SITE KEEPING

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		<u>MAINTENANCE OF SITE KEEPING INSTALLATION</u>				
SA.01 SN.01	1600.03	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.01 and CJ.04.02.01), shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Cleaning out of and supply of black refuse bags to all waste bins in public areas • Watering of plants, shrubs, grass and trees upon strict instruction from the Engineer (in line with water restrictions) • Removal of weeds, clearing of weeds and grass along the edges of paved areas • Cutting of grass • Trimming of dense shrubs • Fertilisation of lawns, fertilisation of flower beds and trees • Removal of undesirable shrubs • Trimming of trees • Collecting of litter and foreign objects, removal of waste, etc. at: <p>.01 Ficksburg: Maintenance work: All areas included within the perimeter fence of the port of entry which includes the operational area and the residential area as well as site keeping 20 m around the outside of the perimeter fenceline</p>	point	360.00		
SA	1600.04	Payment reduction:				
SA.03		.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum allowable down-time during damage repair maintenance and cleaning of buildings on the following page:	days	-	-250.00	Rate only
		Carried forward				

SCHEDULE NO 4.3: INSTALLATION CM3: FENCING, CLEANING OF BUILDINGS & SITE KEEPING

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
		<u>MAINTENANCE AND CLEANING OF BUILDINGS</u>				
SA.01 CJ.05 SN.01	1600.05	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.02), shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Dusting/wet wiping of counter tops • Dusting under counter shelves and floors in public areas and open plan offices (daily, before opening of port of entry) • Sweeping/washing and polishing office • Vacuum cleaning carpets • Emptying and cleaning of waste baskets in offices • Service and polishing fittings • Washing interior and exterior walls • Cleaning and maintaining ablution facilities in a sanitary condition • Emptying and cleaning of all waste receptacles • Cleaning of all bowls, basins and urinals • Cleaning and polishing of all fittings and mirrors • Washing and cleaning out of She-bins • Washing of windows • Dusting of window sills, ledges, pipes and fittings • Dusting of buildings interiors • Deep cleansing of toilets and ablution blocks every six months, etc. at: <p>.01 Ficksburg: Maintenance work: Operational buildings, ablution blocks, public areas, paving areas, concrete screeds, etc.</p>	point	360.00		
SA	1600.06	<p>Payment reduction:</p> <p>.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p> <p>.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p> <p>.03 Payment reduction due to exceeding of maximum allowable down-time during damage repair</p>	hour	-	-1 000.00	Rate only
SA.03						
SA.04			days	-	-250.00	Rate only
SA.05			days	-	-250.00	Rate only
	TOTAL:	SCHEDULE NO 4.3: INSTALLATION CM3: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 4.4: INSTALLATION CM4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1700.00	<u>SCHEDULE NO. 4.4: INSTALLATION CM4: MAINTENANCE OF BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS</u>				
SA.01	1700.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specifications CE: Water Distribution Networks, DA: Borehole Pump Systems, and DL Chlorination Systems for Disinfection and Reverse Osmosis Units of Drinking Water, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Routine checking, inspection, and repair of leaks/replacement of corroded pipes • Clean out all strainers • Fix and maintain all bracketing systems • Paint repairs to piping, fittings and equipment • Scour reservoirs and pipes to remove silt and deposits, empty and clean bulk water reservoirs • Check V-belts, MCC panels with level sensing devices and electric motors where applicable • Service re-adjust and calibrate pressure gauges and water meters • All maintenance required to ensure efficient and sustained operation of plant at: 				
		.01 Ficksburg: Maintenance work: Bulk water supply systems and external water networks	point	360.00		
SA	1700.02	Payment reduction:				
SA.03		.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum down-time during damage repair Operating of bulk water supply system on following page:	day	-	-250.00	Rate only
	TOTAL:	SCHEDULE NO 4.4: INSTALLATION CM4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 4.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1800.00	<u>SCHEDULE NO. 4.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS, SEWER NETWORKS AND PUMP STATION AND INLET WORKS</u>				
		<u>MAINTENANCE OF SEPTIC TANKS AND SEWER NETWORKS AT FICKSBURG:</u>				
SA.01 EG.06	1800.01	Maintenance and operation of complete installation: The Contractor shall attend to scheduled and unscheduled preventative maintenance and breakdown maintenance as per Technical Specifications EG, which consist of but not limited to: <ul style="list-style-type: none">• Inspection chambers covers and frames• Necessary cleaning and rodding and unblocking of the bulk sewer network• Repair of manhole benching• Fixing of leaks• Removal of invasive plants, trees and bushes around septic tanks, etc.				
SA		.01 Ficksburg : Maintenance work: Sewer network	point	360.00		
SA.03	1800.02	Payment reduction:				
		.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour	-	-1 000.00	Rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-250.00	Rate only
SA.05		.03 Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-250.00	Rate only
	TOTAL:	SCHEDULE NO 4.5: INSTALLATION CM5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 4.6: INSTALLATION CM6: ROADS AND STORMWATER DRAINAGE

FICKSBURG CIVIL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1900.00	SCHEDULE NO. 4.6: INSTALLATION CM6: FICKSBURG: ROADS AND STORMWATER DRAINAGE				
		MAINTENANCE OF ROADS AND STORMWATER DRAINAGE				
SA.01	1900.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CA and CB: Roads, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Routine inspection of roads, gravel shoulders, pavements, road signs and road markings • Blading all gravel roads and parking areas • Removing loose material from road surfaces and the surface of parking areas by means of mechanical brooming • Repair of all surfaces, road pavements, kerbs, road markings and signs, as well as Technical Specification CB: Stormwater drainage, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Inspection, cleaning, unblocking and repair of all storm water infrastructure components such as: <ul style="list-style-type: none"> - Culverts - drains - Manholes - Inlet covers - Inlet benching, grids and frames, etc. at: <p>.01 Ficksburg: Maintenance work: Roads and stormwater drainage at operational area and residential area</p>	point	360.00		
SA.03	1900.02	<p>Payment reduction:</p> <p>Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p>	hour	-	-1 000.00	Rate only
SA.04	1900.03	<p>Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p>	days	-	-250.00	Rate only
SA.05	1900.04	<p>Payment reduction due to exceeding of maximum allowable down-time during damage repair</p>	days	-	-250.00	Rate only
	TOTAL:	SCHEDULE NO 4.6: INSTALLATION CM6.: ROADS AND STORMWATER DRAINAGE - CARRIED TO SUMMARY				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SUMMARY OF SCHEDULE OF QUANTITIES: CIVIL MAINTENANCE WORK

		TENDER
Schedule No. 3.1	Caledonspoort - Structural and Building	R
Schedule No. 3.2	Caledonspoort - Plumbing, Drainage and Wet Services	R
Schedule No. 3.3	Caledonspoort - Fencing, Cleaning of Buildings and Site Keeping	R
Schedule No. 3.4	Caledonspoort - Bulk Water Supply Systems and External Water Networks	R
Schedule No. 3.5	Caledonspoort - Wastewater Treatment Works and Sewer Networks	R
Schedule No. 3.6	Caledonspoort - Roads and Storm Water Drainage	R
Schedule No. 4.1	Ficksburg - Stuctural and Building	R
Schedule No. 4.2	Ficksburg - Plumbing, Drainage and Wet Services	R
Schedule No. 4.3	Ficksburg - Fencing, Cleaning of Buildings and Site Keeping	R
Schedule No. 4.4	Ficksburg - Bulk Water Supply Systems and External Water Networks	R
Schedule No. 4.5	Ficksburg - Wastewater Treatment Works and Sewer Networks	R
Schedule No. 4.6	Ficksburg - Roads and Storm Water Drainage	R
TOTAL OF BILL OF QUANTITIES: CIVIL MAINTENANCE WORK		R

SIGNED ON BEHALF OF THE TENDERER:

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and

BILL OF QUANTITIES

SCHEDULE NO 4: INSTALLATION EM1: FICKSBURG PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING

FICKSBURG
ELECTRICAL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	6.00	<u>PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING OF ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS AT FICKSBURG BRIDGE PORT OF ENTRY</u>				
SA.01	6.01	<u>Maintenance and Servicing of Installations:</u>				
	.01	Electrical Installations as per specification SA 07.02	point	360		
	.02	External Lighting and Standby Power as per specification SA 07.14 to SA 07.16	point	360		
	6.02	Mandatory periodical services not included in				
HB.02	.01	Service, clean, dust, inspect and test-run genset as per specification	number	36		
	.02	Service generator engine every 200 running hours as per specification	number	6		
	.03	Logging and recording of all electricity meter readings on a monthly basis	month	36.00		
HB.06	.04	Supply diesel fuel (Ficksburg Bridge)	life	2400.00		
	6.03	Payment reduction;				
SA.02	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	hour		-1000	rate only
SA.03	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days		-250	rate only
SA.04	.03	Payment reduction due to exceeding of maximum allowable down-time during damages breakdown	days		-250	rate only
SA.05	6.04	Emergency Breakdown:				
	.01	Emergency Breakdown (12 Hours) response - As per specification SA	No	36		
	TOTAL:	SCHEDULE NO 6: CARRIED TO SUMMARY: FICKSBURG PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING				

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 5: INSTALLATION EM2: CALEDONSPORT PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING

CALEDONSPORT
ELECTRICAL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	9.00	<u>PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING OF ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS AT CALEDONSPORT PORT OF ENTRY</u>				
SA.01	9.01	Maintenance and Servicing of Installations:				
	.01	Electrical Installations as per specification SA 07.02	point	360		
	.02	External Lighting and Standby Power as per specification SA 07.14 to SA 07.16	point	360		
	9.02	Mandatory periodical services not included in preventative maintenance items as listed above:				
HB.02	.01	Service, clean, dust, inspect and test-run genset as per specification	number	36		
HB.03	.02	Service generator engine every 200 running hours as per specification	number	6		
	.03	Logging and recording of all electricity meter readings on a monthly basis.	month	36		
HB.06	.04	Supply diesel fuel (Caledonsport)	life	3600		
	9.02	Payment reduction:				
SA.02	.01	Payment reduction due to exceeding of maximum allowable downtime during emergency breakdown	hour	-	-1000.00	rate only
SA.03	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary emergency breakdown	day	-	-250.00	rate only
SA.04	.03	Payment reduction due to exceeding of	day	-	-250.00	rate only
SA.05	9.03	.01 Emergency breakdown (12 Hours) response - As per specification SA	No	36.00		
TOTAL: SCHEDULE NO 6: CARRIED TO SUMMARY: CALEDONSPORT PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPOORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and

BILL OF QUANTITIES

SUMMARY OF SCHEDULE OF QUANTITIES: ELECTRICAL MAINTENANCE WORK

			<u>TENDER</u>
<u>FICKSBURG</u>			
Schedule No. 4	FICKSBURG PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING	R	_____
<u>CALEDONSPOORT</u>			
Schedule No. 5	CALEDONSPOORT PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING	R	_____
TOTAL OF BILL OF QUANTITIES: ELECTRICAL MAINTENANCE WORK CARRIED TO CALCULATION OF TENDER SUM			R _____

SIGNED ON BEHALF OF THE TENDERER:

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 1: INSTALLATION MM1: HVAC INSTALLATIONS

MECHANICAL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
PFD 05.01.01	2000.00	<u>MAINDATORY PERODICAL BI-ANNUAL MAINTENANCE OF HEATING, VENTILATION AND AIR CONDITIONING</u>				
	2001.00	Maintenance of a complete installation, provide full service of heatin, ventilation and air-conditioning systems according to manufacurer's specification:				
	2001.01	Caledonspoort operational and residential areas: Caledonspoort's air conditioning units at various buildings, inclusive but not limited to 60 mid wall split units 2 window shakers, 5 air-curtains and a kitchen extraction fan:				
		01 10 kW mid wall split unit	No	1		
		02 5.2 kW mid wall split unit	No	18		
		03 3.5 kW mid wall split unit	No	41		
		04 3.5 kW window shaker	No	2		
		05 900mm Air-curtain	No	5		
		06 0.37 kW Kitchen extraction fan	No	1		
	2001.02	Ficksburg operational and residential areas: Ficksburg's air conditioning units at various buildings, inclusive but not limited to 44 mid wall split units, 10 window shakers and 3 air-curtains				
		01 10 kW mid wall split unit	No	3		
		02 5.2 kW mid wall split unit	No	1		
		03 3.5 kW mid wall split unit	No	33		
		04 3.5 kW window shaker	No	3		
		05 900mm Air-curtain	No	3		
		The maintenance schedule is described in the technical specificstions: FD, PFD. <i>Bi-annual maintenance for three years. (2 x Total maintenance cost plus 3 x total maintenance)</i>				<i>Sub Total x 2 x 3</i>
		Carried forward				

SCHEDULE NO 1: INSTALLATION MM1: HVAC INSTALLATIONS

MECHANICAL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
	2100.00	Payment reduction: 01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown. 02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown. 03 Payment reduction due to exceeding of maximum allowable down-time during operational damage repair work. 04 Payment reduction due to exceeding of maximum allowable down-time during operational fatal breakdown.					
	TOTAL: SCHEDULE NO 1: INSTALLATION MM1: HVAC INSTALLATIONS - CARRIED TO SUMMARY						

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 2: INSTALLATION MM2: FIRE PROTECTION INSTALLATIONS

MECHANICAL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
JC/PJC	3100.00	<u>MAINTENANCE OF CONVENTIONAL FIRE-FIGHTING EQUIPMENT</u>				
	3101.00	<u>Maintenance of a complete installation:</u>				
		Scheduled and unscheduled preventative maintenance and breakdown maintenance, as per Technical Specification jc: Conventional Fire Fighting Equipment, comprising (i) maintenance related to fire hydrants, including routine inspection of hydrant valve seal, valve stem and or top for damage, valve stem seal, and checking right angle wheel for tightness, checking operation of quick couplers, opening and closing movement of valve, water pressure and flow, stand pipe rigidness, (ii) maintenance related to fire hose reels, including routine inspections of drain seal, rolled down hose for cracks or perishing, checking operation of PWD type nozzle, fire hose reel valve, pressure and flow rate of fire hose reel, and piping for leaks or damage, and lubrication of moving parts of hose reel drum, (iii) maintenance related to fire extinguishers, including routine inspection of backboard mounting and bracket, checking condition of the charge and discharge, checking the discharge hose mechanism, and replace CO ₂ and DCP at prescribed intervals, repair and replacement of all parts, and logging and recording of the maintenance schedule for all fire fighting equipment, servicing fire panels and intergrated fire detection and alarm devices such as smoke detectors, manual call points at:				
	3101.02	Caledonspoort operational and residential areas: Caledonspoort various buildings including but not limited to 35 Fire extinguishers on backboards and in cabinets, a booster pump system, 2 fire hydrants with fire hoses, 8 hose reels and a fire panel.				
		01 9kg Dry chemical powder fire extinguisher	No	22		
		02 4.5kg Dry chemical powder fire extinguisher	No	6		
		03 5kg CO ₂ fire extinguisher	No	5		
		04 2kg CO ₂ fire extinguisher	No	2		
	05 Fire booster pump system	No	1			
	06 Fire hydrants with fire hoses	No	3			
	07 Fire hose reels	No	8			
	Carried forward					

SCHEDULE NO 2: INSTALLATION MM2: FIRE PROTECTION INSTALLATIONS

MECHANICAL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
		09 Service diesel engine,replace fuel filter elements, replace air cleaner elements, replace filter, replace fuel lift pump diaphragm	No	1			
		10 8-zone fire panel	No	1			
	3101.02	Ficksburg operational and residential areas: Ficksburg various buildings including but not limited to 30 Fire extinguishers on backboards and in cabinets, 1 fire hydrant with fire hose 2 fire panels with 4 manual call points and 36 smoke detectors.					
		01 9kg Dry chemical powder fire extinguisher	No	21			
		02 4.5kg Dry chemical powder fire extinguisher	No	5			
		03 5kg CO ₂ fire extinguisher	No	5			
		04 2kg CO ₂ fire extinguisher	No	2			
		05 Fire hydrants with fire hoses	No	1			
		06 Fire hose reels	No	1			
		07 Fire panel	No	2			
		Annual maintenance for three years. (1 x Total maintenance cost plus 3 x total maintenance)			Sub Total x 1 x 3		
	3102.00	Payment reduction:					
		01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown.	hour	-	R -1 000.00	rate only	
		02 Payment reduction due to exceeding of maximum allowable down-time during ordinary	days	-	R -250.00	rate only	
		03 Payment reduction due to exceeding of maximum allowable down-time during operational damage repair work	days	-	R -250.00	rate only	
		04 Payment reduction due to exceeding of maximum allowable down-time during operational fatal breakdown.	hour	-	R -1 000.00	rate only	
	TOTAL:	SCHEDULE NO 2: INSTALLATION MM2: FIRE PROTECTION INSTALLATIONS - CARRIED TO SUMMARY					

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SCHEDULE NO 3: INSTALLATION MM3: WET SERVICES INSTALLATIONS

MECHANICAL
MAINTENANCE
WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	4000.00	<u>MAINTENANCE OF WET SERVICES EQUIPMENT</u>				
	4101.00	Maintenance of a complete installation: Scheduled and unscheduled preventative maintenance and breakdown maintenance, as per Technical Specification jc: Wet services Equipment, comprising (i) maintenance related to geysers , including routine inspection of inline strainers, non-return valves, expansion relief valves, ball valves, emelemt, drain cock, thermostat and pipe work at				
	4101.01	Caledonspoort operational and residential areas: Caledonspoort various buildings including but not limited to 18 geysers.				
		01 150 litre electric geyser	No	18		
	4101.02	Ficksburg operational and residential areas: Ficksburg various buildings including but not limited to 12 geysers.				
		01 150 litre electric geyser	No	12		
		<i>Annual maintenance for three years. (1 x Total maintenance cost plus 3 x total maintenance)</i>			<i>Sub Total x 1 x 3</i>	
	4102.00	Payment reduction:				
		01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown.	hour	-	R -1 000.00	rate only
		02 Payment reduction due to exceeding of maximum allowable down-time during ordinary	days	-	R -250.00	rate only
		03 Payment reduction due to exceeding of maximum allowable down-time during operational damage repair work	days	-	R -250.00	rate only
		04 Payment reduction due to exceeding of maximum allowable down-time during operational fatal breakdown.	hour	-	R -1 000.00	rate only
	TOTAL: SCHEDULE NO 3: INSTALLATION MM3: WET SERVICES INSTALLATIONS - CARRIED TO SUMMARY					

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

SUMMARY OF SCHEDULE OF QUANTITIES: MECHANICAL MAINTENANCE WORK

			TENDER
Schedule No. 1.0	HVAC Installations		R
Schedule No. 2.0	Fire Protection Installations		R
Schedule No. 3.0	Wet Services Installations		R
TOTAL OF BILL OF QUANTITIES: MECHANICAL MAINTENANCE WORK CARRIED TO CALCULATION OF TENDER SUM			R

SIGNED ON BEHALF OF THE TENDERER:

DEPARTMENT OF PUBIC WORKS

TENDER NO. H20/031AI

CALEDONSPORT AND FICKSBURG PORTS OF ENTRY:

36 Months Repair, Maintenance and Servicing of Buildings, Civil, Mechanical and Electrical Infrastructure and Installations

BILL OF QUANTITIES

CALCULATION OF TENDER SUMMARY

	TENDER
TOTAL CIVIL REPAIR WORK	R _____
TOTAL CIVIL MAINTENANCE WORK	R _____
TOTAL ELECTRICAL REPAIR WORK	R _____
TOTAL ELECTRICAL MAINTENANCE WORK	R _____
TOTAL MECHANICAL REPAIR WORK	R _____
TOTAL MECHANICAL MAINTENANCE WORK	R _____
<hr/>	
TOTAL OF SCHEDULE OF QUNATITIES	R _____
15 % VALUE ADDED TAX (VAT)	R _____
<hr/>	
TENDER SUM CARRIED TO THE TENDER FORM	R _____

SIGNED ON BEHALF OF THE TENDERER: _____

H20/031AI

CALEDONSPORT AND FICKSBURG BRIDGE: LAND PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATION FOR A PERIOD OF 36 MONTHS



public works
& infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

Part C3: Scope of Works

Tender no: H20/031AI

PG-01.1 (EC) SCOPE OF WORKS – (GCC (2010) 2nd EDITION: 2010)

Project title:	Caledonspoort and Ficksburg Bridge: Land Port of Entry: Appointment of a service provider for the maintenance and repairs of building, civil, mechanical, electrical infrastructure and installation for a period of 36 months		
Tender no:	H20/031AI	Reference no:	N/A

C3. Scope of Works

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C3.2 PROJECT SPECIFICATIONS

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- BE FLOORS
- BF PEST CONTROL
- BH FITTINGS
- BJ PAINTWORK
- BK CONCRETE CORRECTIVE REPAIRS
- CA ROADS
- CB STORM WATER DRAINAGE
- CC FENCING AND GATES
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Tender no: H20/031AI

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- DB POTABLE WATER FILTRATION SYSTEM
- DH OPERATION OF POTABLE WATER NETWORKS
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- DW WATER SUPPLY
- EA WASTE WATER INLET WORKS
- EB WASTE WATER PUMP SYSTEM
- EC SEDIMENTATION TANKS
- EF SLUDGE TREATMENT
- EG SEPTIC TANK SYSTEMS
- EI DISINFECTION OF WASTEWATER
- EJ WATER QUALITY TESTING
- EK VALVES AND SLUICE GATES FOR WATER TREATMENT PLANTS
- EM OPERATE WASTEWATER TREATMENT WORKS
- EQ REED BEDS
- FD HEATING VENTILATION AND AIR CONDITIONING SYSTEMS
- FN CLEARWATER PUMP SYSTEMS
- HA MEDIUM AND LOW VOLTAGE SWITCHGEAR SYSTEMS
- HB STANDBY POWER SYSTEMS
- HC LOW VOLTAGE RETICULATION
- HD SUBSTATION TRANSFORMERS
- HE EXTERIOR LIGHTING INSTALLATIONS
- JC CONVENTIONAL FIREFIGHTING EQUIPMENT
- KA WATER AUDIT

D: PARTICULAR SPECIFICATIONS

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- PFD HEATING VENTILATION AND AIR CONDITIONING SYSTEMS
- PJC CONVENTIONAL FIREFIGHTING EQUIPMENT

E: ADDITIONAL SPECIFICATIONS

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- SB OPERATING MAINTENANCE AND MANUALS
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Tender no: H20/031AI

C3.1 STANDARD SPECIFICATIONS:

The standard specifications on which this contract is based are the **South African Bureau of Standards Standardized Specifications for Civil Engineering Construction SABS 1200**. *(Note to compiler. "SABS" has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2100)*

Although not bound in nor issued with this Document, the following Sections of the Standardized Specifications of SABS 1200 shall form part of this Contract:

1. SABS 1200 - Standardised Specifications for Civil Engineering Construction*
2. SABS - Standard Specifications*
3. PW 371 - Specification of Materials and Methods to be used. Fourth revision, October 1993.**
4. Guide for architects concerning drainage, water supply and stormwater drainage**
5. PW 343 - Building specifications for Regional Offices**
6. Standard Specification for the Electrical Equipment and Installation for Mechanical Services, Issue VIII December 1984**
7. Standard Electrical Specifications, January 1984, GPS 24-0367**
8. SANS 10400 - The application of the National Building Regulations**
9. Department of Public Works - Standard Electrical Specifications**
10. Standard Specifications for Air Conditioning and Ventilation Installations – Issue XI, 1998**
11. Standard Specifications for Refrigeration Services – Issue VII, 1998**
12. FPO/G61/3E Guide for Architects**
13. Department of Water Affairs – Green Drop * Blue Drop Requirements (Version 1.0-2010)**
14. Guideline for the Implementation of Labour – Intensive Infrastructure Projects under Expanded Public Works Programme**

* Not issued with this document, but available at the Contractor's expense from SA Bureau of Standards, Private Bag X191, Pretoria, 0001.

** Not issued with this document, but available from the Director General, Department of Public Works, Private Bag X65, Pretoria, 0001, or any office of the Regional Representative of this Department

*** Not issued with this document, but available from the Department of Water Affairs (www.dwa.gov.za)

Tender no: H20/031AI

C3.2 PROJECT SPECIFICATIONS:

Status

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications.

In the event of any discrepancy between a part or parts of the Standardised of Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

A GENERAL

PS 1 GENERAL DESCRIPTION:

Each installation requires work that may include any one or more of the activities as set out below: i.e. decommissioning, repair, reconditioning, testing, re-commissioning and maintenance during the 36-month Contract. The work also include compilation of operating and maintenance manuals as well as training of User Client operators and all maintenance personnel.

NOTE: Repair and maintenance work will be carried out within facilities that are occupied by User Client's personnel and associates.

PS 2 DESCRIPTION OF SITE AND ACCESS

Caledonspoor and Ficksburg Ports of Entry is the property if the Department of Public Works. The location of the sites are described below:

Caledonpoort Port of Entry is situated on the border between South Africa and Leshoto, with the physical adress as follows:

Caladonspoor Border Post
Fouriesburg
9725
Free State
South Africa

Ficksburg Port of Entry is situated on the border between South Africa and Leshoto, with the physical adress as follows:

Ficksburg Border Post
End Bloem Street
Ficksburg
9730
Free State
South Africa

The contractor will be granted access to all the installations that need to be repaired and maintended at the date of site handover.



Tender no: H20/031AI

PS 3 DETAILS OF THE CONTRACT

All work forming part of this Contract is divided into installations. The work to be performed as part of an installation under this Contract mainly consists of the following:

1. The various installations at the Port of Entry form part of the new Repair and Maintenance Programme.
2. No distinction will be made between prior to practical completion and completed installations for the purpose of maintenance.
3. The Contractor will have the opportunity at the start of the contract to point out items which are not in perfect working order which in turn will be repaired as per the relevant tendered repair rates.
4. The contractor will further more at the start of the contract perform annual maintenance on all the installations as specified in the BOQ, as part of the Contractor' maintenance obligation.
5. Maintenance will be the responsibility of the contractor and will be evaluated on a monthly basis by the Engineer. The remuneration for maintenance work and responsibilities will be certified accordingly

The Contractor will have the opportunity at the start of the contract to point out items which are not in a perfect working order by means of an assessment and verification report. Typically the following installations shall be assessed:

- Structural and Building related works
- Plumbing, drainage and wet services
- Fencing, cleaning and site keeping
- Bulk water and external water reticulation and water purification works
- Roads and stormwater drainage
- Building electrical
- External lighting
- Standby power generators
- Medium and low voltage equipment
- Heating, ventilation and air-conditioning systems
- Conventional fire fighting equipment

These items will be serviced and repaired as per the relevant tendered rates. The detail Assessment and Verification report shall provide an overview of problem areas at the beginning of the contract period. This shall include testing of all equipment as well as all civil, electrical and mechanical services. The detail Assessment and Verification report shall include photos with a description of problem areas. The Assessment and Verification report must be submitted one calendar month after site handover. A penalty of R 500 per day shall be imposed for late submission.

Payment for the Assessment and Verification report shall be included in the fixed preliminary and general charges.



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PS 3.1 CORRECTIVE REPAIR AND MAINTENANCE WORK

CIVIL REPAIR WORK

SCHEDULE NO 1: GENERAL

SCHEDULE NO 2.1: INSTALLATION CR 1: STRUCTURAL AND BUILDING RELATED WORK

SCHEDULE NO 2.2: INSTALLATION CR 2: PLUMBING, DRAINAGE AND WET SERVICES

SCHEDULE NO 2.3: INSTALLATION CR 3: FENCING, CLEANING AND SITE KEEPING

SCHEDULE NO 2.4: INSTALLATION CR 4: BULK WATER SUPPLY AND EXTERNAL WATER NETWORKS

SCHEDULE NO 2.5: INSTALLATION CR 5: WASTE WATER AND SEWER NETWORKS

SCHEDULE NO 2.6: INSTALLATION CR 6: ROADS AND STORM WATER DRAINAGE

CIVIL MAINTENANCE WORK

SCHEDULE NO 3.1: INSTALLATION CM 1: CALEDONSPOORT: STRUCTURAL AND BUILDING RELATED WORK

SCHEDULE NO 3.2: INSTALLATION CM 2: CALEDONSPOORT: PLUMBING, DRAINAGE AND WET SERVICES

SCHEDULE NO 3.3: INSTALLATION CM3: CALEDONSPOORT: FENCING, CLEANING AND SITE KEEPING

SCHEDULE NO 3.4: INSTALLATION CM 4: CALEDONSPOORT: BULK WATER SUPPLY AND EXTERNAL WATER NETWORKS

SCHEDULE NO 3.5: INSTALLATION CM 5: CALEDONSPOORT: WASTE WATER AND SEWER NETWORKS

SCHEDULE NO 3.6: INSTALLATION CM 6: CALEDONSPOORT: ROADS AND STORM WATER DRAINAGE

SCHEDULE NO 4.1: INSTALLATION CM 1: FICKSBURG: STRUCTURAL AND BUILDING RELATED WORK

SCHEDULE NO 4.2: INSTALLATION CM 2: FICKSBURG: PLUMBING, DRAINAGE AND WET SERVICES

SCHEDULE NO 4.3: INSTALLATION CM 3: FICKSBURG: FENCING, CLEANING AND SITE KEEPING

SCHEDULE NO 4.4: INSTALLATION CM 4: FICKSBURG: BULK WATER SUPPLY AND EXTERNAL WATER NETWORKS

SCHEDULE NO 4.5: INSTALLATION CM 5: FICKSBURG: WASTE WATER AND SEWER NETWORKS

SCHEDULE NO 4.6: INSTALLATION CM 6: FICKSBURG: ROADS AND STORM WATER DRAINAGE



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ELECTRICAL REPAIR WORK

SCHEDULE NO 1:	INSTALLATION ER 1:	CALEDONSPORT AND FICKSBURG: BUILDING ELECTRICAL SERVICES
SCHEDULE NO 2:	INSTALLATION ER 2:	CALEDONSPORT AND FICKSBURG: STANBY POWER SYSTEMS
SCHEDULE NO 3:	INSTALLATION ER 3:	CALEDONSPORT AND FICKSBURG: EXTERNAL ELECTRICAL

ELECTRICAL MAINTENANCE WORK

SCHEDULE NO 4:	INSTALLATION EM 1:	FICKSBURG PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING
SCHEDULE NO 5:	INSTALLATION EM 2:	CALEDONSPORT PREVENTATIVE MAINTENANCE AND MANDATORY PERIODICAL SERVICING

MECHANICAL REPAIR WORK

SCHEDULE NO 1:	INSTALLATION MR 1:	HVAC INSTALLATION
SCHEDULE NO 2:	INSTALLATION MR 2:	FIRE PROTECTION INSTALLATION
SCHEDULE NO 3:	INSTALLATION MR 3:	WET SERVICES

MECHANICAL MAINTENANCE WORK

SCHEDULE NO 1:	INSTALLATION MM 1:	HVAC INSTALLATION
SCHEDULE NO 2:	INSTALLATION MM 2:	FIRE PROTECTION INSTALLATION
SCHEDULE NO 3:	INSTALLATION MM 3:	WET SERVICES

PS 3.1 GENERAL ITEMS

- Compile and supply a complete site plan of Caledonspoort and Ficksburg Ports of Entry Operational and Residential Areas
- Compliance with the Occupational Health and Safety Act and Construction Regulations 2003 and monthly audits.
- HIV / Aids Awareness campaigns and training including awareness workshops and awareness campaigns. Also included is the provision of condoms, posters, booklets, videos, etc. and monthly reporting.
- Site recordkeeping based on the maintenance control plan.
- Consumption monitoring (Electrical and Water)
- BCOCC Contingency infrastructure (provision of Easter and Christmas season facilities) and any peak season as identified by the client.
- Utilisation of a National Call Centre enabling the user departments to report breakdowns.
- Expanded Public Works Programme (EPWP): Implementation of labour intensive practices under the Expanded Public Works Programme (EPWP) **to a value of not less than 10% of the tendered contract amount for wages paid to local labour.**

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PS 3.1.2 Repair and Servicing items in the contract includes:

- Building Structural Elements (Repair actions required to damages and deteriorated elements such as minor touch-up, painting to corroded elements and repair and realignment of locksets, doors, windows, gutters, roofs, etc.). Replacement of damaged floor coverings.
- Water-proofing of concrete roofs.
- Plumbing and Drainage (servicing of sanitary fittings, valves and taps, replacement of damaged/missing components)
- Electrical Installations (servicing of Distribution Boards, Luminaires, Light switches, socket outlets and geyser components as well as Bulk lamp replacement and statutory tests required). Issuing C.O.C's for all buildings.
- Fencing (clearing of fence route, retightening of fence elements, replacement of damaged fences and redressing existing fences)
- Refuse removal (removal of collected refuse from site to registered dumping site)
- Pest Control (Internal and External Termite and Rodent control and preventative measures)
- Water Distribution Networks (servicing and recalibration of water meters and valves, scouring of water pipelines, cleaning of manholes, cleaning of chambers as well as the sterilisation of water reservoirs and repair/service of water treatment package plant)
- Pumping equipment (servicing/reconditioning of water pumps) and reporting.
- Conformation to water standards (testing of water quality)
- Water Audit including compilation of database, meter management system and data loggers for essential services
- Statutory Registration of Water use & Blue Drop / Green Drop Requirements
- Roads (grading of gravel roads, replacement of washed-out jointing sand, repair of interlocking paving sections, repair to road markings and chemical control of vegetation, concrete repair). Installation of embankment-stabilisation Léffe/stein retaining blocks.
- Stormwater (repair of structures and cleaning of drainage channels, inlet- and outlet structures)
- External Electrical (servicing of external lighting luminaires, bulk lamp replacement, servicing of light poles, distribution kiosks and overhead distribution system). Replace damaged luminaires with new LED-type luminaires.
- Standby Power Generators (mandatory generator services as per the manufacturers specifications, testing, cleaning, and supply of diesel)
- Replacement of 4 Generators, which has reached the end of serviceable lifetime.
- Air-Conditioning Units (full servicing of units, testing and cleaning of Air-Conditioning units). Replacement of out-dated units, which has reached the end of serviceable lifetime.
- Fire Fighting (statutory servicing, cleaning and recharging equipment as well as fire fighting training and a fire plan for each of the service buildings).

PS 3.1.3 Preventative Maintenance items in the contract includes:

The maintenance actions (Additional Specifications) of the following items as per specification SA: Maintenance and Servicing, to be measured monthly as per the performance indicators on the Maintenance Scorecards:

- Plumbing and Drainage
- Electrical Installations
- Fencing, Refuse Removal and Pest Control
- Cleaning and Site Keeping
- External Water and Sewer Networks
- Roads and Stormwater Drainage
- External lighting and Standby Power
- Heating, Ventilation and Air-Conditioning Systems
- Fire Fighting Equipment

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PS 3.4 Periodic / Routine Maintenance tasks and Servicing in the contract includes:

- Log all water meter readings and calculate losses on a monthly basis and report in the prescribed format.
- Sample potable water supply and chemical analyses to be provided by an accredited laboratory on a monthly basis.
- Log all electricity meter readings on a monthly basis and report in the prescribed format,
- Monitoring of essential services
- Remove and empty waste from skip to external waste disposal site on a regular basis.

- De-sludge and cleaning of septic tanks on a regular basis as required.
- Service submersible pumps annually.
- Statutory annual servicing of fire extinguishers
- Pest and vermin control (internal and external)
- Providing diesel for standby generators for the duration of the contract to ensure that standby power is available at all times and mandatory periodical servicing of Standby Generators. Servicing generators every 200 running hours.
- Site keeping and cleaning of the Ports of Entry.
- Supply of potable drinking water in case of water shortages
- Cleaning of Administration Buildings and Public Ablutions on a daily basis.
- Supply of consumables for ablutions
- Annual servicing of all air-conditioning units.

Maintenance of each of the above installations will be the responsibility of the Contractor and will be evaluated on a monthly basis by the Engineer. The remuneration for maintenance work and responsibilities will be certified accordingly.

PS 3.2 DEPARTMENT OF WATER AFFAIRS INCENTIVE BASED REGULATION MANAGEMENT AND ADMINISTRATION

- Potable water quality tests to be performed by approved SANAS laboratory on a monthly basis on the water delivered to the consumers for determinants specified.
- Potable water quality tests to be performed by an approved SANAS laboratory on a monthly basis on the water abstracted from boreholes for determinants specified.
- Sewage effluent compliance quality tests to be performed by an approved SANAS laboratory for determinants specified.
- Raw sewage 24 h composite sample and analysis for determinants specified.
- Special testing required by the engineer shall include remuneration for all water and wastewater related analysis, in terms of either compliance monitoring, or required to determine risks. All operational sampling and monitoring shall be the Contractor's responsibility remunerated under Operation of an Installation.
- Full SANS 241 (Part 1) set of 34 x chemical, 8 x physical determinants and 6 x micro biological determinants for annual water quality risk assessment.
- Compile and submit to the Engineer for approval a Water Safety Plan in terms of the requirements of SANS 241 (Part 2), inclusive of risk based operational – and compliance monitoring programmes. Water demand management, including loss reduction and water use efficiency business plan Compile and submit to the Engineer for approval a Wastewater Risk Abatement Plan, inclusive of risk based operational – and compliance monitoring programmes, storm/ground water ingress monitoring and control planning.
- Operation as per Technical Specification DH09 comprising Maintain spreadsheet/database with drinking water system process control and maintenance information, including but not limited to: system input volumes, individual water consumption, system pressures, compliance results, operational process control results, chemical consumption, hour meter readings, volt meter readings, ammeter readings, breakdowns, etc., for Groblersbridge and Stockpoort Ports of Entry, and submission to the Client in a format similar to the Department of Water Affairs' incentive based regulation programmes.
- Operation as per Technical Specification EM04.08 comprising Maintain spreadsheet/database with wastewater treatment process control and maintenance information, including but not limited to: raw wastewater flow rates, effluent flow rates,



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irrigation rates, compliance results, operational process control results, chemical consumption, hour meter readings, volt meter readings, ammeter readings, breakdowns, etc., at Groblersbridge and Stockpoort Ports of Entry, and submission to the client in a format similar to the Department of Water Affairs's incentive based regulation programmes

PS 4 CONSTRUCTION PROGRAMME

When drawing up his construction programme, the Contractor shall take into account the time for completion for the repair work of each installation as indicated in Clause 42.1 as amended in Part 1 of the Contract Data.

- Repair Work – 06 months
- Maintenance Work – 36 months (Including repair work period)

If the programme submitted by the Contractor in terms of Clause 12 of the General Conditions of Contract, has to be revised because the Contractor is falling behind in his programme, he shall submit a revised programme of how he intends to regain lost time to ensure practical completion of repair work of each installation, and completion of the Works within the periods stipulated Part 1 of the Contract Data or within a granted extension of time and also to ensure that other contractors have access to the site to start their work on the dates as shown in the original programme. Proposals to increase the tempo of work must incorporate positive steps to increase production either by more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Instructions by the Engineer to expedite progress shall not be the subject of additional compensation to the Contractor unless the instruction explicitly states that the Contractor is entitled to additional compensation and cites the amount of such compensation or the basis on which it is to be determined.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as set out in Clause 55 of the General Conditions of Contract as amended in Part 1 of the Contract Data.

The approval by the Engineer of a programme shall have no contractual significance other than that the Engineer will be satisfied if the work is carried out according to the programme. The said approval shall not limit the right of the Engineer to instruct the Contractor to vary the programme if necessary. The Contractor is also referred to Clause PS 8 and Clause PS 12 when preparing this programme.

NOTE: For reasons of limited access, it may not be possible to carry out the repair work on some of the installations in parallel with repair work on other installations. The repair work of some of the installations shall follow sequentially as indicated in the specifications.

The Contractor shall organise his work in such a manner as to cause the minimum inconvenience to the User Client's personnel and operations.

PS 5 SITE FACILITIES AVAILABLE

PS 5.1 CAMP SITE AND STORE ROOM

- (a) Campsite

A site establishment area is available and will be indicated to the Contractor. An area for the campsite was developed by the previous contractor and the infrastructure and facilities can be utilised for the new contract but must be repaired and maintained during the contract to ensure that the facility maintains an esthetical value for the port of Entry.



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(b) Store Room

None of the existing service buildings may be used for storage. The contractor must provide his own store room facilities for the duration of the contract.

The existing and new facilities must comply with the South African National Building Regulations and Standards in all aspects.

PS 5.2 WATER, ELECTRICITY AND SEWERAGE

(a) Water supply

The Contractor must make his own arrangements for water supply. Water will be available at specific points not necessarily adjacent to working areas. Water will be available free of charge but wastage will not be tolerated. The Contractor must supply his own standard fittings to couple up at the points where water is available.

(b) Electrical power supply

Electrical power supply is available on the Site and will be free of charge. The Contractor must make his own arrangements for a connection to the electrical power supply. The Contractor will be responsible, at his own cost, for the distribution of electricity for construction and domestic use.

(c) Sewerage connection

Refer to Subclause PSA 4.2 in connection with toilet requirements. Chemical toilets shall be used.

Note: The Employer shall not be held responsible for any losses or inconvenience due to a disruption in the supply of water and/or electricity.

PS 5.3 PARKING FACILITIES

Parking facilities are available on site.

PS 6 SITE FACILITIES REQUIRED FOR THE ENGINEER

PS 6.1 GENERAL

The Contractor shall provide on the Site, for the duration of the repair phase and for the exclusive use of the Engineer and/or his Representative (as applicable), the various facilities described hereunder. The duration of the repair phase is stated in Part 1 of the Contract Data. All such facilities shall be provided promptly on the commencement of the Contract and failure on the part of the Contractor to provide any facility required in terms of this specification shall constitute grounds for the Engineer to withhold payment of the Contractor's Preliminary and General items until the facility has been provided or restored, as the case may be.

PS 6.2 SITE MEETING VENUE

The Contractor shall provide within its own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of six (6) persons at site meetings. The Engineer shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.



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PS 6.3 INTERNET AND WIFI FACILITIES

The Contractor shall, in accordance with the requirements of Subclause PSAB 4 of the Project Specifications provide one (1) ZOGB/month (data—only) LTEI3G VifiFi-Router for the duration of the contract for the use of the Engineer and his representative.

PS 6.4 CALL CENTRE

A call centre has been established by the Employer to log, route and monitor incoming breakdown calls.

The call centre is administered centrally and is responsible for the routing of breakdown calls on The Contractor shall be responsible for the fixed and variable call costs incurred by the call centre for a relevant contract. The Contractor shall be re-reimbursed from an amount included in the Bill of Quantities, on written instruction of the Engineer. Operating costs of the call centre will be calculated, based on the number of breakdowns logged per contract, and invoiced on a monthly basis.

The Contractor is entitled to a percentage of the value of each payment in relation to the call centre to cover his expenses in this regard (see payment item PSA 8.9).

PS 7 FEATURES REQUIRING SPECIAL ATTENTION

PS 7.1 INSTALLATIONS AT FACILITIES

The installations at all facilities shall be carefully checked for damage and all damages shall be listed and discussed with the Engineer before commencement of repair and maintenance work. The Contractor shall present copies of all correspondence in this regard for discussion at the following site meeting.

PS 7.2 SECURITY

- (a) Restrictions on movement and limited access

The Contractor's personnel, vehicles and equipment will be restricted to areas of construction only. The Contractor shall comply with any requirements that the Engineer may have in this regard and shall take note that for security reasons the access to some areas, may be limited.

- (b) Prohibition on taking of photographs

The Contractor's attention is drawn to the Defence Act, 1957 (Act No 44 of 1957) and the Correctional Services Act, 1998 (Act No 111 of 1998) which clearly state that the taking of photographs is prohibited and that even the possession of a camera on Site is an offence. Permission to take photographs of damaged equipment may be arranged by the Engineer.

- (c) Security check on personnel

The Employer may require the Contractor to have his personnel or a certain number of them security-classified, if so required by any competent authority.

In the event of the Employer or any competent authority requiring the removal of a person or persons from the site for security reasons, the Contractor shall do so forthwith and the Contractor shall thereafter ensure that such person or persons are denied access to the site and/or to any documents or information relating to the work. In such circumstances the Contractor shall indemnify the Employer and the Engineer and shall hold the Employer and the Engineer harmless against any and all claims of whatever nature arising.



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(d) Access cards to security areas

Should the work fall within a security area, the Contractor must obtain from the Engineer access cards for his security-cleared personnel and employees who work within such an area. The Contractor must comply with any regulations or instructions issued from time to time, concerning the safety of persons and property, by the Department of Correctional Services or SA Police services.

PS 7.3 SITE TO BE KEPT CLEAN

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

All redundant materials, rubbish and waste arising from the work must be removed from the Site at the Contractor's cost and the site and buildings left clean and tidy.

PS 7.4 FACILITIES TO OTHER CONTRACTORS

In addition to the requirements of Clause 18 of the General Conditions of Contract the Contractor must make allowances for other Contractors on the Site. This may involve adapting his programme to accommodate the work of other contractors and ensuring access to their sites along prescribed routes over the Site of this Contract.

PS 7.5 SUBCONTRACTORS

In addition to the requirements of Clause 6 of the General Conditions of Contract as amended in Part 1 of the Contract Data, the Contractor shall be responsible for work carried out by subcontractors on his behalf. The Engineer will not liaise directly with such subcontractors. Problems related to payments, programming, workmanship, etc, shall be the responsibility of the Contractor and the subcontractor, and the Engineer will not become involved.

PS 7.6 SABS SPECIFICATIONS AND CODES OF PRACTICE

All reference in this document to South African Bureau of Standards specifications and codes of practice, or any other standard specifications or codes of practice, including National Building Regulations, shall be deemed to be references to the latest issues of such specifications and codes.

PS 7.7 MATERIALS

The monthly payment for materials brought onto the Site will only be applicable for repair work and not for maintenance work.

Unless otherwise instructed in writing by the Engineer, all proprietary materials are to be used, mixed, applied, fixed, etc, strictly in accordance with the manufacturer's recommendations.

PS 7.8 BORROW PITS

There will be no designated borrow pits. The Contractor shall utilise the material on Site or import material from commercial sources.

PS 7.9 PROTECTION OF FURNITURE AND EQUIPMENT

Most of the work to be done inside buildings and occupied houses will be carried out in places where there is furniture and other equipment.



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The Contractor shall be responsible for moving the furniture and equipment in order to provide working space for his personnel. The programme shall be drawn up in such a way as to keep the movement of furniture and equipment to the very minimum and the Contractor shall be solely responsible for any damage to furniture or equipment.

PS 7.10 TESTING AND QUALITY CONTROL

The Contractor shall engage the services of an approved independent laboratory or other institution as applicable for quality testing, to ensure that his work complies with the Specifications.

No separate payment will be made for such testing, the cost of which will be deemed to be included in the Contractor's rates bid for the items of work that require testing in accordance with the Specifications.

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality-control system and provide experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates bid for the related items of work.

The Contractor's attention is drawn to the provisions of the various Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination, the Contractor shall furnish the Engineer with the results of the relevant tests to indicate compliance with the Specifications.

PS 9 CERTIFICATES OF PAYMENT

The statement to be submitted by the Contractor in terms of Clause 49 of the General Conditions of Contract shall be prepared in accordance with the standard payment certificate prescribed by the Engineer and shall comprise at least two sets of A4-size paper copies.

All costs for the preparation and submission of the statements shall be borne by the Contractor.

PS 10 CONSTRUCTION IN RESTRICTED AREAS

Working space in certain areas may be restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. However, the Contractor must note that measurement and payment will be according to the specified cross-sections and dimensions irrespective of the method used, and that the rates and prices submitted will be deemed to include full compensation for difficulties encountered while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

PS 10 DRAWINGS

The Contractor will, in terms of Clause 13 of the General Condition of Contract, be provided free of charge with three paper prints of each drawing issued to him.

All information in the possession of the Contractor that is required by the Engineer's representative to complete the as-built drawings must be submitted to the Engineer's representative before a Certificate of Completion will be issued.

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Only figured dimensions shall be used and drawings shall not be scaled unless required by the Engineer. The Engineer will provide the dimensions that may have been omitted from the Drawings.

PS 11 LEGISLATION

(a) Changes in legislation

Reference in the General Conditions of Contract and in any other standard document forming part of this Contract to legislation which has been amended or superseded by other legislation since the most recent publication of such standard document, shall be deemed to be a reference to the amended or replacement legislation.

Such amended or replaced legislation shall be applicable during the Contract Period provided the amendment or replacement occurred more than 28 days before the closing date for bids in terms of Clause 46.4 of the General Conditions of Contract as amended in Part 1 of the Contract Data.

(b) The Occupational Health and Safety Act

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2003 as promulgated in Government Gazette No 25207 and Regulation Gazette No 7721 of 18 July 2003. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and hazards likely to be encountered on this Contract are detailed in the Scope of Work, Pricing Data and Drawings. The Employers' health and safety specifications (subclause 4(1)) of the regulations will be issued separately.

The Contractor shall in terms of subclause 5(1) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned Construction Regulations 2003.

PS 12 INSURANCE AMOUNTS

The amounts for which the Contractor must insure the Works in terms of Clause 35 of Part 1 of the Contract Data are stated in the Agreement.

PS 13 TIMES FOR COMPLETION

Times for completion of repair work to installations as well as the maintenance down-time for different types of breakdowns are given under Clause 42.1 of Part 1 of the Contract Data. The time for completion will start on the date of access to an installation.

PS 14 PRACTICAL COMPLETION

(a) The Contractor shall be entitled in terms of Clause 51.1 of the General Conditions of Contract to receive a Certificate of Practical Completion when the Works to be executed under the Contract have been completed to the stage where:

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- (i) all materials which are required to be replaced have been replaced and installed to the satisfaction of the Engineer; and
 - (ii) all repair works have been completed.
- (b) The Engineer shall issue to the Contractor and the Employer a Certificate of Completion in terms of Clause 51.4 of the General Conditions of Contract except where a thirty day commissioning period, as stated in paragraph (c) below, is applicable.
- (c) Where indicated at the end of this paragraph, the issuing of a Certificate of Practical Completion for a certain installation will be followed by a thirty day commissioning period. The tasks of the Contractor during the thirty day commissioning period are described in Additional specification SC: General Decommissioning, Testing and Commissioning Procedures. After the completion of the thirty day commissioning period to the satisfaction of the Engineer, a certificate of completion will be issued to the Contractor as described in Clause 51.4 of the General Conditions of Contract.

PS 15 PENALTIES

Penalties in terms of Clause 43.1 of the General Conditions of Contract for late completion of repair work to different installations are given under Clause 43.1 of Part 1 of the Contract Data. Payment reductions for exceeding the maintenance down-time for different types of breakdowns are given under the applicable pay items in the Bill of Quantities for Additional specifications SA: General Maintenance. Penalties will run concurrently where applicable.

- (a) Penalty for failing to meet undertakings and/or conditions pertaining to Targeted Procurement for the award of points

If the bid adjudication points awarded to the Contractor are found to be based on incorrect or false information or the conditions pertaining to the award of points are not met and the Contractor fails to substantiate that such failure is due to a reason acceptable to the Employer (as being) beyond the Contractor's control, the Contractor shall be liable for and pay to the Employer, an amount determined in accordance with clause 2 and subject to clause 1 both of the Works Information, Part 2 of the Conditions of Bid.

- (b) Payment reduction for non-performance

If the Contractor shall fail to rectify a fatal breakdown, an emergency maintenance breakdown, an ordinary maintenance breakdown and damage breakdown within the time as stipulated in Additional Specifications SA: General Maintenance, the Contractor shall be liable to the Employer for the sum/sums stated in the Bill of Quantities for Additional Specification SA as a payment reduction for every hour/day down-time counting from the hour/day the breakdown was reported to the Contractor until the day it was repaired. These payment reductions will be cumulative and will run concurrently.

Where indicated above that the money will be recovered from the Contractor by means of payment reductions, the fixed negative amounts in the rate column of the Bill of Quantities will be used to reduce payments due to the Contractor.

The imposition of such payment reductions shall not relieve the Contractor from his obligation to complete the Works or from any of his obligations and liabilities under the Contract.



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- (c) Application of penalties to be accumulative

The imposition of all penalties in terms of this clause shall be accumulative and shall not relieve the Contractor from his obligation to complete the Works or from any of his obligations and liabilities under the Contract.

PS 19 NON-WORKING DAYS AND HOURS

Whenever any special non-working days stated in Clause 1.6 and Clause 38 of Part 1 of the Contract Data fall within the days allowed or stipulated in the Contract in terms of Clause 1.6 of Part 1 of the Contract Data, such special non-working days shall also be excluded from the calculation of the number of working days concerned.

The Contractor shall not work on any statutory public holidays or on any public holidays declared by the Government to be statutory non-working days, except for work related to repair fatal and emergency breakdowns which influences the functionality of any of the installations.

Working hours might be limited and the Contractor shall work in close cooperation with the User Client and Engineer in this regard. Working hours for the different installations are indicated at the end of this clause where applicable.

The Engineer shall be entitled at any time during the Contract, to vary the normal working hours specified in the Bid documents, including increasing or decreasing the total number of hours per day during which the Contractor may execute the Works or specific portions thereof.

If any variation by the Engineer of the normal working hours specified in the Bid Documents should result in an increase or a decrease in the total number of hours per week during which the Contractor is permitted to execute the Works or any particular portions of Works, then the time allowed in the Contract for the completion of the respective part of the Works to which the varied normal working hours apply shall be adjusted proportionately in relation to:

- a) the remaining time allowed for completion of the specific part or parts of the Works; and
- b) the extent of the variation in the total normal working hours per week.



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B AMENDMENTS TO THE STANDARD SPECIFICATIONS:

The following variations and additions to the SANS 1200 Standardised Specifications referred to in the last clause of Portion 1 apply to this Contract. The prefix PS indicates and amendment to SANS 1200. The letters and numbers following these prefixes respectively indicate the relevant Standardised Specification and clause number in SANS 1200.

PSA GENERAL

PSA 1 SCOPE

REPLACE SUBCLAUSE 1.1 WITH THE FOLLOWING:

"1.1 This specification covers requirements, principles and responsibilities of a general nature that are normally applicable to all Civil Engineering Contracts, as well as the requirements for the Contractor's establishment on the Site."

PSA 2 INTERPRETATIONS

PSA 2.3 DEFINITIONS

(a) General

ADD THE FOLLOWING DEFINITIONS:

"General conditions: The General Conditions of Contract specified for use with this Contract, and the Contract Data.

Specified: As specified in the standardised and standard specifications, the Drawings or the Scope of Work.

Permanent Works: as defined in Clause 1.1.17 of the General Conditions of Contract shall for the purpose of this Contract, be regarded as the repair work and maintenance work as defined in Subclause SA 02.06 of Additional Specification SA: General Maintenance."

(c) Measurement and payment

REPLACE THE DEFINITIONS FOR "fixed charge", "time-related charge" AND "value-related charge" WITH THE FOLLOWING:

"Fixed charge: A charge that is not subject to adjustment on account of variation in the value of the Contract price or the Contract Time of Completion.

Time-related charge: A charge, the amount of which varies in accordance with the Time for Completion of the repair work, adjusted in accordance with the provisions of the Contract.

Value-related charge: A charge, the amount of which varies pro rata with the final value of the measured repair work executed and valued in accordance with the provisions of the Contract."

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PSA 2.4 ABBREVIATIONS

- (a) Abbreviations relating to standard documents

ADD THE FOLLOWING ABBREVIATION:

"CKS: SABS Co-ordinating Specification."

PSA 3 MATERIALS

PSA 3.1 QUALITY

ADD THE FOLLOWING:

"All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified in accordance with SABS Specifications shall bear the SABS mark, whether so specified or not."

ADD THE FOLLOWING SUBCLAUSE:

"PSA 3.3 ORDERING OF MATERIALS

The quantities set out in the Bill of Quantities have been carefully determined from calculations based on data available at the time and should therefore be considered to be approximate quantities only. Before ordering materials of any kind the Contractor shall check with the Engineer whether or not the scope of the work for which the materials are required is likely to change substantially. No liability or responsibility whatsoever shall be attached to the Employer for materials ordered by the Contractor except when ordered in accordance with written confirmation issued by the Engineer."

PSA 4 PLANT

PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

ADD THE FOLLOWING PARAGRAPH BEFORE THE FIRST PARAGRAPH:

"The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. The camp shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. No night-watchman may be on the Site after hours."

ADD THE FOLLOWING TO THE SECOND PARAGRAPH:

"One chemical toilet per 10 workmen shall be provided and must be screened from public view and its use shall be enforced.

The Contractor shall, where applicable, make the necessary arrangements for the removal of night soil."



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PSA 5 CONSTRUCTION

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

REPLACE THE HEADING AND THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 Location of existing services

Before underground or excavation work is carried out, the Contractor shall ascertain the presence and position of all services likely to be damaged or interfered with by his activities. He shall obtain up-to-date plans from the Engineer for this purpose, showing the position of services in the area where he intends to work. As services can often not be reliably located from such plans, the Contractor shall determine the exact position of such services by means of suitable detecting equipment and afterwards by careful hand excavation where necessary in order to expose the services at the positions of possible interference by his activities. This procedure shall also be followed in respect of services not shown on the plans but believed to be present.

All such services, the positions of which have been located at the critical points, shall be designated as 'known' services and their positions shall be indicated on a separate set of Drawings, a copy of which shall be furnished to the Engineer.

While he is occupying the Site, the Contractor shall be liable for all damage caused by him to known services as well as for consequential damage, whether caused directly by his operations or by the lack of proper protection.

PSA 5.4.2 Protection during repair and maintenance work

The Contractor shall exercise all the necessary care to prevent damage to known services during repair and maintenance work. Where applicable, major excavating equipment and other Plant shall not be operated dangerously close to these services. Where necessary, excavation in close proximity to these services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work. Services left exposed shall be suitably protected from damage.

PSA 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly specified or ordered, the Contractor shall not carry out alterations to existing services. When this is necessary, the Contractor shall inform the Engineer, who will either make arrangements for such work to be executed by the owner of the service, or instruct the Contractor to make such arrangements himself.

When existing services are damaged by the Contractor, he shall immediately inform the Engineer, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases the Contractor shall take the necessary steps to minimise damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted.

The Employer will accept no liability for damages due to a delay in having such alterations or repairs effected. The Contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services."

ADD THE FOLLOWING SUBCLAUSE:



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"PSA 5.9 SITE MEETINGS

The Contractor will be required to attend regular site meetings, normally held once a month to discuss general progress, quality of work, problems, claims, payments, etc, but not matters concerning the day-to-day running of the Contract."

PSA 6 TOLERANCES

ADD THE FOLLOWING SUBCLAUSE:

"PSA 6.4 GENERAL

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineer, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorised' dimensions.

If the work is therefore constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, quantities will be based on the 'authorised' dimensions regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Engineer may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be based on the actual dimensions as constructed."

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.2 Preliminary and general items or section (for repair phase only)

PSA 8.1.2.2 Bid sums

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"The Contractor's bid sums under items PSA 8.3 and PSA 8.4 shall collectively cover all charges during the repair phase for

- risks, costs and obligations in terms of the General Conditions of Contract, the Contract Data and of this Standardised Specification, except where provision is made in these Project Specifications to cover compensation for any of these items;
- head-office and site overheads and supervision;
- profit and financing costs;
- expenses of a general nature not specifically related to any item or items of permanent or temporary work;

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- providing facilities on Site for the Contractor's personnel, including offices, storage facilities, workshops, ablutions, for providing services such as water, electricity, sewerage, sewage and rubbish disposal, for access roads and all other facilities required, as well as for the maintenance and removal on completion of the Works of these facilities and the cleaning-up of the camp site on completion of the Works;
- providing facilities for the Engineer and his staff as specified in SABS 1200 AB and in these Project Specifications"

PSA 8.2 PAYMENT

PSA 8.2.1 Fixed-charge and value-related items

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Payment of fixed charges in respect of item 8.3.1 will be made as follows:

Eighty per cent (80%) of the sum bid will be paid when the facilities have been provided and approved. The remaining 20% will be paid when the repair works have been completed, the facilities have been removed and the camp site has been cleared and cleaned.

Payment for the sum bid under item 8.3.2 will be made in three separate instalments as follows:

- (a) The first instalment, which is 40% of the sum, will be paid when the Contractor has fulfilled all his obligations to date under this Standardised Specification, the General Conditions of Contract and the Contract Data, and when the value of work certified for payment, excluding materials on Site and payments for preliminary and general items, is equal to not less than 5% of the total value of the repair work listed in the Bills of Quantities.
- (b) The second instalment, which is 40% of the sum, will be made when the amount certified for payment, including retention monies but excluding this second instalment, exceeds 50% of the repair work.
- (c) The final payment, which is 20% of the sum, will be made when the repair works have been certified as completed and the Contractor has fulfilled all his obligations to date under this Standardised Specification, the General Conditions of Contract and the Contract Data.

Should the value of the measured repair work finally completed be more or less than the Bid Sum for repair work, the sum bid under item 8.3.2 will be adjusted up or down in accordance with the provisions of Clause 50 of the General Conditions of Contract as amended in Part 1 of the Contract Data, and this adjustment will be applied to the third instalment. No adjustment will apply to item 8.3.1 in respect of variations in the value of work done or after the finally authorised Time for Completion."

Note: Payment under item 8.3.2 will only be applicable to repair work.

PSA 8.2.2 Time-related items

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Subject to the provisions of Subclauses 8.2.3 and 8.2.4, payment under item 8.4.1 (time-related item) will be made monthly in equal amounts for each installation, calculated by dividing the sum bid for the item by the repair phase period for the installation in months, provided always that the total of the monthly amounts so paid for the item is not out of proportion with the progress of the work on the installation as a whole.



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Should the Engineer grant an extension of Time for Completion of the repair works on the installation, the Contractor will be entitled to an increase in the sum bid for the time-related item, which increase shall be in the same proportion to the original sum bid as the extension of time is to the original Time for Completion of the repair works.

Payment of such increased amounts will be deemed full compensation for all additional time-related preliminary and general costs due to the circumstances pertaining to the extension of time granted for an installation. The length of the repair phase for each installation is indicated in Part 1 of the Contract Data.

In the Bills of Quantities separate provision is made for time-related items for each installation individually. Time-related payment for an installation shall only be made when the repair work on the installation is in progress and shall end when the time for completion or an extension of time granted by the Engineer expires. When repair work on more than one installation is in progress, time-related payment will be made for each installation and the conditions as stated above shall apply to each installation individually."

PSA 8.3 BILLED FIXED-CHARGE AND VALUE-RELATED ITEMS

REPLACE THE ITEMS WITH THE FOLLOWING:

"PSA 8.3.1 Fixed preliminary and general charges Unit : Sum

PSA 8.3.2 Value-related preliminary and general charges Unit : Sum

The bid sums shall include full compensation for all fixed and value-related preliminary and general charges as described in Subclause PSA 8.1.2.2. Payment will be made as described in Subclause PSA 8.2.1."

PSA 8.4 BILLED TIME-RELATED ITEMS

REPLACE THIS ITEM WITH THE FOLLOWING:

PSA 8.3.2 Time-related preliminary and general charges Unit : Month

(a) Groblersbridge and Stockpoort Ports of Entry

The bid sums shall include full compensation for all time-related preliminary and general charges as described in Subclause PSA 8.1.2.2. Payment will be made as described in Subclause PSA 8.2.2

Note: The total amount bid for items PSA 8.3.1, PSA 8.3.2 and PSA 8.4.1 shall not exceed 15% of the total amount for repair work, excluding value-added tax.

PSA 8.8 TEMPORARY WORKS

REPLACE ITEM 8.8.4 WITH THE FOLLOWING:

PSA 8.8.4 Location and protection of existing services:

PSA 8.8.4.1 Provision of detecting devices for:

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- (a) Water and sewer pipes
- (b) Electrical and other cables

The bid sums shall cover the cost of providing and operating suitable equipment for as long as it is needed to locate all the existing services likely to be affected by the construction activities. Alternatively, an approved specialist firm may be employed to carry out the work.

PSA 8.8.4.2 Hand excavation necessary for locating and exposing existing services in all material:

- (a) In roadways Unit:m3
- (b) In all other areas Unit:m3

The rates shall cover the cost of excavation by means of hand tools within authorised dimensions, for all precautionary measures to protect the services from damage during excavation and backfilling, and for subsequent backfilling and compacting. Compaction of material in all areas except in roadways shall be to 90% of the modified AASTHO density.

The rate for hand excavation in roadways shall include compensation for compacting excavated or selected backfill materials to 93% modified AASTHO density.

The tendered rates shall also include for keeping excavations safe, for dealing with surface and subsurface water, for removing surplus excavated material from Site, for transporting all material, and for supplying adequate supervision during both excavation and backfilling operations.

PSA 8.9 ADDITIONAL TESTS:

- (a) Additional tests required by the Engineer Unit : Sum
- (b) Attendance and profit Unit : %

An amount has been allowed in the Bill of Quantities under subitem (a) to cover the cost of additional tests required by the Engineer. The Engineer will have the sole authority to spend the amount or part thereof.

The bid percentage under subitem (b) will be paid to the Contractor on the value of each payment made to the testing authority.

Note in connection with subitem (a):

The Contractor is responsible for both the cost of normal testing as described in Subclause PS 8.10 in portion 1 of the Project Specifications and for the cost of any additional test that indicates that the Specifications have not been complied with.

PSA 8.10 SECTIONAL FENCING FOR THE PROTECTION OF THE WORKFORCE Unit : m

The bid rate shall include full compensation for the supply, delivery, initial erection and finally removal from the site of the sectional fencing. The cost to move the fencing will not be paid for separately but shall be deemed to be included in the rate bid.



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PSA 8.11 MAINTENANCE MATERIAL:

Supply and deliver maintenance material to the site:

(a) Description of type of service for which material is needed:

- (i) Description of specific material Unit: litre, m², m, number
- (ii) Etc, for other types of material.

(b) Etc for other types of service.

The unit of measurement shall be the litre, square metre, metre or number as applicable to each item ordered on the written instructions of the Engineer.

The bid rates shall include full compensation for supplying and delivering to the maintenance store(s) of the Employer on the Site of the Works each item as billed and shall include for all labour, material, waste and, transport.

A complete book keeping system with delivery notes and order "invoices" shall be kept by the Contractor and the cost thereof shall be deemed to be included in the rates bid for the various items.

The rates bid will be fixed for the full duration of the repair and maintenance phases and shall be applicable to any quantity "ordered" irrespective of size, contents, volume of container or the number. The actual square metre size of the "ordered" items will be calculated to two decimal points for payment purposes. No "rounding-off" to the nearest square metre quantity will be allowed. It is expected that the maintenance material will be ordered in small quantities throughout the duration of the Contract."

PSA 8.12 COMPLIANCE WITH OHS ACT AND CONSTRUCTION REGULATIONS 2003

Unit: sum

The bid sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and the Construction Regulations 2003 at all times during the repair and maintenance phase, as described in PS 13 of Portion 1 of the Project Specifications. The successful bidder shall provide the Engineer with a complete breakdown of this bid sum.

This sum will be paid to the Contractor in equal monthly amounts for the entire duration of the contract period.

PSAB 3 MATERIALS

PSAB 3.1 NAMEBOARDS

REPLACE THE FIRST SENTENCE OF SUB-CLAUSE 3.1 OF SABS 1200AB WITH THE FOLLOWING:

"The Contractor shall supply and erect at locations approved by the Engineer, the number of contract nameboards specified in the Project Specifications, which, unless otherwise specified in the Contract, shall comply with the recommendations for the standard board of the South African Association of Consulting Engineers, with regards to size, painting, decorating and detail, and the requirements described hereunder."



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PSAB 3.2 OFFICE BUILDING(S)

REPLACE THE WORDS: "as scheduled" IN PARENTHESIS IN THE FIRST LINE OF SUBCLAUSE 3.2 OF SABS 1200 AB WITH: "as specified in Portion 1 of the Project Specifications";

AND REPLACE SUBCLAUSE 3.2(j) OF SABS 1200 AB WITH THE FOLLOWING:

"(j) a heater and fan / air-conditioning unit both of such capacity that the inside of the office(s) is always at a temperature of between 20°C and 24°C."

PSAB 4 PLANT

PSAB 4.3 TELEFAX FACILITIES

No telefax facilities required.

PSAB 4.4 SURVEY EQUIPMENT

No survey equipment is required.

PSAB 5 CONSTRUCTION

PSAB 5.4.2 Cellular telephones

The Contractor shall advise the cellular service provider of any faults which develop in the cellular telephone service and/or the cellular telephone handsets and shall, in such circumstances , arrange for the earliest possible restoration of the said service.

The costs of any necessary repairs and/or the replacement of components to the handsets of the cellar telephones shall be for the Contractor's account.

The Contractor shall ensure that all accounts for cellular phone calls and the respective service contracts are promptly paid."

ADD THE FOLLOWING NEW SUBCLAUSES TO CLAUSE 5 OF SABS 1200 SB:

PSAB 5.7 TELEFAX FACILITIES

.No telefax facilities required.

PSAB 5.8 SURVEY EQUIPMENT

No survey equipment is required.



Additional Specifications

- SA GENENERAL MAINTENANCE
- SB OPERATING AND MAINTENECE MANUALS
- SC GENERAL DECOMISSIONING, TESTING AND COMMISSIONING PROCEDURES
- SD GENERAL TRAINING
- SF GENERAL OPERATION
- SH HIV / AIDS REQUIREMENTS
- SI OCCUPATIONAL HEALTH AND SAFETY
- SN IMPLEMENTATION OF LABOUR INTENSIVE INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)
- SL EMPLOYMENT AND TRAINING OF YOUTH WORKSER ON THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP) INFRASTRUCTURE PROJECTS: NATIONAL YOUTH SERVICE (NYS).

ADDITIONAL SPECIFICATION

SA GENERAL MAINTENANCE

CONTENTS

SA 01	SCOPE
SA 02	MAINTENANCE REQUIREMENTS
SA 03	MAINTENANCE CONTROL
SA 04	COMMUNICATION
SA 05	PERFORMANCE MEASUREMENT
SA 06	MEASUREMENT AND PAYMENT

SA 01 SCOPE

Maintenance of the specified systems, services and/or parts of buildings and infrastructure shall all be referred to as "Maintenance of an Installation". Maintenance of all completed installations shall ensure reliable functioning and optimum service life thereof. Monthly maintenance responsibilities for each installation including all units and components as specified shall commence with access to the Site.

Maintenance of an installation shall be performed in accordance with the Technical and Particular Specifications, the Operating and Maintenance Manuals (where applicable) and the Maintenance Control Plan.

Remuneration for maintaining "installations" (systems, services and/or buildings and parts of the infrastructure) in good functional condition is provided for in the Schedules of Quantities by means of monthly payment items.

This Additional Specification covers maintenance requirements, development of a maintenance control plan, identification of equipment, site maintenance administration, maintenance performance measurement, as well as the items for measurement of the Contractor's service level and resulting payment.

The contractor will have the opportunity at the start of the contract to point out items which are not in perfect working order which in turn will be serviced/repared as per the relevant tendered repair rates.

The various installations are in good working order. This places the emphasis of this Contract on repair and maintenance.

No distinction will be made between prior to practical completion and completed installations for the purpose of maintenance.

The Contractor will have the opportunity at the start of the contract to point out items which are not in perfect working order which in turn will be serviced/repared as per the relevant tendered rates. The Contractor must submit a written report of these items within 28 days of site hand over. Failing to submit the report within the allowed time will render any and all defective items part of the Contractor maintenance responsibly as set out in the relevant Technical and Particular Specifications.

The Contractor will further more at the start of the contract perform annual maintenance on all the installations as per the items listed in the different Technical and Particular Specifications as part of the Contractors maintenance obligation.

Maintenance of each of these installations will be the responsibility of the Contractor and will be evaluated on a monthly basis by the Engineer. The remuneration for maintenance work and responsibilities will be certified accordingly.

SA 02 MAINTENANCE REQUIREMENTS**SA 02.01 CONTRACTOR'S RESPONSIBILITIES**

The Contractor shall maintain the complete installations for the 36-month Contract period.

Maintenance implies and shall include monthly preventative maintenance, corrective maintenance, as well as breakdown maintenance on all components of the specified installations.

The maintenance control plan (specified in Clause SA 03) will be developed by the Contractor, to schedule the frequency of routine inspections and format of reports. The Contractor shall carry out inspections on the equipment as detailed in the Technical and Particular Specifications and the maintenance control plan. Each inspection, test or breakdown shall be recorded in an approved format and listed in a quarterly report (part of the maintenance control plan).

As part of repair of each installation, the Contractor shall submit a set of Operating and Maintenance Manuals where applicable. The Contractor shall ensure through training that the operating and maintenance personnel are conversant with the instructions as presented in the Operating and Maintenance Manuals. Continued training shall be included in the scope of maintenance work for the duration of the 36-month Contract, in accordance with Additional Specification SD: General Training.

The Operating and Maintenance Manuals, as approved by the Engineer, shall be used as a basis of preventative maintenance. The Contractor shall perform all preventative and corrective maintenance as described in the Operating and Maintenance Manuals. This shall be in accordance with the Technical and Particular Specifications.

The Contractor shall, as part of his maintenance responsibilities repair or replace faulty equipment upon logging of a breakdown, within the down-time as defined in Clause SA 05.02 at the Contractor's cost, except in the event of replacement being labelled as exceeding liability as specified in Clause 63 of the Project Specific Conditions of Contract, in which case the Department of Public Works will bear part of the costs.

The Contractor shall rectify any faulty condition of which he becomes aware, even if it has not been logged. Such rectification shall also be logged and listed in the quarterly report.

SA 02.02 CONDITIONS FOR EXCEEDING THE CONTRACTOR'S LIABILITY DUE TO OPERATIONAL DAMAGE BREAKDOWNS

Irrespective the definition of operational damage given in the Oxford dictionary, it shall be defined for the purpose of this clause as being any damage caused on purpose or through negligence by the User Client's employees, suppliers, subcontractors, etc for any reason whatsoever. For the purpose of this clause, operational damage and vandalism shall have the same meaning. Where repair work is necessitated as a result of operational damage caused by User Clients or their associates, the Contractor will be requested to:

- (a) perform work, using tendered rates for the supply, delivery and installation of material forming part of the repair work schedule, within the maximum down-time allowed for operational damage, where the Engineer rules that the damage has been caused by incorrect operation;

SA.3

- (b) submit one (1) quotation for repair and/or replacement of the damaged unit, where tendered rates are not available and where the Engineer rules that the damage has been caused by incorrect operation;
- (c) perform the work on receipt of an order from the Engineer, within the time offered as part of the quotation, and
- (d) notify the Engineer well in advance of completion of the repair work in order to enable inspection.

The responsibility of determining whether damage to the installation was caused by people other than employees or associates of the Contractor shall rest with the Engineer.

Damage caused by the employees, suppliers, subcontractors, etc of the Contractor, shall be repaired by the Contractor at his own cost.

SA 02.03

CONDITIONS FOR EXCEEDING THE CONTRACTOR'S LIABILITY ABOVE MARGINAL BREAKDOWN COST

In the event where the cost for the repair or replacement of any single component/subassembly where a breakdown has occurred due to a single failure, or where the cost for replacing a single item of equipment completely, exceeds the value of R15 000,00 (transport, accommodation and travelling cost excluded), the liability of the Contractor is limited to the value of R15 000,00. The additional cost above the value of R15 000,00 will be paid for by the Employer provided that conditions 1, 2 and 3 below have been met.

1. The defective part/component/subassembly or machine must be identifiable as a single subassembly or component and not the total of a number of small defects or breakdowns on subassemblies/components on any one or more machines.

Examples of subassemblies/components are the following:

- (a) Should the wiring or bearings on an electric motor fail, the complete motor must be removed for repairs and the cost for the repairs on the complete motor will be regarded as repairs on a single subassembly/component.
- (b) A starter motor, for example, is a subassembly, which can be removed from the machine for repairs. The repairs on the starter motor together with the repairs on the main bearings will not be regarded as a repair on a single subassembly/component. If the complete diesel engine is replaced with its associated subassemblies the replacement of the complete unit will be regarded as a single component.
- (c) A pump as a whole is regarded as a single component. The pump and driving machine on long coupled pumps are regarded as separate subassemblies. Pumps and motors on close-coupled equipment are regarded as a single component. The pump and motor of a sump pump are therefore regarded as a single component.
- (d) Control equipment for the control of a single item, with the sensing device, the controller itself and the final controlled variable are regarded as a single component of the system. The repairs on any one item on a controller have an influence on the rest of the control equipment and must after the replacement be commissioned again as a unit.

2. The Contractor shall submit a written report to the Engineer for approval. This report shall contain the following information:

SA.4

- (a) The make and model number of the machine serviced/inspected/ repaired/replaced;
 - (b) The identification number of the machine;
 - (c) A description or name and part number of the defective part/component or subassembly;
 - (d) A statement on whether the component could be repaired, together with a cost estimate;
 - (e) A quotation valid for a minimum period of 60 days if the component/part/subassembly has to be replaced or repaired by an outside firm. If the subassembly/machine is to be repaired or replaced by an outside company, the Contractor shall supply one (1) quotation for such parts/repairs or a quotation from any sole supplier. Only an original quotation will be accepted. The mark-up on such work shall be a percentage as tendered and shall be applicable to the total cost (VAT excluded) of repair work by outside companies;
 - (f) The expected urgency for the replacement or repairs, and
 - (g) The delivery time of a new component/subassembly/machine or delivery times on spares required to repair the defective component/ subassembly.
3. A written approval to proceed with the work must be issued by the Department. Copies of the original VAT invoices from outside companies for all repairs or spare parts supplied must be attached to the Contractor's invoice.

SA 02.04

EMERGENCY BREAKDOWN REPAIR VISIT

Whenever an emergency breakdown is logged at a site where no access has been given the Contractor, an "emergency breakdown repair visit" shall be carried out by the Contractor to attend to the repair of the emergency breakdown within 24 hours after it was logged with the Contractor.

Remuneration for the material and labour required to attend to repair of the emergency breakdown shall be deemed included in the payment item for maintenance of an installation based on a point system and measured monthly. Payment for the "emergency breakdown repair visit" will be measured separately in the schedule of quantities to cover the cost of the call-out, in terms of travel and accommodation cost, including travel time and any other cost associated with the call-out.

The Contractor will not be remunerated for emergency breakdown repair visits once the specific installation or site has been completed (Completion Certified). The contractor will be remunerated for maintenance and attending to emergency breakdowns as per his payment item for maintenance of a completed installation based on a point system as measured monthly.

Typical examples of "emergency repair breakdown visits" would be:

- A Breakdown of any standby power generator that prevents the standby power generator from operating at its capacity and meeting the demand.
- A Breakdown of any water supply pump or any other component of the water supply or bulk water installation that affects the water supply to such an extent that it cannot meet the demand
- A Breakdown of the water reticulation network or sewer reticulation network that affects water supply or sewer removal to such an extent that the service is disrupted to any building.
- A Breakdown of site electrical or building electrical that disrupts power supply to a building (including residential unit)
- A Breakdown of a geyser that prevents it from supplying hot water as per specification

- Any other Breakdown that can be regarded as life threatening or having the potential to cause damage to equipment or property and is included in the scope of work to be maintained by the Contractor, as per the technical and particular specifications. The Engineer will be responsible for categorising a breakdown as an emergency.

SA 02.04 **COMPONENTS INCLUDED IN MAINTENANCE SCOPE**

The main sections of a facility with their subsections are as set out in the Technical Specifications and Particular Specifications where applicable and in the Schedule of Quantities and will each be deemed "an installation". Maintenance, as specified, will be applicable to all of these installations.

SA 02.04.01 **CALEDONSPORT PORT OF ENTRY**

Installation: Structural and Building Related Work
Installation: Plumbing and Drainage
Installation: Building Electrical
Installation: Fencing, Cleaning Of Buildings and Site Keeping
Installation: Bulk Water Supply Systems and External Water Networks
Installation: Wastewater Treatment Works and Sewer Networks
Installation: Roads and Storm Water Drainage
Installation: Standby Power Installations
Installation: External Lighting
Installation: Medium and Low Voltage
Installation: Heating, Ventilation and Air Conditioning Systems
Installation: Conventional Fire Fighting Equipment

SA 02.04.01 **FICKSBURG PORT OF ENTRY**

Installation: Structural and Building Related Work
Installation: Plumbing and Drainage
Installation: Building Electrical
Installation: Fencing, Cleaning Of Buildings and Site Keeping
Installation: Bulk Water Supply Systems and External Water Networks
Installation: Wastewater Treatment Works and Sewer Networks
Installation: Roads and Storm Water Drainage
Installation: Standby Power Installations
Installation: External Lighting
Installation: Medium and Low Voltage
Installation: Heating, Ventilation and Air Conditioning Systems
Installation: Conventional Fire Fighting Equipment

SA 02.04.02 SITE AND BUILDING INFORMATION

QTY	Site	Site Keeping Area(m²)	Building floor area (m²)
	Caledonspoort Port of Entry	103 000	
31	Residential Buildings		3498
12	Operational Buildings		1377
8	Park Homes		
	Ficksburg Port of Entry	65 000	
18	Residential Buildings		1295
16	Operational Buildings		478
3	Park Homes		

See related key plans of buildings for Caledonspoort and Ficksburg Land Ports of Entry attached for reference on SA16.

SA 02.05 COMMENCEMENT OF MAINTENANCE PERIOD

Maintenance responsibilities for an installation prior to practical completion of repair work shall include maintenance of all individual units, equipment or components thereof, for which no repair work is required (as per the contract document) or for which the repair work has not yet started, and shall commence with access to the installation.

Where access to an installation with a view to commence repair work is delayed, then the maintenance responsibilities which in such cases will consist of keeping the installation in the condition it is in, shall commence immediately at the start of the Contract.

Such maintenance before access is obtained, shall consist for example of fixing leaks without replacing pipework or opening a blocked pipeline without further altering or inspecting such pipes.

The Contractor shall accept full maintenance responsibilities for each completed installation upon issue of a Certificate of Practical Completion for repair work of that installation.

The preliminary construction programme differentiates between commencement of maintenance on various installations.

SA 02.06 PREVENTATIVE MAINTENANCE: DEFINITION

This entails the rendering of services and servicing of equipment according to a predetermined maintenance control plan to:

- (a) replace and service components of equipment, units or parts thereof for each installation at prescheduled moments regardless of condition;
- (b) readjust, reset, clean, corrosion protect all components of equipment, units or parts thereof for each installation, and

- (c) carry out all implied actions to maintain installations in their present functional condition.

Preventative maintenance shall be aimed at minimisation of breakdowns.

SA 02.07 CORRECTIVE MAINTENANCE: DEFINITION

This entails regular observation of the equipment, identifying pending breakdowns, maladjustment or anomalies of equipment, units or parts of installations and subsequent action to restore installations to the functional condition as before the breakdown.

SA 02.08 BREAKDOWN MAINTENANCE: DEFINITION

This entails repair and/or replacement of defective equipment, units or parts of installations following a breakdown that leaves the installation inoperable or unsafe, and subsequent action to restore installations to their normal functional condition, within the maximum down-time allowed.

SA 02.08 OPERATIONAL DAMAGE BREAKDOWN MAINTENANCE: DEFINITION

This entails repair and/or replacement of defective or damaged equipment, units or parts of installations following a breakdown that leaves the installation inoperable or unsafe, and subsequent action to restore installations to their normal functional condition, within the maximum down-time allowed.

Typical examples of “operational damage breakdown visits” would be:

- A Breakdown of any structural items such as locks, window handles and stays, windows, doors and any other structural related items.
- A Breakdown of any plumbing, drainage or sanitary ware related items.
- A Breakdown of any electrical related items.
- Any other damaged items not caused by normal wear and tear.

SA 02.09 SITE MAINTENANCE RECORD KEEPING

The Contractor shall provide and maintain hard-cover A4 maintenance files for each installation for the duration of the Contract. All schedules, checklists, breakdown reports, preventative maintenance records, component replacement records and quarterly reports shall be filed, together with information regarding repairs exceeding the Contractor’s liability, as set out in SA 02.02 and SA 02.03.

Site maintenance records shall be submitted at each monthly meeting.

SA 02.10 SUPPLY OF LABOUR, EQUIPMENT AND MATERIAL

SA 02.10.01 Labour

Competent personnel that have been trained by the Contractor, in accordance with Additional Specification SD: General Training shall execute all maintenance work.

SA 02.10.02 Equipment

All tools and equipment required for maintenance work shall be supplied by the Contractor at his cost (except where otherwise provided).

SA 02.10.03 Material

All material, spare parts, components, equipment and appurtenances necessary for the complete maintenance of each installation shall be supplied and installed by the Contractor at his cost, to a maximum value per part/subassembly as specified in the Special Conditions of Contract for exceeding Contractor's Liability.

Materials as provided for in the Schedule of Quantities, shall be supplied and delivered by the Contractor at the tendered rates upon order of the Engineer only, and shall be free-issued to the User Client for own use. The Contractor shall inform the Engineer of all scheduled deliveries to arrange official hand-over with the User Client.

SA 02.11 IDENTIFICATION OF EQUIPMENT

A unique identification number will be allocated only to each mechanical equipment item forming part of the installation. This identification number will be allocated and administered in collaboration with the User Client and must be described in the maintenance control plan.

Reference shall be made to identification numbers in the maintenance control plan, operating and maintenance manuals and during all maintenance activities, including the logging of breakdowns and other correspondence. Identification numbers shall also be indicated on as-built drawings.

SA 03 MAINTENANCE CONTROL**SA 03.01 SCOPE**

Maintenance quality control shall be the responsibility of the Contractor. The Contractor shall introduce a maintenance control plan to assist him in ensuring that preventative, corrective and breakdown maintenance are performed as described in the operating and maintenance manuals and Technical and Particular Specifications.

SA 03.02 PRELIMINARY MAINTENANCE CONTROL PLAN

A preliminary version of the maintenance control plan shall be submitted with the programme and the framework of the preliminary version shall be as close as possible to that of the final maintenance control plan as specified in SA 03.03 below. Detail contained in this preliminary maintenance control plan shall include:

- (a) Actual time that a representative of the Contractor will be present on Site for the duration of the maintenance period;
- (b) the scope and frequency of routine inspections
- (c) repair methodology
- (d) details of training plan to be implemented in accordance with Additional Specification SD

SA 03.03 MAINTENANCE CONTROL PLAN

- (a) The maintenance control plan shall be based on the Contractor's preliminary maintenance control plan, and shall be bound in a neat, A4-sized, ring-bound document with a cover page and back cover. The contents of the document shall be indexed.

In drawing up the document, the Contractor may reproduce relevant paragraphs and clauses from any of the specifications forming part of the Contract documents, but should there be any discrepancies between such clauses and

paragraphs in the maintenance control plan and those in the Contract documents, those in the Contract documents shall be regarded as being correct and shall apply.

- (b) To ensure that the Engineer is satisfied that the Contractor understands the purpose and advantage of carrying out maintenance work according to a maintenance control plan he shall, as an introduction to the control plan document, set out his views as to what he believes the implementation of a maintenance control plan will achieve.
- (c) The maintenance control plan shall also contain the following:
 - (i) A summary of the repair and maintenance work to be carried out under the Contract giving details of the conditions of the various installations at the facility(ies) affected by the activities under the Contract. The Contractor shall bear in mind that maintenance work may have to be carried out before the repair phase of the installation has been entirely completed and the summary mentioned above shall therefore differentiate between maintenance work before and after the repair phase has been completed.
 - (ii) Details of how the Contractor intends to carry out the various types of maintenance work especially breakdown maintenance should breakdowns occur.
 - (iii) Details of how the call centre works, as specified in clause SA 04 as well as all statistics of breakdowns, leakages, blockages, etc. available from the call centre for the installation and the age of the installation that has been taken into account in compiling the contents of the maintenance control plan.
 - (iv) A list of organisations and persons directly involved with the Contract or whose requirements have to be taken into account during the entire Contract Period such as the Department of Public Works, the User Client, the Consulting Engineer, the Contractor, the Local Authority, etc. Each person's position within his organisation as well as the applicable phone numbers shall be given.
 - (v) Details of monthly meetings to be hold with the Department of Public Works, the User Client, Contractor and Engineer;
 - (vi) Reports to be submitted after every routine inspection (all reports, checklists, breakdown records, score card results, etc. for each system of an installation shall be kept on the site in a hard cover file);
 - (vii) Procedures to address complaints and logged breakdowns;
 - (viii) Details of quarterly reports, summarising all inspections, together with inspection data such as nature of test, names of persons carrying out tests and inspection results. Detail of repairs and replacements, together with testing of repaired equipment shall also be reflected in this report, and
 - (ix) Assistance to be given by the Engineer with decisions regarding material, equipment and other recommendations.
- (d) The codes of practice as set out in ISO 10006 and ISO 9004 for quality systems and management shall be used as a guideline for compiling a maintenance control plan. ISO accreditation is not a requirement in terms of this Contract.
- (e) The maintenance control plan shall be upgraded when its contents are no longer representative of actual conditions.

- (f) The Contractor shall check the contents of existing Operating and Maintenance Manuals (if available) and shall update or modify and then incorporate applicable data into his own manuals. Where no manuals exist, the Contractor shall draw up his own Operating and Maintenance Manuals.

Pertinent data contained in the Operating and Maintenance Manual may be transferred to the Maintenance control plan to make it a document which can be used as an independent handbook for maintenance work.

The Contractor is referred to the contents of paragraph (a) above regarding the reproduction of data, as this shall also be applicable to data reproduced from Operating and Maintenance Manuals.

SA 04 **COMMUNICATION**

The maintenance control plan (Clause SA 03) will provide, after agreement between the Contractor and the Engineer, for the following communication and complaint logging procedure:

- (a) The Contractor shall establish a telephone and fax line and a cellular telephone connection to ensure that he can be reached at any time.
- (b) The Contractor shall primarily be responsible for determining the items requiring preventative, corrective and breakdown maintenance, and shall communicate this information directly to his maintenance workforce.
- (c) Should the Engineer or operating personnel of the User Client determine or suspect that preventative, corrective or breakdown maintenance is required, a call shall be logged through the call centre to reach the Contractor as soon as possible.
- (d) Reaction times will be as described in Clause SA 05.02.
- (e) All complaints of the User Client shall be reported to the Engineer via the call centre, as set out in the maintenance control plan, and the Engineer shall issue instructions to the Contractor. After the Contractor has attended to the complaint, the Engineer will provide feedback to the call centre both telephonically and via fax.

The call centre logs the details of the Engineer's call and provides feedback to the complainant.

SA 05 **PERFORMANCE MEASUREMENT**

The Contractor's performance shall be measured against the following parameters:

SA 05.01 **SPECIAL TESTING OF AN INSTALLATION**

The Engineer may at any time inspect any part of the entire installation. During Maintenance work, the Engineer shall at his discretion order special tests to be carried out on complete installations at intervals of not less than four months, to verify the satisfactory functional condition of the installation.

The Engineer reserves the right to select at random component equipment and trade practices to be tested by independent authorities for compliance with specifications as specified in this Contract document.

The Contractor shall provide all equipment, tools and instruments required for testing.

SA 05.02 **MAXIMUM MAINTENANCE DOWN-TIME**

After a complaint has been logged and forwarded to the Contractor, the Contractor shall be expected to minimise the maintenance down-time until the system component is fully operational to the satisfaction of the Engineer. Should the Contractor not respond within the maximum down-time, the Engineer may arrange, at the cost of the Contractor, for the necessary repair work to be done by others.

Should the actual down-time exceed the maximum down-time the Contractor shall be liable to a payment reduction for the difference between actual down-time and maximum down-time. This is reflected in the table below:

REQUIRED MAINTENANCE	MAXIMUM DOWN-TIME ALLOWED	PAYMENT REDUCTION IF EXCEEDED
Fatal Breakdown	1 Hour	R 1 000/hour
Emergency Breakdown	12 Hours	R 1 000/day
Ordinary Breakdown	7 days	R 250/day
Operational damage repair	7 days	R 250/day

"Maximum down-time" shall mean the period of time allowed to repair a breakdown, and "actual down-time" shall mean the measured period from the instant when the breakdown was logged with the Contractor until the installation has been repaired to its functional specification.

"Immediate response repairs" shall imply breakdown maintenance repair work where no breakdowns are allowed at any time in terms of the Technical Specification.

"Emergency maintenance repairs" shall imply any breakdown maintenance repair work required to rectify a component or unit of the installation that disables the installation from functioning at its designed maximum requirement in terms of the Technical Specification.

"Ordinary maintenance repairs" shall imply all breakdown maintenance repair work required other than immediate response or emergency maintenance repairs.

"Operational damage repairs" shall imply all operational damage breakdown repair work required on any other damaged items not caused by normal wear and tear and shall also include and structural related breakdowns.

SA 05.03 **PERFORMANCE-BASED PAYMENT**

Remuneration for all value-related as well as all time-related preliminary and general charges shall be deemed included in the monthly maintenance payments for the various installations.

SA 05.03.01 **Score-card**

The Engineer shall inspect each installation monthly after Practical Completion of the repair phase of the installation. The Engineer shall use a score-card to measure the quality of preventative and corrective maintenance rendered by the Contractor during the preceding month, on all components that form part of the installation, in accordance with the maintenance specifications. The Engineer will record his inspection directly onto the score-card. The score-card shall serve to evaluate ten performance indicators each month.

SA 05.03.02 **Performance indicators**

Performance indicators shall be selected to measure the Contractor's service level of preventative and corrective maintenance.

The Engineer shall have the opportunity to select ten (10) performance indicators each month, which shall focus on the measurement of maintenance quality against the relevant specifications for the ensuing month. All ten (10) performance indicators are known to both the Engineer and the Contractor.

The Contractor shall aim to perform satisfactorily on all ten performance indicators. All indicators shall be selected from the scope of his normal preventative and corrective maintenance work and shall be based on the maintenance control plan and operating and maintenance manuals. The work shall either be satisfactory, or unsatisfactory, and the Contractor shall score one (1) or zero (0) respectively per indicator.

Performance indicators shall be used to focus on certain key aspects of the work and shall in no way limit the Contractor's responsibility to do all the required work.

SA 05.03.03 Satisfactory performance

The Engineer shall inspect the site on an arbitrary day to measure the quality of maintenance against the ten selected performance indicators. Should the Contractor score the maximum points (10) he shall receive his full maintenance payment for the installation. Should the quality of preventative maintenance, or components requiring persistent corrective maintenance be unsatisfactory according to the score-card, the Contractor may fail to achieve full payment due to a reduced service level. Each monthly payment for maintenance shall be subject to evaluation based on the score-card.

A copy of the score-card including a guideline for the use thereof is included in this Specification.

SA 06 MEASUREMENT AND PAYMENT

SA.01 MAINTENANCE OF A COMPLETE INSTALLATION Unit: point

The unit of measurement shall be a point. Each month shall represent a maximum of ten points and a minimum of zero points, depending on the performance and quality of maintenance. Ten points per month, determined by using the tendered rate per point, shall include full compensation for all liabilities and obligations described or implied in the Contract document and deemed by the Contractor to be applicable to the maintenance phase of the Contract, for the complete monthly maintenance of an entire installation, and all appurtenant works deemed to form part thereof, as defined in the relevant Technical or Particular Specifications.

The combined tendered rate for ten points (which shall not be less than 10% of the total tendered Contract Price) shall also include full compensation for complete preventative, corrective and breakdown maintenance (as defined in this General Maintenance Specification), including full compensation for all costs related to resetting, repair, procurement, supply, delivery, replacement, protecting, furnishing, installing, testing and commissioning of all items and material required to maintain the complete installation in a perfect functional condition. The only items not to be included in the rate for monthly maintenance points are:

1. Supply, delivery, installation and testing of special equipment/materials that will be measured elsewhere, and
2. Special testing of an installation.

Different installations shall be listed in the Schedule of Quantities, in accordance with the definition of each installation.

Although ten points per month shall include full compensation for preventative, corrective and breakdown maintenance, the Contractor might fail to achieve all points applicable in the event of unsatisfactory performance, in which case he shall still

perform all maintenance requirements according to specification, but at his own cost where a reduction in points awarded is insufficient to cover his cost.

SA.02 ADDITIONAL TESTS:

SA.02.01 Where ordered by the EngineerUnit: rand (R)

SA.02.02 Charge required by the Contractor on subitem SA.03.01 aboveUnit: %

An amount has been allowed in the Schedule of Quantities to cover the cost of additional tests required by the Engineer. The Engineer will have the sole authority to spend the amount or part thereof under subitem SA.03.01.

The tendered percentage under subitem SA.03.02 will be paid to the Contractor on the value of each payment made to the approved testing authority.

SA.03 PAYMENT REDUCTION DUE TO EXCEEDING OF MAXIMUM ALLOWABLE DOWN-TIME DURING EMERGENCY BREAKDOWN..... Unit: days

The unit of measurement shall be the number of days, in excess of 36 hours, during which a component of an installation was in a disfunctional condition that required emergency repairs.

The negative fixed rate shall include full compensation for the User Client's loss in productivity and, multiplied by the number of days measured, shall be deducted from the certified amount due to the Contractor.

SA.04 PAYMENT REDUCTION DUE TO EXCEEDING OF MAXIMUM ALLOWABLE DOWN-TIME DURING ORDINARY BREAKDOWN.....Unit: days

The unit of measurement shall be the number of days, in excess of 7 days, during which a component of an installation was in a disfunctional condition that required ordinary repairs.

The negative fixed rate shall include full compensation for the User Client's loss in productivity and, multiplied by the number of days measured, shall be deducted from the certified amount due to the Contractor.

SA.05 PAYMENT REDUCTION DUE TO EXCEEDING OF MAXIMUM ALLOWABLE DOWN-TIME DURING OPERATIONAL DAMAGE BREAKDOWN..... Unit: days

The unit of measurement shall be the number of days, in excess of 7 days, during which a component of an installation was in a disfunctional condition that required ordinary repairs.

The negative fixed rate shall include full compensation for the Client's loss in productivity and, multiplied by the number of days measured, shall be deducted from the certified amount due to the Contractor.

SA.06 CALL-OUT FOR REPAIR OF EMERGENCY BREAKDOWN (24 Hours).....Unit: No

The Unit of measurement shall be number. The Contractor will be remunerated for the number of call-out trips to the site, in order attend to the repair of an emergency breakdown logged (Before Access to a Site) with him by the Engineer. The tendered rate shall provide full compensation for all travel, accommodation and travel-time cost to and from the site. Remuneration for material and labour cost is deemed to be included under the "maintenance of a completed installation" payment item in the schedule of quantities, based on the points system and measured monthly.

**DEPARTMENT OF PUBLIC WORKS
MAINTENANCE SCORE-CARD**



CONTRACT NUMBER:

CONTRACT:

.....

CONTRACTOR:

ENGINEER:

INSTALLATION: **MONTH:** **OF 36**

The following components of the installation were selected by the contractor at the Monthly Operation Meeting nr. as performance indicators to be tested according to specification:

1. ENGINEER'S SELECTION

- 1.1
- 1.2
- 1.3
- 1.4
- 1.5
- 1.6
- 1.7
- 1.8
- 1.9
- 1.10

0	1

TOTAL SCORE:

/ /

.....
Engineer's Representative

.....
Signature

.....
Date

GUIDELINE FOR THE USE OF THE MAINTENANCE SCORE-CARD

The score-card and performance indicators must be used as a maintenance management tool. The aim with each score-card is to ensure that:

- (a) the project focuses on key aspects of maintenance per month;
- (b) the Contractor receives payment for his work, and
- (c) the Employer receives value for money and a sustained high level of service.

Performance indicators must be selected to measure the Contractor's service level of preventative and corrective maintenance that will be based on the Maintenance Control Plan and the Operating and Maintenance Manuals (containing information specified in the Contract documentation).

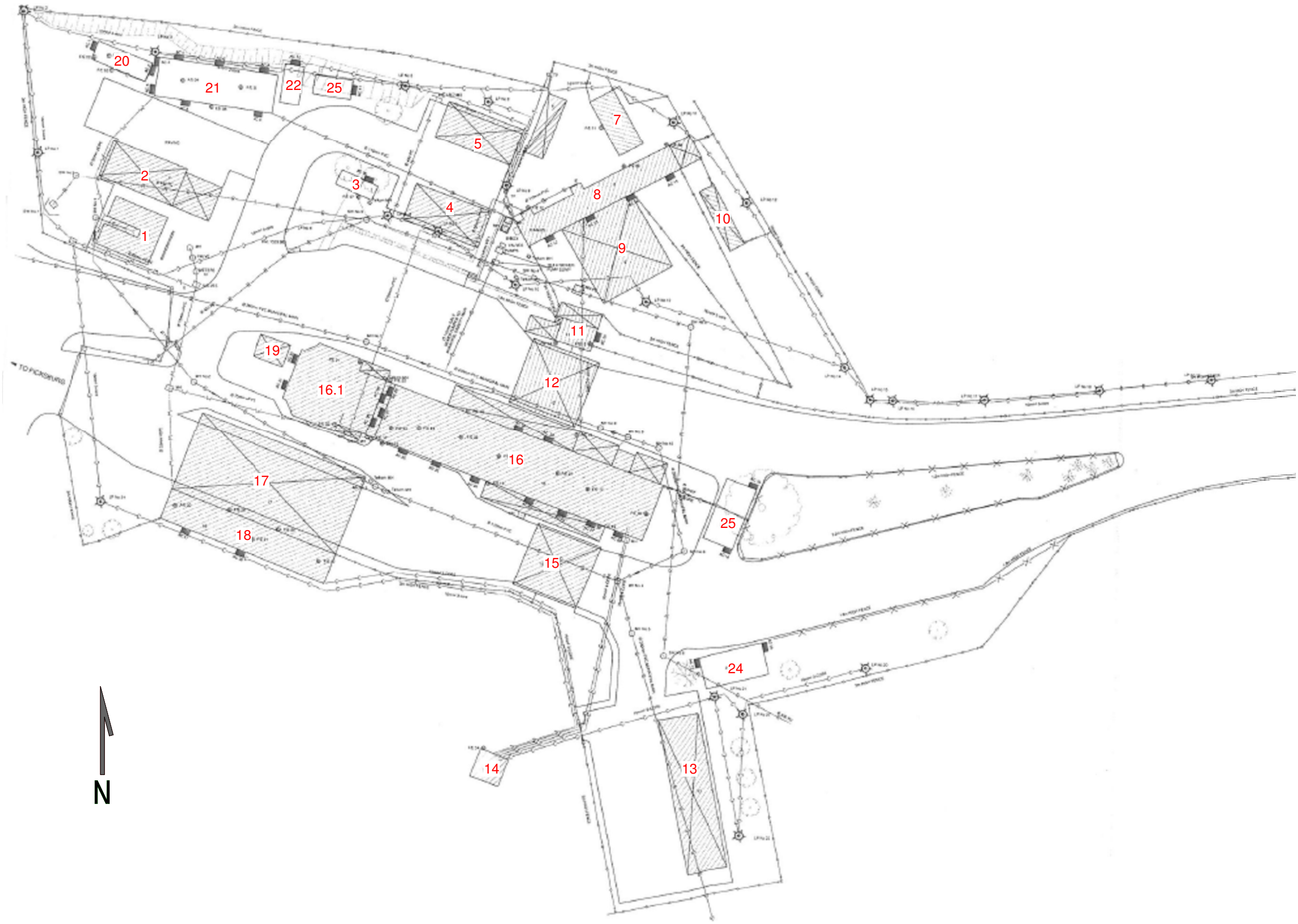
For each specific installation, different performance indicators must be defined each month based on the content of the maintenance in relation to the scope of maintenance work per installation and must be based on the Contractor's service level record on preventative and corrective maintenance.

Breakdowns must be dealt with if and when necessary by logging of the breakdown and monitoring the downtime.

The Contractor and the Engineer must agree on all performance indicators at an occasion prior to the month during which the Contractor's performance (service level of maintenance) will be measured.

**KEY PLANS FOR CALEDONSPORT AND FICKSBURG LAND PORT
OF ENTRY**

No.	DATE	AMENDMENT	D.P.W.



THE MASTER HELD AT DELTA BUILT ENVIRONMENT CONSULTANTS BEARS THE ORIGINAL SIGNATURE OF APPROVAL COPYRIGHT VESTS IN THE DEPARTMENT OF PUBLIC WORKS

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discipline **ARCHITECTURE**

service **DPW CALEDONSPORT AND FICKSBURG LAND PORT OF ENTRY REPAIR AND MAINTENANCE**

WCS number **WCS 052560**

drawing title **FICKSBURG LAND PORT OF ENTRY SITE KEY PLAN**

ref.no. _____ designed N/A
scale NTS _____ drawn N/A
date 01-12-2019 _____ checked N/A
DPW drawing number _____

ADDITIONAL SPECIFICATION**SB OPERATING AND MAINTENANCE MANUALS****CONTENTS**

SB 01	SCOPE
SB 02	PROCEDURE FOR SUBMISSION OF MANUALS
SB 03	FORMAT OF OPERATING AND MAINTENANCE MANUALS
SB 04	CONTENTS
SB 05	MEASUREMENT AND PAYMENT

SB 01 SCOPE

The Contractor shall be responsible for the compilation of complete sets of Operating and Maintenance Manuals. A separate Operating and Maintenance Manual shall be supplied for each installation where required and as defined in the Additional Specification SA: General Maintenance.

SB 02 PROCEDURE FOR SUBMISSION OF MANUALS**SB 02.01 SUBMISSION OF DRAFT MANUALS**

A draft copy of each Operating and Maintenance Manual shall be submitted to the Engineer prior to safety inspection of the installation. Approval of the draft Operating and Maintenance Manuals shall be a prerequisite for commencement of the safety inspection in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

The manuals will be reviewed and checked by the Engineer and returned to the Contractor with comments, where necessary. The Contractor shall make the necessary changes and amendments to the manuals to incorporate the Engineer's comments.

SB 02.02 DEVELOPMENT OF FINAL MANUALS

A final draft copy of each Operating and Maintenance Manual shall be submitted to the Engineer at least one week prior to commencement of Day 1 tests on commissioning. This set of manuals will not be accepted without the Contractor's verification of the information contained in the manuals and the professional language editing thereof. The Engineer shall return the manuals to the Contractor, who shall make the final corrections. The Engineer will, however, not be responsible for the quality control on manuals. Approval of final Operating and Maintenance Manuals shall be a prerequisite for issuing of a Certificate of Practical Completion for repair of the installation.

After the Engineer has approved the final Operating and Maintenance Manuals, the Contractor shall provide the Engineer with seven (7) sets of the manuals. Approval of the final Operating and Maintenance Manuals shall be a prerequisite for issuing of a Certificate of Completion.

SB 03 **FORMAT OF OPERATING AND MAINTENANCE MANUALS**

- (a) Manuals shall be bound in hardcover lever-arch files with plastic coatings. The files shall be clearly labelled on the front cover, as well as on the back band, with the following information:
 - (i) The title "Operating and Maintenance Manuals"
 - (ii) Name of the installation (as defined in Additional Specification SA: General Maintenance)
 - (iii) Name of the contract and contract number
 - (iv) The Contractor's name, address and contact telephone number and fax (logo optional)
 - (v) Month and year in which the manuals are finally handed over to the Employer
 - (vi) Name of the User Client.
- (b) Pamphlets and bound leaflets/booklets from suppliers or manufacturers shall be placed in plastic pockets.
- (c) Drawings and diagrams larger than A3 shall be folded and placed in plastic pockets to be easily removed or stored.
- (d) The sections of the manuals specified below shall be clearly partitioned.
- (e) Cross-referencing between drawings/diagrams and text shall be in a clear and consequent format.
- (f) The Operating and Maintenance Manuals shall be supplied in English.

SB 04 **CONTENTS**

SB 04.01 **TABLE OF CONTENTS**

The table of contents shall appear on the second page and shall consist of the headings of the various sections in the manual and the relevant page numbers.

The table of contents shall essentially contain at least the following:

- 1. Introduction
 - 1.1 Scope of the manual
 - 1.2 General arrangement of the manual
 - 1.3 Description of installation
 - 1.4 Specifications
- 2. List of drawings and diagrams
- 3. Parts and components
- 4. Operating procedures

5. Maintenance
 - 5.1 Purpose of maintenance
 - 5.2 Preventative maintenance
 - 5.3 Trouble-shooting
6. Breakdown maintenance and repair
7. List of Appendices.

SB 04.02 INTRODUCTION

The introduction shall contain at least the following:

SB 04.02.01 Scope of the manual

A summary shall explain the scope of the contents.

SB 04.02.02 General arrangement of the manual

A brief description shall explain the way in which the manual is arranged.

SB 04.02.03 Description of installation

This section shall give a functional description of the complete installation covered by the manual, including all systems and/or functional units deemed to form part thereof, as defined in Additional Specification SA: General Maintenance.

SB 04.02.04 Specifications

A summary shall be given of the specifications applicable to the particular part of the Contract.

SB 04.03 DRAWINGS AND DIAGRAMS

SB 04.03.01 Mechanical flow diagrams (MFDs) and single line diagrams

Mechanical flow diagrams (for mechanical systems) or single line diagrams (for electrical systems) of the system and/or functional unit shall be included in the Operating and Maintenance Manuals for easy reference by the operators of the installation. Diagrams shall be drawn not only for parts of an installation that have been repaired, but also for the complete installation, including all the components.

SB 04.04 PARTS AND COMPONENTS

SB 04.04.01 Equipment data sheets

A data sheet shall be drawn up for each piece of equipment and/or machine forming part of the installation and shall contain the following information:

- (a) Equipment tag number
- (b) Equipment description
- (c) Model/make/manufacture
- (d) Supplier/Reconditioning details
- (e) Ordering details

- (f) Details of fixed components
- (g) Details of lubrication
- (h) Maintenance references (refer to supplier/reconditioning technical manual).

SB 04.04.02 Technical equipment manuals

For each piece of equipment and/or machine forming part of the installation the following information shall be included in this section of the Operating and Maintenance Manuals:

- (a) the supplier or reconditioning manual and/or standards of operating and maintenance instructions;
- (b) illustrated parts breakdown and/or group assembly drawings as agreed with the Engineer;
- (c) parts lists and data sheets, including all characteristic curves for machines indicating operation point, efficiency, power consumption, etc;
- (d) calibration charts, and
- (e) test certificates for hydraulic pressure tests, flame-proof grading, materials, non-destructive examinations, coating and lining details, etc.

Each detailed description shall be accompanied by a set of engineering drawings. From the drawings the functionality of each part or component used, as well as the special characteristics associated with the part or component shall be very clear.

SB 04.04.03 Parts and components list

A detailed description shall specify all the parts and components used for the duration of the Contract. This description shall include new parts and components, as well as existing parts and components that have either been reconditioned or used as specified in the Contract.

The description shall state at least the part or component number, part or component name, the size of the part or component, an explanatory description, the quantity used, the material of which the part or component is made, the coating (if any), date of purchase, as well as any relevant remarks as to the application thereof.

Details of the manufacturer of the part or component shall also be listed. This shall at least state the name, address, telephone number, fax number and name of a contact person.

The supplier of the part or component shall also be stated and shall include at least the name, address, telephone number, fax number, name of a contact person and an alternative supplier (if available).

SB 04.04.04 Drawings

Drawings shall contain a descriptive heading, an explanatory key and relevant comments. Drawings shall be done on a computer-aided design package approved by the Engineer.

A compound drawing for all subassemblies shall clearly indicate how and where the various parts fit in the subassembly. The compound drawing shall be linked to the equipment data sheets and parts and components list and shall clearly specify the parts or components used, their model numbers, their sizes and the quantities used. The compound drawings shall also be accompanied by a short description explaining the workings of the subassembly, as well as the assembly of the parts or components to complete the subassembly.

SB 04.05 **OPERATING PROCEDURES**

The operating instructions shall be a step by step description of the manual start-up and shut-down procedure for every piece of equipment and/or process reconditioned, repaired or supplied with references to the MFDs. For automatic operation the operators shall be referred to the automatic control manual (if applicable).

The functioning of the installation shall be clearly described, using a flow diagram depicting the interrelationships among the various subassemblies. The subassemblies shall be described by descriptive drawings.

Each mechanical or process flow diagram shall contain at least a heading, relevant comments and a key.

Every subassembly shall also have its own flow diagram explaining the operation of the subassembly, as well as the application of each part and component. The application of the subassembly shall also be very clear. The flow diagram shall consist of at least a heading, relevant comments and an explanatory key.

A detailed description shall be given of all operational systems forming part of the installation, explaining the operation and functioning of the system and the number of operations personnel required for performing the operation successfully.

The preparations, which are required before the system can be operational, shall be clearly stated and explained.

The operation tasks shall be clearly explained with reference to dangerous situations that might occur. Hazardous operations shall be explained in great detail and cover all the applicable safety precautions.

SB 04.06 **MAINTENANCE**

SB 04.06.01 **Purpose of maintenance**

The maintenance process shall be explained and the main responsibilities described.

SB 04.06.02 **Preventative maintenance**

A preventative maintenance and lubrication schedule shall be included in this section. This schedule shall be in table format and shall include a summary of all the maintenance actions required for each different system and/or functional unit covered by this manual, in order to give a single summary of all routine preventative maintenance actions required for the complete installation.

SB.6

The schedule shall indicate daily, weekly, fortnightly, monthly and yearly maintenance actions. A lubrication schedule summary shall also be included under this section.

The frequency of routine preventative maintenance actions shall be indicated very clearly.

The Contractor shall provide the maintenance requirements as prescribed by the manufacturer. The type of maintenance shall be clearly indicated. The description of the maintenance to be performed shall include at least the part name, location of the part in either the assembly or subassembly, the model number, the quantity of the particular part or component to be maintained, the type of maintenance, and notes on the maintenance procedure.

A brief description shall accompany the maintenance schedule, indicating special tools to be used, maintenance and test equipment required for the test procedures. Any special tools necessary for maintenance shall be specified in terms of name, model, size, manufacturer, supplier (name, telephone number, fax number, contact person), coating (if any) and notes on the use of the equipment.

Remarks on the system readiness checks of each subassembly shall be explained in detail. Routine inspection and maintenance processes shall be described. It shall be very clear what needs to be done, how to perform the necessary task and any dangers that are present.

SB 04.06.03 Trouble-shooting

An explanation shall be given to assist the maintenance personnel in analysing and resolving malfunctions that might occur. Various scenarios with possible causes and rectification procedures shall be explained.

The scenarios shall be accompanied by drawings indicating the position of the part that is faulty. Each of these drawings shall have a heading, comments and an explanatory key.

SB 04.07 BREAKDOWN MAINTENANCE AND REPAIR

The Contractor shall describe the complete procedure to be followed in the event of a breakdown. It shall be very clear what the operating personnel should look for, how to eliminate any dangers due to the breakdown (eg electricity must be shut off in the event of problems with the wiring) and who should be contacted. The Contractor shall supply the names and telephone numbers of at least two contact persons who may be contacted in the event of a breakdown.

The Contractor shall refer to Additional Specification SA: General Maintenance, to determine the reaction time for the repair to the breakdown.

Repair instructions shall provide the maintenance personnel with detailed instructions for the removal and/or replacement of any item requiring replacement due to malfunctioning. Contact numbers shall also be given to assist maintenance personnel, should a breakdown occur.

The Contractor shall specify the actions expected of maintenance personnel in the event of a breakdown.

The Contractor shall also specify the testing procedures to be followed before the system can be put into operation again. Every procedure shall be

described clearly and all the potential dangers pointed out, as well as the precautions that have to be taken.

The testing procedures shall be accompanied by drawings illustrating the process to be performed. Every drawing shall have a heading, comments and an explanatory key.

SB 05 MEASUREMENT AND PAYMENT

SB.01 Compile and supply a complete set of Operating and Maintenance ManualsUnit : sum

The unit of measurement shall be a sum for each complete set (seven copies) of Operating and Maintenance Manuals. Operating and Maintenance Manuals for different installations shall be measured separately in the Schedule of Quantities.

The tendered sum shall include full compensation for all technical research, gathering of information, compilation of manufacturer's instructions, compilation of drawings and diagrams, and for writing of all the descriptions, instructions and functional procedures, as well as language editing, in order to provide a clear and correct set of Operating and Maintenance Manuals.

The tendered sum shall also include full compensation for all expenses such as paper, copy work, binding and printing necessary for the completion of the manuals.

The tendered sum shall also include full compensation for the compilation of draft sets of operating and maintenance manuals in accordance with the specification, and for incorporation of all comments and corrective requirements.

SB.02 Compile and supply a complete site planUnit : sum

The unit of measurement shall be a sum for the complete set (three A1-size copies for each plan) and electronic format of the site plan(s).

The tendered sum shall include full compensation for all expenses such as paper, copy work and printing required for the completion of the site plan.

The site plan shall include and comply with the following:

SB.02. 01 SCOPE

This specification provides minimum requirements for the preparation of a Site Layout Plan and is based on the specifications of the Department of Public Works.

SB.02. 02 SPECIFICATIONS

The Specification is based on the following specifications:

1. Civil Engineering Manual PW347/2012, Annexure A1
2. Specification of Materials and Methods to be Used PW371
3. Additional Specification SB: Operating and Maintenance Manuals.

Compile and supply a complete Site Layout Plan:

(a) Detail Ground Survey

All services must be shown on a complete Site Layout Plan as required by the Engineer, including roads, fences, paving, transmission and telephone lines, etc. For sewerage reticulation and storm water drainage systems the pipe sizes, as well as invert heights must be provided. An effort must be made to trace the routes of these services.

(b) Survey of Buildings

The “footprint” of all the buildings and structures must be surveyed.

(c) General

All survey data shall be captured in electronic format.

SB.02. 03 TITLE BLOCK

The standard drawing sheet layout and title block of the Department of Public Works must be used.

Complete all the relevant fields in the title block with reference to the name of the Port of Entry in the appropriate block. The words SITE LAYOUT PLAN should form part of the drawing title.

SB.01 Drawing Number

The drawing number should consist of a four-part identifier:

- Port of entry designator: **WCS 045305**
- Group: 1
- Drawing number: Numbering will start at 1
- Revision number: Will start at 01

Typical example: **WCS 045305/1/1 Rev 01**

SB.02 Overlay Sheets/Layering Scheme (if required)

The overlay sheet designator identifies the type of drawing (example: overlay for water reticulation) and can be added to the drawing number:

- C: Existing structures, facilities, roads, paving, fencing, etc
- CR: Storm water drainage system
- CE: Electrical power and equipment
- CF: Fire fighting equipment
- CS: Sewer network
- CT: Telephone lines
- CW: Water reticulation system

Typical example for the numbering of an overlay sheet:

WCS 045305/1/CW/1 Rev 01

SB.02. 04 DRAFTING CONVENTIONS

The Site Layout Plan should be created following engineering conventions and standards in order to represent a clear drawing simplifying the huge amount of visual information.

SB.01 Paper Prints

Preference is given to size A1 plans, but for reporting size A3 will be used and the information should still be legible in this format.

SB.02 Scale

The Site Layout Plan must be drawn according to scale and the following scales can be used:

- 1:200 or
- 1:500 or
- 1:1000

SB.03 Plan Orientation

The Port of Entry should be rotated on the plan so that the north point arrow are pointing in the direction of either the upper left or upper right quadrants of the plan. The north point arrow to be placed in the top right hand corner of the drawing space.

SB.04 Contours

Contours do not form part of the Site Layout Plan.

SB.05 Line Weight







Line weight/width is extremely important and features such as the services should be drawn with lines that are more prominent. The following line weights (mm) can be used:

- | | |
|---------|---------|
| 1. 0.10 | 5. 0.35 |
| 2. 0.15 | 6. 0.50 |
| 3. 0.25 | 7. 0.70 |
| 4. 0.30 | 8. 1.00 |

SB.06 Line Type/Style

The following typical standard line types that can be used:

TYPICAL LINE TYPES

LINE DESCRIPTION	LINE APPEARANCE
1. Centre Line	
2. Solid/Continuous line	
3. Short broken line	
4. Long broken line	
5. Break line	
6. Hatch lines 45°	

SB.07 **Hatching**

Hatching are angled line patterns to indicate the position of permanent structures. The spacing between lines should be consistent at 45° to the structure. Park Homes must be shown on the plan, but without hatching.

SB.08 **Surfaced Areas**











Surfaced roads should be indicated by two solid lines as well as paved areas.

Two long broken lines should be used to indicate gravel roads.

SB.09 **Non Standard Line Types**

The following lines could be used for the various services, but must be identified in the Legend as a non standard line type:

LEGEND

			<u>Colour Code</u>	<u>Line Weight (mm)</u>
	W	Water pipe line	Cyan	0.50
	S	Sewer pipe line	Black	0.50
	EL	Electrical overhead line	Magenta	0.50
	EC	Electrical cable	Magenta	0.50
	T	Telephone line	Green	0.50
	G	Gas pipe line	Brown	0.50
	x	Fence line	Black	0.30
		Surfaced Road	Black	0.30
		Gravel Road	Black	0.30
		Railway Line	Black	0.25

SB.10 Lettering and Font Styles

Use the standard font style and font size for engineering drawings and do not use stylized fonts.

Create all text in upper case letters, except for certain unit designations such as km, m, mm, kVA, etc.

SB.11 Site Layout Plan

When the Port of Entry is too large for one sheet, divide the plan into logical sections. Add a key layout in the title block showing how the various sheets should be joined together to obtain a layout of the entire site. This key layout should form part of each sheet.

SB.12 Facilities

The name of the facility should be written adjacent to the facility. If the space is limited, a reference number of the facility, which refers to a description of the facility, is inserted in a table format in or close to the title block as a legend.

SB.13 Fences and gates

Show the position of the security fence and all other fences as well as gates. Include the height of all fences.

SB.14 Destinations

The destination to the nearest town with a pointing arrow should appear on all incoming and outgoing roads.

SB.02. 05 SERVICES

The position of the services is extremely important and should be indicated by lines that are more prominent/thicker. The description of the line types for the various services must be given in the Legend. See DIR04.09.

The following services, where applicable, must be shown on the Site Layout Pan for future reference:

SB.01 Water Reticulation System

Show the position of the water reticulation system and include the following:

- Pipe lines, pipe sizes, type of pipes, valves, meters, boreholes and tanks (include capacities). Show the direction of flow.

SB..02 Sewerage Network

Show the layout of the sewerage network and include the following:

- Pipe lines, pipe sizes, type of pipes, manholes, rodding eyes, septic tanks (include capacities), french drains (include volumes). Show the invert levels of all manholes as well as the position and level of the bench mark.

SB.03 Electrical Power

Indicate the position of electrical power lines, cables, substations, kiosks, flood lights along the perimeter as well as street lights and area lighting.

Air-conditioning units should be numbered and listed in table format including the type and size.

Give the source(s) of electrical power.

SB.04 Telephone Lines

Show the position of overhead telephone lines.

SB.05 Storm water System

Show the layout of the storm water system, culverts and sizes as well as inlet and outlet structures. Give the invert levels of all structures as well as the position and level of the bench mark.

SB.06 Fire Fighting Equipment

Include the pump installation, tank and capacity, fire hydrants, valves, meters, fire extinguishers and fire hose reels.

Fire extinguishers should be numbered and listed in table format including the type and size.

SB.02.06 ELECTRONIC FORMAT

A complete set of electronic files shall be placed on CD(s) in a Data Exchange Format (DXF) or DWG format.

Affix a stick-on label to the CD with the following information:

- Department of Public Works and logo
- Name of Port of Entry
- WCS number
- Description: SITE LAYOUT PLAN
- Drawing number(s)
- Date issued
- Electronic format: DXF or DWG

SB.02.07 SUBMISSION

The Consultant must submit A1 and A3 paper prints as well as a CD(s) of the Site Layout Plan(s) to the Project Manager before the Final Approval Certificate is signed.

The CD(s) must include the entire overlays/layering scheme and a compound drawing which includes all the services and information on one Site Layout Plan in DXF/DWG format.

During the Repair and Maintenance phase, the Project Manager will forward a request from time-to-time to the Consultants to prepare an A3 print(s) of the Site Layout Plan, which will be submitted as part of a report to Department of Public Works.

ADDITIONAL SPECIFICATION

SC GENERAL DECOMMISSIONING, TESTING AND COMMISSIONING PROCEDURES

CONTENTS

SC 01	SCOPE
SC 02	PHASED REPAIRS AND UPGRADING OF THE INSTALLATION
SC 03	DETAILED COMMISSIONING PROGRAMME
SC 04	COMMISSIONING COMMUNICATION CHANNELS
SC 05	COMMISSIONING RISK CONTROL AND PENALTIES
SC 06	DELAYS TO SCHEDULED SHUTDOWNS
SC 07	MATERIAL AND EQUIPMENT PROCUREMENT AND PROTECTION
SC 08	TESTING OF EQUIPMENT PRIOR TO RECOMMISSIONING
SC 09	TESTING OF MATERIAL AND EQUIPMENT SPECIFICATIONS AND WORKMANSHIP
SC 10	DECOMMISSIONING
SC 11	RECOMMISSIONING, COMMISSIONING AND COMPLETION OF INSTALLATIONS
SC 12	MEASUREMENT AND PAYMENT

SC 01 SCOPE

This specification encompasses all aspects of the repairs of systems and services that form part of an installation, including the factory and on-site testing, decommissioning, installation and commissioning of all equipment, instrumentation and materials reconditioned, supplied and installed as part of an installation as defined in Additional Specification SA: General Maintenance.

The specified procedures are the minimum requirements to be supplemented by various technical and particular specifications in this document. These requirements shall apply to all commissioning work scheduled as part of the initial repair work on installations, as well as commissioning work that is part of the routine preventive and corrective maintenance.

SC 02 PHASED REPAIRS AND UPGRADING OF THE INSTALLATION

When an installation consists of parallel systems or components, the complete installation and all its components shall be repaired without taking the complete installation out of commission at any time, unless otherwise specified in the Technical Specifications.

In order to schedule the repairs of an installation, all work shall be done in phases as specified in the Technical Specifications and illustrated in detail on the drawings. Repairs of each part shall terminate with the successful reconditioning of that part.

Each part of the system shall be decommissioned and recommissioned in the sequence specified in the Technical Specifications and on the drawings.

The Contractor shall install all the necessary temporary specials, spool pieces, supporting frames and brackets to provide a functional link between each repaired and upgraded part of the system and the part of the installation that has not yet been repaired and upgraded during recommissioning. Electrical and instrumentation Contractors and subcontractors shall ensure that the system remains operational as specified, using either existing or newly installed instruments, cables and controls.

Payment is based on the successful recommissioning of a specific part of the installation.

SC 03 **DETAILED COMMISSIONING PROGRAMME**

No work of any kind on any part of the existing installation shall take place prior to the Engineer's approval of a detailed commissioning programme. This programme shall be submitted in addition to the general programme for planning and monitoring contract progress, at least two weeks prior to any programmed shutdown. The programme shall be the coordinated product of the Engineer and the User Client. Commissioning programmes shall take all process requirements into account. The detailed commissioning programme shall indicate all actions necessary for:

- (a) Decommissioning
- (b) Recommissioning of parts of the installation
- (c) Commissioning of the installation as a whole.

All work deemed necessary for practical completion of the installation shall be indicated on the commissioning programme.

The programme shall indicate the milestones to be achieved before shutdown and decommissioning as activities of zero duration, all of which shall be prerequisites linked to the "start" of decommissioning.

The following specific actions shall be included in the programme, clearly indicating the time allowed for:

- (a) Communication, including the time for confirmation of the official shutdown;
- (b) Draining parts of the installation to sumps, where available, or to other storage facilities provided by the Contractor;
- (c) Installation of temporary blanked flanges or other means of isolation where necessary;
- (d) Partial decommissioning and removal of existing material and equipment to perform work, including protection of pipework against hot work, cutting into pipework, loosening bolts, flanges and all other work necessary for recommissioning;
- (e) Installation of temporary functional links (pipe specials) between any two parts of the installation;
- (f) Each individual field weld, subject to the Engineer's approval;

SC.3

- (g) Non-destructive testing of materials, for manufacturing/construction quality and for producing test results;
- (h) Installation of all instruments and their connection to SCADA systems;
- (i) Installation and connection of all power cables;
- (j) De-aeration of all pipe sections;
- (k) Communication between the Contractor, the Engineer, the Employer and the User Client;
- (l) Start-up of the complete system, indicating start-up procedures.

Inspection of the prefabricated installation, testing of all equipment prior to final commissioning, pressure testing and non-destructive testing shall be clearly scheduled in the project progress programme.

Day 30 tests and instruction/training sessions with the User Client shall be scheduled in the project progress programme.

SC 04 COMMISSIONING COMMUNICATION CHANNELS

The Contractor shall communicate with the User Client's operating and maintenance managers via the Engineer to finalise start-up after decommissioning in accordance with the specified procedures.

The following key parties shall be involved before and during shutdown and decommissioning of any part of the system:

Contractor:	Site Agent
Engineer:	Resident Engineer
Employer:	Representative of Area Manager
User Client:	Operating and Maintenance Manager.

SC 05 COMMISSIONING RISK CONTROL AND PENALTIES

- (a) All regulations and statutory requirements as laid down in the latest edition of the Occupational Health and Safety Act, 1993: Construction Regulations, 2003 as promulgated in Government Gazette No 2507 and Regulation Gazette No 7721 of 18 July 2003 shall be adhered to.
- (b) The Contractor shall not be allowed to work on any part of the installation without obtaining a commissioning check permit on the day of shutdown. A typical example of a commissioning check permit is included in this document, referring to the minimum required milestones to be achieved prior to decommissioning.
- (c) Payment reductions for exceeding the maximum permissible down-time during maintenance shall apply as stipulated in the General and special Conditions of Contract. This stipulation does not include shutdowns during programmed routine preventive maintenance work.

SC 06 DELAYS OF SCHEDULED SHUTDOWNS

Specific dates on which an installation shall be shut down for decommissioning shall be finalised during coordination meetings of all the parties involved, including the Engineer, the Employer, the User Client and the Contractor.

Although a date for each shutdown will be scheduled at the coordination meetings, the actual date of the shutdown shall be determined by the process requirements and user demands, allowing for a window of seven (7) calendar days from the date of the planned shutdown.

Prospective tenderers shall make allowances in their tendered rates for the shutdown to occur at any time during this seven-day period. No additional payment shall be due if the shutdown occurs within this seven-day period.

If the Contractor fails to commence with the shutdown and decommissioning of the installation within the scheduled period, all additional costs arising from the shutdown at a later stage shall be for the Contractor's account.

SC 07 MATERIAL AND EQUIPMENT PROCUREMENT AND PROTECTION

It is the responsibility of the Contractor to ensure the functionality of all units of new equipment prior to decommissioning, before installation of any specific part of the system. If the equipment, whether free-issued or not, does not conform to the functionality specifications during pre-installation testing, the Contractor shall notify the Engineer in writing without delay.

SC 08 TESTING OF EQUIPMENT PRIOR TO RECOMMISSIONING

The equipment shall be tested for functionality after pre-installation of equipment in parts of the installation.

- (a) The Contractor shall inform the Engineer well in advance of his intention to perform the first tests and start-up of equipment in order to allow a representative of the Engineer to witness the tests. The extent of all precommissioning tests and checks shall be agreed with the Engineer prior to commencement.
- (b) The Contractor shall first conduct his own tests of the equipment. When he is satisfied that the equipment complies with the specifications, he shall notify the Engineer that he is ready for the official tests on completion. The Contractor shall not conduct an official test without the Engineer's presence or approval. All equipment shall conform to the specified requirements.
- (c) Before starting up any part of the installation or filling the tanks and sumps with liquid, the Contractor shall clean out the tanks, pipes, fittings, equipment or structures and, if necessary, make arrangements with other Contractors to remove their building rubble from the structures, check that all safety devices and alarms have been set and activated, all nuts have been tightened correctly, that all the equipment is complete and ready for start-up, that the plant has been installed correctly, and that copies of the operating manuals have been handed to the Engineer.
- (d) The Contractor shall start up each section of equipment after ensuring that oil fillings, lubrication, vibration monitoring, cable termination and so on have been correctly completed. He is also responsible for the first

refilling of all lubricating oils and for adjusting the plant to operate according to the specifications. Before any equipment is started or energised, the Contractor shall ensure that it is safe in terms of the personnel and equipment on the site to do so. The Contractor's tendered rates and sums shall allow for these costs.

All equipment shall be tested according to the relevant specifications that form part of this document.

No shutdown or decommissioning of any part of the system shall take place unless all the equipment to be installed have been tested by the Contractor and approved by the Engineer.

SC 09 TESTING OF MATERIAL AND EQUIPMENT SPECIFICATIONS AND WORKMANSHIP

All results of the required non-destructive, precommissioning and manufacturing testing shall be submitted to the Engineer well in advance of testing the equipment on recommissioning. All such test results shall be submitted before Day 1 commissioning tests and no certificate of practical completion shall be issued prior to receipt of the required test results.

SC 10 DECOMMISSIONING

The decommissioning period shall commence on the instant of the entire system shutdown. The recommissioning period shall start in parallel with decommissioning.

Shutdown and decommissioning shall not proceed without compliance with all the milestones in the detailed commissioning programme. The list of milestones in this document is not complete but indicates the minimum requirements. Milestones to be achieved prior to shutdown and decommissioning may be added to the programme at the Engineer's discretion.

The Contractor is responsible for the safe decommissioning of all material, equipment, components and instrumentation to avoid damage to parts or components of the installation.

SC 11 RECOMMISSIONING, COMMISSIONING AND COMPLETION OF INSTALLATIONS

SC 11.01 RE-COMMISSIONING

Re-commissioning means the commissioning of all sections or systems that form part of the installation to meet the required functional specifications for the individual section or system prior to commissioning of the repaired and upgraded installation.

The Contractor is responsible for the recommissioning of all parts of the system and he shall perform the tasks listed below.

- (a) Prior notice shall be given to and proper arrangements shall be made for recommissioning with the Employer, the Engineer, the User Client and the suppliers of equipment that is affected by recommissioning and testing.

SC.6

- (b) If plant and equipment supplied by others are to be commissioned, the supplier's specific permission together with all requirements related to commissioning shall be obtained prior to recommissioning without in any way altering the Special Conditions of Contract with reference to the Contractor's liability in terms of defects.
- (c) The new and reconditioned parts of the installation shall be thoroughly inspected by a responsible representative of the Contractor to ensure that manufacture/construction and installation work have been completed according to the specifications.

SC 11.02

COMMISSIONING AND COMPLETION OF REPAIRS AND UPGRADING WORK

Commissioning means commissioning of the repaired and upgraded installation as a whole to perform in perfect working order.

- (a) The commissioning period for each installation as a whole:
 - (i) Commences with the Day 1 tests of the complete repaired and upgraded installation;
 - (ii) Includes commissioning of all sections and systems that have been recommissioned prior to the Day 1 tests;
 - (iii) Includes training of the User Client's operating personnel and the maintenance teams;
 - (iv) Terminates with a Day 30 test in compliance with the commissioning report.
- (b) The purpose of the Day 1 tests is to ensure that:
 - (i) The electronic, electrical and mechanical equipment and materials are functional and in perfect working order with respect to each other and the installation as a whole;
 - (ii) The commissioning period, including training, commences on successful completion of the Day 1 tests;
 - (iii) The Contractor is entitled to a certificate of practical completion for the repairs and upgrading of the installation on successful completion of the Day 1 tests;
 - (iv) The Contractor becomes responsible for maintenance of the installation and is entitled to performance-based payments in compliance with the Special Conditions of Contract and Additional Specification SA: General Maintenance.
- (c) Commissioning shall be undertaken over a trouble-free period up to Day 30. During this period the Contractor shall train the User Client's operators and his maintenance team for operating and maintaining the installation. This training shall allow for all possible operational conditions, including emergency conditions, the correct servicing of every part, the type of oil or grease to be used, and similar tasks. The training shall take place by means of demonstrations, and the operating and maintenance manuals shall be referred to for this purpose.

SC.7

- (d) Day 30 commissioning tests shall be performed thirty calendar days after the successful completion of the Day 1 tests. The commissioning period of the installation terminates upon the successful completion of the Day 30 tests.
- (e) The Contractor shall conduct all the tests required to satisfy the Engineer that the installation is performing according to specification, and shall make allowance for these tests in his tendered rates and prices. These tests shall be conducted to certify that the installation, as repaired, upgraded and installed, is in perfect working order in terms of the specified functional requirements. The Contractor shall note that all equipment is to be tested as part of an installation, where appropriate, and will not be passed if all protection devices, interlocking with other equipment, etc, are not fully functional.
- (f) The Engineer shall provide commissioning sheets to the Contractor at least three weeks before the commissioning period commences, for all the equipment supplied, reconditioned and installed by the Contractor. The Contractor shall complete the commissioning sheets during the commissioning period and all items listed shall be entered. No completion certificate will be issued for an installation of which the equipment has incomplete commissioning reports. Information that is not available or applicable, or instances where certain tests have not been carried out, are subject to the Engineer's decision.
- (g) Commissioning of the plant (which includes the thirty days between the Day 1 and Day 30 tests) includes operating under conditions that adequately prove that all the specifications have been met. All safety devices, standby plant, automatic controls and protection devices shall be adequately tested for reliability and correct functioning. The Contractor may be called upon to repeat testing during the maintenance period if the performance of the equipment is suspected to be substandard. Costs related to such tests shall be for the Contractor's account and shall comply with the specified requirements. Copies of updated commissioning reports shall be provided to the Engineer within two days after a test has been performed.
- (h) The Contractor is responsible for providing all labour and materials (including testing equipment) during the commissioning period and shall carry out all the servicing and adjustments to ensure that the installation operates as specified. Valid calibration certificates shall be available for all testing equipment on the site during the commissioning period.
- (i) Programmes for the Day 1 tests, Day 30 tests and instruction/training sessions with the User Client's operators and maintenance team shall be prepared by the Contractor and submitted to the Engineer at least two weeks before the commissioning period commences. The Contractor shall provide weekly updates of these schedules for the duration of the commissioning period.
- (j) The Contractor shall note that if any equipment fails during the commissioning period, the equipment shall be repaired or replaced by the Contractor, and testing and commissioning shall commence from scratch.
- (k) Successful commissioning of an installation entitles the Contractor to a certificate of completion for the installation.

SC 12 **MEASUREMENT AND PAYMENT**

SC.01 **Decommissioning and removing parts of the installation**Unit: sum

The unit of measurement shall be a sum.

The tendered sum shall include full compensation for all actions and labour required for shutdown and decommissioning of the entire installation as specified to enable decommissioning and removal of parts of the installation as listed in the Schedule of Quantities.

The tendered sum shall include full compensation for the decommissioning and removal of the parts and components of an installation as listed individually in the Schedule of Quantities, including actions and/or costs resulting from such work, to enable the recommissioning of parts of the repaired and/or upgraded installation.

The tendered sum shall include full compensation for final dismantling of decommissioned materials and equipment and the removal of all such items to stores on site, as directed by the Engineer.

SC.02 **Commissioning and testing of parts of the installation**Unit: sum

The unit of measurement shall be a sum.

The tendered sum shall include full compensation for commissioning and testing parts of the installation to be operational while still incomplete in relation to the entire repaired and/or upgraded system or installation.

Separate payment items shall be scheduled for separate parts of the system.

SC.03 **Commissioning and testing of the installation**Unit: sum

The unit of measurement shall be a sum.

The tendered sum shall include full compensation for commissioning the upgraded installation as a whole and for all costs and expenses related to labour, removal, repair, reinstallation and testing of material and equipment during the commissioning period for each part of the installation. The tendered sum shall include full compensation for the final commissioning and testing, including Day 1 and Day 30 tests, of all parts and components of the installation to the specified functional condition.

Payment shall be based on successful completion of the Day 30 tests.

SC.04 **Provision for safety and hot work requirements during shutdown** Unit: number

The unit of measurement shall be the number of shutdowns during which all the required safety and hot work requirements are provided.

The tendered rates shall include full compensation for all the required safety and hot work requirements and arrangements in accordance with the specifications during a shutdown period, including all labour, personnel, equipment, materials and consumables required.

ADDITIONAL SPECIFICATION

SD GENERAL TRAINING

CONTENTS

SD 01	SCOPE
SD 02	BASIC BETHOD REQUIREMENT
SD 03	TRAINING OF USER DEPARTMENT PERSONNEL
SD 04	TRAINING OF MAINTENANCE PERSONNEL

SD 01 SCOPE

The Contractor shall be responsible for providing diverse training to various groups, including operating and maintenance personnel. The Contractor shall develop and facilitate initial training sessions for all parties, as well as training sessions at specified intervals to revive and supplement the initial training. An accredited trainer shall present all training sessions.

This specification includes all requirements for methods to be employed, the syllabus required by the User Department, the syllabus required for maintenance managers and workers and the method of measurement and payment.

SD 02 BASIC METHOD REQUIREMENT

The Contractor shall be responsible for conducting a complete investigation of the groups that have to be trained in order to compile a proper training plan.

The investigation shall cover at least the following aspects:

- (a) Assess likelihood of conformance to task-specific requirements (status quo) of capabilities.
- (b) Identify minimum pre-qualification criteria in terms of existing knowledge and skill levels in relation to reaching target requirements.
- (c) Evaluate personnel in terms of pre-qualification criteria and tasks to be performed (skills profile).
- (d) Identify training needs
- (e) Develop appropriate and accredited training course and material in terms of task-specific activities and identified training needs, and compile the training syllabus per installation.

The Contractor shall identify an accredited trainer to assist in the above investigation and finalise the compilation of a training plan and syllabus. Approval of the syllabus shall be a condition for issue of a Certificate of Practical Completion for repair of an installation. Once the training plan and syllabus have been approved the Contractor shall liase with the Engineer to establish a date and appropriate training venue that would be conducive to learning to perform training.

The training shall be revived within one month after initial training to determine its effectiveness. Further regular sessions shall be scheduled according to the effectiveness of initial training.

The Engineer will be responsible for recording all training sessions and shall keep an attendance register. The Engineer will also examine the trainees officially with each training session and issue certificates of trainees' acquired skills on satisfactory completion of the training.

SD 03 TRAINING OF USER DEPARTMENT PERSONNEL

The Contractor's training shall include training of the User Department's operators on biannual basis to acquaint them with operating of installations (especially electrical and mechanical systems). The training sessions shall comprise lectures and on-site (hands-on) demonstrations, and shall be conducted over two-day periods. The Contractor shall liaise with the Engineer to prepare for the correct number of trainee operators.

The content of training courses for operators shall include the essential features of operating the installation, as also described in the Operating and Maintenance Manuals

Completion of an installation shall, in terms of the Special Conditions of Contract, be subject to successful completion of training. The training course shall also be based on the Operating and Maintenance Manuals. No training shall commence without the Engineer's approval of the final draft Operating and Maintenance Manual for the particular installation.

SD 04 TRAINING OF MAINTENANCE PERSONNEL

The Contractor shall train either his own employees, or local labourers, with regard to maintenance of the installation.

The training of maintenance managers shall include the following aspects:

- (a) Awareness of safety, health and personal hygiene in terms of the requirements of the Occupational Health and Safety Act, 1993 (Act 85 of 1993);
- (b) Functioning of the installation, including all its systems, services, parts of buildings and infrastructure;
- (c) All septic tasks related to routine preventative maintenance;
- (d) Interpretation and understanding of Operating and Maintenance Manuals with specific reference to requirements in cases of corrective and breakdown maintenance, and
- (e) repair/reconditioning and installation/construction of equipment and materials forming part of an installation.

SD 05 MEASUREMENT AND PAYEMENT

SD.01 Development of a syllabus for training of operators.....Unit: sum

The unit of measurement shall be the lump sum for the compilation of a training syllabus for each installation that shall be measured separately in the Schedule of Quantities.

The tendered sum shall include full compensation for identification of pre-qualification criteria and training needs, staff assessment and evaluation prior to training, all technical research, development and compilation of an accredited training course and course material, and all other actions necessary for commencement of official training in accordance with the specification.

The tendered sum shall also include full compensation for the compilation of a draft syllabus and for incorporation of all the Engineer's comments and corrective requirements.

SD.02 **Presenting a training course for operators**.....Unit: number

The unit of measurement shall be the number of training courses presented based on the approved syllabus.

The tendered rate shall include full compensation for presenting a two-day training course, including lectures, demonstrations, on-site training and hands-on development and improvement of operators' skills to enable the operators to operate installations safely and efficiently.

The tendered rate shall include full compensation for the Contractor's time, appointment of the accredited trainer for the course, and for all material expenses such paper hand-outs and slides for the whole group of trainees, the number of which shall be determined during development of the training course.

SD.03 **Presenting a training course for maintenance personnel**Unit: number

The unit of measurement shall be the number of training courses presented.

The tendered rate shall include full compensation for presenting a two-day training course, including lectures, demonstrations, on-site training and hands-on development, and improvement of maintenance personnel's skills to enable them to maintain and repair installations safely and efficiently at the satisfactory functional condition specified.

The tendered rate shall include full compensation for the Contractor's time, appointment of the accredited trainer for the course, and for all material expenses such paper hand-outs and slides for the whole group of trainees, the number of which shall be determined during development of the training course.

ADDITIONAL SPECIFICATION

SF GENERAL OPERATION

CONTENTS

SF 01	SCOPE
SF 02	OPERATION REQUIREMENTS
SF 03	OPERATION CONTROL
SF 04	COMMUNICATION
SF 05	PERFORMANCE MEASUREMENT
SF 06	MEASUREMENT AND PAYMENT

SF 01 SCOPE

Operation of the specified systems, services or equipment shall all be referred to as "Operation of an installation". Operation of an installation shall ensure effective functioning and optimum operational condition thereof. Monthly operation responsibilities for each installation including all units and components as specified shall commence with access to the installation.

Operation of an installation shall be performed in accordance with the Technical and Particular Specifications and the Operating and Maintenance Manuals.

Remuneration for operating "installations" (systems, services and equipment) is provided for in the Bills of Quantities by means of monthly payment items, depending on the score achieved by the operators.

This Additional Specification covers operation requirements, site operation administration, communication operation performance measurement, as well as the items for measurement of the Contractor's service level and resulting payment.

SF 02 OPERATION REQUIREMENTS

SF 02.01 CONTRACTOR'S RESPONSIBILITIES

The Contractor shall operate the complete installation for 36-month Contract period.

Operation implies and shall include hourly operation, daily operation (night and day), weekly as well as monthly operation on all components of the specified installations, *including* public holidays and non-working days.

The Contractor shall operate the equipment as detailed in the Technical and Particular Specifications and the operation and maintenance manuals. Each operational function, task, test or action shall be recorded in an approved format and listed in a quarterly report by the Contractor.

As part of the repair of each installation, the Contractor shall submit a set of Operating and Maintenance Manuals where applicable. The Contractor shall ensure through training that the operating and maintenance personnel are conversant with the instructions as presented in the Operating and Maintenance Manuals. Continued training shall be included in the scope of operation work for the duration of the -month Contract, In accordance with Additional Specification SD: General Training.

The Operating and Maintenance Manuals, as approved by the Engineer, shall be used as a basis of hourly, daily, weekly and monthly operations. The Contractor shall perform all operational tasks as described in the Operating and Maintenance Manuals.

SF 02.04 COMPONENTS INCLUDED IN OPERATION SCOPE

The main sections of a facility with their subsections are set out in the Technical Specifications and Particular Specifications where applicable and in the Bill of Quantities and will each be deemed "an installation". Operation, as specified, will be applicable to all of the installations listed in the Bill of Quantities under the "OPERATION" section

SF 05.05 COMMENCEMENT OF OPERATION PERIOD

Operation responsibilities for an installation shall include operation of all individual units, equipment or components thereof, and shall commence with access to the installation.

SF 02.09 SITE OPERATION RECORD KEEPING

The Contractor shall provide and maintain hard-cover A4 Operation files for each installation that needs to be operated for the duration of the Contract. All schedules, checklists, actions, tasks, reports, hourly, daily and monthly operational records and quarterly reports shall be filed.

Sire operation records shall be submitted to the Engineer at each monthly meeting.

These files will become the property of the Department of Public Works after the completion of the 36 months contract.

SF 02.10 SUPPLY OF LABOUR, EQUIPMENT AND MATERIAL

SF 02.10.01 Labour (qualified where necessary)

Competent personnel (qualified where necessary) that have been trained by the Contractor or external training authority, in accordance with Additional Specification SD: General Training shall execute all operational work.

SF 02.10.02 Equipment

All tools and equipment required for operational work shall be supplied by the Contractor at his cost (except where otherwise provided).

SF 02.10.03 Material

All material, equipment, testing equipment, protective clothing and appurtenances necessary for the complete operation of each installation shall be supplied and installed by the Contractor at his own cost. Remuneration for *maintenance* actions and material shall be measured elsewhere in this document.

The technical specification of each specific installation to be operated, shall indicate whether the Contract should supply other consumables (such as chemicals or coal) as part of his operation requirements.

SF 03 OPERATION CONTROL

Operation quality control shall be the responsibility of the Contractor. The Contractor shall introduce his own quality assurance system to assist him in ensuring that hourly, daily and monthly operational tasks are performed as described in the operating and maintenance manuals and Technical and Particular Specifications.

SF 04 COMMUNICATION

The Contractor shall communicate in writing to the Engineer the following operational results on a monthly basis:

- (a) The quantity of ground water or surface water extracted and the total recorded as at the last day of each month.
- (b) The quality of waste water irrigated or discharged into the environment and the total recorded weekly (compiled monthly)
- (c) The quantity of the waste water by grab sampling, at the point at which the waste water enters the effluent disposal system.
- (d) Record keeping of activities as specified shall be up to date on a daily basis and available to the Engineer on inspection.
- (e) The quality of domestic waste water discharged into the environment.
- (f) Details of failures and malfunctions and details of measures taken to avoid environmental pollution.

SF 05.03 PERFORMANCE-BASED PAYMENT

Remuneration for all value-related as well as all time-related preliminary and general charges shall be deemed included in the monthly operation payments for the various installations.

SF 05.03 Score-card

The Engineer shall inspect each installation monthly after access to the installation has been granted. The Engineer shall use a score-card to measure the quality of operational tasks rendered by the Contractor during the preceding month, on all components that form part of the installation, in accordance with the Operation specifications. The Engineer will record his inspection directly onto the score-card. The score-card shall serve to evaluate ten performance indicators each month in the manner set out below.

The Contractor shall always have the opportunity to score the maximum points, provided that his operation work complies with the Specifications. The Employer shall be protected against a reduced or unsatisfactory operational level and may refuse payment on such points.

SF 05.03.02 Performance indicators

Performance indicators shall be selected to measure the Contractor's service level of operation.

The Engineer shall select ten (10) performance indicators each month, which shall focus on the measurement of operation quality against the relevant specifications for the ensuing

month. All ten (10) performance indicators are known to both the Engineer and the Contractor.

The Contractor shall aim to perform satisfactory on all ten performance indicators. All indicators shall be selected from the scope of his normal hourly, daily and monthly operation work and shall be based on the operation control plan and operating and maintenance manuals. The work shall either be satisfactory, or unsatisfactory, and the Contractor shall score one (1) or zero (0) respectively per indicator.

Performance indicators shall be used to focus on certain key aspects of the work and shall in no way limit the Contractor's responsibility to do all the required work.

SF 05.03.03 Satisfactory performance

The Engineer shall inspect the site on an arbitrary day to measure the quality of operation against the ten selected performance indicators. Should the Contractor score the maximum points (10) he shall receive his full operation payment for the installation. Should the quality of operation be unsatisfactory according to the score-card, the Contractor may fail to achieve full payment due to a reduced service level. Each monthly payment for operation shall be subject to evaluate based on the score-card.

A copy of the score-card including a guideline for the use thereof is included in this Specification.

SF 06 MEASUREMENT AND PAYMENT

SF.01 OPERATION OF AN INSTALLATION.....Unit: point

The unit of measurement shall be a point. Each month shall represent a maximum of ten points and a minimum of zero points, depending on the performance and quality of operation. Ten points per month, determined by using the tendered rate per point, shall include full compensation for all liabilities and obligations described or implied in the Contract documents and deemed by the Contractor to be applicable to the operation of an entire installation, and all appurtenant works deemed to form part thereof, as defined in the relevant Technical or Particular Specifications.

The combined bid rate for ten points shall also include full compensation for complete hourly, daily, weekly and monthly operation.

Although ten points per month shall include full compensation for hourly, daily and monthly operation, the Contractor might fail to achieve all points applicable in the event of unsatisfactory performance, in which case he shall still perform all operation requirements according to specification, but at his own cost where a reduction in points awarded is insufficient to cover his cost.

Remuneration for all value-related as well as all time-related preliminary and general charges shall be deemed included in the monthly operation payments for the various installations.

SF.02 **APPOINT MANDATORY CLASS I AND CLASS II**
PROCESS CONTROLLERSUnit:
point

The unit of measurement shall be each month the stipulated number of process controllers has performed the duties as prescribed in the Contract and Technical Specifications. Each month shall represent 16 hours per day for 8 days per week. The rate tendered for the process controllers shall include all duties as required by the process controllers in terms of the Contract and Technical Specifications.

The item shall not limit the Contractor to the amount of personnel required to operate the works but shall be deemed the minimum requirement for the operation of the works as required in the Contract and Technical Specifications.

Any additional labour or process controllers required to perform any preventative or breakdown operation work shall be included in the Contractor's rate tendered for the ten operation scoring points per month.

The item shall be deemed mandatory and the Contractor shall be liable in terms of the ten operation scoring points per month to ensure that the required process controllers are appointed.

Remuneration for all value-related as well as all time-related preliminary and general charges shall be deemed included in the monthly operation payments for the various installations.

SF.03 **APPOINT MANDATORY CLASS III AND CLASS IV**
PROCESS
CONTROLLERSUnit: point

The unit of measurement shall be each month the stipulated number of process controllers has performed the duties as prescribed in the Contract and Technical Specifications. Each month shall represent 8 hours per day for 5 days per week. The rate tendered for the process controllers shall include all duties as required by the process controllers in terms of the Contract and Technical Specifications.

The item shall not limit the Contractor to the amount of personnel required to operate the works but shall be deemed the minimum requirement for the operation of the works as required in the Contract and Technical Specifications.

Any additional labour or process controllers required to perform any preventative or breakdown operation work shall be included in the Contractor's rate tendered for the ten operation scoring points per month.

The item shall be deemed mandatory and the Contractor shall be liable in terms of the ten operation scoring points per month to ensure that the required process controllers are appointed.

Remuneration for all value-related as well as all time-related preliminary and general charges shall be deemed included in the monthly operation payments for the various installations.

GUIDELINE FOR THE USE OF THE OPERATION SCORE-CARD

The score-card and performance indicators must be used as an Operation management tool. The aim with each score-card is to ensure that:

- (a) the project focuses on key aspects of Operation per month;
- (b) the Contractor receives payment for his work, and
- (c) the Employer receives value for money and a sustained high level of service.

Performance indicators must be selected to measure the Contractor's service level of operation that will be based on the Operating and Maintenance Manuals (containing information specified in the Contract documentation).

For each specific installation, different performance indicators must be defined each month based on the content of the Operation in relation to the scope of Operation work per installation and must be based on the Contractor's service level record on operation.

The Contractor and the Engineer must agree on all performance indicators at an occasion prior to the month during which the Contractor's performance (service level of Operation) will be measured.



DEPARTMENT OF PUBLIC WORKS

HIV/AIDS

SPECIFICATION

OCTOBER 2004

SECTION

HIV/AIDS SPECIFICATION

HIV/AIDS REQUIREMENTS

1 SCOPE

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers;
- Informing Workers of their rights with regard to HIV/AIDS in the workplace;
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices.

2 DEFINITIONS AND ABBREVIATIONS

2.1 Definitions

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes.

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent.

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all.

2.2 Abbreviations

- HIV : Human Immunodeficiency Virus.
- AIDS : Acquired Immune Deficiency Syndrome.
- STI : Sexually Transmitted Infection.

3 BASIC METHOD REQUIREMENT

3.1 The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers.

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site;
- When new Workers or Sub-contractors will join the construction project;
- Duration of Workers and Sub-contractors on site;
- How the maximum number of Workers can be targeted with workshops;
- How the Contractor prefers workshops to be scheduled, e.g. three hourly sessions per Worker, or one 2.5 hour workshop per Worker;
- Profile of Workers, including educational level, age and gender (if available);
- Preferred time of day or month to conduct workshops;
- A Gantt chart reflecting the construction programme, for scheduling of workshops;
- Suitable venues for workshops.

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training.

3.2 The Service Provider Workshop Plan shall address, but will not be limited to the following:

- 3.2.1 The nature of the disease;
- 3.2.2 How it is transmitted;
- 3.2.3 Safe sexual behaviour;
- 3.2.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
- 3.2.5 Attitudes towards other people with HIV/AIDS;
- 3.2.6 Rights of the Worker in the workplace;
- 3.2.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
- 3.2.8 How the Service Provider will support the Awareness Champion;
- 3.2.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
- 3.2.10 How the workshops will be presented, including frequency and duration;
- 3.2.11 How the workshops will fit in with the construction programme;
- 3.2.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
- 3.2.13 How the video will be used;
- 3.2.14 How the Service Provider will elicit maximum participation from the Workers;
- 3.2.15 A questions and answers slot (interactive session).

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated.

4 HIV/ AIDS AWARENESS EDUCATION AND TRAINING

4.1 Workshops

The Contractor shall ensure that all Workers attend the workshops.

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the

learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops.

4.2 Recommended practice

4.2.1 Workshop Schedule

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session.

4.2.2 Service Providers

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works.

4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met.

4.2.3.1 UNIT 1: The nature of HIV/AIDS

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:

1. Define and describe HIV and AIDS;
2. List and describe the progression of HIV/AIDS.

4.2.3.2 UNIT 2: Transmission of the HI virus

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found;
2. Describe how HIV/AIDS can be transmitted;
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS.

4.2.3.3 UNIT 3: HIV/AIDS preventative measures

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream.

Assessment Criteria:

1. Report on how to minimise the risk of HIV/AIDS infection;
2. Report on precautions that can be taken to prevent HIV/AIDS infection;
3. Explain or demonstrate how to use a male and female condom;
4. List the factors that could jeopardize the safety of condoms provided against HIV/AIDS Transmission.

4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counseling.

Assessment Criteria:

1. Describe methods of testing for HIV/AIDS infection;
2. Report on why voluntary testing is important;
3. Report on why pre- and post-test counselling is important.

4.2.3.5 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria:

1. List and describe ways to manage HIV/AIDS;
2. Describe nutritional needs of people living with HIV/AIDS;
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS;
4. Explain the need for counselling and support to people living with HIV/AIDS.

4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people.

Assessment Criteria:

1. Discuss anti-retroviral therapy;
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child;
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS;
4. Describe post exposure prophylactics.

4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way.

Assessment Criteria:

1. Discuss the rights of a person living with HIV/AIDS in the workplace;
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace;
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important.

4.3 Displaying of plastic laminated posters and distribution of information booklets

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets. The contractor should include the costs of posters and information booklets in his/her tender price.

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's.

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover.

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds.

The posters on display must always be intact, clear and readable.

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site.

5 PROVIDING WORKERS WITH ACCESS TO CONDOMS

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health.

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover.

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers.

7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION

- 7.1 Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner.

7.2 The Awareness Champion shall be responsible for:

7.2.1 Liaising with the Service Provider on organising awareness workshops;

7.2.2 Filling condom dispensers and monitoring condom distribution;

7.2.3 Handing out information booklets;

7.2.4 Placing and maintaining posters.

8 MONITORING

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract.

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent.

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent.

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent.

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract.

SCHEDULE A

HIV/AIDS PROGRAMME: SITE CHECKLIST

When did construction commence: _____

Name of Departmental Project Manager: _____

Please refer to HIV/AIDS Programme activities during the reporting period

<i>Tick the block if Contractor satisfactorily complied with specifications</i>																												
DATE	PI				PI				PI				PI				PI				PI							
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 14 days of site handover																												
Awareness champion on site																												
HIV/AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												
Support service poster/s in highly trafficked area																												
Support service poster/s in a good condition																												

<i>Please indicate the applicable number for the reporting period</i>							
Workers on payroll (at PI)							
Sub-Contractors who will be on site for longer than 30 days (at PI)							
Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							

Representative/Agent

Date

Contractor

Date

Date of progress inspection: (ccyy/mm/dd)

Reporting period: (ccyy/mm/dd) _____ to (ccyy/mm/dd) _____

Deviations from HIV/AIDS awareness programme plan:

Corrective actions:

Representative/Agent

Departmental Project Manager

Date

Date

SCHEDULE B

HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT

Reporting period: (ccyy/mm/dd) _____ to (ccyy/mm/dd) _____

Number of workshops conducted in reporting period: _____

Number of scheduled workshops according to approved workshop plan: _____

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

Service Provider

Date

Date

HIV/AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED

<i>Fill in the applicable information with regard to each workshop conducted</i>																				
DATE	W/S				W/S				W/S				W/S							
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Content of workshop: (Mark the content included)																				
SLO1																				
SLO2																				
SLO3																				
SLO4																				
SLO5																				
SLO6																				
SLO7																				
HIV/AIDS in construction video																				
Indicate the duration of the workshop in hours																				
Total number of Workers																				
Indicate workshop venue																				

SCHEDULE C

CONTRACTOR HIV/AIDS PROGRAMME REPORT

Project name: _____

Project Location: _____

Contract value of project: R_____

Department of Public Works Project Manager: _____

HIV/AIDS Programme duration: (ccyy/mm/dd) _____ to (ccyy/mm/dd) _____

AWARENESS MATERIAL

Describe location of posters displayed during the programme: _____

Comments on posters: _____

Indicate total number of booklets distributed: _____

Comments on booklets: _____

CONDOMS

Indicate total number of male condoms distributed: _____

Indicate total number of female condoms distributed: _____

Describe where male condom dispenser was placed: _____

Describe where female condom dispenser was placed: _____

HIV/AIDS WORKSHOPS

Indicate the total number of HIV/AIDS workshops conducted: _____

Indicate the duration of workshops: _____

Indicate the total number of Workers that participated in the HIV/AIDS workshops: _____

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry:

Comments on HIV/AIDS workshops on site: _____

GENERAL

Briefly describe programme activities and satisfaction with outcome: _____

Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site:

Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers:

Yes	No	Currently developing one
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Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss
Reactive TB
Hair loss
Severe tiredness

Coughing or chest pain
Pain when swallowing
Persistent fever
Diarrhoea

Vomiting
Meningitis
Memory loss
Pneumonia

Number of HIV/AIDS-related deaths: _____

Contractor

Date

Departmental Project Manager

Date

ADDITIONAL SPECIFICATION

SI OCCUPATIONAL HEALTH AND SAFETY

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SI 01 APPLICABLE LEGISLATION AND REGULATIONS

This document was prepared to guide the Agent in the compilation of a Health and Safety Specification in terms of Sub-regulation 4(1)a of the Construction Regulation as published under Government Notice R.2003 of 18 July 2003. The content of this document or the fact it was made available for the use of the Agent will not relieve the Agent of any of his obligations in terms of the act.

The Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) together with its applicable Regulations ("the Act") forms part of this Health and Safety Specification. Any word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned to it unless the context otherwise indicates.

SI SCOPE OF WORK

All work forming part of this Contract is divided into installations. The maintenance and servicing work to be performed as part of the installations under this Contract mainly

consists of the following: Buildings (Structural, Wet Services and Electrical) Roads, Stormwater, Water distribution, Sewer Networks, Standby Power generation, External Lighting and Firefighting equipment at the various Ports of Entry as listed in the Scope of Works (PG-01.1)

SI 03 THE PRINCIPAL CONTRACTOR'S GENERAL DUTIES

The Principal Contractor's general duties in terms of this Health and Safety Specification are, but not limited to, the following:

1. Every Principal Contractor shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees and other contractors.
2. Without derogating from the generality of a Principal Contractor's duties under subsection (1), the matters to which those duties refer include in particular –
 - a. the provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, are safe and without risks to health;
 - b. taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety or health of employees and other contractors, before resorting to personal protective equipment;
 - c. making arrangements for ensuring, as far as is reasonably practicable, the and absence of risks to health in connection with the production, processing, handling, storage or transport of articles or substances;
 - d. establishing, as far as is reasonably practicable, what hazards to the safety of persons are attached to any work which is performed substance which is produced, processed, used, handled, stored and any plant or machinery which is used in his business, and he shall, as far as is reasonably practicable, further establish what precautionary measures should be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures;
 - e. providing such information, instructions, training and supervision necessary to ensure, as far as is reasonably practicable, the work of his employees and other contractors;
 - f. not permitting any employee or contractor to do any wo use, handle, store or transport any article or substance machinery, unless the precautionary measures contemplated in paragraphs (b) and (d), or any other precautionary measures which may be prescribed, have been taken;
 - g. taking all necessary measures to ensure that the requirements of this Health and Safety Specification are complied with by every person in his employment or on premises under his control where plant or machinery is used;
 - h. enforcing such measures as may be necessary in the interest of health and safety;
 - i. ensuring that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented; and
 - j. causing all employees and other contractors to be informed regarding the scope of their authority as contemplated in section 37(1)(b) of the Act.
 - k. Monthly OHS audit and reporting.

SI 04 THE PRINCIPAL CONTRACTOR’S SPECIFIC DUTIES

The Principal Contractor’s specific duties in terms of this Health and Safety Specification are specified in the Construction Regulation as published under Government Notice R.2003 of 18 July 2003. (Hereinafter referred to as “Construction Regulation, 2003”).

The Principal Contractor is specifically referred to the following sub-regulations of the Construction Regulation, 2003:

Subject	Applicable sub-regulation of the Construction Regulation, 2003.
Definitions	1
Scope of application	2
Notification of construction work	3
Principal Contractor and Contractor	5
Supervision of construction work	6
Risk assessment	7
Approved inspection authorities	29
Offences and penalties	30
Withdrawal of regulations	31
Short title	32

The Principal Contractor will acquaint himself with these duties and will make provision in his Contract price for the implementation and supervision these duties.

SI 05 THE PRINCIPAL CONTRACTOR’S SPECIFIC DUTIES WITH REGARD TO HAZARDOUS WORK OR ACTIVITIES

The following hazardous work or activities were identified in terms of the Construction Regulation, 2003, and it is the duty of the Principal Contractor to ensure that the said work and activities are performed or carried out in terms of the relevant sub-regulations of the Construction Regulation, 2003 and other applicable Regulations.

Hazardous work or activity	Applicable sub-regulation of the Construction Regulation, 2003.	Other applicable Regulations
Fall protection	8	
Structures	9	
Formwork and support work	10	
Excavation	11	Precautionary measure as stipulated for confined spaces under the General Safety Regulations published

		under Government Notice R.1031 of 30 May 1986, as amended
Demolition work	12	Asbestos related work will be conducted in accordance with the Asbestos Regulations published under Government Notice R.155 of 10 February 2002 as amended. Lead related work will be conducted in accordance with the Lead Regulations published under Government Notice R. 236 of 28 February 2002 as amended.
Scaffolding	14	Section 44 of the Act
Suspended scaffolds	15	Section 44 of the Act
Boatswains chairs	16	
Material hoists	17	
Explosive powered tools	19	
Cranes	20	Applicable provisions of the Driven Machinery Regulations as published under Government Notice R.533 of 16 March 1990, as amended
Construction vehicles	21	
Electrical installations and machinery on construction sites	22	Applicable provisions in the Electrical installation Regulations published under Government notice R.2920 of 23 October 1992 and the Electrical Machinery Regulations published under Government notice R.1953 of 12 August 1988 respectively as amended.
Use and temporary storage of flammable liquids on construction sites.	23	Applicable provisions as stipulated in the General Safety Regulations published under Government Notice R.1031 of 30 May 1986, as

		amended
Water environments	24	
Housekeeping on construction sites.	25	Applicable provisions as stipulated in the Environmental Regulations for Works places published under Government Notice R.2281 of 16 October 1987, as amended.
Stacking and storage on construction sites.	26	Applicable provisions as stipulated in the General Safety Regulations published under Government Notice R.1031 of 30 May 1986, as amended.
Fire precautions on construction sites	27	Applicable provisions as stipulated in the Environmental Regulations for Works places published under Government Notice R.2281 of 16 October 1987, as amended.

SI 06 MEASUREMENT AND PAYMENT

SI.01 OCCUPATIONAL HEALTH AND SAFETY..... Unit: month

The unit of measurement shall be a calendar month and shall include full compensation for all liabilities and obligations described or implied in the Contract document and deemed by the Contractor to be applicable for Compliance with OHS Act and Construction Regulations 2003, and all appurtenant works deemed to form part thereof, as defined in the relevant Specifications.

The contractor's Occupational Health and Safety shall be scored monthly as per the typical OHS-Audit Report contained in this specification. This item shall only be payable for the specific month in which the contractor exceeds an OHS-Audit-score of 95% or more. The contractor should note that all work on site may be stopped at any stage by the external OHS Auditor should the contractor not achieve the minimum score of 90% for the OHS Audit report.

7.1 Principal Contractor and contractors appointed by the Principal Contractor

- 7.1.1 The Principal Contractor shall accept the appointment under the Terms and Conditions of Contract between the Department of Public Works and the Principal Contractor. The Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulations 3 of the Construction Regulations. Annexure B of this Specification contains a "Notification of Construction Work" form. The Principal Contractor shall submit the notification in writing prior to commencement of work and inform Department of Public Works or his Agent accordingly. The above-mentioned notification of construction work must be kept available on site and be presented to any Inspector, Client Representative, Contractor or employee. **It is advised that the Labour Notification document be signed by both parties (Client and Principal Contractor) at site handover as no work, not even site establishment, will be allowed if this notification has not been sent to the department of Labour.**
- 7.1.2 The Principal Contractor shall ensure that he/she is fully conversant with the requirements of this Specification and all relevant health and safety legislation. This Specification is not intended to supersede any Act, nor Regulations or any part of either. Those sections of the Act and the Construction Regulations, which apply to the scope of work to be performed by any Contractor in terms of this contract, (entirely or in part) will continue to be legally required of the Principal Contractor to comply with. No Contractor will in no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act, SABS Codes of Practice mentioned in any document pertaining to this project or which may perceivable be applicable to this contract.
- 7.1.3 The Principal Contractor shall provide and demonstrate to Department of Public Works a suitable and sufficiently documented health and safety plan based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the works. This plan shall, as appendices, include the health and safety plans of all Sub-contractors for which he/she has to take responsibility in terms of this contract. **Note that no generic safety plan will be accepted. All safety plans shall be site specific.**
- 7.1.4 Any contractor involved in this project by means of construction work, supplying of any product, material or service, shall provide proof of his registration and good standing with the Compensation Commissioner or with a licensed compensation insurer prior to commencement with the works or service. Where the Department of Public Works have appointed any preselected or pre-approved contractor, such contractor will be seen as Principal Contractors and shall comply with all OHS requirements as set out in this document. **No contractor will be allowed on site without a letter of good standing from the Compensation Commissioner.**
- 7.1.5 The potential Principal Contractor shall, in submitting his/her tender, demonstrate that he/she has made provision for the cost of compliance with this Health and Safety Specifications and Requirement, the Act and any Regulations pertaining to the health and safety of employees at work. The Principal Contractor will furthermore ensure that any contractor appointed under him/her complies to this document ensuring that such a contractor:

- 7.1.5.1 Is in good standing with the Compensation Commissioner
- 7.1.5.2 Complies fully with the Basic Conditions of Employment Act of 1997.
- 7.1.5.3 Is fully conversant with the requirements set out in this document.
- 7.1.5.4 Have proof of qualification and certification of all appointed persons in terms of section 16.2 of the act, managers and supervisors in terms of the Act and any Regulations pertaining to the health and safety of employees at work. Should such certification not be valid or absent, such training shall be provided by the Client and costs incurred due to non-compliance shall be payable by the applicable contractor for the above-mentioned or any other training in terms of the Act or any Regulations pertaining to Health and Safety of employees.
- 7.1.5.5 Is a qualified contractor, specializing in the field for which he/she is appointed
- 7.1.5.6 Has the infrastructure and financial stability to adhere to all requirements within this document
- 7.1.5.7 Who is not represented on site by the Chief Executive Officer or Managing Director, a qualified person shall be appointed and available on site in terms of section of the Act.

N.B. Construction Regulation 5(3) (g) determines that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process. The Contractor shall on tendering make provision for the cost of health and safety measures in terms of his/her documented Health and Safety Plan and measures based on these Health and Safety Specifications during the period of the project. The cost shall be duly quantified and clearly identified for such identifiable purpose

- 7.1.6 The Principal Contractor shall consistently demonstrate his competence and the adequacy of his resources to perform the duties imposed on his/her in terms of this Specification, the Act and the Construction Regulations.
- 7.1.7 The Principal Contractor shall ensure that a copy of all contractors on site's health and safety plans are available on site and will be presented upon request to Department of Public Works, Safety Officer, Inspector, Sub-contractor or employee.
- 7.1.8 The Principal Contractor shall ensure that all health and safety files, including those of sub-contractors appointed by the Principal Contractor are available on site as required in terms of these Specifications, the Act or any Regulations pertaining to the health and safety of employees on site, and made available to Department of Public Works or Inspector upon request. Upon completion of the works, the Principal Contractor shall hand over a consolidated health and safety filing system to the Department of Public Works.
- 7.1.9 The Contractor shall, throughout execution of the project, ensure that all conditions imposed on his Sub-contractors in terms of the Act and the Construction Regulations are complied with as if they are the Principal Contractor.
- 7.1.10 The Contractor shall from time to time evaluate the relevance of the Health and Safety Plan/system and revise the same as required, following which revised plan/system shall be submitted to Department of Public Works and/or his/her Agent for approval.

7.1.11 All contractors shall from time to time and before any work is started, ensure that a qualified appointed Risk Assessor conducts a risk assessment regarding such work and communicate these risks with the health and safety committee in order to manage such risks and retain safety to all employees at work. Should such an appointed person not have the knowledge and certification to execute his/her responsibilities, The Client will train and certify such person/s and costs for such training will be paid by the applicable contractor.

7.1.12 The Principal Contractors shall keep on site a daily Hazard Identification and Risk Assessment (HIRA) document, ensuring that all supervisors and employees are familiar with the daily risks pertaining to the work at hand. Such documentation shall be kept on file for reference purposes at the site office. All supervisors shall be fully qualified to perform a risk assessment to uphold his/her responsibility in terms of the Construction Regulations 6(6).

7.1.13 The Principal Contractor shall ensure that no employee or visitor is allowed on site without a written approval permit from the Principal Contractor. Such permit will only be issued after site safety induction training has been conducted and the emergency procedures communicated with such employee/visitor. All safety induction records and acknowledgments of understanding employees/visitors shall be available on the safety file.

7.1.14 The Principal Contractor shall furthermore ensure that all contractors and employees entering the site are in possession of an identification card, containing a photo of the person carrying the identification, the employer detail and job description as well as any training detail.

7.2 Contractors appointed by the Principal Contractor

In addition, no contractor will be allowed to perform any work unless the following has been established and adhere to:

- Every contractor will enter into a mandatory agreement pertaining to the health and safety on site and to ensure the safety of his/her employees at work
- Every contractor will submit proof of good standing with the Compensation Commissioner. The contractor shall furthermore demonstrate an action plan of the renewal interval and process of the letter of good standing
- Before commencement of any work, the contractor will cause a risk assessment to be conducted by a certified Risk Assessor and take reasonable steps to ensure safety of his/her employees during such work
- . No contractor will *be* allowed on site without a written approval permit from the Principal Contractor. Site safety induction training must be conducted before any employee will be allowed to enter the site for the first time.

SI 08 HEALTH AND SAFETY FILE

Every contractor, which includes the Principal Contractor, shall in terms of Construction Regulation 5(7), keep a Health & Safety File on site at all times, which must include all documentation required in terms of the Act and Regulations. A full detailed index of the safety file required for this project is listed in section 24 of this document. The safety file of the Principal Contractor shall include a list of all Contractors on site who are appointed by the Principal Contractor and the agreements between the parties and details of work being done.

IMPORTANT

The Health and Safety File will remain the property of Department of Public Works and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Department of Public Works and/or its Agent on its behalf at the time of completion of the project. Under no circumstances may a safety file be removed from site or copied as all documentation in it is regarded as legal binding documents. Generic non site-specific documentation will not be accepted.

SI 09 OHS GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OHS PERFORMANCE

The Principal Contractor is required to maintain an acceptable disabling incident frequency rate (DIFR) and report on this to Department of Public Works and/or its Agent on its behalf on a monthly basis.

The Principal Contractor shall ensure injury and incident records (Near Hits, First Aid, Medical cases, Disabling Lost Time Incidents), training etc. referred to above are kept on site. All documents shall be made available to the client for inspection including the Department of Labour's Inspectors as required by the Occupational Health and Safety Act, 85 of 1993.

The statistics formula as listed below shall be adhered to.

DIFR (Disabling Injury Frequency Rate) $\frac{DI's \times 1\,000\,000}{\text{Man-hours}}$

SI 10 IDENTIFICATION OF HAZARDS AND DEVELOPMENT OF RISK ASSESSMENTS, SAFE WORKING PROCEDURES (SWP) AND METHOD STATEMENTS

- The Contractor is required to develop Baseline Risk Assessments, which must be included in the tender document, identifying all the risks involved taken in consideration, the scope of work as seen from the current site situation. This risk assessment will assist the contractor in proactively plan for safety management, safety budgeting and execution of his/her safety plan.
- Once taken site, the contractor will perform an Issue Based Risk Assessment, addressing individual processes within the construction process
- Safe Working Procedures (SWP) and Method Statements for each activity executed in the contract or project must be drafted and implemented.
- Each contractor shall implement a daily Hazard Identification and Risk Assessment (HIRA) system where hazards and risk assessments are discussed with all employees involved with a specific task.
- Once risks have been identified, notice boards, symbolic safety signs and instructions must be placed or installed to prevent incidents and warn all parties involved of such hazards and risks

SI 11 ARRANGEMENT FOR MONITORING AND REVIEW

11.1 Monthly Audit by Client and/or its Agent on its behalf

Department of Public Works and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor. Auditing will focus on the following:

- Legal compliance and documentation
- OHS Plan and implementation

- Appointment documentation
- Risk Assessments
- OHS Awareness
- Keeping of registers and checklists
- OHS Training
- OHS Committee
- Reporting, investigation and management of incidents
- Personal Protective Equipment
- Etc

11.2 Other audits and inspections by client and/or its agent on its behalf

Department of Public Works and/or its Agent on its behalf reserves the right to conduct any other ad hoc audits and inspections as it and/or its Agent on its behalf deem necessary.

A representative of the Principal Contractor and the relevant Health and Safety Representative(s) must accompany the Department of Public Works and/or its Agent on its behalf on all Audits and Inspections and may conduct their own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results. The Department of Public Works and/or its Agent on its behalf may require to be handed a copy of the minutes of the previous Health and Safety Committee meeting reflecting possible recommendations made by that committee to the Employee for reference purposes.

11.3 Reports

11.3.1 The Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

- dies
- becomes unconscious
- loses a limb or part of a limb
- is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed.

OR where:

- a major incident occurred
- the health or safety of any person was endangered
- where a dangerous substance was spilled
- the uncontrolled release of any substance under pressure took place
- machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- machinery ran out of control

to the Provincial Director of the Department of Labour within seven (7) days and at the same time to Department of Public Works and/or its Agent on its behalf.

Refer in this regard to Section 24 of the Act & General Administrative Regulation 8.

11.3.2 The Contractor is required to provide the Department of Public Works and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations.

11.3.3 The Contractor is required to provide the Department of Public Works and/or its Agent on its behalf with a monthly "Health and Safety Risk Management Report".

11.3.4 The Contractor is required to provide a.s.a.p. Department of Public Works and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated below. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of The Contractor; it shall be reported immediately to any of the following:

- Department of Public Works
- Client's Agent
- As per OHS Act

11.4 Review

The Principal Contractor is to review the Hazard Identification, Risk Assessments and Safe Work Processes monthly as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor must provide Department of Public Works and/or its Agent on its behalf, other Contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph.

11.5 Site Rules and other Restrictions

11.5.1 Site Safety Rules

The Contractor must develop a set of **site-specific** OHS rules that will be applied to regulate the Health and Safety Plan and associated aspects of the construction. The site safety rules shall not be limited to, but include the following:

- No interaction shall take place between any employee and any visitor of the Port of Entry.
- No sleeping or any form of accommodation will be allowed on site
- No open fire will be allowed
- No alcohol or drug related substances will be allowed on site. The Principal Contractor shall either have breathalyser on site to prevent any person suspected of being intoxicated, from entering the site or appoint a sub-contractor to perform such a service.
- Smoking will not be allowed inside the Port of Entry buildings/structures.
- PPE issued shall include, but are not limited to:
 - SABS approved Safety boots. PVC Gumboots with steel toes and non-slip soles will be accepted
 - SASS approved overalls identifying the employer of such employee. No short pants will be allowed on site.

- Employees working in areas where they are exposed to direct sunlight for long periods of time must be supplied with broad spectrum factor 30 sun block.
- SABS approved hard hats
- SABS approved hearing protection in noise demarcated areas
- SABS approved safety harnesses with double lanyards
- PPE issued shall not be off site
- No contractor, employee or visitor will be allowed on site without attending site safety induction training
- No employee or visitor will be allowed on site without the prescribed identification
- Emergency procedures shall be implemented
- First aid arrangements shall be implemented and communicated with all employees and visitors on site
- Reporting of incidents must be managed and a D1FR-rate be established

11.5.2 Security Arrangements

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees shall at all times be provided with fulltime supervision while on site.

All contractors and employees must be issued with proper identification as prescribed in section 7.2.14

After consultation with the user client, the principal Contractor must develop a set of Security rules and implement procedures and maintain these throughout the construction period.

After consultation with the BCOCC Port Coordinator, the Principal Contractor shall develop and implement an emergency plan to coincide with the BCOCC protocol regarding security arrangements in the case of emergencies.

No contractor, employee or visitor shall be allowed to interact with any Port of Entry visitors.

The Principal Contractor shall be responsible for his/her own security arrangements at store areas indicated by the BCOCC Port Coordinator.

11.6 Training

The contents and syllabi of all training required by the Act and Regulations pertaining to the Act, including any other or relevant training as required must be included in The Contractor's Health and Safety Plan and Health and Safety File.

11.6.1 General Induction Training

All employees and visitors must be in possession of proof of General Safety Induction training.

11.6.2 Other Training

All operators, drivers and users of construction vehicles, mobile plant equipment must be in possession of valid proof of training and certificate of competency. All operators of mobile machinery and construction vehicles as well as drivers shall be in possession of a medical certificate of fitness of which a copy shall be made available on the safety file.

All employees in jobs requiring training in terms of the Act and Regulations must be in possession of valid proof of training as follows:

Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessments and recommendations by the health and Safety Committee):

- General Induction (Section 8 of the Act)
- Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- Site/Project Manager
- Construction Supervisor (Construction Regulations 6.1)
- OHS Representatives (Section 18 (3) of the Act)
- Training of the Appointees indicated in 12.6.1 & 12.6.2 above
- Operation of Cranes (Driven Machinery Regulations 18 (11))
- Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 21)
- Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction Regulation 27)
- As a minimum basic First Aid to be upgraded when necessary (General Safety Regulations 3)
- Storekeeping Methods & Safe Stacking (Construction Regulation 26)
- Emergency, Security and Fire Co-coordinator
- All employees operating electrical power tools

11.7 Accident and Incident Investigation

The Principal Contractor is responsible to oversee the investigation process of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to receive first aid or be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)

The results of the investigation to be entered into the Accident/Incident Register listed above. (General Administrative Regulation 9)

The Contractor is responsible for the investigation of all non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar incidents in future.

The Contractor is responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, ALL incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

11.8 Health, Safety and Environmental Representatives (referred to as H&S Reps) and H&S Committees

11.8.1 Designation of H&S Representatives

Where a Contractor employs more than 20 persons (including the employees of other Contractors (sub-contractors) he/she has to appoint one H&S Representatives for every 50 employees or part thereof. (Section 17 of the Act and General Administrative Regulation 6 & 7).

H & S Representatives have to be designated in writing and the designation shall be in accordance with the collective Agreement as concluded between the parties as is required in terms of General Administration Regulation 6.

11.8.2 Duties and Functions of the H&S Representatives

The Contractor must ensure that the designated H&S Representatives conduct at least a weekly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor, after which these reports shall be consolidated for submission to the Health and Safety Committee.

H&S Representatives must be included in and be part of accident/incident investigations.

H&S Representatives shall be members of at least one H&S Committee and must attend all meetings of that H&S committee.

11.8.3 Establishment of Health and Safety Committee(s)

The Contractor must establish a Health and Safety Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons nominated by the employer on an H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members and determine the procedures of the meetings including the chairmanship.

The H&S Committee must meet minimum monthly and consider at least the following Agenda for the first meeting. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

Agenda:

- 1) Opening and determining of chairmanship
- 2) Minutes of Previous Minutes and the process of compiling minutes
- 3) Observations
- 4) Program and Safety considerations
 - OHS Awareness campaign
 - Assessments and HIRA
 - Contractors OHS cooperation
- 5) Hygiene
 - Drinkable water
 - Toilets for each sex
 - Toilet paper arrangements
 - Hand wash facilities, including soap and handtowels/paper
- 6) Housekeeping

- 7) Incidents & Accidents / Injuries
- 8) Registers:
 - a. H&S Rep. Inspections
 - b. Matters of First Aid
 - c. Scaffolding
 - d. Ladders
 - e. Excavations
 - f. Portable Electric Equipment
 - g. Fire Equipment
 - h. Power Hand tools
 - i. Incident Report Investigation
 - j. Pressure Vessels
 - k. Personal Protective Equipment
- 9) Safety performance Evaluations
- 10) Education & Safety promotion program
- 11) First Aid Officials and training in First Aid
- 12) Demarcation of work- /hazardous-/safe areas / walkways
- 13) Posters and signage
- 14) Environmental preservation and conservation
- 15) Waste Management
- 16) Specific training programmes
- 17) General
- 18) Date of Next Meeting
- 19) Closing

SI 12 PROJECT/SITE SPECIFIC REQUIREMENTS

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Safe Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by The Contractor:

- Site Establishment including:
 - Office/s
 - Secure/Safe Storage and storage areas for materials, plant & equipment
 - Ablution facilities
 - Sheltered dining area
 - Access and Egress control
 - Vehicle access to the site
- Dealing with existing Structures
- Location of existing Services
- Installation & Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment
- Adjacent Land uses/Surrounding property exposures
- Boundary & Access control/Public Liability Exposures (Remember: the Employer is also responsible for the OHS of non-employees affected by his/her work activities.)
- Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning, allergies etc.
- Exposures to Noise
- Exposure to Vibration

- Exposure to dust
- Protection against dehydration and heat exhaustion
- Protection from wet & cold conditions
- Dealing with HIV/Aids and other diseases as per specific programme provided by Department of Public Works and/or its Agent on its behalf
- Use of Portable Electrical Equipment including:
 - Angle grinder
 - Electrical Drilling machine
 - Skill saw
- Excavations including
 - Ground/soil conditions
 - Trenching
 - Shoring
- Drainage
 - Barricading
 - Flooding
 - Daily inspections
- Welding including:
 - Arc Welding
 - Gas welding
 - Flame Cutting
 - Use of LP Gas torches and appliances
- Loading & Offloading of Trucks
- Aggregate/Sand and other Materials Delivery
- Manual and Mechanical Handling
- Lifting and Lowering Operations
- Driving & Operation of Construction Vehicles and Mobile Plant including
 - Trenching machine
 - Excavator
 - Bomag Roller
 - Plate Compactor
 - Front End Loader
 - TLB
 - Mobile Cranes and the ancillary lifting tackle
 - Parking of Vehicles & Mobile Plant
 - Towing of Vehicles & Mobile Plant
- Use and Storage of Flammable Liquids and other Hazardous Substances – Department of Public Works and/or its Agent on its behalf to be informed of this prior to commencing of the project
- Layering and Bedding of trench floor
- Installation of Pipes in trenches
- Backfilling of Trenches
- Protection against Flooding
- Gabion work
- Protection from Overhead Power Lines
- Any hazards discovered by any contractor
- As discovered from any inspections and audits conducted by Department of Public Works and/or its Agent on its behalf or by The Contractor or any other Contractor on site

- As discovered from any accident/incident investigation

12.1 The following are in particular requirements depending on scope of works and will form a basis for compliance audits.

1. Administrative & Legal Requirements
2. Education, Training & Promotion
3. Public Safety & Emergency Preparedness
4. Personal Protective Equipment
5. Housekeeping
6. Scaffolding, Formwork & Support work
7. Ladders
8. Electrical Safeguarding
9. Emergency/Fire Prevention & Protection
10. Excavations & Demolition
11. Tools
12. Cranes
13. Personnel & Material Hoists
14. Transport & Materials Handling
15. Site Plant & Machinery
16. Plant & Storage Yard/Site Workshops Specifics
17. Health & Hygiene

SI 13 OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE

13.1 Administrative & Legal Requirements

OHS Act Section/ Regulations	Subject	Requirements
Construction. Regulation 3	Notice of carrying out Construction work	Department of Labour notified Copy of Notice available on Site
General Admin.	*Copy of OHS Act (Act 85 of 1993)	Updated copy of Act & Regulations on site. Readily available for perusal by employees
COID Act Section 80	*Registration with Compensation. Insurer	Written proof of registration / Letter of good standing available on Site
Construction.	H&S Specification &	H&S Spec received from Client and/or its Agent
Regulation 4 & 5 (1)	Programme	on its behalf. OHS programme developed & Updated regularly

Section 8(2)(d) Construction. Regulation 7	*Hazard Identification & Risk Assessment	Hazard Identification carried out/Recorded Risk Assessment and – Plan drawn up/Updated RA Plan available on Site
Section 16(2)	*Assigned duties (Managers)	Employees/Sub-Contractors informed/trained Responsibility of complying with the OHS Act assigned
Construction. Regulation 6(1)	Designation of Person Responsible on Site	Competent person appointed in writing as Construction Supervisor with job description.
Construction. Regulation 6(2)	Designation of Assistant for above	Competent person appointed in writing as Assistant Construction Supervisor with job description
Section 17 & 18 General Administrative Regulations 6 & 7	*Designation of Health & Safety Representatives	More than 20 employees – one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports actioned by Management.
Section 19 & 20 General Administrative	*Health & Safety Committees	H&S Committee/s established. All H&S Reps shall be members of H&S Committees Additional members are appointed in writing. Meetings

<p>Section 37(1) & (2)</p>	<p>*Agreement with Mandatories 1(Sub-) Contractors</p>	<p>Written agreement with (Sub-) Contractors List of (Sub-) Contractors displayed.</p> <p>Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Supervisor designated</p> <p>Written arrangements re. H&S Reps & H&S Committee</p> <p>Written arrangements re. First Aid</p>
<p>Section 24 & General Admin. Regulation 8 COID Act Sect. 38, 39 & 41</p>	<p>*Reporting of Incidents (Dept. of Labour)</p>	<p>Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of labour, within 3 days. (WCL 1 or 2) and to Department of Public Works and/or its Agent on its behalf.</p> <p>Cases of Occupational Disease Reported. Copies of Reports available on Site.</p>
<p>General Admin. Regulation 9</p>	<p>*Investigation and Recording of Incident</p>	<p>All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing.</p> <p>Copies of Reports (Annexure 1) available on Site.</p> <p>Tabled at H&S Committee meeting</p> <p>Action taken by Site Management</p>

Construction. Regulation 8	Fall Prevention & Protection Site.	Competent person appointment to draw up and supervise the Fall Protection Plan. Proof of appointees' competence available on • Risk Assessment carried out for work at heights. Fall Protection Plan drawn up/updated. Available on Site.
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SI 14 THE CONTRACTOR'S GENERAL DUTIES

The Contractor shall at all times ensure his status of an "employer" as referred to in the Act, and will abide by his/her responsibilities, duties and functions as per the requirements of the Act and Regulations with specific reference to Section 8 of the Act.

The Contractor shall keep, and on demand make available, a copy of the Act on site at all times and in addition to that he/she will introduce and maintain a file titled "Health and Safety File", or other record in permanent form, which shall contain all relevant aspects and information as contemplated in the Construction Regulations. He/she will make this file available to Department of Public Works or his representative whenever necessary or on request to an interested party.

SI 15 THE CONTRACTOR'S SPECIFIC DUTIES

The Contractor's specific duties in terms of these specifications are detailed in the Construction Regulations as published under government notice No. R1010 dated 18 July 2003.

The Contractor is specifically referred to the following elements of the Construction Regulations:

Regulation No. 1	Definitions
Regulation No. 2	Scope of application
Regulation No. 3	Notification of construction work
Regulation No. 5	Principal Contractor and Contractor
Regulation No. 6	Supervision of construction work
Regulation No. 7	Risk Assessment
Regulation No. 26	Stacking & Storage on construction sites
Regulation No. 28	Construction welfare facilities
Regulation No. 29	Approved Inspection authorities
Regulation No. 30	Offences and penalties

The list must not be taken to be exclusive or exhaustive!

The Contractor shall ensure compliance to the Act and its Regulations and specifically to the above regulations, and document each record in the Health and Safety File.

SI 16 THE CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH REGARD TO

HAZARDOUS ACTIVITIES

The following activities are identifiable as hazardous in terms of the Construction Regulations.

The contractor shall execute the activities in accordance with the following Construction Regulations and other applicable regulations of the Act.

Regulation No. 8	Fall protection (Working on heights and in sub-ground level areas included)
Regulation No. 9	Structures
Regulation No. 10	Formwork and support work
Regulation No. 11	Excavation work
Regulation No. 12	Demolition work (Which is not foreseen for this project)
Regulation No. 13	Tunnelling
Regulation No. 14	Scaffolding
Regulation No. 15	Suspended platforms
Regulation No. 16	Boatswain's chairs
Regulation No. 17	Material hoists
Regulation No. 18	Batch plants
Regulation No. 19	Explosive powered tools
Regulation No. 20	Cranes
Regulation No. 21	Construction vehicles & mobile plant
Regulation No. 22	Electrical installations and machinery on construction sites
Regulation No. 23	Use and temporary storage of flammable liquids on construction sites
Regulation No. 24	Water environments
Regulation No. 25	Housekeeping on construction sites
Regulation No. 27	Fire precautions on construction sites

This limit must not be taken to be exclusive or exhaustive!

All of the above requirements will be read in conjunction with the relevant Regulations and Health and Safety standards as required by the Act. All documents and records required by the Construction Regulations will be kept in the Health and Safety File and will be made available at any time when required by Department of Public Works or his representative, or on request to an interested party.

SI 17 GENERAL NOTES TO THE CONTRACTOR

Legal Framework

Part of legal obligations

The more important Acts and relevant subordinate/secondary legislation as well as other (inter alia Local Government) legislation that also apply to the State as well as to State owned buildings and premises: -

- (i) The latest issue of SABS 0142: "Code of practice for the Wiring of Premises"
- (ii) The Local Government Ordinance or by-laws issued by the Local Authorities
- (iii) The Fire Brigade Services Act 1987, Act 99 of 1987 as amended
- (iv) The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended and relevant proclaimed Regulations (SABS 0400)

- (v) The Post Office Act 1958 (Act 44 of 1958) as amended
- (vi) The Electricity Act 1984, Act 41 of 1984
- (vii) The Regulations of Local Gas Board(s), including Publications of the SABS Standards and Codes of Practice, with specific reference to GNR 17468 dated 4th October 1997.
- (viii) Legislation pertaining to water usage and the environment
- (ix) Legislation governing the use of equipment, which may emit radiation (e.g. X-Rays etc.) (Hazardous Substances Act, 1973 (Act 15 of 1973))
- (x) Common Law
Legal Liabilities

Common Law and Legislation

Based on two main criteria —

- Would the reasonable person have foreseen the hazard?

That is a reasonable person in that specific position, taking experience, qualifications} authority, position in the organization etc. into consideration

- Would the reasonable person have taken precautionary measures (action) to prevent or limit the hazard?

Negligence can be proven on failure on any or both of the above criteria

SI 18 HOUSEKEEPING

Good housekeeping will be maintained at all times as per Construction Regulation No. 25. Poor housekeeping contributes to three major problems, namely:

- costly or increased incidents,
- fire or fire hazards and
- reduction in production.

Good housekeeping will enhance production time and the statement of "A clean site is a safe site" was never proven wrong.

Particular emphasis is to be placed on the following crucial elements of a construction site:

- Phase priorities and production/plant layout

Enclosures

- Pits, openings and shoring
- Storage facilities
- Effective, sufficient and maintained lighting or illumination
- Principal sources of injuries e.g. stairways, runways, ramps, loose building material
- Oil, grease, water, waste, rubble, glass, storm water
- Colour coding
- Demarcations
- Pollution
- Waste disposal
- Ablution and hygiene facilities
- First aid

The list must not be taken to be exclusive or exhaustive!

In promotion of environmental control all waste, rubble, scrap etc, will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, The Contractor will ensure that the matter is brought to record with Department of Public Works or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals and waste matters or by-products which nature is such that they are poisonous or could pose a threat to living beings, shall be treated or disposed of by methods approved of by an inspector. Such matter shall be declared to the Department of Public Works and record of such removal of waste by an accredited waste removal contractor to a Government approved chemical waste site shall be documented and kept on file.

NOTE: No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting including support services in respect of Health and Safety.

SI 19 LOCKOUT SYSTEMS — ELECTRICAL

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

A lockout system register shall be kept and all lockouts are logged and discussed during the OHS Committee meetings.

Any lockout which could affect the daily operation of the Port of Entry, shall be communicated with the BCOCC Port Coordinator and such discussions shall be documented and kept with all lockout documents.

SI 20 INCIDENT INVESTIGATION

Inspection, reporting, proactive auditing and control measures are the best way in which a responsible contractor can control his area of responsibility in terms of occupational health and safety. All incidents therefore, irrespective of whether it gave rise to loss, injury, damage or not, shall be reported and investigated and the results recorded in the Health and Safety File. (GAR 9)

SI 20 GENERAL

The project under control of The Contractor shall be subject to periodic health and safety audits that will be conducted by Department of Public Works at intervals agreed upon between The Contractor and Department of Public Works, provided such intervals will not exceed periods of one month. The Contractor is to ensure that he/she and all persons under his control on the construction site shall adhere to the above specifications, as non-conformance will lead to Department of Public Works taking action as directed by Construction Regulation 4.1(e). The Contractor should note that he/she shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Plan based on these specifications.

SI 21 IMPORTANT LISTS AND RECORDS TO BE KEPT

The following are lists of several records that are to be kept in terms of the Construction Regulations. The lists are:

- 1 List of appointments
- 2 List of record keeping responsibilities
- 3 Inspection checklist

These lists and documents are to be used as a point of reference to determine which components of the Act would be applicable to a particular site or task or project, as was intended under paragraph 1 ("Preamble") above.

1. LIST OF APPOINTMENTS

ITEM	REGULATION	APPOINTMENT	RESPONSIBLE PERSON
1	4(1)(c)	Principal contractor for each phase or project	Client Principal Contractor
2	5.(3)(B)	Contractor	Contractor
3	5(11)	Contractor	Contractor
4	6(1)	Construction supervisor	Contractor
5	6(2)	Construction supervisor sub-ordinates	Contractor
6	6(6)	Health and Safety Officer	Contractor
7	7(1)	Person to Carry Out Risk Assessment	Contractor
8	7(4)	Trainer/Instructor	Contractor
9	8(1)(a)	Fall Protection Planner	Contractor
10	10(a)	Formwork & Support Work Supervisor.	Contractor
11	10(e) + (f)	Formwork & Support Work Examiner	Contractor
12	11(1)	Excavation Supervisor	Contractor
13	11(3)(b)(ii)(b)	Professional Engineer or Technologist	Contractor
14	11(3)(k) & 12(11)	Explosives Expert (If needed)	Contractor
15	12(1)	Supervisor Demolition Work	Contractor
16	12(2) + (3)	Demolition Expert	Contractor
17	14(2)	Scaffold Supervisor	Contractor
18	15(1)	Suspended Platform Supervisor	Contractor
19	15(2)(c)	Compliance Plan Developer	Contractor
20	15(8)(c)	Suspended Platform Expert	Contractor
21	15(13)	Outrigger Expert	Contractor
22	17(8)(a)	Material Hoist Inspector	Contractor
23	18(1)	Batch Plant Supervisor	Contractor
24	18(7)	Batch Plant Operator	Contractor
25	19(2)(b)	Power Tool Expert	Contractor
26	19.2 (g)(i)	Power Tool Controller	Contractor
27	20(f)	Tower Crane Operator	Contractor
28	21(1)(d)(1)	Construction Vehicle and Mobile Plant Operator	Contractor

29	21(1)(j)	Construction Vehicle and Mobile Plant Inspector	Contractor
30	22(d)	Temporary Electrical Installations	Contractor
31	22(e)	Temporary Electrical Installations Controller	Contractor
32	26 a	Stacking and Storage Supervisor	Contractor
33	27(h)	Fire Equipment Inspector	Contractor

1. LIST OF RECORD KEEPING RESPONSIBILITIES

ITEM	CR	RECORD TO BE KEPT	RESPONSIBLE PERSON
1	3(3)	Notification to Provincial Director - Annexure A Available on site	Principal Contractor
2	4(3)	Copy of Principal Contractor's Health & Safety Plan Available on request	Client
3	5(6)	Copy of Principal Contractor's Health & Safety Plan As well as each Contractor's Health & Safety Plan Available on request	Principal Contractor
4	5 7	Health and Safety File opened and kept on site (including all documentation required in terms of the Act & Regulations) Available on request	Every Contractor
5	5(8)	Consolidated Health and Safety File handed to Client on completion on Construction work. To include all documentation required in terms of the Act & Regulations and records of all drawings, designs, materials used and similar information on the structure	Principal Contractor
6	5(9)	Comprehensive and Updated List of all Contractors on site, the agreements between the parties and the work being done Included in Health and Safety file and available on	Principal Contractor
7	6(7)	Keep record on the Health and Safety File of the input by Construction Safety Officer [CR 6 (7)] at design stage or on the Health and Safety Plan	Contractor
8	7(2)	Risk Assessment - Available on site for inspection	Contractor
9	7(9)	Proof of Health and Safety Induction Training	Every employer on site
10	8(3)	Construction Supervisor [CR 6(1)] has latest updated version of Fall Protection Plan [CR 8(1)]	Contractor

11	9(2)(b)	Inform contractor in writing of dangers and hazards relating to construction work	Designer of structure
12	9(3)	All drawings pertaining to the design of structure on site available for inspection	Contractor
13	9(4)	Record of inspections of the structure [First 2 years -once every 6 months, thereafter yearly] - Available on request	Owner of Structure
14	9(5)	Maintenance records - safety of structure - Available on request	Owner of Structure
15	10(d)	Drawings pertaining to the design of formwork/support work structure - Kept on site, available on request	Contractor
16	11(3)(h)	Record of excavation inspection - On site available on request	Contractor
17	15(11)	Suspend Platform inspection and performance test records Kept on site available, on request	Contractor
18	17(8)(c)	Material Hoist daily inspection entered and signed in record book kept on the premises	Contractor
19	17(8)(d)	Maintenance records for Material Hoist - Available on site	Contractor
20	18(9)	Records of Batch Plant maintenance and repairs on site available for inspection	Contractor
21	19(2)(g)(ii)	Issuing and collection of cartridges and nails or studs (Explosive Powered Tools) recorded in register - recipient signed for receipt as well as return	Contractor
22	21(1)(j)	Findings of daily inspections (prior to use) of Construction Vehicles and Mobile Plant	Contractor
23	22(d)	Record of temporary electrical installation inspections [once a week] and electrical machinery [daily before use] in a register and kept on site	Contractor
24	27(l)	Fire Evacuation Plan	Contractor

2. INSPECTION CHECKLISTS

Employer Particulars	
Employer:	
Registered Name of Enterprise:	
Trade Name of Enterprise:	--
Company Registration No.:	--
SARS Registration No.:	--
U1F Registration No.:	--
CO1DA Registration No.:	
Relevant SETA for EEA purposes:	
Industry Sector:	
Bargaining Council:	
Contact Person:	
Address of Premises:	
Postal Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Chief Executive Officer:	
Chief Executive Officer Address:	
Competent Person:	
Maximum power demand: in KW	
Health and Safety Representatives:	
Activities, products manufactured and/ services rendered:	
Raw materials, materials and chemical/ biological substances:	
Total Number of Employees:	Male: Female:

Contractor Particulars	
CONTRACTOR NAME:	
WCA / FEMA NUMBER:	
H&S PLAN:	
RISK ASSESSMENTS:	
H&S FILE IS KEPT WHERE:	
CONTRACTS MANAGER:	
MANAGING DIRECTOR/CEO:	
COMPETENT PERSONS:	
OHSA 16.2 CEO DELEGATION	
CR 1 4 : SCAFFOLDING:	
CR 1 5 : SUSPENDED SCAFFOLDING:	
CR17 6: MATERIAL HOISTS:	
CR18(1): BATCH PLANT:	
CR8(1)(A): FALL PROTECTION:	
CR11(1)(1): EXCAVATION WORK:	
CR12: DEMOLITION WORK:	
CR19(2)(B): EXPLOSIVE POWER TOOLS	
CR27(A): STACKING	

INSPECTION				
SECTION	ITEM CHECKED	N/A	YES	NO
CR6(1)	APPOINTMENTS			
CR6(2)	Supervisor:			
S17(1)	Assistant Supervisor:			
S19(1)	Health & Safety Representative: (ratio)			
CR 12(1)	Health & Safety Committees			
	Demolition Director			
	DOCUMENTS			
	Records of Incidents			
	Copy of the Act			
	Safety Reps Report			
	Safety Committee Minutes			
	Lifting Machinery Log (Crane)			
	Notification of Construction Work			
	Risk Assessment			
	Proof of the Health & Safety Induction Training			
	Inspection of Excavation (Records)			
	Crane Operator Medical Certificate			
	Mobile Plant Operator Medical Certificate			
	Batch Plant Repairs & Maintenance Records			
	Temporary Electrical Installation Record			
	Health & Safety File			

	Suspended Platforms' Performance Records			
	Material Hoist Record Book			
	Scaffolding Log Book			
	Medical Certificate of Fitness			
	Construction Vehicle & Mobile Plant Register			
	Electrical Installation & Machinery Register			
	INCIDENTS			
	Reported			
	Recorded Investigated Action Taken			
	PUBLIC SITE			
	Sanitary Facilities			
	Changing facilities for each sex			
	Perimeter fence & no admittance			
	Overhead protection netting/falling objects			
	Pedestrian warning			
	PERSONAL SAFETY EQUIPMENT			
	Items Issued:			
	Items Required:			
	(What is the payment on each item?)			
	SAFETY PLANS			
	FIRST AID			
	Name(s) of First Aider(s)			
	Client's Health & Safety Specification			
	Principal's contractor H&S Plan			
	FIRE HAZARD & PRECAUTIONS			
	Flammables used, waste, hot work, diesel, fuel, gas			
	Portable Extinguishers			
	ELECTRICAL INSTALLATIONS & MACHINERY			
	Guarding & PPE to Electrical Installations			
	ILLUMINATION			
	Dangerous Places and signage as well			
	HOUSEKEEPING			

ADDITIONAL SPECIFICATION**SN IMPLEMENTATION OF LABOUR-INTENSIVE INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)****CONTENTS**

SN 01	SCOPE
SN 02	TERMINOLOGY AND DEFINITIONS
SN 03	APPLICABLE LABOUR LAWS
SN 04	EMPLOYMENT OF UNSKILLED AND SEMI-SKILLED WORKERS IN LABOUR INTENSIVE WORKS
SN 05	TRAINING OF EPWP WORKERS
SN 06	CONTRACTUAL OBLIGATIONS IN RELATION TO LABOUR
SN 07	SETTING OF RATE OF PAY
SN 08	GENERIC LABOUR INTENSIVE SPECIFICATION
SN 09	REPORTING
SN 10	MEASUREMENTS AND PAYMENT

SN 01 SCOPE

This project is part of the Expanded Public Works Programme and aims to alleviate and reduce unemployment. EPWP will achieve this aim through the provision of work opportunities as part of the project. EPWP workers will be recruited and trained in skills relevant to the work to be done on this project. These workers will be employed by the Contractor as part of this project so that they can gain work experience on these projects. The Contractor will be required to manage, supervise and report on the EPWP workers, monthly for a period of 36 months. Furthermore the Contractor will be required to supervise these EPW workers to ensure that the work they perform is of the required standard.

Labour-intensive infrastructure projects under the EPWP include:

- using labour intensive construction methods to provide employment opportunities to local unemployed people;
- providing training or skills development to those locally employed workers;
- building cost-effective and quality assets.

The employment of locally employed temporary workers on all EPWP labour intensive infrastructure projects must be in accordance With the Code of Good Practice for the Employment and Conditions for Expanded Public Works Programmes Issued in terms of the Basic Conditions of Employment Act, 1997 (Act N°75 of 1997).

SN 02 TERMINOLOGY AND DEFINITIONS**SN 02.01 TERMINOLOGY**

- (a) BY HAND Refers to the use of tools which are manually operated and powered
- (b) EPWP Expanded Public Works Programme, a National Programme of the government of South Africa, approved by Cabinet
- (c) DOL Department of Labour, Labour-intensive refers to methods of construction involving a mix of machines and labour, where labour, utilising hand tools and light plant and equipment, is preferred to the use of heavy machines, where technically and economically feasible.(Note: The normal emphasis on the cost-effectiveness and r l quality of the asset must be retained).
- (d) Public body Refers to a department, trading entity, constitutional institution, municipality, public entity or municipal entity.
- (e) Scope of work Refers to a specification and description of the services or construction works which are to be provided and any other requirements and constraints relating to the manner in which the contract is to be performed

SN 02.02 DEFINITIONS

- (a) “employer” means the contractor or any party employing the worker / beneficiary under the EPWP Programme.
- (b) “client” means the Department of Public Works.
- (c) “ worker” means any person working or training in an elementary occupation on an EPWP.

SN 03 APPLICABLE LABOUR LAWS

In line with the Expanded Public Works Programme (EPWP) policies, the Code of Good Practice for Employment and Conditions of Work for Expanded Public Works Programmes read in conjunction with a Ministerial Determination for Expanded Works Programmes issued by the Minister of Labour in terms of Section 50(1) of the Basic Conditions of Employment Act of 1997 of which extracts have been reproduced below in clauses SN 04, shall apply to , works described in the scope of work and which are undertaken by unskilled or semi-skilled workers.

SN 04 EMPLOYMENT OF UNSKILLED AND SEMI-SKILLED WORKERS IN LABOUR INTENSIVE WORKS

SL 04.01 REQUIREMENTS FOR THE SOURCING AND ENGAGEMENT OF LABOUR

The beneficiaries of the programmes should be locally-based (as close to the project site as possible) individuals prepared to work on the specific EPWP.

In order to spread the benefits as broadly as possible in the community, a maximum of one person per household should be employed, taking local available labour into account.

Workers from other areas may be employed if they have skills that are required for a project and there are not enough persons in the local communities who have those skills or who could undergo appropriate skills training. However, workers from other communities should not exceed 20% of all persons working on a programme. A proper skills audit should be conducted, where possible, in an area where an EPWP is in operation.

Programmes should set participation targets for employment with respect to women, youth, and people with disabilities.

The proposed targets are:

- 55% women;
- 40% youth from 16 to 35 years of age; and
- 2% people with disabilities

EPWPs should seek to achieve these targets in all occupational categories. Persons under sixteen years of age may not be employed on EPWP.

SL 04.02 SPECIFIC PROVISIONS PERTAINING TO SANS 1914-5

Definitions

Targeted labour: Unemployed persons who are employed as local labour on the project.

Contract participation goals

- The specified contract participation goal for the contract is stated in the Scope of Works. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
- The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

SN.4

- Further to the provisions of clause 3.3.2 of SANS 1914.5, written contracts shall be entered into with targeted labour.

The definition for net amount shall be amended as follows:

- Financial value of the contract upon completion, exclusive of any value added tax or sales tax which the law requires the employer to pay the contractor.

SN 05 TRAINING OF EPWP WORKERS

The contractor shall provide all the necessary on-the—job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.

Three types of training are applicable, namely

- Life skills;
- On the job training;
- First Aid training;
- Technical Skills training.

Training will be implemented by training instructors accredited by DOL and/or CETA:

- EPWP workers shall be employed on the projects for a minimum period of 12 months.
 - EPWP workers shall be deployed on projects in the vicinity of their homes. The same arrangements as for other workers regarding accommodation, subsistence and travel shall be applicable to EPWP workers.
- (a) The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
 - (b) The cost of the formal training of targeted labour, will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically possible. The contractor, must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The employer must be furnished with a copy of this request.
 - (c) A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works — Cinderella Makunike, Fax Number 012 328 6820 or email cinderella.makunike@dpw.gov.za Tel: 083 677 4026
 - (d) The contractor shall be responsible for scheduling the training of workers and shall

SN.5

take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he/she is employed for 4 months or more.

- (e) The contractor shall do nothing to dissuade targeted labour from participating in the above mentioned training programmes.
- (f) An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of (d) above.
- (g) Proof of compliance with the requirements of (a) to (e) must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

SN 06 CONTRACTUAL OBLIGATIONS IN RELATION TO LABOUR

The EPWP workers to be employed in the programme (EPWP) shall be directly contracted to the Contractor. Over and above the construction and project management responsibilities, the contractor will be expected to perform the tasks and responsibilities as set out in this specification. Implementation of labour intensive practices under the Expanded Public Works Programme (EPWP) is required to a value of not less than 10% of the tendered contract amount for wages paid to local labour.

SN 07 PAYMENT OF WORKERS

Employers must pay workers at least the minimum rate as stipulated in the Ministerial Determination: Expanded Public Works Programme.

Workers can be paid on the basis of the number of tasks completed. These workers are referred to as "task-rated workers". Alternatively, workers can be paid on a daily rate.

There are jobs where it is not possible to pay workers on the basis of tasks performed. These workers must be paid on the basis of the amount of time they worked. They are referred to as "time-rated workers".

On the task-based system, a worker is paid for each task completed or part thereof.

If workers are informed a day before that work will not take place the next day, they should not be entitled to any payment.

Workers will be paid a training allowance in case they are required to attend agreed training programmes. This should be equal to 100% of the daily task rate for task-rate workers or 100% of the daily rate of pay for time-rated workers. All the costs of training will be covered, for example, travel, trainers, material, tuition fees.

Where a worker participates in a learnership, the relevant learnership determination must be used to determine the training allowance whilst on training.

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Each worker must be given written particulars of employment and verbal explanations in an appropriate language of their rate of pay and how this is to be calculated.

Where a project is completed earlier than anticipated the worker should receive the full agreed remuneration for the stipulated period of the contract if the pay for the task was to be calculated on the basis of time. Where such work was to be performed on a task-based system, the full agreed remuneration for the task should be paid for early completion.

SN 07.01 PENALTY FOR NON-ACHIEVEMENT OF LOCAL LABOUR TARGET (LLT)

The Contractor will be assessed on a quarterly basis in the event that the Contractor fails to substantiate that any failure to achieve the Local Labour Target (LLT) was due to quantitative underruns, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall pay to the Employer penalties (P) in an amount determined in accordance with the following formula:

$$P = I \times \frac{(0 - D_o)}{(100)} \times NA$$

Where D = tendered Local Labour Target (LLT) percentage.

Do = the Local Labour Target (LLT) which the Employer's Representative, based on the credits passed, certifies as being achieved upon completion of the Contract.

NA = Net Amount, being Tender Sum excluding VAT and CPA

P = Rand value of penalty payable

SN 08 GENERIC LABOUR INTENSIVE SPECIFICATION

The Generic Labour-intensive specification below is the same as SANS 1921-5, Construction and management requirement for works contracts- Part 5: Earthworks activities which are to be performed by hand and should be included in the scope of works without amendment or modification as set out below.

SN 08.01 SCOPE

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- a) Trenches having a depth of less than 1.5 metres
- b) Cleaning of storm water drainage
- c) Cleaning of roads and sidewalks
- d) Clearing of fence routes
- e) Cleaning and site keeping
- d) Cleaning of buildings

SN 08.02 PRECEDENCE

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

SN 08.03 HAND EXCAVATEABLE MATERIAL

Hand excavateable material is material:

a) granular materials:

- i. whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

b) cohesive materials:

- i. whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii. where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100 mm;

Note:

- i. A boulder, a cobble and gravel is material with a particle size greater than 200 mm, between 60 and 200 mm.
- ii. A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400 mm and drives a cone having a maximum diameter of 20 mm (cone angle of 60°with respect to the horizontal) into the material being used.

SN 08.04 TRENCH EXCAVATION

All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

SN 08.05 COMPACTION OF BACKFILLING TO TRENCHES (AREAS NOT SUBJECT TO TRAFFIC)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers

- a) to 90% Proctor density;
- b) such that in excess of 5 blows of a dynamic come penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

SN 08.06 EXCAVATION

All hand excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

SN 08.07 CLEARING AND GRUBBING

Grass and small bushes shall be cleared by hand.

SN 08.8 SHAPING

All shaping shall be undertaken by hand.

SN 08.09 LOADING

All loading shall be done by hand, regardless of the method of haulage.

SN 08.10 HAUL

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

SN 08.11 OFFLOADING

All material, however transported, is to be off- loaded by hand, unless tipper-trucks are utilised for haulage

SN 08.12 SPREADING

All material shall be spread by hand.

SN 08.13 COMPACTION

Small areas may be compacted by hand provided that the specified compaction is achieved.

SN 08.14 GRASSING

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

SN 08.15 STONE PITCHING AND RUBBLE CONCRETE MASONRY

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand. Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m. Grout shall be mixed and placed by hand.

SN 08.16 MANUFACTURED ELEMENTS

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Elements manufactured or designed by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320 kg. In addition the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper hand hold on them.

SN 08.17 ROADS

The following operations may be carried out using labour intensive methods:

1. Site clearance
2. Layer work construction including loading, hauling and spreading material.

Note: All compaction should be done using conventional compaction equipment and where necessary the use of heavy machinery may be employed to loosen material for excavation by hand. Where significant use of blasting is indicated, then the Works are probably not suitable for labour intensive methods.

3. Where higher standards of roads are to be constructed then the following operations may be included:
 - Macadam base course either dry, water bound or emulsion bound; foamed bitumen gravel; emulsion treated gravel; or slurry bound or composite macadams.
 - Application of bitumen bound surface treatment (cold) including spreading and dragging of chips.
 - Slurry treatments to existing or new road surfaces.
 - In situ concrete roads
 - Segmented block paved roads.
 - Cast in-situ block pavements (hyson-cells);
 - Road markings.
4. Fencing.
5. Erection of road signs.
6. Grass maintenance.
7. Road reserve maintenance.
8. Rubble masonry bridges, culverts and retaining walls

SN 08.18 STORM WATER

The following operations may be constructed using labour intensive construction methods:

1. Gabions and reno mattresses.
2. Small diameter pre-cast concrete elements (pipes and arches).
3. Grassed or lined water channels

SN 08.19 SEWERS

The following operations may be constructed using labour intensive construction methods:

1. Sewer manholes either in brickwork or using specially manufactured pre-cast manhole rings (individual mass less than 320 kg).
2. Sewer manhole covers and lids using specially designed pre-cast units.
3. Maturation or flocculation ponds with least dimension not exceeding 100m.

SN 08.20 WATER

The following operations may be constructed using labour intensive construction methods:

1. Laying of water pipelines, fittings and house connections in all materials (including steel) where the mass of individual pipe lengths does not exceed 320 kg.
2. Construction of ferro-cement reservoirs.
3. Excavation for membrane lined and floating roof reservoirs.
4. Construction of small masonry reservoirs.
5. Spring and well protection measures

SN 08.21 HAUL OF MATERIAL

Where the haul of any material exceeds 200 m, consideration should be given to the use of local resources for transporting material. This includes the use of animal drawn vehicles and small trailer combinations utilising locally sourced tractors. All loading and offloading can be done by hand.

SN 08.22 ELECTRICITY

The following operations may be constructed using labour intensive methods:

1. Excavation of trenches for reticulation of all voltages.
2. Excavation for and erection of poles for overhead lines.
3. Installation of all electricity cables (joints and terminations by qualified persons).

SN 08.23 BILL OF QUANTITIES

Labour-intensive works is highlighted in the bills of quantities for the payment items relating to labour-intensive works (LI).

SN 09 REPORTING

The Consultant 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 consultant shall not submit the payment certificate to the employer for payment.

The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted

SN 10 MEASUREMENTS AND PAYMENT

The number of EPWP workers specified for this contract that will receive orientation and life skills development training is 15 and technical training is 15

SN 10.01 PAYMENT FOR EMPLOYMENT AND TRAINING OF EPWP WORKERS
(TARGET: - 15 EPWP WORKERS)

Labour-intensive works is highlighted in the bills of quantities for the payment items relating to labour-intensive works (LI).

- SN 10.01.01** Orientation and Life Skills development training for EPWP workers for an average of 10 days per EPWP worker Unit: PC Sum
- SN 10.01.02** Technical skills training for EPWP workers for an average of 20 days per EPWP worker Unit: PC Sum
- SN 10.01.03** First Aid Level 1 training for EPWP workers for an average of 5 days per EPWP worker Unit: PC Sum
- SN 10.01.04** Profit and attendance for administration of items 1 and 2 above Unit: percentage (%)

SN 10.02 PAYMENT FOR TRAVELING OF EPWP WORKERS

- SN 10.02.01** Travelling (based on return trip/EPWP worker) Unit: worker/ day

The unit of measurement shall be the number of EPWP workers transported from the nearest local community to the work place and back on a daily basis. The tendered shall allow for the cost of each worker to be able to safely reach the work place and travel back each day and shall be measured as a number for each worker per day.

SN 10.03 EMPLOYMENT OF EPWP WORKERS

SN 10.03.01 Employment of EPWP workers Unit: PC Sum

The unit of measurement shall be the number of EPWP workers at the labour rate of comparable unskilled work in the local area alternatively a minimum R 1 734 per month as the amount indicated in the Ministerial Determination 4: EPWP, dated 01 November 2015, Clause 14.2: Minimum of R78.86 per day multiplied by the period employed in months and the rate tendered shall include full compensation for all costs associated with the employment of EPWP workers and for complying with the conditions of contract. The cost for the training shall be excluded from this item. This item is based on a 24 months appointment for EPWP workers.

SN 10.03 PROVISION OF EPWP DESIGNED OVERALLS AND HARD HATS AND SAFETY BOOTS (PPE) TO EPWP WORKERS

SN 10.04.01 Supply 2 x EPWP branded overalls to each EPWP worker Unit: PC. Sum

SN 10.04.02 Supply 1 x EPWP branded hard hat to each EPWP worker Unit: PC.Sum

SN 10.04.03 Supply 1 x pair of safety boots to each EPWP worker Unit: PC.Sum

SN 10.04.04 Profit and attendance for administration of items 1, 2 and 3 above Unit: %

EPWP worker overalls should be orange (top and bottom) as per EPWP branding specification with the exception of Correctional Services contracts where the overalls should be blue (top and bottom). A minimum of two overalls per EPWP worker should be blue (top and bottom). A minimum of two overalls per EPWP worker should be supplied. Hard hats should be orange and branded as per the EPWP branding specification.

An amount has been provided in the Schedule of Quantities under sub item SM 11.04.01 and SM 11.04.02 for the supply of EPWP designed overalls and hard hat, as per the EPWP branding specification provided by the EPWP unit. The tendered percentage under sub items SM 10.05.02 will be paid to the contractor on the value of each payment pertaining to the supply of overalls and hard hats and safety boots to cover his expenses in this regard.

ADDITIONAL SPECIFICATION**SL EMPLOYMENT AND TRAINING OF YOUTH WORKERS ON THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP) INFRASTRUCTURE PROJECTS: NATIONAL YOUTH SERVICE (NYS)****CONTENTS**

SL 01	SCOPE
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SL 09	CONTRACTUAL OBLIGATIONS IN RELATION TO YOUTH LABOUR
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EXAMPLE	EPWP-NYS EMPLOYMENT AGREEMENT

SL 01 SCOPE

This project is part of the Expanded Public Works Programme and the National Youth Service Programme (NYS) and aims to train young people and provide them with practical work experience as part of this programme. Youth aged between 18 and 35 will be recruited and trained in skills relevant to the work to be done on this project. These youth will have to be employed by the contractor as part of this project so that they can gain their work experience on these projects. The training of the youth will be coordinated and implemented by a separate service provider. This service provider will provide the contractor with a list of all the youth and the training each of these youth have received. The Contractor will be required to employ all of these youth for a minimum period of 6 months. Furthermore the Contractor will be required to supervise these youth to ensure that the work they perform is of the required standard. The contractor's staff will be required to assist and mentor the youth to ensure that they are able to perform the type of work they need to do to the satisfactory standards required. The contractor will not be required to employ all youth in the programme at the same time, but may rotate the youth on the project, as long as all youth are employed for the minimum duration stated earlier.

This specification contains the standard terms and conditions for workers employed in elementary occupations and trained on a Special Public Works Programme (SPWP) for the National Youth Services Programme. These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

SL 02 TERMINOLOGY AND DEFINITIONS

SL 02.01 TERMINOLOGY

- (a) EPWP The Code of Good Practice for Expanded Public Works Programmes, which has been gazetted by the Department of Labour, and which provides for special conditions of employment for these EPWP projects. In terms of the Code of Good Practice, the workers on these projects are entitled to formal training, which will be provided by training providers appointed (and funded) by the Department of Labour. For projects of up to six months in duration, this training will cover life-skills and information about other education, training and employment opportunities.
- (b) EPWP Expanded Public Works Programme, a National Programme of the government of South Africa, approved by Cabinet.
- (c) NYDA National Youth Development Agency.
- (d) DOL Department of Labour.

SL 02.02 DEFINITIONS

- (a) “employer” means the contractor or any party employing the worker / beneficiary under the EPWP – NYS Programme.
- (b) “client” means the Department of Public Works.
- (c) “ worker / trainee” means any person working or training in an elementary occupation on a EPWP.

SL 03 APPLICABLE LABOUR LAWS

In line with the Expanded Public Works Programme (EPWP) policies, the Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of labour in government Notice No. R63 of 25 January 2002, of which extracts have been reproduced below in

clauses SL 04, shall apply to works described in the scope of work and which are undertaken by unskilled or semi-skilled workers.

The Code of Good Practise for Employment and Conditions of Work for Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No. R64 of 25 January 2002 shall apply to works described in the scope of work and which unskilled or semi-skilled workers undertake.

SL 04 EXTRACTS FROM MINISTERIAL DETERMINATION REGARDING SPWP

SL 04.01 DEFINITIONS

In this specification –

- (a) “department” means any department of the State, implementing agent or contractor;
- (b) “employer” means any department that hires workers to work in elementary occupations on a SPWP;
- (c) “worker” means any person working in an elementary occupation on a SPWP;
- (d) “elementary occupation” means any occupation involving unskilled or semi-skilled work;
- (e) “management” means any person employed by a department or implementing agency to administer or execute a SPWP;
- (f) “task” means a fixed quantity of work;
- (g) “task-based work” means work in which a worker is paid a fixed rate for performing a task;
- (h) “task-rated worker” means a worker paid on the basis of the number of tasks completed;
- (i) “time-rated worker” means a worker paid on the basis of the length of time worked
- (j) “Service Provider” means the consultant appointed by Department to coordinate and arrange the employment and training of labour on EPWP infrastructure projects.

SL 04.02 TERMS OF WORK

- (a) Workers on a SPWP are employed on a temporary basis.
- (b) A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.
- (c) Employment on a SPWP does not qualify as employment and a worker so employed does not have to register as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

SL 04.03 NORMAL HOURS OF WORK

- (a) An employer may not set tasks or hours of work that require a worker to work–
 - (i) more than forty hours in any week
 - (ii) on more than five days in any week; and
 - (iii) for more than eight hours on any day.
- (b) An employer and a worker may agree that the worker will work four days per week. The worker may then work up to ten hours per day.
- (c) A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks (based on a 40-hour week) allocated to him.

Every work is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

SL 04.04 MEAL BREAKS

- (a) A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- (b) An employer and worker may agree on longer meal breaks.
- (c) A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

- (d) A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

SL 04.05 SPECIAL CONDITIONS FOR SECURITY GUARDS

- (a) A security guard may work up to 55 hours per week and up to eleven hours per day.
- (b) A security guard who works more than ten hours per day must have a meal break of at least one hour duration or two breaks of at least 30 minutes duration each.

SL 04.06 DAILY REST PERIOD

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

SL 04.07 WEEKLY REST PERIOD

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

SL 04.08 WORK ON SUNDAYS AND PUBLIC HOLIDAYS

- (a) A worker may only work on a Sunday or public holiday to perform emergency or security work.
- (b) Work on Sundays is paid at the ordinary rate of pay.
- (c) A task-rated worker who works on a public holiday must be paid –
 - (i) the worker's daily task rate, if the worker works for less than four hours;
 - (ii) double the worker's daily task rate, if the worker works for more than four hours.
- (d) A time-rated worker who works on a public holiday must be paid –
 - (i) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;

- (ii) double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

SL 04.09 SICK LEAVE

- (a) Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.
- (b) A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.
- (c) A worker may accumulate a maximum of twelve days' sick leave in a year.
- (d) Accumulated sick-leave may not be transferred from one contract to another contract.
- (e) An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
- (f) An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
- (g) An employer must pay a worker sick pay on the worker's usual payday.
- (h) Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
 - (i) absent from work for more than two consecutive days; or
 - (ii) absent from work on more than two occasions in any eight-week period.
- (i) A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
- (j) A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

SL 04.10 MATERNITY LEAVE

- (a) A worker may take up to four consecutive months' unpaid maternity leave.
- (b) A worker is not entitled to any payment or employment-related benefits during maternity leave.
- (c) A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- (d) A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.
- (e) A worker may begin maternity leave –
 - (i) four weeks before the expected date of birth; or
 - (ii) on an earlier date –
 - (1) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - (2) if agreed to between employer and worker; or
 - (iii) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- (f) A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
- (g) A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

SL 04.11 FAMILY RESPONSIBILITY LEAVE

- (a) Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -
 - (i) when the employee's child is born;

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- (ii) when the employee's child is sick;
- (iii) in the event of the death of –
 - (1) the employee's spouse or life partner
 - (2) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling

SL 04.12 STATEMENT OF CONDITIONS

- (a) An employer must give a worker a statement containing the following details at the start of employment –
 - (i) the employer's name and address and the name of the SPWP;
 - (ii) the tasks or job that the worker is to perform;
 - (iii) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
 - (iv) the worker's rate of pay and how this is to be calculated;
 - (v) the training that the worker may be entitled to receive during the SPWP.
- (b) An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
- (c) An employer must supply each worker with a copy of the relevant conditions of employment contained in this specification.
- (d) An employer must enter into a formal contract of employment with each employee. A copy of a pro-forma is attached at the end of this specification.

SL 04.13 KEEPING RECORDS

- (a) Every employer must keep a written record of at least the following –
 - (i) the worker's name and position;
 - (ii) in the case of a task-rated worker, the number of tasks completed by the worker;
 - (iii) in the case of a time-rated worker, the time worked by the worker;
 - (iv) payments made to each worker.

- (b) The employer must keep this record for a period of at least three years after the completion of the SPWP.

SL 04.14 PAYMENT

- (a) A task-rated worker will only be paid for tasks that have been completed.
- (b) An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer. Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- (c) A time-rated worker will be paid at the end of each month and payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- (d) Payment in cash or by cheque must take place –
 - (i) at the workplace or at a place agreed to by at least 75% of the workers; and
 - (ii) during the worker's working hours or within fifteen minutes of the start or finish of work;
- (e) All payments must be enclosed in a sealed envelope which becomes the property of the worker.
- (f) An employer must give a worker the following information in writing –
 - (i) the period for which payment is made;
 - (ii) the number of tasks completed or hours worked;
 - (iii) the worker's earnings;
 - (iv) any money deducted from the payment;
 - (v) the actual amount paid to the worker.
- (g) If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.
- (h) If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

SL 04.15 DEDUCTIONS

- (a) An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

- (b) An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
- (c) An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.
- (d) An employer may not require or allow a worker to –
 - (i) repay any payment except an overpayment previously made by the employer by mistake;
 - (ii) state that the worker received a greater amount of money than the employer actually paid to the worker; or
 - (iii) pay the employer or any other person for having been employed.

SL 04.16 HEALTH AND SAFETY

- (a) Employers must take all reasonable steps to ensure that the working environment is healthy and safe and that all legal requirements regarding health and safety are strictly adhered to.
- (b) A worker must:
 - (i) work in a way that does not endanger his/her health and safety or that of any other person;
 - (ii) obey any health and safety instruction;
 - (iii) obey all health and safety rules of the SPWP;
 - (iv) use any personal protective equipment or clothing issued by the employer;
 - (v) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

SL 04.17 COMPENSATION FOR INJURIES AND DISEASES

- (a) It is the responsibility of employers to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
- (b) A worker must report any work-related injury or occupational disease to their employer or manager.
- (c) The employer must report the accident or disease to the Compensation Commissioner.
- (d) An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

SL 04.18 TERMINATION

- (a) The employer may terminate the employment of a worker provided he has a valid reason and after following existing termination procedures.
- (b) A worker will not receive severance pay on termination.
- (c) A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.
- (d) A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
- (e) A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

SL 04.19 CERTIFICATE OF SERVICE

- (a) On termination of employment, a worker is entitled to a certificate stating –
- (i) the worker's full name;
 - (ii) the name and address of the employer;
 - (iii) the SPWP on which the worker worked;
 - (iv) the work performed by the worker;
 - (v) any training received by the worker as part of the SPWP;
 - (vi) the period for which the worker worked on the SPWP;
 - (vii) any other information agreed on by the employer and worker.

SL 05 EMPLOYER'S RESPONSIBILITIES

The employer shall adhere to the conditions of employment as stipulated in the *Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes*. Over and above the conditions stipulated above, he shall be responsible to:

- (a) formulate and design a contract between himself/ herself and each of the recruited youth workers, ensuring that the contract does not contravene any of the Acts stipulated in South African Law, e.g. Basic Conditions of Employment Act, etc. (A copy of a pro-forma contract is attached at the end of this specification);
- (b) screen and select suitable candidates for employment from the priority list of youth workers provided by the NYDA;
- (c) ensure that the recruited youth workers are made available to receive basic life skills training which will be conducted and paid for by the NYDA;
- (d) ensure that all youth workers receive instruction on safety on site prior to them commencing with work on site;
- (e) ensure that all youth workers are covered under workmen's compensation for as long as they are contracted to the contractor. Payment to the Compensation Commissioner shall be the responsibility of the contractor;
- (f) assist in the identification and assessment of potential youth workers to undergo advanced technical training in respective trades;
- (g) test and implement strict quality control and to ensure that the health and safety regulations are adhered to;

- (h) provide all youth workers with the necessary protective clothing as required by law for the specific trades that they are involved in.
- (i) provide overall supervision and day-to-day management of youth workers and/or sub-contractors; and
- (j) ensure that all youth workers are paid their wages on time through a pre-agreed payment method as stipulated in the contract with the youth worker.

SL 06 PLACEMENT OF RECRUITED YOUTH WORKERS

Employers will be contractually obliged to:

- (a) employ youth workers from targeted social groups from the priority list provided by the Service Provider/ NYDA.
- (b) facilitate on-the-job training and skills development programmes for the youth workers;
- (c) achieve the following minimum employment targets:
 - (i) 100% people between the ages of 18 and 35
 - (ii) 60% women;
 - (iii) 2% people with disabilities.
- (d) brief youth workers on the conditions of employment as specified in sub clause SL 04.09 above;
- (e) enter into a contract with each youth worker, which contract will form part of the Employment Agreement;
- (f) allow youth workers the opportunity to attend life skills training through DOL. This shall be arranged at the beginning of the contract;
- (g) ensure that payments to youth workers are made as set out in sub clauses SL 04.14 and SL 04.15 above.
- (h) set up of personal profile files as prescribed by Service Provider and as set out in sub clause SL 04.13 above.
- (i) in addition to (h)
 - a copy of the I.D;
 - qualifications;
 - career progress; e.g.
 - Status of technical improvement,
 - Willingness to work,
 - Leadership capabilities,
 - Discipline; and

SL.14

- Any other factors that can assist DPW-HR with the placement of the youth workers ant the end of the programme

- EPWP Employment Agreement, and
- list of small trade tools;

must be included in the youth worker's personal profile file.

SL 07 TRAINING OF YOUTH WORKERS

Three types of training are applicable, namely

- Life skills;
- On the job training
- Technical Skills training.

Training will be implemented by training instructors accredited by DOL and/or CETA:

- Youth workers shall be employed on the projects for an average of 6 months.
- Youth workers shall be deployed on projects in the vicinity of their homes. The same arrangements as for other workers regarding accommodation, subsistence and travel shall be applicable to youth workers.

(a) Life skills training

All youth workers are entitled to undergo life skills training. Training of this module will be flexible enough to meet the needs of the employer. Training should take place immediately after site hand-over and during the period of site establishment and pre-planning before actual construction starts, alternatively this will be spread over the duration of the contract period. The contractor will be required to work closely with the person to schedule the training sessions so that the timing of the training is aligned with the contractors work schedule and his demand for workers.

(b) On-the job training

The Employer shall provide youth workers with on-the-job training to enable them to fulfil their employment requirements. The employer shall also be expected to closely monitor the job performance of youth workers and shall identify potential youth workers for skills development programmes.

(c) Technical skills training

The Employer shall assist in identifying youth workers for further training. These youth workers will undergo further technical training to prepare them for opportunities as semi-skilled labourers.

Such training will comprise of an off-site theoretical component and practical training on-site. The contractor will be responsible for on-site practical work under his supervision. Youth workers who graduate from the first phase of the training programme will be identified and given opportunities to register for skills development programmes. These can ultimately result in an accredited qualification. The programme will consist of theoretical instruction away from the construction site as well as on-site practical work under the supervision of the employer. Candidates will be entitled to employment to complete all training modules.

SL 08 BENEFICIARY (YOUTH WORKERS) SELECTION CRITERIA**SL 08.01 PREAMBLE**

The *Code of Good Practise for Employment and Conditions of Work for Expanded Public Works Programmes* encourages:

- optimal use of locally-based labour in a Expanded Public Works Programme (EPWP);
- a focus on targeted groups which consist of namely youth, consisting of women, female-headed households, disabled and households coping with HIV/AIDS; and
- the empowerment of individuals and communities engaged in a EPWP through the provision of training.

SL 08.02 BENEFICIARY (YOUTH WORKERS) SELECTION CRITERIA

(a) The youth workers of the programmes should preferably be non-working individuals from the most vulnerable sections of disadvantaged communities who do not receive any social security pension income. The local community must, through all structures available, be informed of and consulted about the establishment of any EPWP – NYS

(b) In order to spread the benefit as broadly as possible in the community, a maximum of one person per household should be employed, taking local circumstances into account.

- (c) Skilled artisans from other areas may be employed if they have skills that are required for a project and there are not enough persons in the local communities who have those skills or who could undergo appropriate skills training. However, this should not result in more than 20% of persons working on a programme not being from local communities.
- (d) Programmes should set participation targets for employment with respect to youth, single male- and female-headed households, women, people with disabilities, households coping with HIV/AIDS, people who have never worked, and those in long-term unemployment.
- (e) The proposed targets as set out in sub clause SL 06 (c)
- 100% youth from 18 to 35 years of age;
 - 60% women;
 - 2% disabled.
- (e) Have Matric Certificate or a minimum Grade 10 with Maths and Science subjects.

SL 09 CONTRACTUAL OBLIGATIONS IN RELATION TO YOUTH LABOUR

The youth workers to be employed in the programme (EPWP-NYS) shall be directly contracted to the employer. Over and above the construction and project management responsibilities, the employer will be expected to perform the tasks and responsibilities as set out in clause SL 05 above.

SL 10 PROVINCIAL RATES OF PAY

It is stipulated that youth workers on the EPWP-NYS receive a minimum of R 1 735 per month whilst working and R 1 735 per month whilst on training in ALL provinces. Should youth workers be attending training whilst employed by the contractor, the contractor will still be responsible for payment to the youth worker whilst at training.

SL 11 MEASUREMENTS AND PAYMENT

The number of youth workers specified for this contract that will receive orientation, life skills development training and technical training is 15.

**SL 11.01 PAYMENT FOR TRAINING OF YOUTH WORKERS
(TARGET: - 15 YOUTH WORKERS)**

SL 11.01.01 Orientation and Life Skills development training for youth workers for an average of **26** days per youth worker.....Unit: Prov.Sum

SL 11.01.02 Technical skills training for youth workers for an average of ___ days per youth worker.....Unit: Prov.Sum

The above items are only applicable if DoL / NYDA do not fund the specific training.

SL 11.01.03 Payment reduction due to not meeting the target as in SL 11.01.01 and SL 11.01.02.....Unit: Youth worker
LESS R 2000 per youth worker

SL 11.01.04 Profit and attendance (on items 1 and 2 above).....Unit: 10 %

SL 11.02 PAYMENT FOR TRAVELLING AND ACCOMMODATION DURING OFF-SITE TRAINING

SL 11.02.01 Orientation / Life skills development training for 10 days each:

01 Travelling (based on R30 per day return trip/trainer)Unit: PC.sum

02 Accommodation (based on 5 nights per week and R150/trainer per night).....Unit: PC.Sum

03 Profit and attendance (on items 1 and 2 above)..... Unit: %

SL 11.02.02 Skills development and technical training:

01 Travelling (based on R30 per day return trip/trainer)Unit: PC.Sum

02 Accommodation (based on 5 nights per week and R150/trainer per night).....Unit: PC.Sum

03 Profit and attendance (on items 1 and 2 above)..... Unit: %

The units of measurement for sub items SL 11.02.01 (01) and SL 11.02.02 (01) above shall be the cost for travel for the trainer off site that must be arranged by the contractor. Amounts quoted shall be corrected according to re-measurement based on actual invoices.

The unit of measurement for sub items SL 11.02.01 (02) and SL 11.02.02 (02) above shall be the amounts in Rand expended for accommodation for the trainer off site that must be arranged by the contractor. Amounts quoted shall be corrected according to re-measurement based on actual invoices.

The tendered percentages under sub items SL 11.02.01 (03) and SL 11.02.02 (03) will be paid to the contractor on the value of each payment pertaining to the travelling and accommodation to cover his expenses in this regard.

SL 11.03 ALTERNATIVE WORKERS FOR THE PERIOD OF OFF-SITE TRAINING

SL 11.03.01 Skills development and technical training for youth workers for a period of **10** days per youth worker..... Unit: worker-days

SL 11.03.02 Skills development and Technical training for youth workers for a period of 120 days per youth worker.....Unit Worker-days

The unit of measurement shall be the number of youth workers replaced while in training multiplied by the number of days.

The rates tendered shall include full compensation for additional replacement labour during periods of off-site training.

SL 11.04 EMPLOYMENT OF YOUTH WORKERS

SL 11.04.01 Employment of youth workers.....Unit: Prov.Sum
The unit of measurement shall be the number of youth workers at the labour rate of R 1 735.00 per month as the amount determined by the Ministerial Determination 4: Expanded Public Works Programs (Government Notice No. 9745: 4th May 2012) multiplied by the period employed in months and the rate tendered shall include full compensation for all costs associated with the employment of youth workers and for complying with the conditions of contract. The cost for the training shall be excluded from this item. This item is based on 6 months appointment for youth workers.

SL 11.05 PROVISION OF EPWP DESIGNED OVERALLS AND HARD HATS TO YOUTH WORKERS

SL 11.05.01 Supply 2 x EPWP branded overalls, 1 x EPWP branded hard hat, gloves and safety boots to each youth worker (allowed R 1 800.00 / youth worker)Unit: PC.Sum

Youth worker overalls should be orange (top and bottom) as per EPWP branding specification with the exception of Correctional Services contracts where the overalls should be blue (top and bottom). **A minimum of two overalls per youth worker should be supplied.** Hard hats should be orange and branded as per the EPWP branding specification.

SL 11.05.02 Profit and attendance.....Unit: 10%

An amount has been provided in the Schedule of Quantities under sub item SL 10.05.01 for the supply of EPWP designed overalls and hard hat, as per the EPWP branding specification provided by the EPWP unit, and the Service Provider. The Service Provider will have sole authority to spend the amounts or part thereof. The tendered percentage under sub items SL 10.05.02 will be paid to the contractor on the value of each payment pertaining to the supply of overalls and hard hats to cover his expenses in this regard.

SL 11.06 **PROVISION OF SMALL TOOLS FOR YOUTH WORKERS**

SL 11.06.01 Provide all youth workers with prescribed tools for their respective trades. Specification for the mentioned tools to be provided by the Service Provider. These tools will become the property of the youth workers after the completion of the programme...(allowed R 1500-00 / youth worker)Unit: PC.Sum

SL 11.06.02 Profit and attendance..... Unit: %

SL 11.07 **APPOINTMENT OF YOUTH TEAM LEADER/S**

SL 11.07.01 Appointment of Youth Team Leader/s for the duration of the contract (allowed R 3 000-00)..... Unit: Prov.Sum

The Youth Team Leader will act as CLO/PLO to facilitate the project work between the youth workers and the contractor. (Ratio 1:15)

SL 11.08 **LIAISON WITH SERVICE PROVIDER**Unit: hours
The tendered rate shall include full compensation for the cost of liaising with the Service Provider and Social Facilitators on all issues regarding the works.

EPWP - NYS AGREEMENT
LIMITED DURATION CONTRACT OF EMPLOYMENT

[Example]

FOR
EXPANDED PUBLIC WORKS PROGRAMME
BETWEEN

Company Name:
(herein after referred to as the “**contractor**”)

Company Address:

Contract Name:

AND

Surname and Name/s
(hereinafter referred to as the “**Youth worker**”)

Residential Address:

ID number:

1. The contractor hereby appoints the Youth worker in terms of a Limited Duration Contract, to work as a youth worker within a Special Public Works Programme (SPWP) Project.
2. This contract must be read in conjunction with the standard terms and conditions of employment applicable to a SPWP, a copy of which is attached.
3. The project where you will be employed is referred to as
and is located at
4. The contract will start onand end on.....

5. You must be aware that **this contract is a Limited Duration Contract** and **not a permanent job**. Your minimum period of employment will be 6 months and the contract may be terminated for one of the following reasons:
 - (a) Funding for the programme in your areas comes to an end.
 - (b) You repeatedly do not perform in terms of the tasks set out in your work programme.
 - (c) If you breach any of the terms and conditions of this contract.

6. You will be employed as a general worker within the contract, you may, depending on the contractor's operational needs, be required to perform other duties that can be reasonably expected of you.

7. You will adhere to the contractors' disciplinary code.

8. You will be required to work your daily hours from to which included your meal break.

9. While you are working you will report to

10. You will be paid an time-rate amount of R per hour.

11. The contractor shall not be required to provide to local workers:
 - holiday, leave, sick or severance pay;
 - a pension or similar scheme;
 - a medical aid or similar scheme.

12. Signed on this day of 20.....

Contractor: Date:

Youth Worker: Date:

Witness: Date:

CALEDONSPORT AND FICKSBURG BRIDGE: LAND PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATION FOR A PERIOD OF 36 MONTHS



public works
& infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

Part C4: Site information

PG-03.1 (EC) SITE INFORMATION – (GCC (2010) 2nd EDITION: 2010)

Project title:	<i>Caledonspoort and Ficksburg Bridge: Land Port of Entry: Appointment of a service provider for the maintenance and repairs of building, civil, mechanical, electrical infrastructure and installation for a period of 36 months</i>		
Tender no:	H20/031AI	Reference no:	N/A

C4 Site Information

The location of each Land Port of Entry is described below

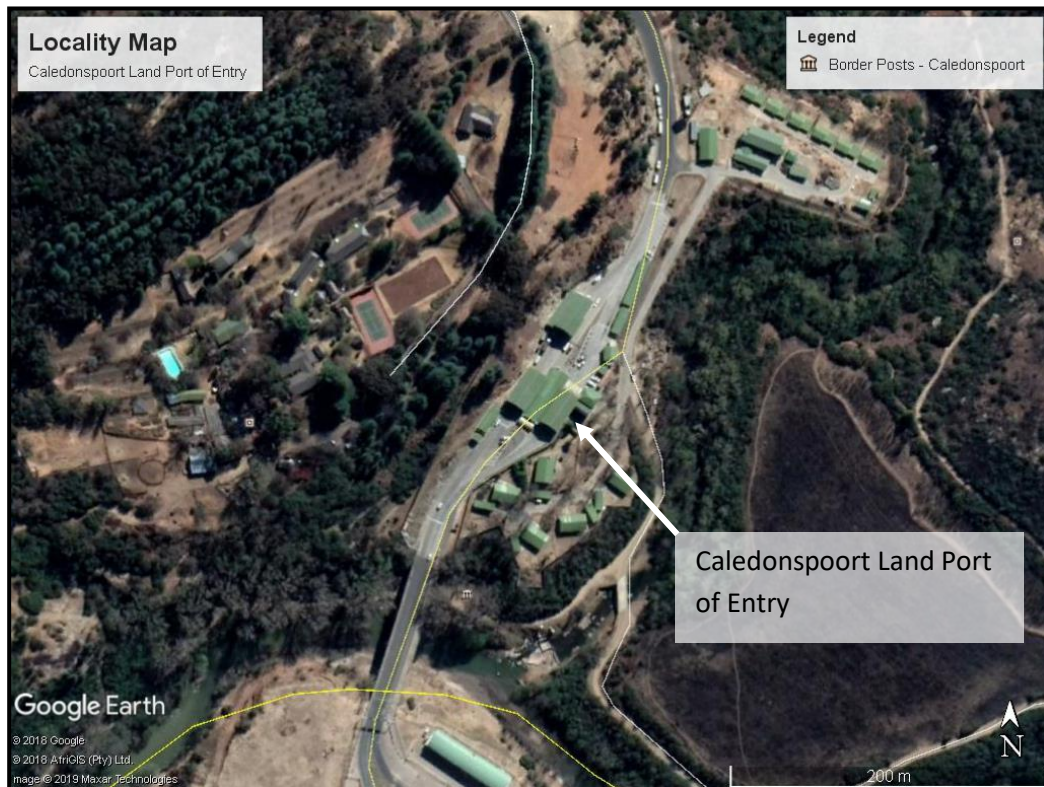
Caledonspoort

Physical Address:

Caladonspoort Border Post
 Fouriesburg
 9725
 Free State
 South Africa

GPS Coordinates:

28.6948°S 28.2339°E



Caledonspoort Land Port of Entry aerial view

Ficksburg

Physical Address:

Ficksburg Border Post
End Bloem Street
Ficksburg
9730
Free State
South Africa

GPS Coordinates:

28.8839°S 27.8903°E



Ficksburg Land Port of Entry aerial view

It must be emphasized that all installations will remain occupied and will only be accessible during office hours. Special arrangements will have to be made with the Engineer to obtain access to the dwellings.

The contractor is to allow for the above in his programme.