



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

TENDER NO: H20/032 AI

CLOSING DATE: 9 April 2021 @ 11:00

PROCUREMENT DOCUMENTS

MASERU BRIDGE: PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTH (APPOINTMENT OF CONTRACTOR)

VOLUME 3 of 3 – CONTRACT

MARCH 2021

ISSUED BY:
NATIONAL DEPARTMENT OF PUBLIC
WORKS, PRETORIA HEAD OFFICE
CGO BUILDING
CNR BOSMAN AND MADIBA STREET,
PRETORIA

PROJECT MANAGER:
K Kgorane

NAME OF TENDERER: _____.

C1.2

CONTRACT DATA

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

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| Project title: | MASERU BRIDGE: PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTH (APPOINTMENT OF CONTRACTOR) | | |
| Tender no: | H20/032AI | Reference no: | n/a |

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| | 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 | |
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| 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> : For portion 1 within <i>insert description as may be applicable</i> For portion 2 within <i>insert description as may be applicable</i> For portion 3 within <i>insert description as may be applicable</i> For portion 4 within <i>insert description as may be applicable</i> (followed by further portions as required) |

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| | The time for achieving Practical Completion of the whole of the Works is: 36 months , measured from the Commencement Date. The time thus stated includes special non-working days and the year-end break. |
| 1.1.1.15 | The name of the Employer is: The Government of the Republic of South Africa in its Department of Public Works. |
| 1.1.1.16 | The name of the Engineer is: Bvi Consulting Engineers (pty) Ltd |
| 1.1.1.26 | The Pricing Strategy is a: Re-measurement Contract. |
| 1.1.1.31 | Not applicable to this Contract. |
| 1.1.1.35 | 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. |
| 1.2.1.2 | Employer's address: Physical Address: Department of Public Works CGO Building, cnr Bosman and Madiba Streets, PRETORIA 0001 Postal Address: Department of Public Works Private Bag X65 PRETORIA 0001 Facsimile: Telephone: 012 406 1327 |
| | Engineer's address: Physical Address: 17President Steyn Avenue Westdene Bloemfontein 9301 Postal Address: PO Box, 12441 Brandhof 9324 |

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| | <p>Facsimile: 051 447 6056</p> <p>Telephone: 051 447 2137</p> |
| 1.3.4 | Not applicable to this Contract. |
| 1.3.5 | <p>Replace Clause 1.3.5 with the following provisions:</p> <ul style="list-style-type: none"> (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. (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. (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. (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. (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. (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. |
| 3.1.3 | <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 |

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| | 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:</p> <p>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:</p> <p>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:</p> <p>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:</p> <p>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> |

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| 4.8.2.2 | 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, |
| 5.3.1 | 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) <i>insert other requirements</i> <i>insert other requirements</i> <i>insert other requirements</i> |
| 5.3.2 | The time to submit the documentation required before commencement with Works execution is: 21 days. |
| 5.4.2 | 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: <i>The Maseru Bridge ports of entry is operational everyday and coordination about the sections of the where work should take place should be discussed with client.</i> |
| 5.8.1 | The non-working days are: Saturdays and Sundays The special non-working days are: (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. |
| 5.9.1 | Amend Clause 5.9.1 as follows: 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. |
| 5.13.1 | The penalty for failing to complete the Works is: R3000 per day <i>or, if completion in portions is required,</i> The penalty for failing to complete portion 1 of the Works is: <i>Rinsert penalty amount per day.</i> The penalty for failing to complete portion 2 of the Works is: <i>Rinsert penalty amount per day.</i> The penalty for failing to complete portion 3 of the Works is: <i>Rinsert penalty amount per day.</i> The penalty for failing to complete portion 4 of the Works is: <i>Rinsert penalty amount per day.</i> <i>Followed by further portions as required.</i> The penalty for failing to complete the whole of the works is: <i>Rinsert penalty amount per day.</i> |
| 5.14.1 | Amend the second paragraph of Clause 5.14.1 as follows: When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of |

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| | 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 14 th day after the contractor requested the Certificate of Practical Completion. |
| 5.16.1 | Amend Clause 5.16.1 to delete the proviso in the third paragraph of this clause. |
| 5.16.2 | Amend Clause 5.16.2 as follows: 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. |
| 5.16.3 | The latent defect period for all works is: 5 years . |
| 6.2.1 | 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. |
| 6.2.3 | Amend Clause 6.2.3 as follows: 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. |
| 6.5.1.2.3 | The percentage allowance to cover overhead charges is: 33%, except on material cost where the percentage allowance is 10%. |
| 6.8.2 | Contract Price Adjustment (CPA) will be applicable: "Yes" . If CPA is indicated as 'Yes' above the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor: The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: The value of "x" is 0.15. The values of the coefficients are: a = 0.25. (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel) 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) The urban area nearest the Site is Ladybrand, Free State . (Select urban area from Statistical News Release, P0141, Table 7.1.) The applicable industry for the Producer Price Index for materials is insert name of industry . (Select the applicable industry from Statistical News Release, P01421, Table 11.) The area for the Producer Price Index for fuel is insert name of area . |

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| | <p>(Select the area from Statistical News Release, P01421, Table 12.)</p> <p>The base month is March 2020. (The month prior to the closing of the tender.)</p> |
| 6.8.3 | Price adjustments for variations in the costs of special materials are not allowed. |
| 6.10.1.5 | The percentage advance on materials not yet built into the Permanent Works is: 85 % . |
| 6.10.3 | The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1. |
| 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, 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.</u></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), 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.</u></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), 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.</u></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 | Amend Clause 8.6.1.1.1 to read as follows: Contract Sum plus 10%. |
| 8.6.1.1.2 | The value of Plant and materials supplied by the Employer to be included in the insurance sum is: Nil |

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| 8.6.1.1.3 | The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is: Nil |
| 8.6.1.3 | Amend Clause 8.6.1.3 to delete reference to limit of indemnity, to read as follows: 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. |
| 8.6.1.5 | <p>1. Public liability insurance to be effect by the Contractor to a minimum value of:</p> <p><input type="checkbox"/> R5 million</p> <p>or</p> <p><input checked="" type="checkbox"/> R insert amount in figures (and in words)</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 of:</p> <p>R insert amount in figures (and in words)</p> <p>With a deductible not exceeding 5% of each and every claim.</p> |
| 8.6.5 | Amend Clause 8.6.5 as follows: 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. |
| 8.6.7 | Amend Clause 8.6.7 as follows: 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. |
| 8.6.8 | <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> |

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| | <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> |
| 9.1.4 | <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</p> |

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| | substantiating any such damage or loss. |
| 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 within 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</p> |

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| | given, or to any submission, statement or admission made in the course of the amicable settlement. |
| 10.5 10.6 & 10.7 | The entire provisions of these Clauses are not applicable to this Contract. |
| 10.10.3 | Amend Clause 10.10.3 as follows to reword and remove reference to "arbitrator": 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. |

| | |
|---------|--|
| | 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>Postal Address:</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 Contact 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 53 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> |

C1.3

VARIABLE CONSTRUCTION GUARANTEE

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: **K Kgorane**
 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: **H20/032 AI**, for the **MASERU BRIDGE: PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTH (APPOINTMENT OF CONTRACTOR)** (hereinafter referred to as the “**contract**”) for the sum of R **insert amount**, (**insert amount in words**), (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 **insert amount**, (**insert amount in words**) 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: _____

C1.4

FIXED CONSTRUCTION GUARANTEE

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: **K Kgorane**
 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: **H20/032AI**, for the **MASERU BRIDGE: PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTH (APPOINTMENT OF CONTRACTOR)** (hereinafter referred to as the "**contract**"), for the sum of R **insert amount**, (**insert amount in words**), (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 **insert amount**, (**insert amount in words**) 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: _____

C3

SCOPE OF WORKS

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

| | | | |
|-----------------------|---|----------------------|------------|
| Project title: | <i>MASERU BRIDGE: PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTH (APPOINTMENT OF CONTRACTOR)</i> | | |
| Tender no: | <i>H20/032 AI</i> | Reference no: | <i>n/a</i> |

C3. Scope of Works

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NOTE: This is an example only. Compiler / Designer to provide the applicable contents.

B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

Variations and additions to the following SANS 1200 Standardised Specifications:

| | | |
|---------------------|---|----------------------------------|
| SANS 1200 A | : | General |
| SANS 1200 AB | : | Engineer's office |
| SANS 1200 C | : | PSC Site Clearance |
| SANS 1200 D | : | PSD Earthworks |
| SANS 1200 G | : | PSG Concrete (Structural) |
| SANS 1200 LB | : | PSLB Bedding (Pipes) |
| SANS 1200 LE | : | PSLE Stormwater Drainage |

C3.3 PARTICULAR SPECIFICATIONS

a) Technical Specifications

| | | |
|-----------|----------|---|
| AA | : | Plumbing and drainage installations |
| BA | : | Roof coverings |
| BB | : | Carpentry and joinery for roofs and ceilings |
| BC | : | Waterproofing of concrete roofs |
| BD | : | Walls |
| BE | : | Floors |
| BH | : | Fittings |
| BJ | : | Paintwork |
| BK | : | Measurement and payment building work |
| CA | : | Roads |
| CB | : | Stormwater drainage |
| CC | : | Fencing and gates |
| CE | : | Water distribution networks |
| CF | : | Sewerage networks |
| CG | : | Solid waste management |
| DA | : | Borehole pump system |
| JC | : | Conventional fire fighting equipment |

Tender no: H20/032 AI

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. SANS 1200 - Standardised Specifications for Civil Engineering Construction*
2. SANS 164 - Plugs, socket-outlets and couplers for industrial purposes*
3. SANS 241 - South African Standard Specification for drinking water
4. SANS 515 - Decorative paint with a non-aqueous solvent base for interior use*
5. SANS 558 - Cast iron surface boxes and manhole and inspection covers and frames*
6. SANS 630 - Decorative high gloss enamel paints*
7. SANS 631 - Decorative oil gloss paint for interior and exterior use*
8. SANS 633 - Emulsion paints for interior decorative purposes*
9. SANS 634 - Emulsion paints for exterior use*
10. SANS 675 - Zinc-coated fencing wires (plain and barbed)*
11. SANS 678 - Primers for wood for interior and exterior use*
12. SANS 681 - Undercoats for paints*
13. SANS 682 - Aluminium paint*
14. SANS 683 - Roof paints (relevant sections)*
15. SANS 723 - Wash primer (metal etch primer)*
16. SANS 801 - Epoxy-tar paints*



- | | | | |
|-----|----------------------------|---|--|
| 17. | SANS 887 | - | Varnish for interior use* |
| 18. | SANS 926 | - | Two-pack zinc-rich epoxy primer* |
| 19. | SANS 935 coated sheet | - | Hot-dip (galvanised) zink coatings (other than on continuously zinc- and wire)* |
| 20. | SANS 10252-2 Drainage | - | Code of Practice "Water Supply and Drainage for Buildings, Part 2: Installations for Buildings", Annexure B: Septic Tank Systems* |
| 21. | SANS 1227 | - | Textured wall coatings, emulsion base, for interior and exterior use* |
| 22. | SANS 1319 | - | Zinc phosphate primers for steel* |
| 23. | SANS 1373 | - | Chain-link fencing and its wire accessories* |
| 24. | SANS 4831 Most probable | - | Microbiology: General guidance for the enumeration of coliforms: number technique* |
| 25. | SANS 4833 Colony count | - | Microbiology: General guidance for the enumeration of coliforms: technique at 30°C* |
| 26. | SANS 5011 | - | Water – pH-Value* |
| 27. | SANS 5217 | - | Water – free and saline ammonia content* |
| 28. | SANS 6048 | - | Water – chemical oxygen demand* |
| 29. | SANS 6052 | - | Residual chlorine content of water* |
| 30. | SANS 6057 | - | Electrical conductivity of water* |
| 31. | SANS 10064 | - | The preparation of steel surfaces for coating* |
| 32. | SANS 10160 buildings* | - | The general procedures and loadings to be adopted in the design of |
| 33. | SANS 10162 | - | The structural use of steel* |



34. SANS 10298 - Indirect small to medium-sized gas chlorination systems for the disinfection of water*
35. SANS 10299 - Development, maintenance and management of groundwater resources*
36. SANS 10306 - The management of potable water in distribution systems*
37. SANS 10329 - The design and construction of sectional steel tanks for storage of liquids at or above ground level*
38. SANS 10400 - Application of the National Building Regulations
39. SANS ISO 5667-2 - Water quality sampling, part2: Guidance on sampling techniques*
40. OW 371 - Specification of Materials and Methods to be used. Fourth revision, October 1993.**
41. BS 1486: Part 2 - Heavy duty lubrication nipples
59. BS 5316: Part 1 - Acceptance tests for centrifugal, mixed flow and axial pumps
60. Department of Water Affairs and Forestry, Department of Health and the Water Research Commission - Department of Quality of Domestic Water Supplies

* Not issued with this document, but available at the Contractor's expense from the 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.

Tender no: H20/032 AI

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 PROJECT DESCRIPTION:

IPS 1 GENERAL DESCRIPTION

Each installation requires work that may include any one or more of the activities as set out in clause PS4 below: decommissioning, repair, reconditioning, testing, re-commissioning and maintenance during the 36-month Contract. The work may 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. The contractor will also be required to coordinate all repair works with the appointed Electrical and Mechanical contractor as well as the user clients.

PS 4 DETAILS OF CONTRACT

The emphasis of this Contract is Repair, Maintenance and Operation. Corrective maintenance (Repair) items as listed below were allowed for work that is required outside the normal maintenance responsibilities at the on-set of the Contractual access to installations. The following corrective maintenance work includes various locations within upper houses, lower houses and operational area. The items allowed for in the Scope of Works will only be executed upon instruction from the Engineer when so required and when necessary.

Description of corrective maintenance work: General Items

- Compliance with the Occupational Health and Safety Act and Construction Regulations
- Expanded Public Works Programme (EPWP) implementation, which includes life skills training, technical development and technical training
- HIV/AIDS awareness campaigns and training, which includes awareness workshops and awareness champions. This should also include training and the provision of condoms, posters, booklets, videos, etc.
- Provision should be made for additional facilities during Easter and Christmas seasons or any peak season as identified by the Client
- To enable the User Departments to report breakdowns, the Contractor shall establish an approved third party Breakdown Maintenance Call Centre
- Make provision for water carting when it is required
- Pest control is important to apply in this kind of environment
- Site keeping and cleaning of facilities as well as the supply of consumables for ablutions to be included in the follow-on contract
- Diesel should be provided for the stand-by generators for the duration of the contract to ensure that stand-by power is available at all times. The stand-by generators are serviced periodically
- Make provision for power saving equipment such as air-conditioning units (inverter type), solar geysers, etc. – in case of replacement
- Provide facilities for disabled persons as specified by the Client
- Updating of existing layout plans with regard to services, etc.
- Supply Chemicals for Water and Waste Water Treatment Plants

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

Installation R1: Structural and Building Related Corrective Maintenance Work

- General structural corrective maintenance due to operation damage, wear and tear work such as paintwork, replacement of damaged items, e.g. doors, locks, windows, etc. on all buildings.
- Apply varnish to all exterior timber doors.
- Paint roof timbers and fascia boards.
- Sealing of roofs
- Replacement of roof tiles at certain houses
- Replacement of roof sheeting at small houses that are at the end of their life cycles
- Replacement of rotten purlins and rafters on roofs
- Paint all previously painted surfaces at least once during the Contract

Installation R2: Plumbing and Drainage Related Corrective Maintenance Work

- Replace missing or damaged toilet seats.
- Replace damaged toilet pans.
- Service cisterns and flush masters.
- Service all taps, valves, etc.
- Service and clean geysers due to hardness salt precipitation.
- Replace defective geysers due to hardness salt precipitation.

Installation R3: Fencing, Cleaning and Site Keeping Related Corrective Maintenance Work

- Replace solid waste bins if required.
- Replace defective and damaged ablution block equipment.
- Damage corrective maintenance to fences if required.
- Corrosion protection of all fences, posts and gates.
- Repairs to existing gates if required.
- Replacement of rusted fence posts and diamond mesh
- Corrosion protection of fence posts and gates at various ports of entry

Installation R4: Water treatment works, Bulk Water Supply Systems and External Water Networks Related Corrective Maintenance Work

- Test abstraction point (Caledon River), the existing borehole and updated asset information.
- Service existing borehole pump and allow for replacement if required.
- Service the borehole chlorination systems or connect it to current water treatment plant.
- Service existing treatment plant at ozone machine room and tanks, fittings to be replaced where required
- Service existing water treatment room and allow for replacement dosing pumps and tanks if required.
- Service existing domestic and fire water booster pump house and allow for replacement of pumps if required.
- Service existing valves and fittings where required.
- Replace defective of water meters if required.
- Service and calibrate flow meters.
- Update the existing operating and maintenance manuals.
- Repair underground water distribution pipes if required.
- Ensure supply of chemicals required for the operation of the treatment Plant.

Installation R5: Wastewater Treatment Works and Sewer Networks Related Corrective Maintenance Work

- Pump out and clean existing wastewater treatment structures.
- Service existing motor control centres.
- Service the raw sewer pumps.
- Replace the existing float control switches.
- Replace the biological contactor.
- Recondition other existing pumps.
- Update the existing operating and maintenance manuals.
- Clean sump at the raw sewer pump station
- Service motor control centres
- Service existing flow measuring equipment
- Service existing pumps and motors
- Cleaning out of rotating biological contactor

Installation R6: Roads and Storm Water Related Corrective Maintenance Work

- Install indication and identifying signage if required.
- Road marking and maintenance of road signs
- Base and sub base failures on road in operational area
- Replacement of damaged paving
- replaced cracked concrete surfacing sections of the main (truck & Vehicular) road ways at operational road
- Replacement of sections of cracked concrete road at operational area to prevent further damages
- Relevelling of paving at entrance and carport paving at residential lower houses.
- Replace current concrete entrance drive way to full paving entrance road to garage at residential upper houses.
- Replacement of cracked and damaged concrete edge beams
- Replacement of damaged paving if required.
- Re shape of ground to accommodate storm water at residential Upper houses.

The description of the Works given above is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract. All work will be performed according to the relevant specifications forming part of this Contract.

Approximate quantities of each type of work will be given in the Bill of Quantities.

Approximate quantities of each type of work are given in the Bill of Quantities.

NOTE: A clear distinction will be made between the repair work to be done and the maintenance responsibilities applicable to each installation.

LABOUR INTENSIVE PROJECTS:

Employer's objectives

The employer's objectives are to deliver public infrastructure using labour intensive methods

Labour-intensive works

Labour-intensive works comprise the activities described in the Labour-Intensive Specification. Such works shall be constructed using youth workers who are temporarily employed in terms of this scope of work.

Refer to Additional Specification SL: Labour Intensive Projects in the Scope of Work.

PS5 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.

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 6 SITE FACILITIES AVAILABLE

PS 6.1 CAMPSITE AND STORE ROOM

(a) Repair work

An area for the campsite will be provided after consultation with the User Client area manager. Only one night watchman will be allowed in the campsite at night.

(b) Maintenance responsibilities

The Contractor must provide his own storeroom facilities for the duration of the maintenance phase.

PS 6.2 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 6.3 PARKING FACILITIES

Parking facilities are available on the Site.

PS 7 SITE FACILITIES REQUIRED FOR THE ENGINEER

PS 7.1 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 7.2 OFFICE ACCOMMODATION

The Contractor shall provide on Site two (2) offices for the exclusive use of the Engineer. At the onset of the contract the Engineer will identify the site at which the office is to be provided.

Such office(s) shall comply with and be furnished in accordance with the requirements of Subclause 3.2 of SANS 1200 AB. The Contractor shall maintain the office(s) in accordance with the requirements of Subclause 5.2 of SANS 1200 AB.

Irrespective the type of material of which an office is constructed, the Contractor shall ensure that the temperature inside the office is always between 20°C and 24°C.

Such office accommodation shall be provided within the Contractor's site establishment facilities.

PS 7.3 CARPORTS

The Contractor shall provide on Site two (2) carports for the exclusive use of the Engineer, in accordance with requirements of Subclause PSAB 3.3 of the Project Specifications. At the onset of the contract the Engineer will identify the site at which the carport is to be provided.

PS 7.4 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 ten (10) 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. At the onset of the contract the Engineer will identify the site at which the meeting venue is to be provided.

PS 7.5 CONTRACT NAMEBOARDS

The Contractor shall provide, erect and maintain five (5) contract nameboards at such positions and locations as are directed by the Engineer, in accordance with the requirements set out in SANS 1200 AB (as amended) and according to the nameboard drawing contained in the document.

The Contractor shall before ordering or manufacturing any such contract nameboards obtain the Engineer's written approval in respect of all names and wording to appear on the contract nameboards.

PS 7.6 SURVEY EQUIPMENT AND ASSISTANTS

(a) Survey equipment

The Contractor shall, in accordance with the requirements of SANS 1200 AB (as amended) provide the following survey equipment for the exclusive use of the Engineer and his staff:

- (i) 1 upright reading automatic level with tripod
- (ii) 1 metric levelling staff with protective cover bag
- (iii) 6 ranging rods
- (iv) 1 100 metre Stilon tape measure
- (v) 1 ± 2 kg hammer.
- (vi) 1 Laser tape measure

Whenever reasonably required by the Engineer, the Contractor shall, in accordance with the requirements of SANS 1200 AB (as amended), make available to the Engineer or his representative, the following additional survey equipment:

- (i) 1 tacheometer with tripod
- (ii) 1 survey staff for tacheometer
- (iii) 1 Distomat, complete with tripod, fully charged battery and all appurtenant accessories.

(b) Survey assistants

The Contractor shall, in accordance with the requirements of Subclause 5.5 of SANS 1200 AB, make available to the Engineer, two (2) survey assistants.

PS 7.7 TELEPHONE FACILITIES

The Contractor shall, in accordance with the requirements of Subclause PSAB 4.1 of the Project Specifications, provide on site, the following telephone facilities for the use of the Engineer and his Representative:

- (a) Telkom telephones**
 - (i) Number of separate telephone lines (numbers): One
 - (ii) Number of telephone hand sets required: One
- (b) Cellular telephones**

Number of cellular telephones required for a period of 36 months: 2

The average call cost at business rates (over the 36 month contract period) shall not exceed R1 200,00 per month.

PS 7.8 COMPUTER FACILITIES

The Contractor shall provide computer facilities together with the specified software installed, for the exclusive use of the Engineer and his staff, in accordance with the requirements of SANS 1200 AB (as amended).

PS 7.9 TELEFAX FACILITIES

The Contractor shall provide telefax facilities in accordance with the requirements of SANS 1200 AB (as amended).

PS 7.10 ELECTRICITY SUPPLY FOR THE ENGINEER

All electricity supply to the Engineer's office(s) and laboratory (if applicable), whether provided by the Contractor by way of a reticulated supply from a local authority or by way of on-site generators, shall be regulated by the Contractor to within limits such as to prevent

damage occurring to any electrical plant and equipment provided by the Contractor or by the Engineer, as a result of fluctuations in the electrical current supplied.

PS 7.11 HOUSING FOR ENGINEER'S REPRESENTATIVE

The Engineer will provide housing for the Engineer's representative. The housing and the relevant services and local authority rates and charges shall be paid for by the Contractor on the written instruction of the Engineer, from an amount included in Section 1200 A of the Bill of Quantities for this purpose.

The Contractor is entitled to a percentage of the value of each payment to the Engineer to cover his expenses in this regard. (See payment item PSA 8.6)

PS 7.12 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 each contract at the installation. The call centre is operational 24 hours per day, 365 days per year. 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 8 FEATURES REQUIRING SPECIAL ATTENTION

PS 8.1 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 8.2 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.

(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.

(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 8.3 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 8.4 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 8.5 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 8.6 SANS 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 8.7 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 8.8 BORROW PITS

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

PS 8.9 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.

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 8.10 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 11 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.

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 13 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 15 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 16 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 17 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:

- (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 18 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 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.

- (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.

B: AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATION:

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 an amendment to SANS 1200. The letters and numbers following these prefixes respectively indicate the relevant Standardised Specification and clause numbers 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."

PSA 2.4 ABBREVIATIONS

(a) Abbreviations relating to standard documents

ADD THE FOLLOWING ABBREVIATION:

"CKS: SANS 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 SANS Specifications shall bear the SANS 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. Only one 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."

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:

"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

PSA 8.1.2.2 Tendered sums

REPLACE THE CONTENTS OF THIS SUB CLAUSE WITH THE FOLLOWING:

"The Contractor's tendered sums under items PSA 8.3 and PSA 8.4 shall collectively cover all charges for

- risks, costs and obligations in terms of the General Conditions of Contract, the Contract Data and of this standardized specification, except where provision is made in the 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**

- 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 SANS 1200 AB and in these Project Specifications
- complying with Additional Specification SL: Employment and Training of Youth Workers on the Expanded Public Works Programme (EPWP) Infrastructure Projects: National Youth Service (NYS) as attached to these Bills of Quantities.
- identifying a minimum of 52 youth workers from a priority list and employing them at the MINMEC rates for a minimum period of 6 months and training them as per specification SL
- liaising and co-ordinating with the Service Provider with regard to the priority list and the selection of youth workers, employment and training of the identified youth workers
- availing the services of an adequately qualified foreman specifically for the EPWP-NYS youth workers to act as their construction supervisor. This foreman will be responsible for continuously monitoring the progress of the youth workers and to address questions and issues that may arise from the youth workers.

PSA 8.2 PAYMENT

PSA 8.2.1 Fixed-charge and value-related items

REPLACE THE CONTENTS OF THIS SUB CLAUSE WITH THE FOLLOWING: "Fixed charges in respect of item 8.3.1 will be paid as follows:

Eighty per cent (80%) of the tendered amount will be paid as soon as the facilities have been established and approved and the youth workers from the priority list have been appointed. The residual twenty per cent (20%) will be paid as soon as the work is completed, the facilities have been removed and the camp site has been vacated and cleaned.

The amount which is tendered in terms of item 8.3.2 will be paid as follows:

- (a) An amount equal to fifteen per cent (15%) of the tender price VAT excluded will be paid as soon as the facilities have been provided and approved.**
- (b) The balance of the tendered amount for item 8.3.2 will be paid in two separate payments as follows:**
 - (i) The first payment will be ninety per cent (90%) of the balance and will be paid when the amount certified for payment, including retention, but excluding the amount for this first payment exceeds twenty per cent (20%) of the tender price.**
 - (ii) The remaining ten per cent (10%), will be made when the Works have been certified as completed and the Contractor has fulfilled all his obligations to date in terms of this specification, the General Conditions of Contract and the Contract Data.**

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.

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 a group of installations, representing on site (e.g. A1-A12 Port of Entry). A total duration for completion

of all installations at one site is specified in the Contract Data. Time-related payment for a group of installations (site) shall only be made when the repair work on the group of installations (site) is in progress and shall end when the time for completion or an extension of time granted by the Engineer expires. The sum measured for the Time-related payment for a group of installations (site) will be paid proportional (based on the value of the individual installation) and if a time extension is applicable and approved.

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 sums bid 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 8.4.1 Time-related preliminary and general charges:

- (a) Installation R1 Unit: Sum
- (b) Installation R2 Unit: Sum
- (c) Installation R3 Unit: Sum
- (d) Installation R4 Unit: Sum
- (e) Installation R5 Unit: Sum
- (f) Installation R6 Unit: Sum

The sums bid 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 bid for repair work, excluding value-added tax.

PSA 8.6 PRIME COST ITEMS

REPLACE THIS ITEM WITH THE FOLLOWING:

"PSA 8.6 PRIME COST SUMS:

- (a) Housing for Engineer's representative Unit: PC Sum
- (b) Charge required by Contractor on subitem (a) above Unit: %

The Prime Cost Sum provided under subitem (a) in the Bill of Quantities will be expended in accordance with Clause 45.2 of the General Conditions of Contract.

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

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:

(a) Water and sewer pipes Unit : Sum

(b) Electrical and other cables Unit : Sum

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 excavating 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 AASHTO density.

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

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

ADD THE FOLLOWING ITEMS:

"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.

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 CALL CENTRE

- (a) Call centre operating costs for breakdown calls logged Unit: Sum
- (b) Charge required by contractor on subitem (a) aboveUnit: %

An amount has been allowed in the Bill of Quantities under subitem (a) to cover the cost of administrating breakdown calls logged through the call centre. The call centre will submit to the contractor a monthly invoice for breakdown calls logged and monthly subscription. The Contractor will be responsible for prompt payment of the invoice received from the call centre.

The bid percentage under subitem (b) will be paid to the Contractor on the value of each payment pertaining to the call centre to cover his expenses in this regard.

Payment to the Contractor will only become due upon submission of proof of payment to the call centre.

PSA 8.13 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 ENGINEER'S OFFICE

PSAB 3 MATERIALS

PSAB 3.1 NAMEBOARDS

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

"The Contractor shall supply and erect at locations approved by the Engineer, the number of contract nameboards specified in Portion 1 of 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."

PSAB 3.2 OFFICE BUILDING(S)

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

AND REPLACE SUBCLAUSE 3.2(j) OF SANS 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."

ADD THE FOLLOWING SUBCLAUSE IN CLAUSE 3:

"PSAB 3.3 CAR-PORT

The Contractor shall construct the number of carports indicated in Portion 1 of the Project Specifications, for the sole use of the Engineer and his staff. Each car-port shall be constructed so that the vehicle parked under it is always protected against the direct rays of the sun. The carport area shall be at least 20 m2 and the floor shall be covered with a layer of crushed stone to alleviate dusty and muddy conditions. The carport(s) shall be positioned so as to provide easy and convenient access to the Engineer's office."

PSAB 4 PLANT

PSAB 4.1 TELEPHONE

REPLACE THE WORDS: "Department of Post and Telecommunications" WITH "Telkom" AND ADD THE FOLLOWING AT THE END OF SUBCLAUSE 4.1 OF SANS 1200 AB:

"In addition to a Telkom telephone and subject to satisfactory transmission and reception quality in the vicinity of the Site, the Contractor shall provide the number of cellular telephones and associated service contracts from a reputable cellular service provider, as specified in Portion 1 of the Project Specifications, for the exclusive use of the Engineer and his staff."

ADD THE FOLLOWING NEW SUBCLAUSES TO CLAUSE 4 OF SANS 1200 AB:

"PSAB 4.2 COMPUTER EQUIPMENT

Where it is specified in Portion 1 of the Project Specifications that the Contractor shall provide computer equipment on site for the exclusive use of the Engineer and his staff, such computer hardware and software shall comply with the specifications set out in Subclauses PSAB 4.2.1 and PSAB 4.2.2 hereunder.

PSAB 4.2.1 Computer hardware

(a) Computers

Computers shall comply with the following minimum specifications:

LAPTOP

- I. 2.4 GHz Intel Core 2 Duo Processor, Intel Centrino with vPro technology
- II. 15.4 inches diagonal display
- III. 1920 x 1200 WUXGA+WVA video resolution
- IV. 120 GB internal hard disk, 7200 rpm speed
- V. LightScribe DVD, RW SuperMulti with Double Layer Fixed
- VI. 1 x 2048 Mb DDR2 RAM, upgradeable to 4GB max.
- VII. 2 SODIMM slots supporting dual channel memory
- VIII. 4 USB 2.0 ports, VGA, stereo microphone in, stereo headphone/line out, Firewire (1394a), HDMI, power connector, docking connector. RJ-11, RJ-45.
- IX. Slots available for additional devices: 1 Type I/II PC card slot supports both 32-bit CardBus and 16-bit cards, 1 secure digital slot.
- X. Full-sized keyboard
- XI. Enhanced dual pointing devices (touchpad and pointstick)
- XII. 8-cell (73 WHr) Lithium-Ion battery
- XIII. External 90W HP Smart AC adaptor, HP Fast charge Technology
- XIV. KENSINGTON Lock slot
- XV. 56 kbps fax/voice/data modem.
- XVI. Intel Wireless LAN 802.11 a/b/g/n mini-pci card and Bluetooth

(b) Printers

Printers shall, unless otherwise approved by the Engineer, be (Black and White) laser printers.

All computer hardware shall be provided complete with the requisite connecting cables and all inter-facing devices and software necessary for its efficient operation as an integral system.

PSAB 4.2.2 Computer software

The following software shall be properly installed on the computer, and the original licence agreements and disks shall be provided to the Engineer for safekeeping:

- (a) Microsoft Windows XP Pro Service Pack 3
- (b) MS-Office 2003 Professional and Genuine Windows XP Professional
- (c) MS-Project 2008 Professional
- (d) Auto-Cad 2008 LT

PSAB 4.3 TELEFAX FACILITIES

Subject to the availability of Telkom lines, the Contractor shall provide and install in the Engineer's office referred to in Subclause PSAB 3.2, one plain paper fax machine for the exclusive use of the Engineer and his staff. The Contractor shall provide all consumables such as paper, and ink and toner cartridges as may be necessary for the proper operation of the fax machine.

PSAB 4.4 SURVEY EQUIPMENT

The Contractor shall provide on site and make available for the exclusive use of the Engineer and his staff, the survey equipment listed in Portion 1 of the Project Specifications.

All survey equipment provided by the Contractor shall be in good condition, properly calibrated and fit for the purpose.

In addition to survey equipment provided by the Contractor for the exclusive use of the Engineer and his staff, the Contractor shall make available for use by the Engineer, the further survey equipment listed in Portion 1 of the Project Specifications, at all times when such is reasonably required by the Engineer and his staff for the purposes of the Contract."

PSAB 5 CONSTRUCTION

PSAB 5.4 TELEPHONE

REPLACE THE CONTENTS OF SUBCLAUSE 5.4 OF SANS 1200 AB WITH THE FOLLOWING:

"PSAB 5.4.1 Telkom telephones

The Contractor shall advise Telkom promptly of any faults which develop in the telephone service and shall, in such circumstances , arrange for the earliest possible restoration of the said service.

The Contractor shall ensure that the telephone account is promptly paid.

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 cellular 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 SANS 1200 SB:

"PSAB 5.6 COMPUTER EQUIPMENT

All computer equipment provided shall be kept fully serviceable at all times by the Contractor. The Contractor shall have any defective equipment repaired or replaced at his own cost within 12 hours after notification by the Engineer's staff.

The Contractor shall further provide at his own cost, all paper and black ink cartridges/Toner and other consumables reasonably required by the Engineer.

PSAB 5.7 TELEFAX FACILITIES

The Contractor shall advise Telkom promptly of any faults which develop in the telephone line service for the fax machine and shall, in such circumstances , arrange for the earliest possible restoration of the said service.

The Contractor shall promptly arrange for any repairs to or replacement of the fax machine as may prove necessary, and shall ensure that all accounts pertaining to the fax machine are promptly paid.

The Contractor shall further provide at its own cost, all paper, ink cartridges, toner kits and other consumables required for the operation of the fax machine.

PSAB 5.8 SURVEY EQUIPMENT

All survey equipment provided by the Contractor shall be kept fully serviceable at all times by the Contractor. The Contractor shall have any defective equipment repaired or replaced at his own cost within 24 hours after notification by the Engineer's staff.

Where required by the Engineer, the Contractor shall at his own cost, promptly arrange for the re-calibration of survey equipment provided."

PSC SITE CLEARANCE

PSC 3 MATERIALS

PSC 3.1 DISPOSAL OF MATERIAL

ADD THE FOLLOWING:

"The Contractor shall obtain his own dumping sites for the disposal of material and all transport costs shall be included in the rates tendered for site clearance.

PSC 5 CONSTRUCTION

PSC 5.1 AREAS TO BE CLEARED AND GRUBBED

ADD THE FOLLOWING:

"Pipeline routes shall be cleared on instruction of the Engineer to a distance of 1,5 m on both sides of the pipeline centre line. Route pegs or markers shall not be destroyed or damaged during clearing operations."

PSC 5.2 CUTTING OF TREES

PSC 5.2.3 Preservation of trees

PSC 5.2.3.2 Individual trees

REPLACE THE LAST SENTENCE WITH THE FOLLOWING:

"An amount of R1 000,00 will be deducted from moneys due to the Contractor as a penalty for every tree that is damaged or removed unnecessarily and without prior instruction from the Engineer.

PSC 5.5 RECLEARING OF VEGETATION

ADD THE FOLLOWING:

"When areas have to be re-cleared on the written instructions of the Engineer, such re-clearing shall be carried out at the Contractor's own cost and the Contractor is therefore advised not to clear the areas too soon."

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.2 PAYMENT

PSC 8.2.1 Clear and grub

REPLACE THE FIRST LINE WITH THE FOLLOWING:

"The area designated by the Engineer to be cleared and grubbed will be measured in square metres to the nearest square metre or, "

PSC 8.2.12 Remove water, silt, debris and unsuitable soil, transport to spoil site furnished by Contractor and keep excavations free of water Unit: m³

The tendered rate shall include full compensation for removing silt, debris and unsuitable soil and for loading and transporting the material to spoil sites furnished by the Contractor. The Contractor shall furnish a survey and Digital Terrain Model (DTM) of the areas after topsoil has been removed. Payment will only be made on the basis of the DTM after verification by the Engineer. The rate shall also include for all costs relating to dewatering the dams, keeping them dry and temporary diverting sewer to other portions of the site."

PSD EARTHWORKS

PSD 2 INTERPRETATIONS

PSD 2.1 SUPPORTING SPECIFICATIONS

REPLACE SUBCLAUSE 2.1.2 WITH THE FOLLOWING:

"PSD 2.1.2 Any of the other SANS 1200 specifications may form part of the Contract documents."

PSD 2.3 DEFINITIONS

REPLACE THE WORD AND THE DEFINITION FOR "Borrow" WITH THE FOLLOWING:

"Borrow material: Material, other than material obtained from excavations required for the works, obtained from sources such as borrow pits or the authorised widening of excavations. 'Borrow' shall have a corresponding meaning."

REPLACE THE DEFINITION FOR "Specified density" WITH THE FOLLOWING:

"Specified density: The specified dry density expressed as a percentage of modified AASHTO dry density."

REPLACE THE DEFINITION FOR "Stockpile" WITH THE FOLLOWING:

"Stockpile (verb): The process of selecting and, when necessary, loading, transporting and off-loading material in a designated area for later use for a specific purpose"

ADD THE FOLLOWING DEFINITIONS:

"Commercial source: A source of material provided by the Contractor, not the Employer, and including any borrow pit, provided by the Contractor

Fill: An embankment or terrace constructed of material obtained from excavations or borrow pits. In roads it includes the earthworks up to the underside of the selected subgrade level.

Fill (material): Material used for the construction of an embankment or terrace

Roadbed: The natural in situ material on which the fill or, in the absence of fill, the pavement layers are constructed"

PSD 3 MATERIALS

PSD 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

PSD 3.1.1 Method of classifying

ADD THE FOLLOWING:

"The classification of material other than 'soft excavation' shall be agreed upon before excavation may commence.

The Contractor shall inform the Engineer immediately if and when the nature of the material being excavated changes to such an extent that a new classification is warranted for further excavation. Failure on the part of the Contractor to advise the Engineer in good time shall entitle the Engineer to reclassify, at his discretion, such excavated material."

PSD 3.1.2 Classes of excavation

DELETE THIS SUBCLAUSE AND REPLACE WITH THE FOLLOWING:

"The excavation of material shall be classified as follows for purposes of measurement and payment:

a) Soft excavation

Soft excavation shall be excavation in material which can be efficiently removed with a pick and shovel.

b) Intermediate excavation

Intermediate excavation shall be excavation in material which cannot be efficiently removed with a pick and shovel and in which blasting or drilling and wedging is not required. It shall therefore be material which can be removed by machine.

c) Hard rock excavation

Hard rock excavation shall be excavation in material which cannot be removed without blasting or without wedging and splitting.

d) Boulder excavation

Boulder excavation shall be the removal of boulders smaller than 0,01 m³ which can be efficiently removed by hand.

The Engineer's determination of the classification of the excavation shall be final and binding."

PSD 3.2.1 Material suitable for embankments and terraces

REPLACE THE CONTENTS OF SUBCLAUSE (a) (b) and (c) WITH THE FOLLOWING:

"(a) Material with a minimum CBR of 15 at 93% of modified AASHTO density;

- (b) Hard or rock material having a maximum dimension of 37.5mm;
- (c) Both clay or clayey material of liquid limit exceeding 40 or PI exceeding 18 (or both), and rock or boulders having a maximum dimension greater than 37.5mm.
- (d) Material with a oversize index = 0;
- (e) Shrinkage product of 100 - 240.

The Contractor shall immediately inform the Engineer if and when the nature of the material being excavated changes to such an extent that a new classification is warranted for further excavation. Failure on the part of the Contractor to advise the Engineer in good time shall entitle the Engineer to reclassify, at his discretion, such excavated material."

PSD 3.2.3 Material suitable for backfill or fill against structures

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Material used for backfill behind structures shall generally be the material excavated, subject to the following conditions:

- (a) The material shall not contain an excessive number of stones retained on a 50 mm sieve;
- (b) The material shall not contain large clay lumps that do not break up under the action of the compaction equipment; and
- (c) The liquid limit of the material shall not exceed 40, neither shall the PI exceed 18."

PSD 3.3 SELECTION

ADD THE FOLLOWING SUBCLAUSE:

"PSD 3.3.3 Selection in borrow pits provided by the Contractor

Approval of a borrow area for a certain purpose does not necessarily mean that all the material in that area is suitable for the specified purpose. What it does mean is that the borrow area contains some suitable material. The onus shall rest on the Contractor to ensure that only material that is indeed suitable is removed and used for the specified purpose.

When the Contractor has to select excavated material for a specific purpose, the above provisions relating to borrow areas shall apply mutatis mutandis to excavations.

The Contractor shall not waste or contaminate material that has been selected for a specific purpose."

PSD 4 PLANT

PSD 4.4 DETECTORS

REPLACE THE CONTENTS OF SUBCLAUSE 4.4 WITH THE FOLLOWING:

"The Contractor shall, for the purposes of detecting and locating underground services in accordance with the provisions of subclause 5.4 of SANS 1200 A and subclause 5.1.2 of SANS 1200 D, at his own cost, provide and use detecting equipment which is suitable for the detection of underground cables and pipes."

PSD 5 CONSTRUCTION

PSD 5.1 PRECAUTIONS

PSD 5.1.1 Safety

PSD 5.1.1.1 Barricading and lighting

REPLACE "Machinery and Occupational Safety Act, 1983 (Act 6 of 1983)" WITH "Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Construction Regulations 2003".

PSD 5.1.1.2 Safeguarding of excavations

REPLACE "Machinery and Occupational Safety Act" WITH "Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Construction Regulations 2003".

PSD 5.1.1.3 Explosives

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"The Contractor will generally be permitted to use explosives for breaking up hard material during excavations, for demolishing existing structures, and for other purposes where explosives are normally required, subject to the following conditions:

(a) The Engineer may prohibit the use of explosives in cases where, in his opinion, the risk of injury to persons or damage to property or to adjoining structures is too high. Such action by the Engineer does not entitle the Contractor to additional payment for having to resort to less economical methods of construction.

(b) The Engineer's prior written approval shall be obtained for each and every blasting operation. This approval may be withheld if the Contractor does not use explosives responsibly and carefully.

(c) The Contractor shall comply fully with the requirements of the Explosives Act, 1997 (Act No 83 of 1997) and all other legislation and regulations as may be applicable to blasting and the use of explosives.

(d) Before blasting is undertaken, the Contractor shall satisfy the Engineer that he has established whether or not the insurers concerned require pre- and post-blasting inspections of buildings and structures within a certain radius of the proposed blasting.

Should such inspections be required, the Contractor shall, together with the Engineer and the insurer, examine and measure the buildings, houses or structures in the vicinity of the proposed blasting site and establish and record, together with the owner, lessee or occupier, the extent of any existing cracking or damage before blasting operations commence.

(e) When there is a possibility of damage to power and telephone lines or any other services or property, the Contractor shall adapt his method of blasting and the size of the charges and shall use adequate protective measures (eg cover-blasting) to reduce the risk of damage.

(f) All accidents, injury to persons and animals and damage to property shall be reported to the Engineer in detail and in writing as soon as is practicable.

(g) The Engineer shall be given 24 hours notice by the Contractor before each blasting operation is carried out.

(h) When blasting to specified profiles, the Contractor shall so arrange the holes and charges that the resulting exposed surfaces are as sound as the nature of the material permits. The Contractor shall make good, at his own expense, any additional excavation necessitated by the shattering of rock in excess of any over break allowances specified in the Project Specifications or given on any Drawing.

Notwithstanding the Contractor's compliance with the above provisions, the Contractor shall remain liable for any injury to persons and animals and loss of or damage to property occurring as a result of blasting operations."

PSD 5.1.2 Existing services

PSD 5.1.2.2 Detection, location and exposure

REPLACE THE CONTENTS OF SUBCLAUSE 5.1.2.2 WITH THE FOLLOWING:

"The exposure by the Contractor of underground services, as required in terms of subclause 5.4 of SANS 1200 A (as amended) shall be carried out by careful hand excavation at such positions and to such dimensions as are agreed to by the Engineer.

Unless otherwise instructed or agreed by the Engineer, no service shall be left exposed after its exact position has been determined and all excavations carried out for the purposes of exposing underground services shall be promptly backfilled and compacted to the following densities:

(a) In roadways: 90% Mod AASHTO density; and

(b) In all other areas: 93% Mod AASHTO density.

Where hand excavations to expose underground services have to be carried out in roadways, the Contractor shall reinstate the road layer works in accordance with the provisions of subclause 5.9 of SANS 1200 DB.

Payment in respect of exposing the services by means of hand excavation as described above, will be made in accordance with subclause PSD 8.3.8.1.

Payment in respect of reinstating layer works in roadways will be made in accordance with subclause 8.3.6.1 of SANS 1200 DB (as amended)."

PSD 5.1.2.3 Protection of cables

REPLACE SUBCLAUSE 5.1.2.3 WITH THE FOLLOWING:

"5.1.2.3 Protection during construction

Further to the requirements of subclause 5.4.2 of SANS 1200 A (as amended), major excavating equipment and other plant shall not be operated dangerously close to known services. Where necessary, excavation in close proximity to known 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.

Should any service not being a known service be discovered or encountered during the course of the Contract, the Contractor shall, in addition to complying with the requirements of subclause 5.4.2 of SANS 1200 A (as amended), immediately notify the Engineer thereof and implement such measures as will prevent damage of such service or, if it was damaged in the course of discovery, will prevent and minimise the occurrence of any further damage occurring."

PSD 5.2 METHODS AND PROCEDURES

PSD 5.2.2 Excavation

PSD 5.2.2.1 Excavation for general earthworks and for structures

ADD THE FOLLOWING TO PARAGRAPH (b):

"When the nature of the material precludes the above procedure, additional excavations shall be carried out to provide working space for the erection of formwork. In general, payment

will be made for excavating a working width of 600 mm, but the Contractor may excavate a greater working width at no additional cost to the Employer."

REPLACE THE FIRST SENTENCE OF PARAGRAPH (e) WITH THE FOLLOWING:

"Where excavations have been carried below the authorised levels, the Contractor shall backfill such excavations to the correct level with approved gravel compacted to at least 90% of modified AASHTO density, or to the density of the surrounding material, whichever is the higher density.

Where excavations for structures have been carried out in hard material, the Engineer may direct that over-excavation be backfilled with weak concrete if there is a danger of settlement or differential settlement of the foundations.

Where the sides of excavations against which concrete is to be cast have been over-excavated or have collapsed partially, the Contractor shall retrim the excavations if necessary and, unless other remedial measures are agreed to by the Engineer, shall cast the concrete for the structure, including the additional concrete that may be required as a result of the over-excavation or partial collapse. The cost of the additional concrete or remedial measures shall be for the Contractor's account."

PSD 5.2.2.3 Disposal

REPLACE THE SECOND SENTENCE WITH THE FOLLOWING:

"The Contractor shall provide all necessary spoil sites for the spoiling of all surplus and unsuitable materials and shall make the necessary arrangements with the owner of the site where the material is disposed of, and pay all charges and levies as may be applicable for the use of such spoil sites.

Every spoil site provided by the Contractor shall be approved by the local authority in whose area it is located, and the spoiling shall comply with the applicable statutory and municipal regulations as well as the requirements of the owner of the spoil site.

Payment to the Contractor in respect of locating and making arrangements for suitable spoil sites and spoiling material at the such sites will be made in accordance with the provisions of subclause PSD 8.3.15."

ADD THE FOLLOWING SUBCLAUSE IN SUBCLAUSE 5.2.2:

"PSD 5.2.2.4 Selection and stockpiling

Approval or designation of the material in a particular borrow pit or excavation for a particular purpose does not imply that all the material in the borrow pit or excavation is suitable for the particular purpose to which the said approval or designation relates, nor that all material in the borrow pit or source should be used for the particular purpose. The Contractor shall select suitable material from that borrow pit or source, discard unsuitable material and reserve material for other purposes as necessary.

The Contractor shall organise and carry out his operations in such a manner as will prevent the contamination of suitable embankment and backfill material with unsuitable materials. Any excavated material which becomes, in the Engineer's opinion, unsuitable for use in embankments or backfill as a result of contamination, shall be disposed of in a manner acceptable to the Engineer and shall be replaced by the Contractor with materials acceptable to the Engineer, all at the Contractor's cost.

When required, or when ordered by the Engineer, material shall be stockpiled for later use. The additional costs for stockpiling material shall be paid to the Contractor in accordance with the provisions of subclause PSD 8.3.14."

PSD 5.2.5 Transport for earthworks

REPLACE THE CONTENTS OF SUBCLAUSE 5.2.5 WITH THE FOLLOWING:

"The transport of all excavated materials, irrespective of the distance and source, shall be deemed to be free-haul, the cost of which is included in the Contractor's tendered rates and prices for the excavation of the materials. No separate compensation shall apply for the transportation of excavated materials."

PSD 7 TESTING

PSD 7.2 TAKING AND TESTING OF SAMPLES

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"The Contractor shall arrange with the approved independent laboratory engaged by the Contractor in terms of subclause PS 8.2.1 of Portion 1 of the Project Specifications to carry out sufficient tests on a regular basis as agreed between him and the Engineer to determine whether the degree of compaction, and, where applicable, the quality of materials used, comply with the Specifications and shall submit the results of these tests to the Engineer in a form approved by him.

The compaction requirements for fills shall be deemed complied with when at least 75% of the dry-density tests on any lot show values equal to or above the specified density and when no single value is more than five percentage points below the specified value."

PSD 8 MEASUREMENT AND PAYMENT

PSD 8.3 SCHEDULED ITEMS

PSD 8.3.1 Site preparation

REPLACE SUBCLAUSES 8.3.1.1 AND 8.3.1.2 WITH THE FOLLOWING:

"Where site preparation such as clearing, grubbing, the removal of large trees or the removal and stockpiling of topsoil is required, the provisions and scheduled items of SANS 1200 C shall apply."

PSD 8.3.3 Restricted excavation

REPLACE THE WORDS "in 1 m increments" AT THE END OF THE FIRST SENTENCE OF SUBITEM (a) WITH "in the increments indicated in the Schedule of Quantities".

REPLACE "in 5.2.2.1 – 5.2.2.3 (inclusive)" AT THE END OF SUBCLAUSE (a) WITH "in subclauses 5.2.2.1 to 5.2.2.5 (inclusive)".

PSD 8.3.4 Importing of materials

DELETE SUBITEM (a) OF 8.3.4.

PSD 8.3.6 Overhaul

DELETE SUBCLAUSE 8.3.6.

PSD 8.3.8 Existing services

PSD 8.3.8.1 Location

REPLACE ITEM 8.3.8.1 WITH THE FOLLOWING:

"8.3.8.1 Hand excavation for locating and exposing existing services:

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

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised or actual dimensions of the excavation, whichever is the lesser.

The tendered rates shall cover the cost of excavating in all materials by means of hand tools within authorised dimensions and at locations approved by the Engineer in accordance with the requirements of subclause PSA 5.4.1 for all precautionary measures necessary 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 AASHTO density.

The tendered rate for hand excavation in roadways shall include compensation for compacting excavated or selected backfill material to 93% of modified AASHTO density. Reinstating layerworks and surfacing shall be measured and paid for in terms of SABS 1200 DB.

The tendered rates shall also include for keeping excavations safe, for dealing with surface and subsurface water, for removing surplus excavated material from the site, for transporting all material within the free-haul distance, and for supplying adequate supervision during both excavation and backfilling operations."

PSD 8.3.10 Topsoiling

CHANGE THE UNIT TO "m³" AND REPLACE THE CONTENTS OF THIS ITEM WITH THE FOLLOWING:

"The unit of measurement shall be the cubic metre and the quantity shall be calculated from the authorised dimensions.

The tendered rate shall include loading of the topsoil from stockpiles, transporting it for the free-haul distance, and off-loading, spreading, shaping and lightly compacting the topsoil."

ADD THE FOLLOWING

"PSD 8.3.14 Extra over items PSD 8.3.2.(a)(1) and PSD 8.3.3 for temporary stockpiling Unit: m³

The unit of measurement shall be the cubic metre of material from necessary excavations, temporarily stockpiled by the Contractor on the instructions of the Engineer, before being used in embankments or backfill. Measurements shall be taken in place in compacted embankment or backfill as the case may be.

The tendered rate shall include for the costs, additional to those provided for in PSD 8.3.2(a)(1) and PSD 8.3.3, of off-loading, forming and maintaining the stockpile for as long as is required, reloading and transporting from the stockpile, regardless of haul distance.

Payments to the Contractor under this item will only be made in respect of that material stockpiled on the instructions of the Engineer (which instruction shall state specifically that payments for such stockpiling will be paid for under this item) and no payments will be made to the Contractor under this item in respect of materials stockpiled by the Contractor on his own volition, nor for materials necessarily stockpiled by the Contractor in consequence of the sequence of operations adopted by him in the course of executing the works, whether such stockpiling was avoidable or otherwise.

PSD 8.3.15 Layers and embankment widening using material from designated borrow pits or excavations:

- (a) **G7 fill material as specified, compacted to 93% of modified AASHTO density** **Unit: m³**

The unit of measurement shall be the cubic metre and the quantity will be calculated from the authorised dimensions of the compacted layers.

The tendered rates shall include full compensation for excavating the material as if in soft material for loading, all haul from source provided by the Contractor, off-loading, spreading, watering, mixing, breaking down and compacting the layer."

No overhaul will be paid on material for the purposes of this Contract and all the costs for transporting material shall be included in the applicable tendered rates and amounts.

- PSD 8.3.16 Extra over item 8.3.15 for obtaining material from commercial sources or borrow pits provided by the Contractor** **Unit: m³**

The tendered rate shall include full compensation for the additional cost of finding a suitable source of material, for procuring the material and paying all royalties or other charges to the owner of the source, for transporting the material to the point of use regardless of the distance hauled and for excavating in intermediate, hard or boulder material as required.

- PSD 8.3.17 Final finishing and cleaning up of the site of the works** **Unit: sum**

The tendered sum shall include full compensation for the clearing, disposal of material, finishing, tidying and all other work required to finish and clean up the Site of the works and affected areas by removing excess earth, stones, boulders, debris and other waste material, by clearing stormwater inlets and outlets and pipe barrels, by clearing the surfacing of all dirt, mud and foreign material, and by neatly finishing off all junctions, intersections and kerbing.

All material resulting from the finishing operations shall be disposed of to a spoil site furnished by the Contractor."

PSG CONCRETE (STRUCTURAL)

PSG 3 MATERIALS

PSG 3.2 CEMENT

PSG 3.2.1 Applicable specifications

ADD THE FOLLOWING:

"All references to 'Ordinary Portland Cement' shall be replaced with 'Portland composite cement (CEM II 32,5)'."

PSG 3.2.2 Alternative types of cement

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Only Portland composite cement (CEM II 32,5) shall be used.

If the Contractor wishes to use any other type of cement, he shall obtain the Engineer's prior written approval (see 8.1.3.2 and 8.1.3.3). The tendered rates, however, shall be based on the use of Portland composite cement (CEM II 32,5) only."

PSG 3.2.3 Storage of cement

ADD THE FOLLOWING:

"Cement shall not be stored for longer than 12 weeks without the Engineer's permission."

PSG 3.4 AGGREGATES

PSG 3.4.3 Storage of aggregates

ADD THE FOLLOWING:

"When aggregates of different chloride content are stored on the site, their use in the various classes of concrete shall be strictly controlled."

PSG 4 PLANT

PSG 4.1 GENERAL

ADD THE FOLLOWING SUBCLAUSE:

"PSG 4.1.1 Minimum plant

The Contractor shall have the following minimum plant available and in sound working order:

(a) One concrete mixer of sufficient capacity to complete a section of the floor or road between construction joints within 4 hours and without interruption

(b) Two concrete vibrators, at least one of which shall be powered by an internal combustion engine

(c) One air compressor

(d) Suitable and adequate plant to transport concrete and other material and equipment at all stages of construction

(e) Storage tanks of adequate capacity to ensure that sufficient water will be available before commencement of every major concrete-placing operation.

If the Plant used for placing concrete is electrically or mechanically powered, the Contractor shall also provide some other approved, non-electrically-powered standby means for placing concrete at an adequate rate in the event of a power or mechanical failure of the main Plant."

PSG 4.5 FORMWORK

PSG 4.5.1 Design

ADD THE FOLLOWING:

"All formwork or scaffolding required for any part of the Works shall be designed by the Contractor, and before commencing with the erection of any formwork or scaffolding, the Contractor shall submit the methods he proposes to use to the Engineer for approval. The Engineer has the authority to order alterations to the design or the sizes of any part of the formwork or scaffolding. The Contractor shall check the safety and suitability of all such alterations. The fact that the Engineer has approved or altered any part of the formwork of scaffolding shall not be construed as relieving the Contractor of his responsibility with regard to the strength and stability of the formwork or scaffolding."

PSG 4.5.3 Ties

ADD THE FOLLOWING:

"No plugs, bolts, ties or clamps of any description used to hold the formwork will be allowed to project into or through the concrete unless expressly approved by the Engineer.

Only approved tie-rods consisting of solid rods (that remain embedded in the concrete) and with removable ends shall be used to hold the formwork of the walls. The removable tie-rod ends shall facilitate removal without damage to the concrete, and no permanently embedded parts of such tie-rods shall have less than 50 mm of cover to the finished concrete surface.

The cavities left in the concrete when the tie-rod end cones are removed shall be soundly caulked with a cement mortar to which an approved shrinkage-reducing agent has been added, and shall be neatly finished to a smooth surface uniform with that of the surrounding concrete.

The cost of supplying special tie-rods as well as the filling of cavities left by the tie-rod cones shall be included in the rates tendered for formwork under the appropriate pay items.

On no account shall formwork be secured to reinforcing bars."

PSG 5 CONSTRUCTION

PSG 5.1 REINFORCEMENT

PSG 5.1.2 Fixing

ADD THE FOLLOWING:

"The Engineer will inspect the reinforcing after it has been fixed in place, the formwork has been cleaned, cover blocks have been positioned, and before concreting commences.

Welding of reinforcing steel will not be permitted."

PSG 5.1.3 Cover

ADD THE FOLLOWING:

"The distance between pipes in the concrete and the reinforcing steel shall nowhere be less than

(a) 40 mm or

(b) 5 mm plus the maximum size of the coarse aggregate, whichever is the largest."

PSG 5.2 FORMWORK

PSG 5.2.2 Preparation for formwork

ADD THE FOLLOWING:

"Construction joints shall be positioned as shown on the Drawings."

PSG 5.2.5 Removal of formwork

ADD THE FOLLOWING SUBCLAUSE:

"PSG 5.2.5.7 The Contractor shall make provision for the continued support of beams and slabs while the formwork is being removed and/or for back propping of beams and slabs."

PSG 5.5 CONCRETE

PSG 5.5.1 Quality

PSG 5.5.1.5 Durability

The exposure conditions of the concrete are classified as "severe".

PSG 5.5.1.7 Strength concrete

ADD THE FOLLOWING:

"The concrete mixes shall be designed by the Portland Cement Institute or a similar approved laboratory.

Mix designs to be submitted to the Engineer for approval."

PSG 5.5.3 Mixing

PSG 5.5.3.2 Ready-mixed concrete

ADD THE FOLLOWING:

"Ready-mixed concrete may be used on the Site. The Contractor shall take samples for testing from every load delivered to the Site."

PSG 5.5.5 Placing

ADD THE FOLLOWING:

"Concreting of the floor between construction joints shall be carried out in both directions from a point on the floor in order to close the gap with fresh concrete."

PSG 5.5.7 Construction joints

ADD THE FOLLOWING:

"Should the Contractor's method of construction necessitate the placing of a construction or other joint in a position not shown on the Drawings, such method of construction and position of the joint shall be approved by the Engineer in writing. The cost of such joint shall be included in the tendered rates and shall include scabbling of the concrete where steel reinforcement is continuous."

PSG 5.5.8 Curing and protection

ADD THE FOLLOWING:

"The curing methods of retaining the formwork in place or covering with a waterproof membrane are strongly recommended. Concrete will not be paid for unless properly cured and proof of curing is continuously visible on site."

PSG 6 TOLERANCES

PSG 6.2 PERMISSIBLE DEVIATIONS

PSG 6.2.3 Specified permissible deviations

ADD THE FOLLOWING:

"Degree-of-accuracy II is applicable.

Every specified permissible deviation is binding in itself. The cumulative effect of permissible deviations will not be considered. The maximum permissible vertical deviation is subject to the other permissible deviations."

REPLACE SUBCLAUSE 6.2.3(d)(5) WITH THE FOLLOWING:

| Permissible deviation | | Degree of accuracy | | | | | | | |
|---|----------|--------------------|----|----|--------------------------------|--|--|--|--|
| | | III | II | I | | | | | |
| | | mm | mm | mm | | | | | |
| "Vertically, per metre of height | | | | | subject to a maximum of | | | | |
| 5 | | | | | | | | | |
| 50 | 3 | | | | | | | | |
| 30 | 2 | | | | | | | | |
| 10 | | | | | | | | | |

PSG 7 TESTS

PSG 7.1 FACILITIES AND FREQUENCY OF SAMPLING

PSG 7.1.1 Facilities

ADD THE FOLLOWING:

"The Contractor shall provide sufficient storage capacity for the concrete cubes and shall arrange to have them tested by an approved laboratory.

The cost of all testing, including the cost of sampling, storage and transport of samples shall be included in the rates tendered for concrete work."

PSG 7.3 ACCEPTANCE CRITERIA FOR STRENGTH CONCRETE

ADD THE FOLLOWING:

"Test results obtained from the supplier of ready-mixed concrete will not be accepted for evaluation in terms of subclause 7.3, but samples for testing shall be taken of such concrete at the point of placing."

PSG 8 MEASUREMENT AND PAYMENT

PSG 8.1 MEASUREMENT AND RATES

PSG 8.1.1 Formwork

DELETE "or splays over 20 mm x 20 mm" FROM THE FIRST LINE OF PARAGRAPH 8.1.1.2.

ADD THE FOLLOWING TO PARAGRAPH 8.1.1.2:

"Splays up to and including 25 mm x 25 mm will not be measured separately and will be deemed to be included in the formwork costs."

ADD THE FOLLOWING PARAGRAPHS:

"8.1.1.7 For construction joints at kickers, all additional costs for formwork to edges up to 300 mm high will be deemed to be included in the rates tendered for vertical formwork to sides of walls and will not be measured separately in narrow widths.

8.1.1.8 No formwork will be measured to edges of blinding layers under structures, and the cost thereof (if needed) will be deemed to be included in the rates tendered for concrete in blinding layers.

8.1.1.9 Back-shuttering or formwork to top revealed surfaces of sloping or conical formwork will only be measured to surfaces of over 40° and up to 85° to the horizontal.

8.1.1.10 Formwork to horizontal surfaces in pump stations, valve chambers, manholes or sumps can either be removed through the manhole cover opening or the Contractor may use permanent formwork at his own cost as no claims in this regard will be considered."

PSG 8.1.2 Reinforcement

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"The unit of measurement for steel bars shall be the ton of reinforcement in place, in accordance with the Drawings or as authorised by the Engineer.

The unit of measurement for welded steel fabric shall be the kilogram of fabric reinforcement in place, and the quantity shall be calculated from the net area covered by the mesh, excluding overlaps.

Clips, ties, separators, stools and other steel used for positioning reinforcement will not be measured, unless these are shown on the bending schedules.

The tendered rate shall include full compensation for the supply, delivery, cutting, bending, welding, placing and fixing of the steel reinforcement, including all tying wire, stools, supports and waste."

PSLB BEDDING (PIPES)

PSLB 3 MATERIALS

PSLB 3.1 SELECTED GRANULAR MATERIAL

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Selected granular material shall have a PI not exceeding 6 and shall be free from sharp-edged particles exceeding 19 mm."

PSLB 3.2 SELECTED FILL MATERIAL

ADD THE FOLLOWING:

"Selected fill material used for bedding shall be stabilized with 5% cement as specified under subclause PSDB 3.5(c)."

PSLB 3.4 SELECTION

PSLB 3.4.1 Suitable material available from trench excavation

REPLACE THE WORDS "(but is not required)" IN THE FIFTH LINE WITH THE WORDS "(at his own cost)".

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1 PRINCIPLES

PSLB 8.1.5 Disposal of displaced material

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Material displaced by the pipeline and by imported material from sources other than trench excavation, shall be disposed of at an approved site furnished by the Contractor. No haulage is payable for such material."

PSLB 8.1.6 Free-haul

No separate payment for haul is applicable to this contract.

PSLB 8.2 SCHEDULED ITEMS

ADD THE FOLLOWING ITEM:

**"PSLB 8.2.6 Extra over items 8.2.1 and 8.2.2 for bedding stabilized
with 5% cement Unit: m³**

The tendered rate shall include full compensation for selecting, mixing, backfilling and compacting the stabilized material to 93% of modified AASHTO density."

PSLE STORMWATER DRAINAGE

PSLE 3 MATERIALS

ADD THE FOLLOWING CLAUSE:

"PSLE 3.6 POLYETHYLENE SHEETING

Polyethylene sheeting shall comply with the requirements of SANS 952 and shall be at least 250 micron thick. All joints shall be mechanically sealed to provide a water tight surface."

PSLE 5.5 CATCHPITS, MANHOLES, INLETS, AND OUTLET STRUCTURES

PSLE 5.5.8. Headwalls

ADD THE FOLLOWING CLAUSE:

"The floor of excavations shall be compacted to 95% of modified AASHTO density to 150 mm deep before construction of the floor may proceed."

PSLE 8 MEASUREMENT AND PAYMENT

PSLE 8.2 SCHEDULED ITEMS

ADD THE FOLLOWING ITEMS:

"PSLE 8.2.14 Polyethylene Sheeting

The tendered sum shall include full compensation for procuring, transporting and installing sheeting and sealing of joints.

PSLE 8.2.15 Compaction of excavation floors

The tendered sum shall include full compensation for levelling the surface, adjusting the in-situ moisture content, compacting soil to 150mm thick to 95% of modified AASHTO density

Tender no: H20/032 AI

B: AMENDMENTS TO THE STANDARD SPECIFICATIONS:

IVariations and additions to the following SANS 1200 Standardised Specifications:

| | | |
|---------------------|----------|----------------------------------|
| SANS 1200 A | : | General |
| SANS 1200 AB | : | Engineer's office |
| SANS 1200 C | : | PSC Site Clearance |
| SANS 1200 D | : | PSD Earthworks |
| SANS 1200 G | : | PSG Concrete (Structural) |
| SANS 1200 LB | : | PSLB Bedding (Pipes) |
| SANS 1200 LE | : | PSLE Stormwater Drainage |

Tender no: H20/032 AI

C3.3 PARTICULAR SPECIFICATIONS:

| | | |
|-----------------|----------|--|
| ISA | : | General maintenance |
| SB | : | Operating and maintenance manuals |
| SD | : | General Training |
| SF | : | General operation |
| SH | : | HIV / AIDS Requirements |
| SI | : | Occupational Health and Safety |
| SL | : | Employment and Training of Youth Workers on EPWP Infrastructure |
| Projects | | |

ANNEXURE A: COMPLIANCE WITH OHSA (ACT 85 OF 1993)

Tenderers are required to satisfy the Employer and the Engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

- | | | |
|-------|--|----------|
| 1. | Is the Contractor familiar with the OHSA (ACT 85 OF 1993) and its Regulations? | YES / NO |
| 2. | Who will prepare the Contractors Health and Safety Plan? (Provide a copy of the person/s curriculum vitae/s or company profile). | |
| <hr/> | | |
| 3. | Does the Contractor have a health and safety policy? (If yes, provide a copy). How is this policy communicated to all employees? | YES / NO |
| <hr/> | | |
| 4. | Does the Contractor keep records of safety aspects of each construction site? If yes, what records are kept? | YES / NO |
| <hr/> | | |
| 5. | Does the Contractor conduct monthly safety meetings? If yes, who is the chairperson of the meeting, and who attends these meetings? | YES / NO |
| <hr/> | | |
| 6. | Does the Contractor have a safety officer in his employment, responsible for the overall safety of his company? If yes, please explain his duties and provide a copy of his CV. | YES / NO |
| <hr/> | | |
| <hr/> | | |
| 7. | Does the Contractor have trained first aid employees? If yes, indicate who. | YES / NO |
| <hr/> | | |
| 8. | Does the Contractor have a safety induction training programme in place? (If yes, provide a copy). | YES / NO |

Signature of Tenderer

Date

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**



public works

Department:
Public Works
REPUBLIC OF SOUTH AFRICA

PROJECT:

MASERU BRIDGE

**MAINTENANCE OF REPAIR OF BUILDINGS, CIVIL,
MECHANICAL AND ELECTRICAL
INFRASTRUCTURE AND INSTALLATIONS**

PREPARED BY



**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

1. BACKGROUND

In terms of the Construction Regulation 5(1)(b), 2014 of the Occupational Health and Safety Act, No. 85 of 1993, the Client, is required to compile an Health & Safety Specification for any intended project and provide such specification to Contractor.

The Project is located at the Maseru Bridge Port of Entry, Free State, South Africa.

2. SCOPE

The scope is the development of a health & safety specification that addresses all aspects of occupational health and safety as affected by construction work.

The Project scope is the Maintenance and Repair of Buildings, Civil, Mechanical and electrical Infrastructure and installations.

The Construction Work on project will entail the maintenance and repair of the following:

- Buildings
- Electrical cables
- Security lights
- Water pipe lines
- Sewer pipe lines
- Storm water pipe lines
- Firefighting equipment
- Electricity supply
- Air conditioners
- Etc.

Also refer to the Design Report and Scope of Work as per Bill of Quantities.

3. DEFINITIONS

Act: means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

AIA means an Inspection Authority approved by the chief inspector: Provided that an inspection authority approved by the chief inspector with respect to any particular service shall be an Approved Inspection Authority with respect to that service only.

Client: means any person for whom construction work is being performed.

Client's Health and Safety Agent: SHE Group, 5 Walter Sisulu Road, Universitas, Bloemfontein, 9321. Tel. 0514369675

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

Competent person: means any person having the knowledge, training, experience and qualifications specific to the work or task being performed.

Construction work: means any work in connection with—

- the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

Contractor: means an employer, as defined in section 1 of the Occupational Health and Safety Act, who performs construction work and includes principal contractors;

Hazard identification: means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed;

Health and safety file: means a file or other record in permanent form, containing the information required as contemplated in these regulations;

Health and safety plan: means a documented plan, which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

Health and safety specification: means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

HCS: Hazardous Chemical Substances

MSDS: Material Safety Data Sheet

PPE: Personal Protective Equipment

OREP: Occupational Risk Exposure Profile

Medical Certificate of Fitness: means a certificate contemplated in Construction Regulation 7(8);

Occupational Health Practitioner means an occupational medicine practitioner or a person who holds a qualification in occupational health recognized as such by the South African Medical and Dental Council as referred to in the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act No. 56 of 1974), or the South African Nursing Council as referred to in the Nursing Act, 1978 (Act No. 50 of 1978);

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

Occupational Hygiene Survey: means a Survey or Analysis on Hazardous Environmental Exposure e.g. Noise, Lead, Asbestos, Airborne Pollutants, Thermal Stress, Hazardous Chemical Substances, etc. to Persons conducted by an Inspection Authority Approved by the Department of Labour for the Exposure identified, provided that an inspection authority approved by the chief inspector with respect to any particular service shall be an Approved Inspection Authority with respect to that service only

Occupational Hygiene: means the anticipation, recognition, evaluation and control of conditions arising in or from the workplace, which may cause illness or adverse health effects to persons;

Principal contractor: means an employer, as defined in section 1 of the Occupational Health and Safety Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

Risk assessment: means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard;

Structure: means any building, steel or reinforced concrete structure

SACPCMP means the South African Council for the Project and Construction Management Professions

Designer: means a competent person who

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter or landscape architect;

Construction manager: means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

Construction site: means a work place where construction work is being performed.

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

4. OH&S MANAGEMENT

4.1 Construction Work Permit

The Client's Agent shall, as the contract meets the requirements laid down in Construction Regulations 3, prior to commencement of the works, apply to the Department of Labour for a Permit to do Construction Work.

A copy shall be kept on the OH&S file and the construction work permit number shall be displayed at the entrance to the Construction Site. No Construction activities may take place before Permit has been issued by the Department of Labour

4.2 Structure and Organisation of OH&S Responsibilities

4.2.1. Overall Supervision and Responsibility for OH&S

- The Client to ensure that the Principal Contractor, is appointed in terms of Construction Regulation 5(1)(k), implements and maintains the agreed and approved OH&S Plan.
- The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the Act to ensure that his Employees (as defined in the Act) complies with the Act. Legal Compliance Audit may be used for this purpose.
- Any OH&S Act (85 /1993), Section 16 (2) appointee/s as detailed in his/her/their respective appointment forms
- The Construction Manager, Assistant Construction Manager, Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 8. Should provide proof of OHS training and fully understand their duties and responsibilities outlined by the respective appointments.
- The principal contractor shall appoint as a minimum a Full Time competent Health and Safety Officer that is registered with the SACPCMP.

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

4.2.2 Further (Specific) Responsibilities for OH&S

The contractor shall note that it is a generic list only and is intended for use as a guideline.

| Appointment | Legal Reference |
|---|--------------------------------|
| Construction Manager | Construction Regulation 8(1) |
| Assistant Construction Manager | Construction Regulation 8(2) |
| OH&S Officer | Construction Regulation 8(5) |
| Construction Supervisor | Construction Regulation 8(7) |
| Risk Assessor | Construction Regulation 9 |
| Fall Protection Plan Developer | Construction Regulation 10 |
| Structures Supervisor/Inspector | Construction Regulation 11 |
| Excavation Supervisor | Construction Regulation 13 |
| Bulk Mixing Plant Supervisor | Construction Regulation 20 |
| Crane Inspector | Construction Regulation 22 |
| Construction Vehicle / Mobile Plant / Machinery Supervisor | Construction Regulation 23 |
| Drivers / Operators of Construction Vehicles / Plant | Construction Regulation 23 |
| Electrical Installation and Appliances Inspector | Construction Regulation 24 |
| Hazardous Chemical Substances Supervisor | HCS Regulations & CR 25 |
| Stacking & Storage Supervisor | Construction Regulation 28 |
| Emergency/Security/Fire Coordinator | Construction Regulation 29 |
| First Aider | General Safety Regulation 3 |
| Fire Equipment Inspector | Construction Regulation 29) |
| Incident Investigator | General Admin Regulation 9 |
| Ladder Inspector | General Safety Regulation 13A |
| OH&S Committee | OHS Act Section 19 |
| OH&S Representatives | OHS Act Section 17 |
| Person Responsible for Machinery | General Machinery Regulation 2 |
| Pressure Equipment Supervisor | Pressure Equipment Regulations |
| Welding Supervisor | General Safety Regulation 9 |

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

The above appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated and agreed with the appointees.

Competencies of all Appointed Personnel to be attached to Appointment and Placed on Health and Safety File.

The principal contractor shall, furthermore, provide the clients agent with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site.

4.3 Communication & Liaison

- 4.3.1 OH&S Liaison between the Client, the principal Contractor, the other Contractors, the Designer and other concerned parties will be through the OH&S committee or Committee established by Client for this purpose.
- 4.3.2 In addition to the above, communication may be directly to the Client or his appointed Agent, verbally or in writing, as and when the need arises.
- 4.3.3 Consultation with the workforce on OH&S matters will be through their Supervisors, OH&S Representatives, the OH&S committee and their elected Trade Union Representatives, if any.
- 4.3.4 The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

4.4 OH&S File

The Principal Contractor must, in terms of Construction Regulation 7(1)(b), keep a health & safety file on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done.

**CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

The following documents must inter alia be kept in the OH&S file:

1. Construction Work Permit (Construction Regulation 3)
2. Copy of OH&S Act (updated) (General Administrative Regulation 4.)
3. Proof of Registration and good standing with a COID Insurer - Construction Regulation 5(1)(j)
4. OH&S Plan agreed with client including the underpinning Risk Assessment/s & Method Statements (Construction regulation 5(1)(l))
5. Policies
6. Risk assessment conducted and reviewed during works.
7. Safe Work Procedures
8. Health and safety specifications provided by the client.
9. Designs/drawings (Construction Regulation 6&7)
10. Traffic Management / Accommodation Drawings
11. A list of Contractors (Sub-Contractors) including copies of the agreements between the parties and the type of work being done by each Contractor (Construction Regulation 7)
12. Appointment/Designation forms as per 4.1.2 above.
13. Competency Certificates
14. Occupational Medical Certificates of all personnel working on site to proof Fitness to work
15. AIA Certificate of Service Provider responsible for Occupational Hygiene Monitoring
16. Minutes of Safety Committee Monthly meetings
17. Statistical Data
18. Registers as follow:
 - Risk Register
 - PPE - Personal Protective Clothing and Equipment issued
 - Daily Mobile Machinery Checklists
 - Generator and Other Fuel Driven Machinery Registers
 - Registers / Checklists for all Equipment being used on site
 - Stacking & Storage Inspection Register
 - Excavations Inspection Register – Daily
 - Monthly Environmental Checklist
 - Weekly Hygiene Facility Inspection Register – Ablutions and Eating areas
 - Incident Register
 - Safe Area Declarations
 - Fire Extinguishing Equipment Register
 - Training Attendance Registers
 - First Aid Box and Equipment Checklist

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- Dressing Record Register – To be placed in First Aid kit
- Risk Assessment Communication Registers
- Lock-out Request Forms (Water and Electricity)
- Lock-out Permits (Water and Electricity)
- SHE Officer Inspection Register (Non-Conformance Register) – Monthly checklist and deviations

4.5. OH&S Goals and Objectives and Arrangements for Monitoring and Review of OH&S Performance

The Principal Contractor is required to maintain a DIFR of less than 1 and report on this to the Client on a monthly basis.

4.6 Identification of Hazards and Development of Risk Assessments, Standard Working Procedures (SWP) and Method Statements

The Principal Contractor is required to develop Risk Assessments, Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project (See Section 5 below "Project/Site Specific Requirements")

4.7. Arrangements for Monitoring and Review

4.7.1. Monthly Audit by Client

The Client will be conducting monthly Audits to comply with Construction Regulation 5(1)(o) to ensure that the principal Contractor has implemented and is maintaining the agreed and approved OH&S Plan.

If contractor is non-compliant according to Client's Health and Safety Audit, the Client's Agent / Representative may stop the work or a specific work activity and request a re-audit that must be approved by the client and the contractor will be held liable for the cost.

4.7.2. Other Audits and Inspections by Client

The Client reserves the right to conduct other ad hoc audits and inspections as deemed necessary.

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The Principal Contractor must conduct a Monthly Internal Health and Safety Audit and an Audit on all Sub-Contractors. The Audit must be conducted by an independent person of the contractor or contractor's representative, which is not working on the site, on condition that the person is qualified to conduct an Occupational Health and Safety Audit.

- 4.7.3. A representative of the Principal Contractor must accompany the Client on all Audits and Inspections and may conduct his/her own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results.

The client's representative / Agent must approve the Principal Contractor's Health and Safety Audit Template, to be used, before work commences

4.7.4. Reports

4.7.4.1 The Principal Contractor is required to provide the Client with a monthly report.

4.7.4.2 The Principal Contractor must 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 days. (Section 24 of the Act & General Administrative Regulation 8.)

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4.7.4.3. The Principal Contractor is required to provide the Client with copies of all statutory reports required in terms of the Act. The Principal Contractor is required to provide the Client with copies of all internal and external accident/incident investigation reports.

4.7.5. *Review*

4.7.5.1 The Principal Contractor is to review the Hazard Identification, Risk Assessments and SWP's at each Production Planning and Progress Report meeting as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

4.7.5.2 The Principal Contractor must provide the Client, other Contractors and all other concerned parties with copies of any changes, alterations or amendments.

4.8 Site Rules and other Restrictions

4.8.1 *Site OH&S Rules*

The Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the OH&S aspects of the construction.

4.8.2. *Security Arrangements*

4.8.2.1 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 will not be allowed on site unaccompanied.

4.8.2.2 The Principal Contractor must develop a set of Security rules and procedures and maintain these throughout the construction period.

4.8.2.3 The Principal Contractor must appoint a competent Emergency Controller who must develop emergency contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing program for the plans e.g. January: Fall Accident, February: Electrical Shock, etc. and practiced/tested with all persons on site at the time, participating.

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4.9 Training

The contents and syllabi of all training required by the Act and Regulations to be included in the Principal Contractor's OH&S Plan.

4.9.1 *General Induction Training*

All employees of the Principal and other Contractors to be in possession of proof of General Induction training.

4.9.2 *Site Specific Induction Training*

All employees of the Principal and other Contractors to be in possession of Site Specific OH&S Induction training.

4.9.3 *Other Training*

4.9.3.1 All operators, drivers and users of construction vehicles, mobile plant and other equipment to be in possession of Competency Certificates & Medical Certificates of Fitness (Construction Regulation 23).

4.9.3.2 All employees in jobs requiring training in terms of the Act and Regulations to be in possession of valid proof of training.

4.9.3.3 OH&S Training Requirements: (as required by the Construction Regulations and as indicated by the OH&S Specification & the Risk Assessment/s):

- General Induction (Section 8 of the Act)
- Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- Construction Manager
- Construction Supervisor
- OH&S Representatives (Section 18 (3) of the Act)
- Operation of Cranes (Driven Machinery Regulations 18 (11))
- Operators & Drivers of Construction Vehicles & Mobile Plant (CR 23)
- Basic Fire Prevention & Protection (ERW 9 and CR 29)
- Basic First Aid (General Safety Regulations 3)
- Storekeeping Methods & Safe Stacking (Construction Regulation 28)
- Emergency, Security and Fire coordinator
- Work and Appointment Related training
- Work at Heights Training (Where Required)

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4.10. Accident and Incident Investigation

- 4.10.1 The Principal Contractor is responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)
- 4.10.2. The results of the investigation to be entered into the Accident/Incident Register: Annexure 1. (General Administrative Regulation 9)
- 4.10.3. The Principal 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 accidents in future.
- 4.10.4. The Principal Contractor is responsible for the investigation of all road traffic accidents and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

4.11 H&S Representatives and Committees

4.11.1 *Designation of OH&S Representatives*

Before commencing work, the Principal Contractor shall designate a competent Safety, Health and Environmental representative (SHE Rep) who shall be acceptable to the Agent, to represent and act for the Contractor and Sub Contractors.

It should be noted that the Principal Contractor is held responsible for the activities of the Sub Contractors. Failure of Health and Safety measures by the Sub Contractor will revert directly back to the Principal Contractor.

The Contractor shall inform the Agent in writing of the name and address of the Contractor's SHE Rep and of any subsequent changes in the name and address of the SHE Rep, together with the scope and limitations of the SHE Rep's authority to act for the Contractor. The Contractor's SHE Rep shall make available to the Employer an all-hours telephone number at which the SHE Rep can be contacted at any time in the event of an emergency involving any of the Contractor's employees, or other persons at the Works.

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4.11.1.1 OH&S Representatives have to be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

4.11.2 Duties and Functions of the OH&S Representatives

4.11.2.1 The Principal Contractor must ensure that the designated OH&S Representatives conduct a minimum monthly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor.

4.11.2.2 OH&S representatives must be included in accident/incident investigations.

4.11.2.3 OH&S representatives must attend all OH&S committee meetings.

4.11.3. Appointment of OH&S Committee

4.11.3.1 The Principal Contractor must establish an OH&S Committee consisting of all the designated OH&S Representatives together with a number of management representatives that are not allowed to exceed the number of OH&S representatives on the committee. The members of the OH&S committee must be appointed in writing.

4.11.3.2. The OH&S Committee must meet minimum monthly and consider, at least, the following Agenda:

- 1) Opening
- 2) Previous Minutes
- 3) Observations
- 4) Program and Safety considerations
- 5) Occupational Health
- 6) Housekeeping improvement
- 7) Incidents & Accidents / Injuries
- 8) Equipment Registers
- 9) Safety performance Evaluations
- 10) Occupational Hygiene monitoring and measuring
- 11) Education & Safety promotion program
- 12) Legal Non-Compliances
- 13) General
- 14) Date of Next Meeting
- 15) Closing

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4.12 Occupational Medicals

- 4.12.1 Principal Contractor must ensure that all employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner as per Annexure 3 of Construction Regulation, 2014 - Construction Regulation 7(1)(g)

4.13 Traffic Management

- 4.13.1 Principal Contractor must ensure that Traffic Management must be done according to Client's Specifications and Approved Drawings

4.14 Fines & Penalties

- 4.14.1 Repeated non-conformances raised during Audits may be subjected to a Minimum Fine of R 250.00 per Finding and a Maximum Fine of R 5,000.00 per finding.
- 4.14.2 The value of the fine will be recommended by the Pr. CHSA and Finally Approved by the Client's Project Manager

5 PROJECT/SITE SPECIFIC REQUIREMENTS

- 5.1 The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

- Site Establishment
- Offices
- Secure / safe storage for materials, plant and equipment
- Ablutions
- Sheltered eating area
- Vehicle access to the site
- Dealing with existing structures
- Location of existing structures
- Installation and Maintenance of temporary construction electrical supply
- Adjacent land uses / surrounding property exposures
- Boundary and access control

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- Public liability exposures
- Health risks arising from neighboring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Dealing with HIV/Aids and other diseases
- Use of portable electrical equipment
- Excavations & Trenching
- Welding & Flame cutting
- Loading and offloading of trucks
- Manual and mechanical handling
- Lifting and lowering operations
- Working in elevated positions
- Working in Confined / Restricted Spaces
- Surveying and Setting Out
- Traffic Management
- Clear & Grub
- Driving & Operation of Construction Vehicles and Mobile Plant
- Use and Storage of Flammable Liquids and other Hazardous Substances
- Reinforced steel fixing
- Concrete works
- Electrical work
- Pipe installation and connection to reservoir.
- Installation of Support Services
- Signage
- As discovered by the principal contractors hazard identification exercise
- As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site.
- As discovered from any accident / Incident Investigation

The following are in particular requirements 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 |

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| |
|---|
| 5. Housekeeping |
| 6. Working at Heights |
| 7. Temporary Structures e.g. Formwork, Support work, Scaffold, etc. |
| 8. Traffic Control & Accommodation |
| 9. Electrical Safeguarding |
| 10. Emergency/Fire Prevention & Protection |
| 11. Excavations (Foundations, Trenches, etc.) |
| 12. Ladders & Tools |
| 13. Lifting Equipment |
| 14. Permits |
| 15. Transport & Materials Handling |
| 16. Site Plant & Machinery |
| 17. Plant & Storage Yard |
| 18. Occupational Health & Hygiene |
| 19. Construction Activities |

5.2 Construction Vehicles and Mobile Plant – Regulation 23

The Contractor shall ensure that drivers of motor vehicles are in possession of a driver's license, valid for the class of vehicle which they are required to drive, and shall produce the license on request.

The Contractor shall not permit any driver to be in control of a vehicle at the Works while under the influence of alcohol, drugs or other substance.

A register shall be kept of workers operating construction vehicles and mobile plant.

The register shall contain proof of training of operators to operate construction vehicles and mobile plant, certification of competency and authorization of operators to operate machinery, vehicles or plant.

Names of operators and their relevant training with date and time stamps together with name of course instructor shall be kept in the Health and Safety File on site.

Physical and Psychological fitness shall be proved by way of a medical certificate of fitness of the said operators before allowing operators to operate machinery, vehicles or plant.

The Health and Safety File shall include the written training material offered to operators for the different construction vehicles and mobile plant.

Each and every driver shall be trained on risks involved and safety procedures.

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All Construction vehicles and mobile plant must be of acceptable design and construction and used according to their design.

All construction vehicles and mobile plant must be maintained in good working order.

A register of all vehicles and plant shall be kept on site together with names of operators responsible for each.

The register shall report all maintenance activities performed on these vehicles and plant as well as signatures certifying the condition of the vehicles as in a good working order.

All requirements on the vehicles and mobile plant with regard to safety and health shall be inspected and certified

During use of Construction vehicles or mobile plant the following rules shall be adhered to:

- Construction vehicles or mobile plant must be prevented from falling into excavations, water or any other area lower than the working surface. These protection must consist of adequate edge protection e.g. Guard rails and/or crash barriers
- No person shall be allowed to or require to ride on any Construction Vehicle or Mobile Plant in a position otherwise than a safe place provided for on the construction vehicle or mobile plant as designed for that purpose.
- The construction site must be organized in such a way that as far as is reasonable practical, pedestrians and vehicles can move safely and without risks to health and safety.
- Traffic routes shall be of sufficient size, sufficient in number and in suitable positions to be used safely by construction vehicles, mobile plant and pedestrians.
- Each and every traffic route shall be indicated by suitable signs for reasons of safety and health.
- No tools and/or material shall be transported in the same compartment as the operators/drivers/employees unless the said are secured against movement during transportation.
- All Construction Vehicles and Mobile Plant left unattended at night adjacent to a freeway in normal use or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of vehicles or plant
- Bulldozers, scrapers, loaders and other similar mobile plant are, when being repaired or when not in use, fully lowered or blocked with controls in a neutral position, motors stopped and brakes set.
- Reflective indicators must be provided to workers in the form of reflective jackets or vests as specified and worn by workers working on/or adjacent to public roads

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5.3 Excavation Work Construction - Regulation 13

An excavation could be a hole or trench of any size and shape. A Risk Assessment must be done prior to making an excavation.

The following must be taken in consideration when doing the Risk Assessment:

- Depth of the excavation
- Length of the excavation
- Existing services
- Barricading and demarcation
- Depth of the excavation

Should an excavation be more than chest deep (1.2m), it must be adequately shored or braced.

Slopes or trenches shall be as flat as possible, 1 x vertical to 2 x horizontal must be considered maximum for dry conditions. In wet conditions either a much lower slope shall be used, or if space is a constraint, shoring and de-watering shall be applied.

A competent person shall be appointed to supervise excavation work. Stability evaluation of ground must be done and a certificate shall be issued.

A plan for prevention of persons being trap due to collapse shall be provided by the Contractor. The design of shoring shall be documented by Contractor in the Health and Safety file as provided by the competent designer of shoring.

The maximum loading of sides of an excavation must be documented in a usable format if adjacent structures and buildings are present and can be affected a design and construction of supporting details shall be represented.

Provision shall be made for access routes to the excavation. Routes must not be more than 6 meters away from worker.

Contractor must establish all existing services in area of excavations. Plan of existing services shall be documented in the Health and Safety file. Existing services include Telkom, Gas, Water, Electricity Supplies and other similar services.

Excavation Inspection shall be done on a

- daily basis
- prior to each shift
- after every blasting operation
- after an unexpected fall of ground
- after substantial damage to supports
- after rain

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5.4 Barricading and Demarcation

The construction site shall be barricaded completely to prevent pedestrians and vehicles to enter the construction area.

Protection around the site must be in the form of a physical barrier and appropriate signage, to prevent public from entering the area.

It is advised to use 1.2m high DAY-GLO Mesh (barrier netting) to prevent pedestrians to enter the specific construction area.

5.5 Housekeeping and Construction Sites – Regulation 27

The Contractor shall at all time carry out the Works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall take all precautions, which are necessary and adequate to eliminate any conditions, which contribute to the risk of injury to persons or damage to property. The Contractor shall continuously inspect all work, materials and equipment to discover and determine any such conditions and shall be solely responsible for the discovery, determination and elimination of such conditions.

During the period of this Contract, the Contractor shall be responsible for the safe storage of all materials and equipment required for execution of the Contract, and for disposal of all non-usable waste material in an orderly manner.

All materials, whether stored on the construction site or within the Contractor's designated area, shall be stored neatly and safely to prevent possible injury to any personnel. The material shall be stored to facilitate safe access to, and removal of the material from the storage area.

Any flammable material, such as paint, diesel fuel and oil, shall be stored in lockable non-combustible structures, which shall be clearly marked to indicate the hazardous nature of the materials stored within. The flammable materials stores shall be located in safe areas away from hazardous surroundings and adequate and suitable fire-fighting equipment shall be provided within easy reach of the materials stores.

Loose material need for use shall not accumulate so as to obstruct means of access to and egress from the workplace.

Scrap and waste shall not be allowed on site and must be removed daily.

The construction sites adjacent to build up area or public way shall be effectively fenced and controlled with access points.

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5.6 Stacking and Storage on Construction Sites – Regulation 28

A Competent person shall be appointed in writing with the duty of supervising all stacking and storage of material on site.

Adequate storage areas shall be provided which includes demarcated areas. All storage areas shall be kept neat and under control. Registers and checklist on housekeeping shall be kept on site

5.7 First Aid

5.7.1 Safety Notice Board

The Contractor shall provide a Safety Notice Board where safety notices, site regulations concerning safe working practices and information on the location of the nearest first aid station, can be conspicuously displayed to all staff. The size of the notice board shall be at least 600 mm x 800 mm.

5.7.2 First Aid Equipment

The Contractor shall provide for its employees a stretcher for emergencies and an approved first aid box. The first aid box shall be checked weekly by a responsible person, who shall be appointed by the Contractor, and a record shall be kept of the contents. Any deficient medical supplies shall be promptly replenished by the Contractor.

5.7.3 Hazard Notices

The Contractor shall display hazard notices in all areas where hazardous conditions prevail or may occur.

5.7.4 Reporting of Incidents and/or Injuries

All incidents in respect of damage to Works, property or machinery, or injury to persons, shall be reported by the Contractor's SHE Rep by the quickest means possible.

A mandatory incident report form, containing full details of the incident, shall be completed and submitted to the Site Agent and the Department of Labour within twenty four (24) hours of the occurrence of the incident.

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5.8 Fire Precautions on Construction Sites – Regulation 29

A register shall be kept on all Acetylene and Oxygen cylinders used on the site. Condition of components, sub-components and safety components (e.g. Flame back arrestors) shall be listed in the register and signed by the construction supervisor at regular intervals as required with time and date stamp.

Acetylene, Oxygen and LP Gas cylinders shall be stored in suitable places to minimize the risk of fire.

Suitable storage to be provided for flammable liquids, e.g. petrol, diesel, paint, thinners.

Smoking shall be prohibited in the workplace and notices posted accordingly.

Suitable and sufficient firefighting equipment shall be placed in strategic positions in the work place. (On vehicles and other positions as deemed necessary).

A register shall be kept on type and number of equipment for each site in the Health and Safety File.

A competent person shall inspect all firefighting equipment. A sufficient number of employees shall be trained in the use of firefighting equipment.

A register shall be kept in the Health and Safety File on site with names of employees and type of firefighting training completed with date.

Suitable signs shall be erected in work places indicating escape routes.

Escape routes shall be kept clear. Evacuation plans shall be in Health and Safety File as part of Induction Training. Combustible materials shall not accumulated on site.

5.9 Construction Welfare Facilities – Regulation 30

On each site where existing facilities are not present, at least one sanitary facility shall be erected for every 10 workers, one shower for every 15 workers, a changing facility for each sex and sheltered eating areas.

Mobile toilets with bucket system / Chemical Toilets shall be installed at the site. Cleaning of Toilet Facilities shall be arranged with the City Council or an Approved service provider

Eating facilities shall be made available in the form of a shaded net, table and chairs.

As the site is in a remote area, transport shall be made available for workers to and from site.

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5.10 Hazardous Chemical Substances

The Contractor shall exercise all necessary care in the handling of toxic compounds and shall be able to identify the major chemical components in the event of medical treatment being required.

5.10.1 Hazardous Chemicals and Materials

- a) The Contractor shall provide suitable and adequate protective equipment when working in an area where hazardous chemicals and materials are being used.
- b) The Contractor shall ensure that its employees have familiarized themselves with the hazardous material data sheets applicable to the specific site as well as the location of firefighting equipment, safety showers / baths and other washing facilities, prior to commencement of work.

5.11 Commissioning Safety Precautions

The Contractor shall ensure that wherever repairs, adjustments or any other work are undertaken on any plant or machinery, the power supply is switched off, disconnected or the plant / machinery disengaged until the work or repairs have been completed.

5.12 Electrical Installations and Machinery on Construction Sites – Regulation 24

Before construction commences or any other related works and during the progress thereof adequate steps must be taken to establish the presence of and guard against any danger to the workers in respect to electrical cables or apparatus.

In areas where it cannot be established where electrical devices are, the employees must use tools of which the handles are insulated or rubber insulated gloves.

Any temporary electrical installation set up by the principal contractor or contractor must be inspected at least once a week by a competent person. The inspections shall be recorded in a register and kept in the Health and Safety File.

When working on or next to live electrical Machinery/Equipment the Principal Contractor or Contractor must provide insulated stands, trestles and mats.

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When Distribution Boards are removed the incoming power supplies shall be cut by the client's authorized Electrician. The incomer electricity supply feeder shall be earthed by a suitable earth wire or spike to prevent cable of becoming live during the installation of new Distribution Boards.

No person shall continue with wiring of premises unless the supply to the premises has been rendered dead and the above effective measures has been taken to ensure that such cables remains dead. When rewiring of premises is done the feeder breakers at the other end of the supply cables shall be locked out and the cable earthed to prevent any injury to workers by Electrical Shock.

A register shall be kept on site in the Health and Safety File indicating all signatures of competent persons switching electricity supply on or off with time and date stamp.

No person shall use or permit to use a portable electric load operating at a voltage exceeding 50V to earth unless it is connected to a source of electrical energy incorporating an earth leakage protection device.

A register shall be kept on site in which all daily checks of portable electric tools are performed and signed by the responsible person. Checks shall include condition of plug top, power cord, on-off switch and insulation condition of electric tool. All tools shall be numbered and entered accordingly into the register. Condition of tools as listed in the register shall be inspected and signed by the construction supervisor at regular intervals as required by the nature of the equipment.

End of Document

C4

SITE INFORMATION



PG-03.1 (EC) SITE INFORMATION – (GCC (2010) 2nd EDITION: 2010)

| | | | |
|----------------|---|---------------|-----|
| Project title: | MASERU BRIDGE: PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTH (APPOINTMENT OF CONTRACTOR) | | |
| Tender no: | H20/032 AI | Reference no: | n/a |

C4 Site Information

The Maseru Bridge: Border Posts is operational 24-hours-a-day. Starting at Mont-aux-Sources, the border runs along the drainage divide between the basin of the Orange River (which flows to the Atlantic Ocean) and the various rivers flowing off the Drakensberg to the Indian Ocean.

Buildings

24 Residential (Upper Houses) buildings of 4 604m²

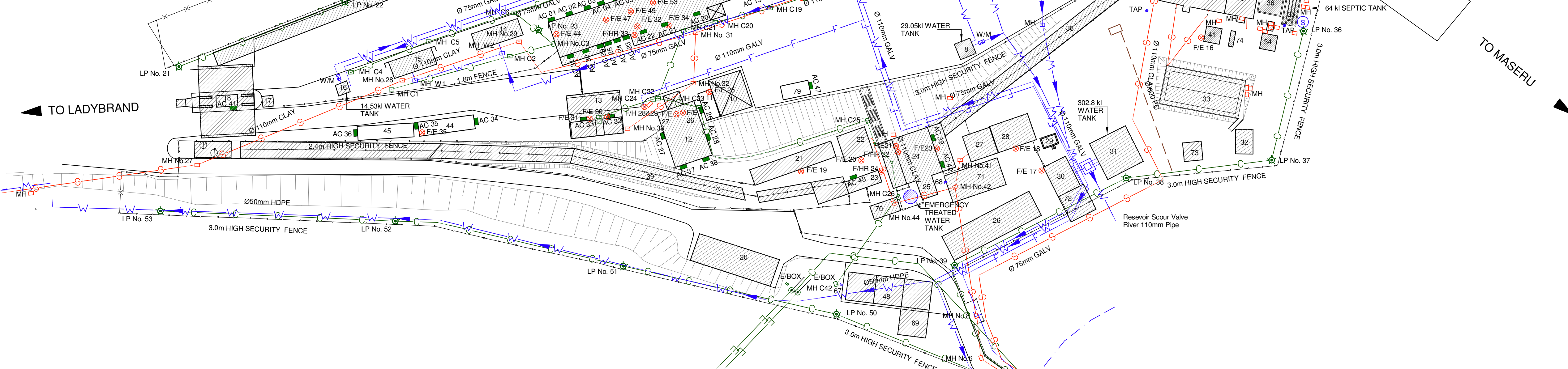
24 Residential (Lower Houses) buildings of 892m²

57 Operational buildings of 4 581.1 m²

REFER TO ATTACHED LOCALITY PLANS

SHEET 1 OF 2

| | |
|----|--|
| 51 | Lower House No. 2 |
| 52 | Lower House No. 2 Carport |
| 53 | Lower House No. 3 |
| 54 | Lower House No. 4 |
| 55 | Lower House No. 5 |
| 56 | Lower House No. 5 Carport |
| 57 | Lower House No. 5 Carport |
| 58 | Lower House No. 5 |
| 59 | Lower House No. 10 Carport |
| 60 | Lower House No. 6 |
| 61 | Lower House No. 7 Carport |
| 62 | Lower House No. 7 |
| 63 | Lower House No. 8 Carport |
| 64 | Lower House No. 7 |
| 65 | Lower House No. 9 |
| 66 | Lower House No. 9 |
| 67 | Bore Hole No. 1 |
| 68 | Bore Hole No. 2 |
| 69 | Carport |
| 70 | Carport (Parking for One vehicle) |
| 71 | Carport (Parking for Four Vehicles) |
| 72 | Solid Waste Storage Area |
| 73 | Neocle Container |
| 74 | Screen Waste Drying Area |
| 75 | Aerator |
| 76 | Northstar Alliance Wellness Center |
| 77 | Pedestrian Walkway Cover to DHA Bypass Parkhomes |
| 78 | Skid Structure over DHA Bypass Parkhomes |
| 79 | DHA Storage Container |

[illegible]

