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

DBN21/10/02

PROCUREMENT DOCUMENTS

FOR THE

DEPARTMENT PUBLIC WORKS AND INFRASTRUCTURE

AT

BERGVILLE MAGISTRATE: REPAIRS AND RENOVATIONS INCLUDING UPGRADE AND INSTALLATION OF BOREHOLE

AT

BERGVILLE, KWAZULU-NATAL

VOLUME 3 of 3: CONTRACT

Department Public Works and Infrastructure
Durban Regional Office
Regional Offices, Corner Aliwal and West Street
Private Bag X54315
DURBAN
4001

OCTOBER 2021

NAME OF TENDERER: .....

CIDB NO: .....

CSD SUPPLIER'S NO: .....

CSD UNIQUE NO: .....

INDEX

VOLUME 3: THE CONTRACT

PART C1: AGREEMENT AND CONTRACT DATA

C1.2: CONTRACT DATA

DPW-04 (EC): CONTRACT DATA: JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	***Bergville magistrate: repairs and renovations including upgrade and installation of borehole***		
Tender no:	*DBN21/10/02*	**Reference no:**	*6203/0188/26/4*

	The Conditions of Contract are clauses 1 to 41 of the **JBCC** Series 2000 Principal Building Agreement (Edition 4.1 of March 2005) prepared by the Joint Building Contracts Committee. Copies of these conditions of contract may be obtained through most regional offices of the Association of South African Quantity Surveyors, Master Builders Association, South African Association of Consulting Engineers, South African Institute of Architects, Association of Construction Project Managers, Building Industries Federation South Africa, South African Property Owners Association or Specialist Engineering Contractors Committee.

	CONTRACT VARIABLES **THE SCHEDULE** The **schedule** contains all variables referred to in this document and is divided into part 1: contract data completed by the **employer** and part 2: contract data completed by the **contractor**. Part 1 must be completed in full and included in the tender documents. Both the part 1 and part 2 form part of this **agreement** Spaces requiring information must be filled in, shown as 'not applicable' or deleted but not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross referenced to the applicable clause of the **schedule**. Key cross reference clauses are italicised in *[ ]* brackets

42.0	**Part 1: Contract Data completed by the Employer:**

42.1	**CONTRACTING AND OTHER PARTIES**
42.1.1	**Employer:** **Government of the Republic of South Africa in its Department of Public Works** Postal address: ***Regional Office*** ***DURBAN*** ***4001*** Tel: ***031 314 7000*** Fax: ***031 337 9020***
[1.2]	Physical address: ***Corner Aliwal and West Street*** ***DURBAN*** ***4001***

Tender no: ***DBN21/10/02***

42.1.2 *[1.1, 5.1]*	**Principal Agent:** ***BARTSCH CONSULT (PTY) LTD*** Postal address: ***PO BOX 762*** ***HARRISMITH*** ***9880*** Tel: ***058 622 3471*** Fax: ***058 623 0844***
[1.1]	**Representative of the Employer:** ***M.T VILAKAZI*** Postal address: ***Regional Offices*** ***PRIVATE BAG X54315*** ***DURBAN*** ***4001*** Tel: ***031 314 7000*** Fax: ***031 337 9020***
42.1.3 *[1.1, 5.2]*	**Agent (1)** ***BARTSCH CONSULT (PTY) LTD*** **Agent's** service: ***ARCHITECT*** Postal address: ***PO BOX 762*** ***HARRISMITH*** ***9880*** Tel: ***058 622 3471*** Fax: ***058 623 0844***
42.1.4 *[1.1, 5.2]*	**Agent (2)** ***RUBIQUANT*** **Agent's** service: ***QUANTITY SURVEYOR*** Postal address: ***PO BOX 710*** ***HARRISMITH*** ***9880*** Tel: ***082 906 1658*** Fax: ***086 500 1833***
42.1.5 *[1.1, 5.2]*	**Agent (3)** ***BOSCH STEMELE (PTY) LTD*** **Agent's** service: ***STRUCTURAL ENGINEERS*** Postal address: ***PO BOX 2009***

	DURBAN ***4000*** Tel: ***083 776 6585*** Fax: ***031 535 6010***

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42.1.6 *[1.1, 5.2]*	**Agent (4)** ***VISHNU ULASSI AND ASSOCIATES*** **Agent's** service: ***CIVIL ENGINEERS*** Postal address: ***5 Glenhaven Drive*** ***Brindhaven*** ***Verulam*** ***4339*** Tel: ***083 786 9364*** Fax:
42.1.7 *[1.1, 5.2]*	**Agent (5)** ***LYON AN PARTNERS*** **Agent's** service: ***ELECTRICAL ENGINEERS*** Postal address: ***24 Hertz Blvd*** ***Vanderbijlpark CW 1*** ***1911*** Tel: ***072 749 4597*** Fax:
42.1.8 *[1.1, 5.2]*	**Agent (6)** ***ROYAL HASKONING DHV (PTY)*** **Agent's** service: ***MECHANICAL ENGINEERS*** Postal address: ***Regional office*** ***Corner Aliwal and West Street*** ***Durban*** ***4001*** Tel: ***031 314 7000*** Fax: ***031 337 9020***
42.1.9 *[1.1, 5.2]*	**Agent (7)** ***HEALTH AND SAFETY - DEPARTMENT OF PUBLIC WORKS*** **Agent's** service: ***HEALTH AND SAFETY*** Postal address: Tel: Fax:

42.2	**CONTRACT DETAILS**
42.2.1 *[1.1]*	**Works** description: Refer to document C3 – Scope of Work.
42.2.2 *[1.1]*	**Site** description: Refer to document C4 – Site Information.
42.2.4 *[41.0]*	Specific options that are applicable to a **State** organ only Where so :

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[1.1 #] *[31.11.2 #]* *[31.12.2#]*	1) Interest rate legislation: The interest rate applicable will be as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999)
[11.2.#]	2) Lateral support insurance to be effected by the contractor: **Yes** ☐ **No** ☒
[31.4.2 #]	3) Payment will be made for materials and goods **Yes** ☒ **No** ☐
[40.2.2.#] *[26.1.2 #]*	4) Dispute resolution of any dispute shall be conducted in the following chronologically order with litigation being last resort: 4.1 Negotiation 4.2 Mediation 4.3 Adjudication 4.4 Arbitration 4.5 litigation
	5) Extended **defects** liability period applicable to the following elements: ***Electrical / Mechanical Installation = 12 Months From Works Completion*** ***Building works = 12 Months From Works Completion***
42.2.6 *[15.3]*	Period for the commencement of the **works** after the **contractor** takes possession of the **site**: Ten (10) **working days.**
42.2.7 *[24.3.1]* *[30.1]*	For the **works** as a whole: The date for **practical completion** shall be ***24 months*** from the **commencement date** and the **penalty** per **calendar day** shall be **R *2550*.**
42.2.8 *[24.3.1]* *[28.1]*	For the **works** in **sections:** The date for **practical completion** from the **commencement date** and the **penalty** per **calendar day:** Section 1: Section 2: Section 3:

	Section 4: Section 5: Section 6:
42.2.9 *[1.2]*	The **law** applicable to this **agreement** shall be that of the: **Republic of South Africa**

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42.3	**INSURANCES**
42.3.1 *[10.1 #, 10.2 # 12.1 #]*	Contract works insurance to be effected by the **contractor** ☒ To the minimum value of the **contract sum** plus 10% With a deductible not exceeding 5% of each and every claim Or ☐ For the minimum sum of **R** **(** **)** With a deductible not exceeding 5% of each and every claim
42.3.2 *[10.1#, 10.2 #, 12.1 #]*	Supplementary insurance is required: **Yes** To the minimum value of the **contract sum** plus 10 %
42.3.3 *[11.1#, 12.1 #]*	Public liability insurance to be effected by the **contractor** ☒ For the sum of R 5 million With a deductible not exceeding 5% of each and every claim Or ☐ For the sum of **R** **(** **)** With a deductible not exceeding 5% of each and every claim
42.3.4 *[11.2 #, 12.1 #]*	Support insurance to be effected by the **contractor** For the sum of **R** **(** **)** With a deductible of **R** **(** **)**

42.4	**DOCUMENTS**
42.4.2 *[3.7]*	Three (3) copies of the construction documents will be supplied to the **contractor** free of charge
42.4.3	**Bills of quantities / Lump sum document** schedule of rates drawn up in accordance with: ☒ Standard System of Measuring Building Work (sixth edition as amended)

	Or ☐ Standard System of Measuring Building Work for Small or Simple Buildings 1999 Or ☐ Other *(specify)*
42.4.5 *[3.4*]	**JBCC** Engineering General Conditions are to be included in the **contract documents: No**

42.4.6 *[31.5.3]* *[32.13]*	The **contract value** is to be adjusted using **CPAP** indices: **Yes** ☒ **No** ☐ Where **CPAP** is applicable, the **contract sum** will be adjusted in accordance with the **JBCC** Contract Price Adjustment Provisions (**CPAP**) as set out in the **CPAP** Indices Application Manual as prepared by the **JBCC** Series 2000, code 2118, dated May 2005 and any amendments thereto: 1) Glass etc. measured in specialist section Metalwork, will be adjusted in terms of the index for that work group unless specifically stated otherwise in the bills of quantities 2) All electrical installations in buildings and power distribution systems shall be adjusted in terms of the index for Work Group 160 Electrical Installation. In case of uninterruptible power supplies, elevators, escalators and hoists, generating sets, motor-alternator sets and intercommunication systems shall be in accordance with Work Group 170 3) With reference to Work Group 190 a proportion of the value related preliminaries pro rata to the amount of work excluded from adjustment, shall be excluded from Contract Price Adjustment Provisions, if Option A has been selected for the adjustment of preliminaries 4) Further to clause 3.4.4 of the CPAP Indices Application Manual, the listing of additional items for exclusion by tenderers, will not be permitted 5) Where V results in a negative amount after application of the formula in clause 8.3 of the CPAP Indices Application Manual the factor of 0,55 shall be substituted by 1,45 Alternative Indices: **Not Applicable**

42.4.7 [3.10]	Details of changes made to the provisions of **JBCC** standard documentation **Clause** 1.1 **COMMENCEMENT DATE –** means the date that the **agreement,** made in terms of the Form of Offer and Acceptance, comes into effect **CONSTRUCTION GUARANTEE** – means a guarantee at call obtained by the **contractor** from an institution approved by the **employer** in terms of the **employer's** construction guarantee form as selected in the **schedule** **CONSTRUCTION PERIOD –** means the period commencing on the **commencement date** and ending on the date of **practical completion** **CORRUPT PRACTICE** – means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution **FRAUDULENT PRACTICE** – means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer, and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition **INTEREST –** the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999) **PRINCIPAL AGENT** – means the person or entity appointed by the **employer** and named in the **schedule**. In the event of a **principal agent** not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by a representative of the **employer** as named in the **schedule** **SECURITY** – means the form of security provided by the **employer** or **contractor**, as stated in the **schedule**, from which the **contractor** or **employer** may recover expense or loss 1.6 Any notice given may be delivered by hand, sent by prepaid registered post or telefax. Notice shall be presumed to have been duly given when: 1.6.4 No clause 3.2.1 A **construction guarantee** in terms of 14.0, where so elected in his tender 3.7 Add at the end thereof: The **contractor** shall supply and keep a copy of the **JBCC** Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the **site**, to which the **employer**, **principal agent** and **agents** shall have access at all times. 3.10 Replace the second reference to "**principal agent**" with the word "**employer**" 4.3 No clause 5.1.2 under clause 41- Include reference to 32.6.3; 34.3; 34.4 and 38.5.8 in terms of which the **employer** has retained its authority and has not given a mandate to the **principal agent** and in terms of which the **employer** shall sign all documents 10.5 Add the following as 10.5

Damage to the works

(1) Without in any way limiting the **contractor's** obligations in terms of the contract, the **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the protection and security of the **works** as the **contractor** may deem necessary

(2) 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**

(3) The **employer** shall carry the risk of damage to or destruction of the **works** and materials paid for by the **employer** that is the result of the excepted risks as set out in 10.6

(4) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof

10.6 Add the following as 10.6

Injury to Persons or loss of or damage to Properties

(1) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable

(2) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property 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, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable

(3) The **contractor** shall upon receiving a **contract instruction** from the **principal agent** cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**

(4) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**

(5) Where the execution of the **works** involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor**, shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed

(6) The **contractor** shall at all times proceed immediately 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**

10.7 Add the following as 10.7

HIGH RISK INSURANCE

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:

10.7.1 **Damage to the works**

The **contractor** shall, from the **commencement date** of the **works** until the date of the **certificate of practical 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

When so instructed to do so by the **principal agent**, 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

10.7.2 **Injury to persons or loss of or damage to property**

The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract 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

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 property 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 period of the contract

10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty one (21) **calendar days** of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.7.4 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 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole

14.0 Replace the entire clause 14.0 with the following:

14.0 SECURITY

14.1 In respect of contracts with a **contract sum** up to R1 million, the **security** to be provided by the **contractor** to the **employer** will be a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT)

	14.1.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A) 14.1.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction **security** or portions thereof to the **contractor** 14.2 In respect of contracts with a **contract sum** above R1 million, the **contractor** shall have the right to select the **security** to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the **schedule**. Such **security** shall be provided to the **employer** within twenty-one (21) **calendar days** from **commencement date**. Should the **contractor** fail to select the **security** to be provided or should the **contractor** fail to provide the **employer** with the selected **security** within twenty-one (21) **calendar days** from **commencement date**, the **security** in terms of 14.7 shall be deemed to have been selected. 14.3 Where the **security** as a cash deposit of ten per cent (10%) of the **contract sum** (excluding VAT) has been selected: 14.3.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date** 14.3.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to three per cent (3%) of the **contract value** (excluding VAT), and refund the balance to the **contractor** 14.3.3 Within twenty-one (21) **calendar days** of the date of **final completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to one per cent (1%) of the **contract value** (excluding VAT) and refund the balance to the **contractor** 14.3.4 On the date of payment of the amount in the final **payment certificate**, the **employer** shall refund the remainder of the cash deposit to the **contractor** 14.3.5 The **employer** shall be entitled to recover expense and loss from the cash deposit in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the cash deposit **security** or portions thereof to the **contractor**

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	14.3.6 The parties expressly agree that neither the **employer** nor the **contractor** shall be entitled to cede the rights to the deposit to any third party 14.4 Where **security** as a variable **construction guarantee** of ten percent (10%) of the **contract sum** (excluding VAT) has been selected: 14.4.1 The **contractor** shall furnish the **employer** with an acceptable variable **construction guarantee** equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date** 14.4.2 The variable **construction guarantee** shall reduce and expire in terms of the Variable **Construction Guarantee** form included in the invitation to tender 14.4.3 The **employer** shall return the variable **construction guarantee** to the **contractor** within fourteen (14) **calendar days** of it expiring 14.4.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall issue a written demand in terms of the variable **construction guarantee**

14.5 Where **security** as a fixed **construction guarantee** of five per cent (5%) of the **contract sum** (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.5.1 The **contractor** shall furnish a fixed **construction guarantee** to the **employer** equal in value to five per cent (5%) of the **contract sum** (excluding VAT)

14.5.2 The fixed **construction guarantee** shall come into force on the date of issue and shall expire on the date of the last certificate of **practical completion**

14.5.3 The **employer** shall return the fixed **construction guarantee** to the **contractor** within fourteen (14) **calendar days** of it expiring

14.5.4 The payment reduction of the value certified in a **payment certificate** shall be in terms of 31.8(A) and 34.8

14.5.5 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall be entitled to issue a written demand in terms of the fixed **construction guarantee** or may recover from the payment reduction or may do both

14.6 Where **security** as a cash deposit of five per cent (5%) of the **contract sum** (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.6.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to five per cent (5%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.6.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall refund the cash deposit in total to the **contractor**

14.6.3 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)

14.6.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both

14.7 Where **security** as a payment reduction of ten per cent (10%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.7.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(B)

14.7.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the **contractor**

14.8 Payments made by the guarantor to the **employer** in terms of the fixed or variable **construction guarantee** shall not prejudice the rights of the **employer** or **contractor** in terms of this **agreement**

14.9 Should the **contractor** fail to furnish the **security** in terms of 14.2 the **employer**, in his sole discretion, and without notification to the **contractor**, is entitled to change the **contractor's** selected form of **security** to that of a ten per cent (10%) payment reduction of the value certified in the **payment certificate** (excluding VAT), whereafter 14.7 shall be applicable

15.1.1 No clause

15.1.2 The **security** selected in terms of 14.0

15.1.4 Add 15.1.4 as follows:

An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within twenty-one (21) **calendar days** of **commencement date**

15.2.1 Under 41: Amend to read as follows:

"Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1.4

17.1.11 Delete the words "and the appointment of **nominated** and **selected subcontractors**"

20.1.3 No clause

21.0 No clause

26.1.2 Add # next to 26.1.2

29.2.5 No clause

31.5.2 Security adjustments in terms of 14.0 or 31.8

31.8 Amend as follows:

31.8(A) Where a **security** is selected in terms of 14.1; 14.5 or 14.6, the value of the **works** in terms of 31.4.1 and of the **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(A).1 Ninety-five per cent (95%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8.(A).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(A).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(A).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**.

31.8(B) Where security is a payment reduction in term of 14.7 has been selected the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(B).1 Ninety per cent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8(B).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(B).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(B).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except were the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

31.12 Delete the following: "Payment shall be subject to the **employer** giving the **contractor** a tax invoice for the amount due."

32.5.1 Add the following to the end of each of these clauses: "…due to no fault of the
32.5.4 **contractor"**
and
32.5.7

34.1 Remove #

34.2 Add # next to 34.2

34.8 The **principal agent** shall certify one hundred per cent (100%) of the amount of the **final account** in the **final payment certificate**

34.13 Replace "seven (7) **calendar days**" with "twenty one (21) **calendar days**" and delete the words: "subject to the **employer** giving the **contractor** a tax invoice for the amount due"

36.1 Add the following clauses 36.1.3 to 36.1.5. under 36.1 to read as follows:

36.1.3 refuses or neglects to comply strictly with any of the conditions of contract

36.1.4 estate being sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

36.1.5 in the judgement of the **employer**, has engaged in **corrupt** or **fraudulent practices** in competing for or in executing the contract

36.3 Remove reference to "No clause", and replace "**principal agent**" with "**employer**"

36.7 Add the following: "Notwithstanding any clause to the contrary, on cancellation of this
37.5 **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever,
and the **contractor** shall on written instruction, discontinue with the **works** on a date stated
38.7 and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever"

37.3.5 Replace "ninety (90)" with "one hundred and twenty (120)
and
38.5.4

39.3.5 Add the following words at the end thereof: "within one hundred and twenty (120) **working days** of completion of such a report"

40.2.2 under clause 41 – Replace "one (1) year" with "three (3) years"

40.6 under clause 41 – Remove reference to no clause

40.7.1 Change "(10)" to "(15)"

Add the following to the end thereof:

	Whether or not mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and equally share the costs of the **mediator** and related costs.

42.0	**Part 2: Contract Data provided by the Contractor:**
42.5	**CONTRACT DETAILS**
42.5.1	**Contractor:** _____ Postal address: _____ _____ _____ Tel: _____ Fax: _____ TAX / VAT Registration No: _____ Physical address: _____ _____ _____
42.5.2	The accepted **contract sum** inclusive of **tax** is **R** _____ Amount in words: _____
42.5.3 *[31.3]*	The latest day of the month for the issue of an interim **payment certificate:** _____
42.5.4 *[32.12]*	The preliminaries amounts shall be paid in terms of: **Alternative A** ☐ **Alternative B** ☐
42.5.5 *[32.12]*	The preliminaries amounts shall be adjusted in terms of: **Alternative A** ☐ **Alternative B** ☐

Tender no: ***DBN21/10/02***

42.5.7 *[14]*	**The security to be provided by the contractor:** (a) in respect of contracts up to R1 million, the **contractor** will provide security in terms of 14.1 (b) in respect of contracts above R1 million, the **contractor** will provide, as **security**, one of the following: (1) cash deposit of 10 % of the **contract sum** (excluding VAT) **Yes** ☐ **No** ☐ (2) variable **construction guarantee** of 10 % of the **contract sum** (excluding VAT) (DPW-10.3 EC) **Yes** ☐ **No** ☐ (3) payment reduction of 10% of the value certified in the **payment certificate** (excluding VAT) **Yes** ☐ **No** ☐ (4) cash deposit of 5% of the **contract sum** (excluding. VAT) and a payment reduction of 5% of the value certified in the **payment certificate** (excluding. VAT) **Yes** ☐ **No** ☐ (5) fixed **construction guarantee** of 5% of the **contract sum** (excluding VAT) and a payment reduction of 5% of the value certified in the **payment certificate** (excluding VAT) (DPW-10.1 EC) **Yes** ☐ **No** ☐ **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.**
42.5.8 *[29.7.2*]	The annual building holiday period after the commencement of the **construction period:** From**:** _____ to _____

42.6	**DOCUMENTS**
42.6.1	**Contract documents** marked and annexed hereto: Priced **bills of quantities:** **Yes** ☐ **No** ☐ Document marked as:_____ **Lump sum document**: **:** **Yes** ☐ **No** ☐ Document marked as:_____ **Guarantees:** **Yes** ☐ **No** ☐ Document marked as:_____ **Contract drawings:** **Yes** ☐ **No** ☐ Document marked as:_____ Other documents**:** **Yes** ☐ **No** ☐ *(Attach additional pages if more space is required)* _____ _____ _____ _____ _____

C1.3: FORM OF GUARANTEE

DPW-10.1 (EC): FIXED CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

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

To: M.T VILAKAZI
Private Bag Private Bag X 54315
DURBAN
4000

Sir,

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (4.1 EDITION MARCH 2005)

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: DBN21/10/02, for the Bergville Justice: Upgrading Plus Repair and Renovations (hereinafter referred to as the "contract") in the amount of R **, (** ***),*** (hereinafter referred to as the **contract sum**)**,**

I / We, _____

in my/our capacity as _____and hereby

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

2. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis;* and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed, on receipt of a written demand from the **employer** to do so, stating that the **employer** has a right of recovery against the **contractor** in terms of 33.0 of the contract.

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 **payment 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 practical completion**.

8. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

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

_____ **200__**

AS WITNESS

1. _____

2. _____

_____

By and on behalf of

_____

_____

_____

(insert the name and physical address of the guarantor)

NAME: _____

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

DATE: _____

A. **No alterations and/or additions of the wording of this form will be accepted.**

B. **The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**

C. **This GUARANTEE must be returned to:** _____

_____

DPW-10.3 (EC): VARIABLE CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

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

To: ***M T VILAKAZI***
Private Bag ***X54315***
DURBAN
4000

Sir,

VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (4.1 EDITION MARCH 2005)

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: ***DBN21/10/02***, for the ***Bergville Justice: Upgrading Plus Repair and Renovations*** (hereinafter referred to as the **"contract"** in the amount of R **, (** **)** (hereinafter referred as the **contract sum),**

I / We, _____

in my/our capacity as _____and hereby

representing _____ (hereinafter referred to as the "**guarantor**") advise that the **guarantor** holds at the **employer's** disposal the sum of R **,** **(** **)** being 10**%** of the **contract sum** (excluding VAT), for the due fulfillment 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 date of payment of the amount in the last final **payment certificate**, 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 3 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of practical completion**, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT).

   (c) The **guarantor's** liability shall reduce to 1 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of final completion**, subject to such amount not exceeding 10 % of the **contract sum** (excluding VAT).

   (d) This guarantee shall expire on the date of the last **final payment certificate**.

   (e) The **practical completion certificate** and the **final completion certificate** referred to in this guarantee shall mean the certificates issued in terms of the contract.

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 the **employer** has a right of recovery against the **contractor** in terms of 33.0 of the contract.

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 the issue of the last **final payment 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 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.

7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the amount guaranteed 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(d) above.

9. 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**

_____ **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:** _____

PART C2: PRICING DATA

C2.1: PRICING INSTRUCTIONS

PG-02.2 (EC) PRICING INSTRUCTIONS - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	***Bergville magistrate: repairs and renovations including upgrade and installation of borehole***		
Tender no:	***DBN21/10/02***	**Reference no:**	*6203/0188/26/4*

C2.1 Pricing Instructions

(a) **PROCUREMENT DOCUMENT**

This document is made up in three different volumes comprising of:

VOLUME 1: Tendering Procedures

VOLUME 2: Returnable Documents (Must be completed and returned)

VOLUME 3: Contract

2. BILLS OF QUANTITIES / LUMP SUM DOCUMENT (PART OF VOLUME 2)

The **bills of quantities / lump sum document** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

- Tenderers must read especially the following documents when pricing the bill of quantities:
  - ELECTRICAL EQUIPMENT SCHEDULES (In Volume 2) **Tenderers must complete all forms in this section and return it with the tender.**
  - HIV/AIDS SPECIFICATION AND SCHEDULES (In Volume 3 after "Scope of the Work")
  - OTHER TECHNICAL SPECIFICATIONS THAT ARE REQUIRED (In Volume 3 after "Scope of the Work")
  - **ALL ITEMS IN THE BILL OF QUANTITIES MUST BE PRICED**

(b) **VALUE ADDED TAX**

The **contract sum** must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the **bills of quantities / lump sum document** must however be net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary.

(c) **CPAP**

The contract is not a Fixed Price Contract and shall be subjected to CPAP. The contract sum will be adjusted in accordance with the JBCC Contract Price Adjustment Provisions as set out in the CPAP Indices Application Manual as prepared by the JBCC Series 2000, code 2118, dated May 2005 and any further amendments thereto.

No alternative indices will be considered

PART C3: SCOPE OF WORK

C3: SCOPE OF WORK

PG-01.2 (EC) SCOPE OF WORKS – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	***Bergville magistrate: repairs and renovations including upgrade and installation of borehole***		
Tender no:	***DBN21/10/02***	**Reference no:**	*6203/0188/26/4*

C3. Scope of Works

(a) **EXTENT OF THE WORKS**

SCOPE OF WORK

Environmentally Friendly

The building design must be 'green' and energy efficient making use of practices such as rain water harvesting etc.

Bulk Services

A backup generator
Upgrade of electricity
Emergency water - the tank will be on ground level and it will be linked to the main services.

Security

The secure holding facility requires major upgrading. The requirements are:

- A 5 Star Holding Cell setup to match Department of Justice requirements within the secure zone of the complex.
- 4 x holding cells (male, female, juvenile male and juvenile female).
- A secure sally port
- A SAPS room and a DCS room with separate ablutions and kitchen

Heritage Site

A portion of the site is of great heritage significance and is being visited by tourists on a daily basis. This portion of the site will be fenced off and a separate entrance will be provided for tourist at the back of the site.

All heritage structures are to be completely restored to their original condition.

Cash Hall upgrade

Securely close above counter up to the ceiling.
Bullet proof windows to be installed at counter.
2 x normal service points + 1 x disabled service point required.
Counter trays to be installed (1 x large tray for the pass through of files and the rest can smaller tray for the pass through of money).
External window of the cash hall should be bullet proof.
Money safes are to be positioned in front of the records safe and visually cordoned off from the public eye with partitioning.
Entrance door to the cash hall should be a safe type door.

Other items

Fencing
Landscaping
Perimeter lighting
Electrical gates

Security lighting
Adjusting the position of the flag pole(s)
Floor tiles to the Interpreters Room and Family Court Clerk Office.
Upgrade of fire installation
2 x additional offices
Covered staff parking to be provided
3 x secure parking (garages) to be provided.

The existing buildings on site comprise of some older buildings –
(1) the main building housing the offices, cash hall, library, court room and holding cells
(2) the gate house
(3) the public ablutions and
(4) the garages.
The main building is arranged in a U-form around a landscaped court yard with the entrance to the court room on the head of one wing and the holding cells at the back of that wing.

Next to the court room a more recent building housing the covered waiting area and Maintenance/Civil/Small claims/Divorces Office has been built.

To the back of the site adjacent to the garage building stand the Upper Thukela Blockhouse. This is a national monument which must be restored and remain open to tourist visits. It is important to note that NO CONSTRUCTION may be undertaken on this structure without the approval of AMAFA pertaining to restoration in writing has been received.

(b) **ORDER OF THE WORKS**

The successful contractor must provide the project manager with a construction programme before any work is commenced

(c) **BUILDINGS OCCUPIED**

Building will be occupied during construction. The Contractor must incorporate the additional time for clearing the offices in phases.

(d) **ACCESS**

There are no special requirements/ restrictions with regard to access on the site.

(e) **LABOUR-INTENSIVE WORKS**

Should labour-intensive works be applicable to the contract the following clauses must be inserted in the Scope of Works.

Employer's objectives:
The employer's objectives are to deliver public infrastructure using labour-intensive methods in accordance with EPWP Guidelines.

Labour-intensive works:
Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work.

Labour-intensive competencies of supervisory and management staff:
Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/ Supervisors at NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/ Manager

at NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent QCTO qualifications (See Appendix C) at NQF outlined in Table 1

(f) **GENERIC LABOUR-INTENSIVE SPECIFICATION**

Should labour-intensive works be applicable to the contract the following Generic Labour-intensive Specification (informed by SANS 1921-5, Construction and management requirements for works contracts - Part 5: Earthworks) which covers activities which are to be performed by hand, should be inserted in the Scope of Works without amendment or modification as set out below. ***(Delete item in total if labour-intensive works are not applicable to the contract)***

Contractors are referred to the Guidelines for the Implementation of Labour-intensive Infrastructure Projects under the Expanded Publics Works Programme (EPWP) for the generic labour-intensive specification applicable to the contract.

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- trenches having a depth of less than 1.5 metres
- stormwater drainage
- roads
- sidewalks and non-motorised transport infrastructure
- water and sanitation

Precedence
Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail
.
Hand excavateable material
Hand excavateable material is:
a) granular materials:
i) whose consistency when profiled may in terms of table 2 be classified as very loose, loose, medium dense, or dense; or
ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;
b) cohesive materials:
i) whose consistency when profiled may in terms of table 2 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

Note
1) A boulder is material with a particle size greater than 200mm, a cobble and gravel is material between 60 and 200mm.
2) A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 2: Consistency of materials when profiled			
GRANULAR MATERIALS		**COHESIVE MATERIALS**	
CONSISTENCY	**DESCRIPTION**	**CONSISTENCY**	**DESCRIPTION**
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp	Firm	Indented by thumb with effort; sharp end of

	end of a geological pick.		geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of a geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

Trench excavation
All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)
Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers;
a) to 90% Mod AASHTO;
b) such that in excess of 5 blows of a dynamic come penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

Excavation
All excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand. Any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

Clearing and grubbing
Grass and bushes shall be cleared by hand.

Shaping
All shaping shall be undertaken by hand.

Loading
All loading shall be done by hand. Haulage equipment should be selected in a manner that allows loading by hand to the greatest extent possible.

Haul
Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Offloading
All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

Spreading
All material shall be spread by hand.

Compaction
Small areas may be compacted by hand provided that the specified compaction is achieved. Appropriate rollers should be used where higher (than can be achieved by hand) levels of compaction are required or for large areas.

Grassing
All grassing shall be undertaking by sprigging, sodding, or seeding by hand.

Stone pitching and rubble concrete masonry
All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand.
Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.
Grout shall be mixed and placed by hand.

Manufactured Elements
Elements manufactured or supplied by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. Where the mass of an element exceeds 55 kg, consideration should be given to the size of the element relative to its total mass related to the number of workers who would be needed to lift such mass

HIV/AIDS SPECIFICATION AND SCHEDULES

PW 1544

DEPARTMENT OF PUBLIC WORKS

HIV/AIDS

SPECIFICATION

OCTOBER 2004

SECTION

HIV/AIDS SPECIFICATION

HIV/AIDS REQUIREMENTS

1 SCOPE

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers;

- Informing Workers of their rights with regard to HIV/AIDS in the workplace;

- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices.

2 DEFINITIONS AND ABBREVIATIONS

2.1 Definitions

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes.

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent.

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all.

2.2 Abbreviations

HIV : Human Immunodeficiency Virus.

AIDS : Acquired Immune Deficiency Syndrome.

STI : Sexually Transmitted Infection.

3 BASIC METHOD REQUIREMENT

3.1 The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers.

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site;
- When new Workers or Sub-contractors will join the construction project;
- Duration of Workers and Sub-contractors on site;
- How the maximum number of Workers can be targeted with workshops;
- How the Contractor prefers workshops to be scheduled, e.g., three hourly sessions per Worker, orone 2.5 hour workshop per Worker;
- Profile of Workers, including educational level, age and gender (if available);
- Preferred time of day or month to conduct workshops;
- A Gantt chart reflecting the construction programme, for scheduling of workshops;
- Suitable venues for workshops.

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training.

3.2 The Service Provider Workshop Plan shall address, but will not be limited to the following:

3.2.1 The nature of the disease;
3.2.2 How it is transmitted;
3.2.3 Safe sexual behaviour;
3.2.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
3.2.5 Attitudes towards other people with HIV/AIDS;
3.2.6 Rights of the Worker in the workplace;
3.2.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
3.2.8 How the Service Provider will support the Awareness Champion;
3.2.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
3.2.10 How the workshops will be presented, including frequency and duration;
3.2.11 How the workshops will fit in with the construction programme;
3.2.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
3.2.13 How the video will be used;
3.2.14 How the Service Provider will elicit maximum participation from the Workers;
3.2.15 A questions and answers slot (interactive session).

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated.

4 HIV/ AIDS AWARENESS EDUCATION AND TRAINING

4.1 Workshops

The Contractor shall ensure that all Workers attend the workshops.

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the

learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops.

4.2 Recommended practice

4.2.1 Workshop Schedule

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session.

4.2.2 Service Providers

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works.

4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met.

4.2.3.1 UNIT 1: The nature of HIV/AIDS

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:
1. Define and describe HIV and AIDS;
2. List and describe the progression of HIV/AIDS.

4.2.3.2 UNIT 2: Transmission of the HI virus

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:
1. Record in what bodily fluids the HI virus can be found;
2. Describe how HIV/AIDS can be transmitted;
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS.

4.2.3.3 UNIT 3: HIV/AIDS preventative measures

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream.

Assessment Criteria:
1. Report on how to minimise the risk of HIV/AIDS infection;
2. Report on precautions that can be taken to prevent HIV/AIDS infection;
3. Explain or demonstrate how to use a male and female condom;
4. List the factors that could jeopardize the safety of condoms provided against HIV/AIDS Transmission.

4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counseling.

Assessment Criteria:
1. Describe methods of testing for HIV/AIDS infection;
2. Report on why voluntary testing is important;
3. Report on why pre- and post-test counselling is important.

4.2.3.5 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria:
1. List and describe ways to manage HIV/AIDS;
2. Describe nutritional needs of people living with HIV/AIDS;
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS;
4. Explain the need for counselling and support to people living with HIV/AIDS.

4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people.

Assessment Criteria:
1. Discuss anti-retroviral therapy;
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child;
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS;
4. Describe post exposure prophylactics.

4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way.

Assessment Criteria:
1. Discuss the rights of a person living with HIV/AIDS in the workplace;
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace;
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important.

4.3 Displaying of plastic laminated posters and distribution of information booklets

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets. The contractor should include the costs of posters and information booklets in his/her tender price.

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's.

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover.

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds.

The posters on display must always be intact, clear and readable.

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site.

5 PROVIDING WORKERS WITH ACCESS TO CONDOMS

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health.

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover.

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers.

7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION

7.1 Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner.

7.2 The Awareness Champion shall be responsible for:

7.2.1 Liasing with the Service Provider on organising awareness workshops;
7.2.2 Filling condom dispensers and monitoring condom distribution;
7.2.3 Handing out information booklets;
7.2.4 Placing and maintaining posters.

8 MONITORING

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract.

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent.

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent.

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent.

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract.

SCHEDULE A

HIV/AIDS PROGRAMME: SITE CHECKLIST

When did construction commence: _____

Name of Departmental Project Manager: _____

Please refer to HIV/AIDS Programme activities during the reporting period

Tick the block if Contractor satisfactorily complied with specifications																												
DATE	**PI**				**PI**				**PI**				**PI**				**PI**				**PI**				**PI**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 14 days of site handover																												
Awareness champion on site																												
HIV/AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												
Support service poster/s in highly trafficked area																												
Support service poster/s in a good condition																												

Please indicate the applicable number for the reporting period							
Workers on payroll (at PI)							
Sub-Contractors who will be on site for longer than 30 days (at PI)							
Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							

Representative/Agent

Date

Contractor

Date

Date of progress inspection: (ccyy/mm/dd)

Reporting period: (ccyy/mm/dd)_____to (ccyy/mm/dd) _____

Deviations from HIV/AIDS awareness programme plan:

Corrective actions:

Representative/Agent	Departmental Project Manager
Date	Date

SCHEDULE B

HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT

Reporting period: (ccyy/mm/dd)_____ to (ccyy/mm/dd) _____

Number of workshops conducted in reporting period: _____

Number of scheduled workshops according to approved workshop plan: _____

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

_____ _____

Service Provider

_____ _____

Date Date

HIV/AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED

Fill in the applicable information with regard to each workshop conducted																												
DATE	**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Content of workshop: (Mark the content included)																												
SLO1																												
SLO2																												
SLO3																												
SLO4																												
SLO5																												
SLO6																												
SLO7																												
HIV/AIDS in construction video																												
Indicate the duration of the workshop in hours																												
Total number of Workers																												
Indicate workshop venue																												

HIV/AIDS AWARENESS PROGRAMME: ATTENDANCE REGISTER

Fill in your name and indicate attendance by ticking the appropriate date																											
DATE		**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
		D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
No	**NAMES**																												

SCHEDULE C

CONTRACTOR HIV/AIDS PROGRAMME REPORT

Project name: _____

Project Location: _____

Contract value of project: R_____

Department of Public Works Project Manager: _____

HIV/AIDS Programme duration: (ccyy/mm/dd)_____to (ccyy/mm/dd) _____

AWARENESS MATERIAL

Describe location of posters displayed during the programme: _____

_____

Comments on posters: _____

Indicate total number of booklets distributed: _____

Comments on booklets: _____

_____

CONDOMS

Indicate total number of male condoms distributed: _____

Indicate total number of female condoms distributed: _____

Describe where male condom dispenser was placed: _____

Describe where female condom dispenser was placed: _____

HIV/AIDS WORKSHOPS

Indicate the total number of HIV/AIDS workshops conducted: _____

Indicate the duration of workshops: _____

Indicate the total number of Workers that participated in the HIV/AIDS workshops: _____

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry:

_____

Comments on HIV/AIDS workshops on site: _____

_____

GENERAL

Briefly describe programme activities and satisfaction with outcome: _____

_____

_____

Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site:

_____

_____

_____

Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers:	Yes	No	Currently developing one

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss	Coughing or chest pain	Vomiting
Reactive TB	Pain when swallowing	Meningitis
Hair loss	Persistent fever	Memory loss
Severe tiredness	Diarrhea	Pneumonia

Number of HIV/AIDS-related deaths: _____

_____ _____

Contractor **Date**

_____ _____

Departmental Project Manager **Date**

SCOPE OF WORKS

OCCUPATIONAL HEALTH & SAFETY SPECIFICATION

DEPARTMENT OF PUBLIC WORKS

OCCUPATIONAL HEALTH AND SAFETY

HEALTH & SAFETY SPECIFICATIONS

FOR

Bergville Justice: Upgrading Plus Repair and Renovations

MANAGED ON BEHALF OF

THE NATIONAL DEPARTMENT OF PUBLIC WORKS

PUBLIC WORKS:

Mr. ??????????	**-**	**HEALTH & SAFETY OFFICER (ELECTRICAL)**
Ms. ??????????	**-**	**HEAD: PROJECTS & MAINTENANCE**
Mr. M T VILAKAZI	**-**	**PROJECT MANAGER**

NB

The Health and Safety File compiled by the Principal Contractor shall only comprise of relevant Requirement for compliance based on the Scope of Works and page 16-28 of this document/specification.

Contents

attachments:

16.3 Covid - 19 Policy
16.4 Employee Screening declarations

16.5 PPE Issue Register
16.6 Compliance Employees Appointments
16.7 Toolbox Talks
16.8 Safe Work Procedures
16.9 Checklists
16.10 Training Material
16.11 Posters
16.12 Compliance Officer Appointments

1. PREAMBLE

*****In terms of Construction Regulation 4(1) (a) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), the Department of Public Works, as the Client and/or its Agent on its behalf, shall be responsible to prepare Health & Safety Specifications for any intended construction project and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

*****The Client's further duties are as described in The Act and the Regulations made there-under. The Principal Contractor shall be responsible for the Health & Safety Policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 5 as well as the Health and Safety Plan for the project.

This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. Notwithstanding this, cognizance should be taken of the fact that no single Act or its set of Regulations can be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is suggested that the entire scope of the Labor legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this argument is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in. It is reiterated that environmental management cannot be disregarded.

Due to the wide scope and definition of construction work, every construction activity and site will be different, and may change even on a daily basis. Therefore, due caution is to be taken when drafting the Health and Safety Plan based on these Health and Safety Specifications. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall set up a Risk Assessment Program to determine any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan. The Health and Safety Plan shall include documented 'Methods of Statement' detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in the Risk Assessment.

The Department of Public Works is tasked to provide accommodation and operational facilities to a very large proportion of the approximate 40 National Departments responsible for the governance of the Department of Public Works. A very large number of State employees and public users of the facilities and the services provided there-in directly interacts with the facilities provided by the well-being, health and safety of a great number of people. This Department thus has directly or indirectly, an impact on the Republic of South Africa as well as the National Parliament.

In this a high premium is to be placed on the health and safety of the most valuable assets of the Department of Public Works. These are its personnel, the personnel of its Clients and the physical assets of which it is the custodian and may also include the public as well. The responsibilities the Department and relevant stakeholders have toward its employees and other people present in the facilities or on the sites are captured further in this specification document. These responsibilities stem from both moral, civil and a variety of legal obligations.

*****Every effort has been made to ensure that this specification document is accurate and adequate in all respects. Should it however, contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time, or relieve the Principal Contractor from his responsibilities and accountability in respect of the project to which this specification document pertains.

***2. SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT**

The Health and Safety Specifications pertaining to the project; Phase 1 and Phase 2" etc. etc.), cover the subjects contained in the index and is intended to outline the normal as well as any special requirements of the Department pertaining to the health and safety matters (including the environment) applicable to the project in question. These Specifications should be read in conjunction with the Act, the Construction Regulations and all other Regulations and Safety Standards which were or will be promulgated under the Act or incorporated into the Act and be in force or come into force during the effective duration of the project. The stipulations in this specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to countermand or nullify any stipulation of the Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

3. PURPOSE

The Department is obligated to implement measures to ensure the health and safety of all people and properties affected under its custodianship or contractual commitments, and is further obligated to monitor that these measures are structured and applied according to the requirements of these Health and Safety Specifications.

The purpose of this specification document is to provide the relevant Principal Contractor (and his /her contractor) with any information which might affect the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; and to protect persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work during the carrying out of construction work for the Department of Public Works. The Principal Contractor (and his /her contractor) is to be briefed on the significant health and safety aspects of the project and to be provided with information and requirements on inter alia:

a) Safety considerations affecting the site of the project and its environment;
b) Health and safety aspects of the associated structures and equipment;
c) Submissions on health and safety matters required from the Principal Contractor (and his /her contractor); and
d) The Principal Contractor's (and his /her contractor) health & safety plan.

It must be ensured that the Principal Contractor (and his /her contractor) is fully aware of what is expected from him/her with regard to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 8 of the Act.

The **Occupational Health and Safety Act (Sixth Revised Edition: 16.2 August 2016), 1993 (Act 85 of 1993)** in its entirety shall apply to the contract to which this specification document applies. The Construction Regulations promulgated on 18 July 2003 and incorporated into the above Act by Government Notice R 1010, published in Government Gazette 25207 shall apply to any person involved in construction work pertaining to this project, as will the Act **read with the Amended Construction Regulation 2014**

4. DEFINITIONS

"Purpose of the Act" –NB: This information below shall be read with the new Construction Regulations 2017(Sixth Revised Edition: 16.2 August 2016), 1993 (Act 85 of 1993)

To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

"Agent" –Means any person who acts as a representative for a client;

"Client" –Means any person for whom construction work is performed;

''Construction Work'' is defined as any work in connection with –

(a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
(b) the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
(c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
(d) 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 Act, who performs construction work and includes Principal Contractors;

"Health and Safety File" –means a file, or other record in permanent form, containing the information required a contemplated in the 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;

"Method Statement" –means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

"Principal Contractor" –means an employer, as defined in section 1 of the 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.

*5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

5.1 Structure and Organization of OH&S Responsibilities

5.1.1. Overall Supervision and Responsibility for OH&S

* The Client and/or its Agent on its behalf to ensure that the Principal Contractor, appointed in terms of Construction Regulation 4(1)(c), implements and maintains the agreed and approved H&S Plan.

* The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the Act to ensure that the Employer (as defined in the Act) complies with the Act. The pro forma Legal Compliance Audit may be used for this purpose.

* All OH&S Act (85 /1993), Section 16 (2) appointee/s as detailed in his/her/their respective appointment forms to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).

* The Construction Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 6 to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).

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* All Health and Safety Representatives (SHE-Reps) as per Section 18 of the Act.

5.1.2. Further (Specific) Supervision Responsibilities for OH&S

Several appointments or designations of responsible and /or competent people in specific areas of construction work are required by the Act and Regulations. The following competent appointments, where applicable, in terms of the Construction Regulations are necessary to ensure compliance to the Act, Regulations and Safety Standards.

Required appointments as per the Construction Regulations: -

Item	Regulation	Appointment	Responsible Person
1.	**4(1)(c)**	**Principal contractor for each phase or project**	**Client**
2.	**5.(3)(b)**	**Contractor**	**Principal Contractor**
3.	**5(11)**	**Contractor**	**Contractor**
4.	**6(1)**	**Construction supervisor**	**Contractor**
5.	6(2)	Construction supervisor sub-ordinates	Contractor
6.	**6(6)**	**Construction Safety Officer**	**Contractor**
7.	**7(1)**	**Person to carry out risk assessment**	**Contractor**
8.	**7(4)**	**Trainer/Instructor**	**Contractor**
9.	8(1)(a)	Fall protection planner	Contractor
10.	10 (a)	Formwork & support work supervisor	Contractor
11.	10(e) + (f)	Formwork & support work examiner	Contractor
12.	11(1)	Excavation supervisor	Contractor
13.	**11(3)(b)(ii)(b)**	**Professional engineer or technologist**	**Contractor**
14.	11(3)(k)	Explosives expert	Contractor
15.	12(1)	Supervisor demolition work	Contractor
16.	12(2) + (3)	Demolition expert	Contractor
17.	12(11)	Explosives expert	Contractor
18.	14(2)	Scaffold supervisor	Contractor
19.	15(1)	Suspended platform supervisor	Contractor
20.	15(2)(c)	Compliance plan developer	Contractor
21.	15(8)(c)	Suspended platform expert	Contractor
22.	15(13)	Outrigger expert	Contractor
23.	17(8)(a)	Material hoist inspector	Contractor
24.	18(1)	Batch plant supervisor	Contractor
25.	18(7)	Batch plant operator	Contractor
26.	19(2)(b)	Power tool expert	Contractor
27.	19.2 (g) (i)	Power tool controller	Contractor
28.	20(f)	Tower crane operator	Contractor
29.	**21(1)(d)(i)**	**Construction vehicle and mobile plant operator**	**Contractor**
30.	21(1)(j)	Construction vehicle and mobile plant inspector	Contractor
31.	22(d)	Temporary electrical installations inspector	Contractor
32.	22 (e)	Temporary electrical installations controller	Contractor
33.	26 (a)	Stacking and storage supervisor	Contractor
34.	27 (h)	Fire equipment inspector	Contractor

This list may be used as a reference or tool to determine which components of the Act and Regulations would be applicable to a particular site, as was intended under the Chapter “Preamble” above. (Page 4)

5.2 Communication & Liaison

5.2.1 OH&S Liaison between the Employer, the Principal Contractor, the other Contractors, the Designer and other concerned parties will be through the H&S Committee as per the procedures determined by the H&S Committee.

5.2.2 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.

5.2.3 Consultation with the workforce on OH&S matters will be through their Supervisors and H&S Representatives ('SHE – Reps')

5.2.4 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/or its Agent on its behalf and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reportingof hazardous/dangerous conditions/situations etc.

6. INTERPRETATION

(i) The Occupational Health and Safety Act and all its Regulations, with the exception of the Construction Regulations, distinguish between the roles, responsibilities and functions of employers and employees respectively. It views consultants and contractors as employees of the "owner" of a construction or operational project, the "owner" being regarded as the employer. Only if formally agreed to by way of the written agreement in this regard between the "owner(s)" and consultant and /or between the "owner(s)" and the contractor(s), will these assumptions be relinquished in favor of the position agreed upon between the relevant parties.

(ii) The position taken by the Construction Regulations is that the "owner", in terms of its instructions, operates (has to operate) in the role of client as per relevant definition. The contractors working for the "client" are seen to be in two categories, i.e., the Principal Contractor and Contractors. The Principal Contractor has to take full responsibility for the health and safety on the site of the relevant project / contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site. (Ordinary / sub) Contractors are required to operate under the scrutiny and control (in terms of all health and safety measures which are covered in the Construction Regulations) of the Principal Contractor. Where for the work the Principal Contractor will have to execute himself, practical health and safety measures are applicable, he will also be subject to the relevant requirements with which (ordinary / sub) Contractors have to comply. The Principal Contractor will, however, not have to actually fulfill such requirements in respect of any of the work / functions of any (ordinary / sub) Contractors on the site for which he has been appointed as Principal Contractor. However, he has to monitor / oversee such processes, ensuring that the requirements are complied with and that the required appointments / evaluations / inspections / assessments and tests are done and that the records are duly generated and kept as prescribed in the Construction Regulations. This has to feature clearly in the Principal Contractor's Health and Safety Plan.

7. RESPONSIBILITIES

7.1 Client

7.1.1 The Client or his appointed Agent on his behalf will appoint each Principal Contractor for the project in writing for assuming the role of Principal Contractor as intended by the Construction Regulations and determined by the Bills of Quantities.

7.1.2 The Client or his appointed Agent on his behalf shall discuss and negotiate with the Principal Contractor the contents of the health and safety plan of the both Principal Contractor and Contractor for approval.

7.1.3 The Client or his appointed Agent on his behalf will take reasonable steps to ensure that the health and safety plan of both the Principal Contractor and Contractor is implemented and maintained. The steps taken will include periodic audits at intervals of at least once every month.

7.1.4 The Client or his appointed Agent on his behalf will prevent the Principal Contractor and/or the Contractor from commencing or continuing with construction work should the Principal Contractor and/or the Contractor at any stage in the execution of the works be found to:

- have failed to have complied with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary in terms of the Act;
- have failed to implement or maintain their health and safety plan;
- have executed construction work which is not in accordance with their health and safety plan; or

- Act in any way which may pose a threat to the health and safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity.

7.2 Principal Contractor

7.2.1 The Principal Contractor shall accept the appointment under the terms and Conditions of Contract. The Principal Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labor of the intended construction work in terms of Regulation 3 of the Construction Regulations. Annexure B of this Specification contains a "Notification of Construction Work" form. The Principal Contractor shall submit the notification in writing prior to commencement of work and inform the Client or his Agent accordingly.

7.2.2 The Principal Contractor shall ensure that he is fully conversant with the requirements of this Specification and all relevant health and safety legislation. This Specification is not intended to supersede the Act nor the Construction Regulations or any part of either. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Principal Contractor in terms of this contract (entirely or in part) will continue to be legally required of the Principal Contractor. The Principal Contractor will in no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act or which may perceivable be applicable to this contract.

7.2.3 The Principal Contractor shall provide and demonstrate to the Client a suitable and sufficiently documented Health and safety plan based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the works. This plan shall, as appendices, include the health and safety plans of all Sub-contractors for which he has to take responsibility in terms of this contract.

7.2.4 The Principal Contractor shall provide proof of his registration and good standing with the Compensation Fund or with a licensed compensation insurer prior to commencement with the works.

7.2.5 The Potential Principal Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and Construction Regulations. (Note: This shall have to be contained in the conditions of tender upon which a tenderer's offer is based.)

7.2.6 The Principal Contractor shall consistently demonstrate his competence and the adequacy of his resources to Perform the duties imposed on the Principal Contractor in terms of this Specification, the Act and the Construction Regulations.

7.2.7 The Principal Contractor shall ensure that a copy of his health and safety plan is available on site and is Presented upon request to the Client, an Inspector, Employee or Sub-contractor.

7.2.8 The Principal Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of this Specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Client or Inspector upon request. Upon completion of the works, the Principal Contractor shall hand over a consolidated health and safety file to the Client.

7.2.9 The Principal Contractor shall, throughout execution of the contract, ensure that all conditions imposed on his Sub-contractors in terms of the Act and the Construction Regulations are complied with as if they were the Principal Contractor.

7.3 Contractor (Responsibilities of..... in terms of this contract and health and safety specification)

As per 7.2 above as and where applicable or as indicated in the letter of appointment.

8. SCOPE OF WORK

These specifications are applicable to the specific scope of work pertaining to the above-mentioned project as detailed in the tender documents (**Building Work Specifications**), this amongst all includes for example: (elaborate sufficiently and provide adequate information to give full understanding of all work to be done)

8.1 BUILDING WORK:

NB
The scope of shall be red with the Tender Document or bill of Quantities (Part C3: Scope of Works).

SCOPE:

EXISTING SINGLE-STOREY BUILDINGS:

1. **Popper notice shall be given to all persons in and around the building where construction work shall be executed. The building shall occupy during the construction period.**

2. **Notification to the provincial director must be given.**

3. **The contractor and sub-contractors must be registered and in good standing with the compensation fund at all time.**

4. **The contractor shall appoint a full-time competent employee in writing as the construction supervisor.**

5. **Work shall be executed at a height greater than 3 meters.**

6. **Excavation work exceeding 1 meter and more.**

7. **All site work; the contractor must take care of proper sun-protection for all his workmen, woman.**

8. **No work, contractor or sub-contractor shall be allowed to work in in-climate weather.**

9. **No danger tape shall be used on the construction site. All work areas shall proper be brigade.**

10. **Special care must be taken of;-**

    Contractors using scaffolding shall ensure that such scaffolding, when used, complies with the safety standards are carried out under the supervision of a competent person who has been appointed in writing.

8.2 ELECTRICAL WORK:

ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITES:

Notwithstanding the provisions contained in the Electrical Installation Regulations promulgated by Government Notice No. R.2920 of 23 October 1992 and the Electrical Machinery Regulations promulgated by Government Notice No. R.1953 of August 1988, respectively, as amended.

1. ***Work shall be medium and low voltage electrical work. The contractor shall give proof of his high and low voltage registration.***

[Notes to the Client, Designer, Project Manager, Architect, and Agent:

add references to the above project and include specific elements identified as the 'Critical Few'. The 'Critical Few' refer to those few or singular elements of the project that have the potential to impact in a major or devastating way on the project as a whole in the event of an accident or incident occurring. (20:80 principle)

Because of the inherent generic nature of the Health and Safety Specifications document, specific relevant information on the project must be provided and it may be necessary to draft the required information under this paragraph on a separate attached document.

If at any time after commencement of the project changes is brought about to the design or construction, sufficient health and safety information and appropriate resources are to be made available to the Principal Contractor to execute the work safely.]

N.B The Principal Contractor shall on tendering make provision for the cost of health and safety measures in terms of his/her documented Health and Safety Plan and measures based on these Health and Safety Specifications during the period of the project. Construction Regulation 5(3)(g) determines that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process.

THE HEALTH AND SAFETY PLAN IS THEREFORE TO BE INCLUDED WITH THE TENDER DOCUMENTS WHEN TENDERS ARE INVITED FOR THE PROJECT.

9. HEALTH AND SAFETY FILE

The Principal Contractor must, in terms of Construction Regulation 5(7), 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. A more detailed list of documents and other legal requirements that must be kept in the Health and Safety File is attached as an addendum to this document.

IMPORTANT:

The Health and Safety File will remain the property of the Client and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Client and/or its Agent on its behalf at the time of completion of the project.

10. OH&S GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OH&S PERFORMANCE

The Principal Contractor is required to maintain a CIFR of at least 8 (See Annexure 3. to this document: "Measuring Injury Experience") and report on this to the Client and/or its Agent on its behalf on a monthly basis.

11. 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 4. below "Project/Site Specific Requirements")

The identification of hazards is over and above the hazards identification programme and those hazards identified during the drafting of the Health and Safety Plan.

12. ARRANGEMENTS FOR MONITORING AND REVIEW

12.1 Monthly Audit by Client and/or its Agent on its behalf

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor Audit to comply with Construction Regulation 4(1)(*d*) to ensure that the principal Contractor has implemented, is adhering to and is maintaining the agreed and approved OH&S Plan.

12.2 Other audits and inspections by client and/or its agent on its behalf.

The Client and/or its Agent on its behalf reserves the right to conduct any other ad hoc audits and inspections as it and/or its Agent on its behalf deem necessary.

A representative of the Principal Contractor and the relevant Health and Safety Representative(s) (SHE-Reps) must accompany the Client and/or its Agent on its behalf on all Audits and Inspections and may conduct their own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results. The Client and/or its Agent on its behalf may require to be handed a copy of the minutes of

the previous Health and Safety Committee meeting reflecting possible recommendations made by that committee to the Employer for reference purposes.

12.3 Reports

The Principal Contractor is required to provide the Client and/or its Agent on its behalf with a monthly "SHE Risk Management Report".

The Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

* dies
* becomes unconscious
* loses a limb or part of a limb
* is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

OR where:

* a major incident occurred
* the health or safety of any person was endangered
* where a dangerous substance was spilled
* the uncontrolled release of any substance under pressure took place
* machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
* machinery ran out of control,

to the Provincial Director of the Department of Labour (DoL) within seven days and at the same time to the Client and/or its Agent on its behalf.
(Section 24 of the Act & General Administrative Regulation 8.)

The Principal Contractor is required to provide the Client and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations.

The Principal Contractor is required to provide a.s.a.p. the Client and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated in 12.7, 12.8.2, 15, 16, 17, 21 and 22 below. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of the Principal Contractor, it shall be reported immediately to any of the following:

12.4 Review

The Principal Contractor is to review the Hazard Identification, Risk Assessments and Standard Work Processes 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.

The Principal Contractor must provide the Client and/or its Agent on its behalf, other Contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph.

12.5 Site Rules and other Restrictions

12.5.1 Site OH&S Rules

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

When required, visitors and non-employees upon entering the site shall be issued with the proper Personal Protective Equipment (PPE) as and when necessary.

12.5.2 Security Arrangements

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees shall at all times be provided with fulltime supervision while on site.

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

If not already tasked to the H&S Officer appointed in terms of Construction Regulation 6(6), the Principal Contractor must appoint a competent Emergency Controller who must develop contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing programmed for the plans e.g., January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

12.6 Training

The contents and syllabi of all training required by the Act and Regulations including any other related or relevant training as required must be included in the Principal Contractor's Health and Safety Plan and Health and Safety File.

12.6.1 General Induction Training

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

12.6.2 Site Specific Induction Training

All employees of the Principal and other Contractors must be in possession of Site Specific Occupational Health and Safety Induction training.

12.6.3 Other Training

All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid proof of training.

All employees in jobs requiring training in terms of the Act and Regulations must be in Possession of valid proof of training as follows:

Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessment/s and recommendations by the Health and Safety Committee):

* General Induction (Section 8 of the Act)
* Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
* Site/Project Manager
* Construction Supervisor
* OH&S Representatives (Section 18 (3) of the Act)
* Training of the Appointees indicated in 12.6.1. & 12.6.2.
* Operation of Cranes (Driven Machinery Regulations 18 (11)
* Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 21)
* Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction Regulation 27)
* As a minimum basic First Aid to be upgraded when necessary (General Safety Regulations 3)
* Storekeeping Methods & Safe Stacking (Construction Regulation 26)
* Emergency, Security and Fire Co-coordinator

12.7 Accident and Incident Investigation

The Principal Contractor is responsible to oversee the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to receive first aid or be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)

The results of the investigation to be entered into the Accident/Incident Register listed above. (General Administrative Regulation 9)

The 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 incidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, ALL incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

12.8 H&S Representatives (SHE-Reps) and H&S Committees

12.8.1 Designation of H&S Representatives ('SHE – Reps')

Where the Principal Contractor employs more than 20 persons (including the employees of other Contractors (sub-contractors) he has to appoint one H&S Representatives for every 50 employees or part thereof. (Section 17 of the Act and General Administrative Regulation 6. & 7.)

H&S Representatives have to be designated in writing and the designation shall be in accordance with the Collective Agreement as concluded between the parties as is required in terms of General Administration Regulation 6.

12.8.2 Duties and Functions of the H&S Representatives

The Principal Contractor must ensure that the designated H&S Representatives conduct at least
a weekly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor, after which these reports shall be consolidated for submission to the Health and Safety Committee.

H&S Representatives must be included in and be part of accident/incident investigations.

H&S Representatives shall be members of at least one H&S Committee and must attend all meetings of that H&S committee.

12.8.3 Establishment of H&S Committee(s)

The Principal Contractor must establish H&S Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons nominated by the employer on a H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members and determine the procedures of the meetings including the chairmanship.

The H&S Committee must meet minimum monthly and consider, at least, the following Agenda for the first meeting. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

***Agenda*:**

1) Opening and determining of chairmanship (only when necessary)
2) Minutes of Previous Minutes
3) Observations
4) Program and Safety considerations
5) Hygiene
6) Housekeeping improvement
7) Incidents & Accidents / Injuries
8) Registers:
    a H&S Rep. Inspections
    b. Matters of First Aid

c. Scaffolding
d. Ladders
e. Excavations
f. Portable Electric Equipment
g. Fire Equipment
h. Explosive Power Tools
i. Power Hand tools
j. Incident! Report Investigation
k. Pressure Vessels
l. Personal Protective Equipment

9) Safety performance Evaluations
10) Education & Safety promotion program
11) First Aid Officials and training in First Aid
12) Demarcation of work- /hazardous-/safe areas/walkways
13) Posters and signage
14) Environmental preservation and conservation
15) Specific training programmes
16) General
17) Date of Next Meeting
18) Closing

13. PROJECT/SITE SPECIFIC REQUIREMENTS

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

* **Clearing & Grubbing of the Area/Site**
* **Site Establishment including:**
  - **Office/s**
  - **Secure/Safe Storage and storage areas for materials, plant & equipment**
  - **Ablution facilities**
  - **Sheltered dining area**
  - **Vehicle access to the site**
* **Dealing with existing Structures.**
* **Location of existing Services**
* **Installation & Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment**
* **Adjacent Land uses/Surrounding property exposures**
* **Boundary & Access control/Public Liability Exposures (Remember: the Employer is also responsible for the OH&S of non-employees affected by his/her work activities.)**
* **Health risks arising from neighboring as well as own activities and from the environment e.g., threats by dogs, bees, snakes, lightning, allergies etc.**
* **Exposure to Noise**
* **Exposure to Vibration**
* **Protection against dehydration and heat exhaustion**
* **Protection from wet & cold conditions**
* **Dealing with HIV/Aids and other diseases as per specific programme provided by the client and/or its Agent on its behalf**
* **Use of Portable Electrical Equipment including:**
  - **Angle grinder**
  - **Electrical Drilling machine**
  - **Skill saw**
* Excavations including:
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage
  - Daily inspections
* Welding including:

- Arc Welding
- Gas welding
- Flame Cutting
- Use of LP Gas torches and appliances

* Loading & Offloading of Trucks
* Aggregate/Sand and other Materials Delivery
* Manual and Mechanical Handling
* Lifting and Lowering Operations
* Driving & Operation of Construction Vehicles and Mobile Plant including:
  - Trenching machine
  - Excavator
  - Bomag Roller
  - Plate Compactor
  - Front End Loader
  - Mobile Cranes and the ancillary lifting tackle
  - Parking of Vehicles & Mobile Plant
  - Towing of Vehicles & Mobile Plant
* Use and Storage of Flammable Liquids and other Hazardous Substances – the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
* Layering and Bedding of trench floor
* Installation of Pipes in trenches
* Backfilling of Trenches
* Protection against Flooding
* Gabion work
* Use of Explosives - the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
* Protection from Overhead Power Lines
* As discovered by the Principal Contractor's hazard identification exercise
* As discovered from any inspections and audits conducted by the Client and/or its Agent on its behalf or by the Principal Contractor or any other Contractor on site
* As discovered from any accident/incident investigation.

13.1 The following are in particular requirements depending on scope of works and will form a basis for compliance audits.

1. **Administrative & Legal Requirements**
2. **Education, Training & Promotion**
3. **Public Safety & Emergency Preparedness**
4. **Personal Protective Equipment**
5. **Housekeeping**
6. Scaffolding, Formwork & Support work
7. **Ladders**
8. **Electrical Safeguarding**
9. **Emergency/Fire Prevention & Protection**
10. Excavations & Demolition
11. **Tools**
12. Cranes
13. Personnel & Material Hoists
14. Transport & Materials Handling
15. **Site Plant & Machinery**
16. **Plant & Storage Yards/Site Workshops Specifics**
17. **Health & Hygiene**

14. OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE

14.1 Administrative & Legal Requirements

OHS Act Section/ Regulation	Subject	Requirements
Construction. Regulation 3	**Notice of carrying out Construction work**	Department of Labour notified Copy of Notice available on Site
General Admin. Regulation 4	***Copy of OH&S Act (Act 85 of 1993)**	Updated copy of Act & Regulations on site. Readily available for perusal by employees.
COID Act Section 80	***Registration with Compens. Insurer**	Written proof of registration/Letter of good standing available on Site
Construction. Regulation 4 & 5(1)	**H&S Specification & Programmed**	H&S Spec received from Client and/or its Agent on its behalf OH&S programme developed & Updated regularly
Section 8(2)(d) Construction. Regulation 7	***Hazard Identification & Risk Assessment**	Hazard Identification carried out/Recorded Risk Assessment and – Plan drawn up/Updated RA Plan available on Site Employees/Sub-Contractors informed/trained
Section 16(2)	***Assigned duties (Managers)**	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.
Construction. Regulation 6(1)	**Designation of Person Responsible on Site**	Competent person appointed in writing as Construction Supervisor with job description
Construction. Regulation 6(2)	**Designation of Assistant for above**	Competent person appointed in writing as Assistant Construction Supervisor with job description
Section 17 & 18 General Administrative Regulations 6 & 7	***Designation of Health & Safety Representatives**	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports auctioned by Management.
Section 19 & 20 General Administrative Regulations 5	***Health & Safety Committee/s**	H&S Committee/s established. All H&S Reps shall be members of H&S Committees Additional members are appointed in writing. Meetings held monthly; Minutes kept. Auctioned by Management.
Section 37(1) & (2)	***Agreement with Man dataries/ (Sub-)Contractors**	Written agreement with (Sub-)Contractors List of (Sub-)Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Supervisor designated Written arrangements re. H&S Reps & H&S Committee Written arrangements re. First Aid
Section 24 & General Admin. Regulation 8 COID Act Sect.38, 39 & 41	***Reporting of Incidents (Dept. of Labour)**	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1?)(WCL 1 or 2) and to the Client and/or its Agent on its behalf Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries kept
General Admin. Regulation 9	***Investigation and Recording of Incidents**	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of Reports (Annexure 1) available on Site Tabled at H&S Committee meeting Action taken by Site Management.
Construction. Regulation 8	**Fall Prevention & Protection**	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site

		Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated Available on Site
Construction. Regulation 8(5)	**Roof work**	Competent person appointed to plan & supervise Roof work. Proof of appointees competence available on Site Risk Assessment carried out Roof work Plan drawn up/updated Roof work inspect before each shift. Inspection register kept Employees medically examined for physical & psychological fitness. Written proof on site
Construction. Regulation 9	**Structures**	Information re. the structure being erected received from the Designer including: - geo-science technical report where relevant - the design loading of the structure - the methods & sequence of construction - anticipated dangers/hazards/special measures to construct safely Risk Assessment carried out Method statement drawn up All above available on Site Structures inspected before each shift. Inspections register kept
Construction. Regulation 10	**Formwork & Support work**	Competent person appointed in writing to supervise erection, maintenance, use and dismantling of Support & Formwork Design drawings available on site Risk Assessment carried out Support & Formwork inspected: - before use/inspection - before pouring of concrete - weekly whilst in place - before stripping/dismantling. - Inspection register kept
Construction. Regulation 14	**Scaffolding**	Competent persons appointed in writing to: - erect scaffolding (Scaffold Erector/s) - act as Scaffold Team Leaders - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Copy of SABS 085 available on Site Risk Assessment carried out Inspected weekly/after bad weather. Inspection register/s kept
Construction. Regulation 11	**Excavations**	Competent person/s appointed in writing to supervise and inspect excavation work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Inspected: - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept Method statement developed where explosives will be/ are used
Construction. Regulation 19	**Explosive Powered Tools**	Competent person appointed to control the issue of the Explosive Powered Tools & cartridges and the service, maintenance and cleaning. Register kept of above Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use **Work areas are demarcated!**

Construction. Regulation 22/Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	***Inspection & Maintenance of Electrical Installation & Equipment (including portable electrical tools)**	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads must be uniquely identified/numbered. Weekly visual inspection by User/Issuer/Storeman. Register kept.
Construction. Regulation 26/ General Safety Regulation 8(1)(a)	***Designation of Stacking & Storage Supervisor**.	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site
Construction. Regulation 27/ Environmental Regulation 9	***Designation of a Person to Co-ordinate Emergency Planning And Fire Protection**	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practiced - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on ***register***. Inspected weekly. Inspection Register kept Serviced annually
General Safety Regulation 3	***First Aid**	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) List of First Aid Officials and Certificates Name of person/s in charge of First Aid box/es displayed. Location of First Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries
General Safety Regulation 2	**Personal Safety Equipment (PSE)**	PSE Risk Assessment carried out Items of PSE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PSE PSE remain property of Employer, not to be removed from premises GSR 2(4)
General Safety Regulation 9	***Inspection & Use of Welding/Flame Cutting Equipment**	Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately Equipment identified/numbered and entered into a register Equipment inspected weekly. Inspection Register kept Separate, purpose made storage available for full and empty vessels
Hazardous Chemical Substances **(HCS)** Regulations Construction Regulation 23	**Control of Storage & Usage of HCS and Flammables**	Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of **HCS** (including Flammables) Written Proof of Competence of above appointee available on Site Risk Assessment carried out Register of HCS kept/used on Site Separate, purpose made storage available for full and empty

		containers
Vessels under Pressure Regulations	**Vessels under Pressure (VUP)**	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of VUP's on Site Inspections & Testing by Approved Inspection Authority (AIA): - after installation/re-erection or repairs - every 36 months. - Register/Log kept of inspections, tests. Modifications & repair
General Safety Regulation 13A	**Inspection of Ladders**	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and weekly thereafter. Inspections register kept Application of the types of ladders (wooden, aluminium etc.) regulated by training and inspections and noted in register
General Safety regulation 13B	**Ramps**	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept. Daily inspected and noted in register

14.2 Education & Training

Subject	Requirement
*Company OH&S Policy Section 7(1)	Policy signed by CEO and published/Circulated to Employees Policy displayed on Employee Notice Boards Management and employees committed.
*Company/Site OH&S Rules (Section 13(a)	Rules published Rules displayed on Employee Notice Boards Rules issued and employees effectively informed or trained: written proof Follow-up to ensure employees understand/adhere to the policy and rules.
*Induction & Task Safety Training (Section 13(a)	All new employees receive OH&S Induction Training. Training includes Task Safety Instructions. Employees acknowledge receipt of training. Follow-up to ensure employees understand/adhere to instructions.
*General OH&S Training (Section 13(a)	All current employees receive specified OH&S training: written proof Operators of Plant & Equipment receive specified training Follow-up to ensure employees understand/adhere to instructions.
*Occupational Health & Safety Promotion	Incident Experience Board indicating e.g. * No. of hours worked without an Injury * No. of days worked without an Injury Mission, Vision and Goal Star Grading - Board kept up to date. Safety Posters displayed & changed regularly Employee Notice Board for OH&S Notices. Site OH&S Competition. Company OH&S Competition. Participation in Regional OH&S Competition Suggestion scheme.

14.3 Public Safety, Security Measures & Emergency Preparedness

Subject	Requirement
*Notices &Signs	Notices & Signs at entrances / along perimeters indicating **"No Unauthorised Entry".** Notices & Signs at entrance instructing visitors and non - employees what to do, where to go and where to report on entering the site/yard with directional signs. e.g., **"Visitors to report to Office"** Notices & Signs posted to warn of overhead work and other hazardous activities. e.g., **General Warning Signs**
Site	Nets, Canopies, Platforms, Fans etc. to protect members of the public passing / entering the site.

Safeguarding Security Measures	Access control measures/register in operation Security patrols after hours during weekends and holidays Sufficient lighting after dark Guard has access to telephone/ mobile/other means of emergency communication
Emergency Preparedness	Emergency contact numbers displayed and made available to Security & Guard Emergency Evacuation instructions posted up on all notice boards (including employees' notice boards) Emergency contingency plan available on site/in yard Doors open outwards/unobstructed Emergency alarm audible all over (including in toilets)
Emergency Drill & Evacuation	Adequate No. of employees trained to use Fire Fighting Equipment. Emergency Evacuation Plan available, displayed and practiced. **(See Section 1 for Designation & Register)**

14.4 Personal Protective Equipment

Subject	Requirement
*PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
*Head Protection	All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)
*Foot Protection	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed
*Eye and Face Protection	Eye and Face (also Hand and Body) Protection (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: * Jack/ Kango Hammers * Angle / Bench Grinders * Electric Drills (Overhead work into concrete / cement / bricks * Explosive Powered tools * Concrete Vibrators / Pokers * Hammers & Chisels * Cutting / Welding Torches * Cutting Tools and Equipment * Guillotines and Benders * Shears * Sanders and Sanding Machines * CO2 and Arc Welding Equipment * Skill / Bench Saws * Spray Painting Equipment etc.
*Hearing Protection	Hearing Protectors (Muffs, Plugs etc.) used when operating the following: * Jack / Kango Hammers * Explosive Powered Tools * Wood/Aluminium Working Machines e.g., saws, planers, routers
*Hand Protection	Protective Gloves worn by employees handling / using: * Cement / Bricks / Steel / Chemicals * Welding Equipment * Hammers & Chisels * Jack / Kango Hammers etc.
*Respiratory Protection	Suitable/efficient prescribed Respirators worn correctly by employees handling / using: * Dry cement * Dusty areas * Hazardous chemicals * Angle Grinders * Spray Painting etc.

*Fall Prevention Equipment	Suitable Safety Belts / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.: * Scaffolding * Riggers * Lift shafts * Edge work * Ring beam edges etc. Other methods of fall prevention applied e.g., catch nets
*Protective Clothing	All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.
*PPE Issue & Control	Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on H&S File. PPE remain property of Employer, not to be removed from premises GSR 2(4)

14.5 Housekeeping

Subject	Requirement
*Scrap Removal System	All items of Scrap/Unusable Off-cuts/Rubble and redundant material removed from working areas on a regular basis. (Daily) Scrap/Waste removal from heights by chute/hoist/crane. Nothing thrown/swept over sides. Scrap disposed of in designated containers/areas Removal from site/yard on a regular basis.
Stacking & Storage **(See Section 1 for Designation & Register)**	Stacking: * Stable, on firm level surface/base. * Prevent leaning/collapsing * Irregular shapes bonded * Not exceeding 3x the base * Stacks accessible * Removal from top only. Storage: * Adequate storage areas provided. * Functional – e.g., demarcated storage areas/racks/bins etc. * Special areas identified and demarcated e.g., flammable gas,cement etc. * Neat, safe, stable and square. * Store/storage areas clear of superfluous material. * Storage behind sheds etc. neat/under control. * Storage areas free from weeds, litter etc.
*Waste Control/Reclamation	Re-usable off-cuts and other re-usable material removed daily and kept to a minimum in the work areas. All re-usable materials neatly stacked/stored in designated areas. (Nails removed/bent over in re-usable timber). Issue of hardware/nails/screws/cartridges etc. controlled and return of unused items monitored.
Sub-contractors (Housekeeping)	Sub-contractors required to comply with Housekeeping requirements.

14.6 Working at Heights (including roof work)

Subject	Requirement
Openings	Unprotected openings adequately guarded/fenced/barricaded/catch nets installed
	Roof work discontinued when bad/hazardous weather Fall protection measures (including warning notices) when working close to edges or on fragile roofing material Covers over openings in roof of robust construction/secured against displacement

14.7 Scaffolding / Formwork / Support Work

Subject	Requirement
Access/System Scaffolding	Foundation firm / stable Sufficient bracing. Tied to Structure/prevented from side or cross movement Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Complying with OH&S Act/SABS 085
Free Standing Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Height to base ratio correct Outriggers used /tied to structure where necessary Complying with OH&S Act/SABS 085
*Mobile Scaffolding	Wheels / swivels in good condition Brakes working and applied. Height to base ratio correct. Outriggers used where necessary Complying with OH&S Act/SABS 085
Formwork / Support Work	All components in good condition. Foundation firm / stable. Adequate bracing / stability ensured. Good workmanship / uprights straight and plumb. Good cantilever construction. Safe access provided. Areas under support work tidy. Same standards as for system scaffolding.
Edges & Openings	Edges barricaded to acceptable standards. Manhole openings covered / barricaded. Openings in floor / other openings covered, barricaded/fenced. Stairs provided with handrails. Lift shafts barricaded / fenced off.

14.8 Ladders

Subject	Requirement
*Physical Condition / Use & Storage	Stepladders - hinges/stays/braces/stiles in order. Extension ladders - ropes/rungs/stiles/safety latch/hook in order. Extension / Straight ladders secured or tied at the bottom / top. No joined ladders used Wooden ladders are never painted except with varnish Aluminium ladders NOT to be used with electrical work All ladders stored on hooks / racks and not on ground. Ladders protrude 900 mm above landings / platforms / roof. Fixed ladders higher than 5 m have cages/Fall arrest system

14.9 Electricity (as part of, or additional to the manual "Safety & Switching Procedures for Electrical Installations"- see attached document)

Subject	Requirement
*Electrical Distribution Boards & Earth Leakage	Colour coded / numbered / symbolic sign displayed. Area in front kept clear and unobstructed. Fitted with inside cover plate / openings blanked off / no exposed "live" conductors / terminals/Door kept close Switches / circuit breakers identified. Earth leakage protection unit fitted and operating. Tested with instrument: Test results within 15 – 30 milliamps Aperture/Opening/s provided for the plugging in and removal of extension leads without the need to open the door Apertures and openings used for extension leads to be protected against the elements and especially rain
*Electrical Installations & Wiring	Temporary wiring / extension leads in good condition / no bare or exposed wires. Earthing continuity / polarity correct: **Looking at the open connectors to connect the wiring, the word "Brown" has the letter 'R' in it, so the brown wire connects to the 'Right hand connector. "Blue" has the letter 'L' in it, so the blue wire connects to the 'Left hand connector.** Cables protected from mechanical damage and moisture. Correct loading observed e.g., no heating appliance used from lighting circuit etc. Light fittings/lamps protected from mechanical damage/moisture. Cable arrestors in place and used inside plugs
*Physical condition of Electrical Appliances & Tools	Electrical Equipment and Tools: (includes all items plugging in to a 16 Amp supply socket) Insulation / casing in good condition. Earth wire connected/intact where not of double insulated design Double insulation mark indicates that no earth wire is to be connected. Cord in good condition/no bare wires/secured to machine & plug. Plug in good condition, connected correctly and correct polarity.

14.10 Emergency and Fire Prevention and Protection

Subject	Requirement
*Fire Extinguishing Equipment	Fire Risks Identified and on record The correct and adequate Fire Extinguishing Equipment available for: * Offices * General Stores * Flammable Store * Fuel Storage Tank/s and catchment well * Gas Welding / Cutting operations * Where flammable substances are being used / applied. * Equipment Easily Accessible
*Maintenance	Fire equipment checked minimum monthly, serviced yearly
*Location & Signs	Fire Extinguishing Equipment: * Clearly visible * Unobstructed * Signs posted including "No Smoking" / "No Naked Lights" where required. (Flammable store, Gas store, Fuel tanks etc.)
* Storage Issue & Control of Flammables (incl. Gas cylinders	Storage Area provided for flammables with suitable doors, ventilation, bund etc. Flammable store neat / tidy and no Class A combustibles. Decanting of flammable substances carried out in ignition free and adequately ventilated area. Container bonding principles applied Only sufficient quantities issued for one task or one day's usage Separate, special gas cylinder store/storage area. Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated. Types of Gas Cylinders clearly identified as well as the storage area and stored separately. Full cylinders stored separately from empty cylinders. All valves, gauges, connections, threads of all vessels to be checked regularly for leaks.

	Leaking acetylene vessels to be returned to the supplier IMMEDIATELY.
*Storage, Issue & Control of Hazardous Chemical Substances (HCS)	HCS storage principles applied: products segregated Only approved, non-expired HCS to be used Only the prescribed PPE shall be used as the minimum protection Provision made for leakage/spillage containment and ventilation Emergency showers/eye wash facilities provided HCS under lock & key controlled by designated person Decanted/issued in containers as prescribed with information/warning labels Disposal of unwanted HCS by accredited disposal agent No dumping or disposal of any HCS on or inside the storage area or anywhere else on the project site All vessels or containers to be regularly checked for leaks

14.11 Excavations

Subject	Requirement
Excavations deeper than 1m.	Shored / Braced to prevent caving / falling in. Provided with an access ladder. Excavations guarded/barricaded/lighted after dark in public areas Soil dumped at least 1 m away from edge of excavation On sloping ground soil dumped on lower side of excavation All excavations are subject to daily inspections

14.12 Tools

Subject	Requirement
*Hand Tools	Shovels / Spades / Picks: * Handles free from cracks and splinters * Handles fit securely * Working end sharp and true Hammers: * Good quality handles, no pipe or reinforcing steel handles. * Handles free from cracks and splinters Handles fit securely Chisels: * No mushroomed heads / heads chamfered * Not hardened * Cutting edge sharp and square Saws: * Teeth sharp and set correctly * Correct saw used for the job
*Explosive Powered Tools.	Only used by trained / authorised personnel. Prescribed warning signs placed / displayed where tool is in use. Work area must be properly isolated/demarcated during use of tool. Inspected at least monthly by competent person and results recorded. Issue and return recorded including cartridges / nails and unused cartridges / nails / empty shells recorded. Cleaned daily after use.

14.13 Transport & Materials Handling Equipment

Subject	Requirement
*Site Vehicles	All Site Vehicles, Dumpers, Bobcats, Loaders etc.; checked daily before use by driver / operator. Inventory of vehicles used/operated on site Inspection by means of a checklist / results recorded. No persons riding on equipment not designed or designated for passengers. Site speed limit posted, enforced and not exceeded. Drivers / Operators trained / licensed and carrying proof. No unauthorised persons allowed to drive / operate equipment.
Conveyors	Conveyor belt nip points and drive gear guarded. Emergency stop/lever/brake fitted, clearly marked & accessible and tested to be functional under full load.

14.14 Site Plant and Machinery

Subject	Requirement
Brick Cutting Machine	Operator Trained. Only authorised persons use the machine. Emergency stop switch clearly marked and accessible. Area around the machine dry and slip/trip free/clear of off-cuts All moving drive parts guarded/electrical supply cable protected Operator using correct PPE - eye/face/hearing/foot/hands/body.
*Electric Arc Welder	Welder Trained. Only authorised / trained persons use welder. Earth cable adequately earthed to work. Electrode holder in good condition/safe Cables, clamps & lugs/connectors in good condition. Area in which welding machine is used is dry/protected from wet. Welder using correct PPE - eye/ face/foot/body/respirator. Correct transparent screens & warning signs placed
*Compressors	Relief valves correctly set and locked / sealed. Maximum Safe Working Pressure (MSWP) indicated on face of pressure gauge: not on glass cover. All drives adequately guarded. Receiver/lines drained daily Hoses good condition/clamped, not wired Compressed air NEITHER used to dust off clothing/PPE/ and work areas NOR on bare skin
Concrete Mixer / Batch Plant	Top platform provided with guardrails. Dust abatement methods in use. Operators using correct PPE - eye / hands / respirators. All moving drive parts guarded. Emergency stops identified / indicated and accessible. Area kept clean/dry/and free from tripping and slipping hazards. Operators overseer identified and crane signals displayed and used.
*Gas Welding / Flame Cutting Equipment	Only authorised/trained persons use the equipment. Torches and gauges in good condition. Flashback arrestors fitted at cylinders and gauges. Hoses in good condition/correct type/all connections with clamps Cylinders stored, used and transported in upright position, secured in trolley / cradle / to structure. All cylinders regularly checked for leaks, leaking cylinders returned immediately Fire prevention/control methods applied/hot work permits.

14.15 Plant & Storage Yards/Site Workshops Specifics

Subject	Requirements
Section 8(2)(1) General Machinery Regulation 2(1): **Supervision of the Use & Maintenance of Machinery**	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of Machinery Critical items of Machinery identified/numbered/placed on register/inventory Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded
General Machinery Regulation 9(2): **Notices re. Operation of Machinery**	Schedule D Notice posted in Work areas
Vessels under Pressure Regulation 13(1)(b): **Supervision of the Use &**	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of VuP's VuP's identified/numbered/placed on register/Manufacturers plate intact

Maintenance of Vessels under Pressure (VuP)	Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded/Test certificates available
Lock-out Procedure	Lock-out procedure in operation
Ergonomics	Ergonomics survey conducted – results on record Survey results applied
Demarcation & Colour Coding	Demarcation principles applied All services, pipes, electrical installation, stop-start controls, emergency controls etc. colour coded to own published or SABS standard Employees trained to identify colour coding
Portable & Bench Grinders	Area around grinder clear/trip/slip free Bench grinders mounted securely - grinder generally in good condition - no excessive vibration On/Off switch/button clearly demarcated/accessible Adequate guards in place Toolrest – secure/square/max. 2 mm gap, perpendicular to drive shaft Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced
Battery Storage & Charging	Adequately ventilated, ignition free room/area/no smoking sign/s Batteries placed on rubber/wooden surface Emergency shower/eye wash provided No acid storage in area Prescribed methods in place and adhered to when charging batteries
Ancillary Lifting Equipment	Chain Blocks/Tirfors/jacks/mobile gantries etc. identified/ numbered on register Chains in good condition/links no excessive wear/checked daily Lifting hooks – throat pop marked/safety latch fitted SWL/MML marked/displayed
Presses/Guillotines/ Shears	Only operated by trained/authorised persons Interlocks/lock-outs fitted/PPE worn or used at all times

14.16 Workplace Environment, Health and Hygiene

Subject	Requirement
*Lighting	Adequate lighting in places where work is being executed e.g., stairwells and basements. Light fittings placed / installed causing no irritating/blinding glare. Stroboscopic effect eliminated (not only reduced) where moving objects or machinery is used
*Ventilation	Adequate ventilation / extraction / exhausting in hazardous areas e.g., chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.
*Noise	Tasks identified where noise levels exceeds 85 dB at any one time. All reasonable steps taken to reduce noise levels at the source. Hearing protection used where noise levels could not be reduced to below 85 dB.
*Heat Stress	Measures in place to prevent heat exhaustion in heat stress problem areas e.g., steel decks, when the WBGT index reaches 30. (See Environmental Regulation 4) Cold drinking water readily available at all times.
*Ablutions	Sufficient hygiene facilities provided - 1 toilet per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided Soap/cleaning agent available for washing hands Means of drying hands available Lock-up changing facilities / area provided. Ablution facilities kept hygienic and clean.
*Eating / Cooking Facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area Refuse bins with lids provided.

	Facilities kept clean and hygienic.
*Pollution of Environment	Measures in place to minimize dust generation. Accumulation or littering of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and dieseline into storm water and other drains or into existing or newly dug holes/cavities on site expressly prohibited.
*Hazardous Chemical Substances	All substances identified and list available e.g., acids, flammables, poisons etc. Material Safety Data Sheets (MSDS) indicating hazardous properties and emergency procedures in case of incident on file and readily available. Substances stored safely. Expiry dates meticulously checked where applicable

15. THE PRINCIPAL CONTRACTOR'S GENERAL DUTIES

The Principal Contractor shall at all times maintain his status of an "employer" as referred to in the Act, and will abide by his/her responsibilities, duties and functions as per the requirements of the Act and Regulations with specific reference to Section 8 of the Act.

The Principal Contractor shall keep, and on demand make available, a copy of the Act on site at all times and in addition to that he/she will introduce and maintain a file titled "Health and Safety File", or other record in permanent form, which shall contain all relevant aspects and information as contemplated in the Construction Regulations. He/she will make this file available to the client or his representative whenever necessary or on request to an interested party.

16. THE PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES

The Principal Contractor's specific duties in terms of these specifications are detailed in the Construction Regulations as published under government notice No.R1010 dated 18 July 2003.

The Principal Contractor is specifically referred to the following elements of the Construction Regulations:

Regulation No. 1 - Definitions
Regulation No. 2 - Scope of application
Regulation No. 3 - Notification of construction work
Regulation No. 5 - Principal Contractor and Contractor
Regulation No. 6 - Supervision of construction work
Regulation No. 7 - Risk Assessment
Regulation No. 26 - Stacking & Storage on construction sites
Regulation No. 28 - Construction welfare facilities
Regulation No. 29 - Approved Inspection authorities
Regulation No. 30 - Offences and penalties

The Principal Contractor shall ensure compliance to the Act and its Regulations and specifically to the above regulations, and document each record in the Health and Safety File.

17. THE PRINCIPAL CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH REGARD TO HAZARDOUS ACTIVITIES

The following activities are identifiable as hazardous in terms of the Construction Regulations.
The contractor shall execute the activities in accordance with the following Construction Regulations and other applicable regulations of the Act:

Regulation No. 8 - Fall protection

Regulation No. 9	- Structures
Regulation No. 10	- Formwork and support work
Regulation No. 11	- Excavation work
Regulation No. 12	- Demolition work
Regulation No. 13	- Tunneling
Regulation No. 14	- Scaffolding
Regulation No. 15	- Suspended platforms
Regulation No. 16	- Boatswain's chairs
Regulation No. 17	- Material hoists
Regulation No. 18	- Batch plants
Regulation No. 19	- Explosive powered tools
Regulation No. 20	- Cranes
Regulation No. 21	- Construction vehicles & mobile plant.
Regulation No. 22	- Electrical installations and machinery on construction sites
Regulation No. 23	- Use and temporary storage of flammable liquids on construction sites
Regulation No. 24	- Water environments
Regulation No. 25	- Housekeeping on construction sites
Regulation No. 27	- Fire precautions on construction sites.

All these will be read in conjunction with the relevant regulations and health and safety standards as required by the Act. All documents and records required by the Construction Regulations will be kept in the Health and Safety File and will be made available at any time when required by the client or his representative, or on request to an interested party.

18. GENERAL NOTES TO THE PRINCIPAL CONTRACTOR

Legal Framework

Part of legal obligations

The more important Acts and relevant subordinate/secondary legislation as well as other (inter alia Local Government) legislation that also apply to the State as well as to State owned buildings and premises: -

(i) The latest issue of SABS 0142: "Code of Practice for the Wiring of Premises"
(ii) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority
(iii) The Fire Brigade Services Act 1987, Act 99 of 1987 as amended
(iv) The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended and relevant proclaimed Regulations (SABS 0400)
(v) The Post Office Act 1958 (Act 44 of 1958) as amended
(vi) The Electricity Act 1984, Act 41 of 1984
(vii) The Regulations of Local Gas Board(s)
(viii) Legislation pertaining to water usage and the environment
(ix) Legislation governing the use of equipment, which may emit radiation (e.g., X-Rays etc.)
(x) Common Law

19. HOUSE KEEPING

Good housekeeping will be maintained at all times as per Construction Regulation No. 25. Poor housekeeping contributes to three major problems, namely, costly or increased accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

Particular emphasis is to be placed on the following crucial elements of a construction site:

- Phase priorities and production/plant layout
- Enclosures
- Pits, openings and shoring
- Storage facilities
- Effective, sufficient and maintained lighting or illumination
- Principal sources of injuries e.g., stairways, runways, ramps, loose building material
- Oil, grease, water, waste, rubble, glass, storm water
- Colour coding
- Demarcations
- Pollution
- Waste disposal
- Ablution and hygiene facilities
- First aid

In promotion of environmental control all waste, rubble, scrap etc., will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, the Principal Contractor will ensure that the matter is brought to record with the client or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals, and waste matters or by-products whose nature is such that they are poisonous or capable of fermentation, putrefaction or constituting a nuisance shall be treated or disposed of by methods approved of by an inspector.

NOTE: No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting.

20. LOCKOUT SYSTEMS

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

21. INCIDENT INVESTIGATION

Inspection and reporting is the best way in which a responsible contractor can control his area of responsibility. All incidents therefore, whether it gave rise to loss, injury, damage or not, shall be investigated and the results recorded in the Health and Safety File. (Attached GAR 9)

22. GENERAL

The project under control of the Principal Contractor shall be subject to periodic health and safety audits that will be conducted by the client at intervals agreed upon between the Principal Contractor and the client, provided such intervals will not exceed periods longer than one month. The Principal Contractor is to ensure that he/she and all persons under his control on the construction site shall adhere to the above specifications, as non-conformance will lead to the client taking action as directed by Construction Regulation 4.1(e). The Principal Contractor should note that he/she shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Plan based on these specifications.

23. IMPORTANT LISTS AND RECORDS TO BE KEPT

The following are lists of several records that are to be kept in terms of the Construction Regulations. The lists are:

1 List of appointments
2 List of record keeping responsibilities
3 Inspection checklist

These lists and documents are to be used as a point of reference to determine which components of the Act would be applicable to a particular site or task or project, as was intended under paragraph 1 ("Preamble") above.

1. LIST OF APPOINTMENTS

ITEM	**REGULATION**	**APPOINTMENT**	**RESPONSIBLE PERSON**
1.	4(1)(c)	Principal contractor for each phase or project	Client
2.	5.(3)(b)	Contractor	Principal Contractor
3.	5(11)	Contractor	Contractor
4.	6(1)	Construction supervisor	Contractor
5.	6(2)	Construction supervisor sub-ordinates	Contractor
6.	6(6)	Health and Safety Officer	Contractor
7.	7(1)	Person to Carry Out Risk Assessment	Contractor
8.	7(4)	Trainer/Instructor	Contractor
9.	8(1)(a)	Fall Protection Planner	Contractor
10.	10 (a)	Formwork & Support Work Supervisor	Contractor
11.	10(e) + (f)	Formwork & Support Work Examiner	Contractor
12.	11(1)	Excavation Supervisor	Contractor
13.	11(3)(b)(ii)(b)	Professional Engineer or Technologist	Contractor
14.	11(3)(k)	Explosives Expert	Contractor
15.	12(1)	Supervisor Demolition Work	Contractor
16.	12(2) + (3)	Demolition Expert	Contractor
17.	12(11)	Explosives Expert	Contractor
18.	14(2)	Scaffold Supervisor	Contractor
19.	15(1)	Suspended Platform Supervisor	Contractor
20.	15(2)(c)	Compliance Plan Developer	Contractor
26.	19(2)(b)	Power Tool Expert	Contractor
27.	19.2 (g) (i)	Power Tool Controller	Contractor
31.	22(d)	Temporary Electrical Installations Inspector	Contractor
32.	22 (e)	Temporary Electrical Installations Controller	Contractor
33.	26 (a)	Stacking and Storage Supervisor	Contractor
34.	27 (h)	Fire Equipment Inspector	Contractor

2. LIST OF RECORD KEEPING RESPONSIBILITIES

ITEM	*CR*	*RECORD TO BE KEPT*	**RESPONSIBLE PERSON**
1.	3(3)	Notification to Provincial Director – Annexure A Available on site	Principal Contractor
2.	4(3)	Copy of Principal Contractor's Health & Safety Plan Available on request	Client
3.	5(6)	Copy of Principal Contractor's Health & Safety Plan As well as each Contractor's Health & Safety Plan Available on request	Principal Contractor
4.	5(7)	Health and Safety File opened and kept on site (including all documentation required i.t.o. OHSA & Regulations Available on request	Every Contractor
5.	5(8)	Consolidated Health and Safety File handed to Client on completion of Construction work.	Principal Contractor

		To include all documentation required i.t.o. OHSA & Regulations and records of all drawings, designs, materials used and similar information on the structure	
6.	5(9)	Comprehensive and Updated List of all Contractors on site, the agreements between the parties and the work being done Included in Health and Safety file and available on request	Principal Contractor
7.	6(7)	Keep record on the Health and Safety File of the input by Construction Safety Officer [CR 6 (7)] at design stage or on the Health and Safety Plan	Contractor
8.	7(2)	Risk Assessment - Available on site for inspection	Contractor
9.	7 (9)	Proof of Health and Safety Induction Training	Every Employee on site
10.	8(3)	Construction Supervisor [CR 6(1)] has latest updated version of Fall Protection Plan [CR 8(1)]	Contractor
11.	9(2)(b)	Inform contractor in writing of dangers and hazards relating to construction work	Designer of Structure
12.	9(3)	All drawings pertaining to the design of structure On site available for inspection	Contractor
13.	9(4)	Record of inspections of the structure [First 2 years – once every 6 months, thereafter yearly] - Available on request	Owner of Structure
14.	9(5)	Maintenance records - safety of structure - Available on request	Owner of Structure
15.	10(d)	Drawings pertaining to the design of formwork/support work structure - Kept on site, available on request	Contractor
16.	11(3)(h)	Record of excavation inspection - On site available on request	Contractor
17.	17(8)(c)	Material Hoist daily inspection entered and signed in record book kept on the premises	Contractor
18.	17(8)(d)	Maintenance records for Material Hoist - Available on site	Contractor
19.	22(d)	Record of temporary electrical installation inspections [once a week] and electrical machinery [daily before use] in a register and kept on site	Contractor
20.	27(*l*)	Fire Evacuation Plan	Contractor

3. INSPECTION CHECKLIST

Employer Particulars	
Employer:	
Registered Name of Enterprise:	
Trade Name of Enterprise:	
Company Registration No.:	
SARS Registration No.:	
UIF Registration No.:	
COIDA Registration No.:	
Relevant SETA for EEA purposes:	
Industry Sector:	
Bargaining Council:	
Contact Person:	
Address of Premises:	
Postal Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Chief Executive Officer:	
Chief Executive Officer Address:	
Competent Person:	
Maximum power demand: in KW	
Health and Safety Representatives:	
Activities, products manufactured and/ services rendered:	
Raw materials, materials and chemical/	

biological substances:	
Total Number of Employees:	Male: Female:

Contractor Particulars	
Contractors:	
Site Address:	
Contracts Manager:	
Managing Director:	
Competent Persons:	
CR14: SCAFFOLDING:	
CR15: SUSPENDED SCAFFOLDING:	
CR17(6): MATERIAL HOIST (S):	
CR18(1): BATCH PLANT:	
CR8(1)(a): FALL PROTECTION:	
CR11(1)(1): EXCAVATION WORK:	
CR12: DEMOLITION WORK:	
CR19(2)(b): EXPLOSIVE POWER TOOLS	
CR26(a): STACKING	

INSPECTION

SECTION/REGS	ITEM CHECKED	N/A	YES	NO
	APPOINTMENTS			
CR6(1)	Supervisor:			
CR6(2)	Assistant Supervisor:			
S17(1)	Health & Safety Representative: (ratio)			
S19(1)	Health & Safety Committees			
CR 12(1)	Demolition Director			
	DOCUMENTS			
GAR 9(1)	Records of Incidents			
GAR 4	Copy of the Act			
GAR 7	Safety Reps Report			
GAR 8	Safety Committee Minutes			
DMR 18(7)	Lifting Machinery Log (Crane)			
CR 3(3)	Notification of Construction Work			
CR 7(2)	Risk Assessment			
CR 7(9)(e)	Proof of the Health & Safety Induction Training			
CR 11(13)(h)	Inspection of Excavation (Records)			
CR 20(g)	Crane Operator Medical Certificate			
CR 21(11)	Mobile Plant Operator Medical Certificate			
CR 18(9)	Batch Plant Repairs & Maintenance Records			
CR22(d)	Temporary Electrical Installation Record			

CR 5(7)	Health & Safety File			
CR 15(11)	Suspended Platforms' Performance Records			
CR 17(b)& (c)	Material Hoists Record Book			
IMPROV NOTICE	Scaffolding Log Book			
CR 21(1)(d)(ii)	Medical Certificate of Fitness			
CR 21(1)(l)	Construction Vehicle & Mobile Plant Register			
CR 22(d)	Electrical Installation & Machinery Register			
	INCIDENTS			
GAR 8(1) S24	Reported			
GAR 9(1)	Recorded Investigated Action Taken			
	PUBLIC SITE			
FR 2(1)	Sanitary Facilities			
CR 28(1) (c)	Changing Facilities for each sex			
CR 25(d)	Perimeter fence & no admittance			
CR 25(e)	Overhead protection netting/falling objects			
NB Notice	Pedestrian warning			
	PERSONAL SAFETY EQUIPMENT			
	Items Issued:			
GSR 2(3)	Items Required:			
S23	(What is the payment on each item?)			
	SAFETY PLANS			
	FIRST AID			
GSR 3(6)	Name(s) of First Aider (s):			
CR 4(1)(3)	Client's Health & Safety Specification			
CR5	Principal's contractor H&S Plan			
	FIRE HAZARD & PRECAUTIONS			
GSR 4	Flammables used, waste, hot work, diesel			
ER 9(1)	Portable Extinguishers			
	ELECTRICAL INSTALLATIONS & MACHINERY			
CR22	Guarding & PPE to Electrical Installations			
	ILLUMINATION			
ER 3(6)	Dangerous Places			
	Housekeeping			
ER6(2)(b),(c),(d)	Clear space storage			
ER6(3)	Disposal of waste			
	EXCAVATIONS			
CR 11(3)(l)	Barricades			
CR 11(3)(c)	Safe Depth Shoring/Bracing			
CR 11(1)(a)	Monitored			
CR 11(3)(h)	Excavation Inspection Record			

	GUARDING			
ER 6(2)(f)	Floor Openings			
	Floor slab sides, Shafts			
	SITE EQUIPMENT			
GSR 13A(a)	Ladders condition, secured			
IMPROV	Scaffold condition, secured			
	Platforms no. of boards condition Support 1.25. Toe Boards			
IMPROV	Hand Rails			
	SITE MACHINES			
DMR 3(2)(3)	Circulars, guards, riving knives			
DMR 2(a)	Mixers guarded			
	ELECTRIC POWER			
EMR 6(1)	Supply Board, condition E.L Relay Test			
GMR 3(1)	Condition of Tools, Leads, Plugs, etc.			
	LIFTING MACHINE/TACKLE			
DMR 18(8)	Lifting of persons			
DMR 18(8)	Condition, Securing of Load			
	EXPLOSIVE POWERED TOOLS			
CR 19(1)	Safe Use and Storage			
IMPROV	Warning Notice			
	ROOF WORK			
CR 8(1)	Safety equipment & precautions			
CR 8(2)	Fall protection plan			
CR 8(3)	Updated fall protection plan			
	ASBESTOS CEMENT			
AR 10(a)	Suitable Tools			

***WARNING*: Under no circumstances shall any work of any nature whatsoever on any ASBESTOS material be undertaken unless the work is entrusted and mandated to a "REGISTERED ASBESTOS CONTRACTOR" in terms of the Asbestos Regulations. [CR 12(9)] (plse. contact the Regional Manager's Office)**

24. HEALTH AND SAFETY FILE COMPILATION AND CONTENT (Document attached)

25. SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS (Document attached)

NOTE:
The guidelines and conditions provided in this attached document form an integral constituent of the Health and Safety Specifications. It is therefore a condition of acceptance that no Health and Safety Plan shall be complete unless all relevant elements of this document applicable to the above project have been included in the Health and Safety Plan. The final approval of the Health and Safety Plan in terms of CR 4(2) shall be subject to this requirement based on the following certification by the Principal Contractor or his Agent:

*" I hereby certify that I have taken cognisance of the content of the document titled '**SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS**' and have included the relevant elements of the document applicable to the above project in my Health and Safety Plan and shall ensure adherence to the requirements thereof."*

The contents of CR 5 is pivotal when mandatary appointments are contemplated.

26. GUIDE TO THE GENERAL ADMINISTRATIVE REGULATIONS
(Document attached)

27. IMPORTANT CONTACT DETAILS (HEALTH & SAFETY ONLY) (Document attached)

ATTACHMENTS

14. HEALTH AND SAFETY FILE COMPILATION AND CONTENT

15. SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS

16. GUIDE TO THE GENERAL ADMINISTRATIVE REGULATIONS

17. IMPORTANT CONTACT DETAILS - HEALTH & SAFETY ONLY

"HEALTH AND SAFETY FILE"

FOR

PROJECTS AND MAINTENANCE
(ELECTRICAL)

MANAGED ON BEHALF OF

THE NATIONAL DEPARTMENT OF PUBLIC WORKS

This document serves as a guide to Principle Contractors and Contractors (and their agents) to assist them in complying with the requirements of the Act and more specifically the Construction Regulations and to ensure a most comprehensive Health and Safety File. Kindly note the following extractions from the Construction Regulations:

"Every contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of the Act and the Regulations, is opened and kept on site and made available to an inspector, client, client's agent or principle contractor upon request. [CR 5(7)]

A Principal Contractor shall hand over a consolidated health and safety file to the client upon completion of the construction work and shall, in addition to the documentation referred to in sub regulation (7) [above], include a record of all drawings, designs, materials used and other similar information concerning the completed structure. [CR 5(8)]

A Principal Contractor shall ensure that in addition to the documentation required in the health and safety file as determined in the two sub regulations above, a comprehensive and updated list of all the contractors on site accountable to the Principal Contractor, the agreements between the parties and the type of work being done are included and available. [CR 5(9)]"

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The information, documentation and lists required to be included in the Health and Safety File as contemplated in the Construction Regulations [CR 5(7)], shall be suitably and sufficiently documented in terms of the following items listed below to ensure compliance with the Act as far as is reasonably practicable.

Note: In the event that any of the items listed below may not have reference to the planning, implementation and completion of the work to be done pertaining to the project on the construction site, it must clearly be indicated as such with a proper statement e.g. 'Not Applicable'. All other relevant references or items below shall relate to the information required as contemplated in the Act and Regulations.

IMPORTANT - ***This Health and Safety File shall be regarded as the property of the Client as it has to be consolidated and handed over to the Client upon completion of the project. The Principal Contractor shall ensure that this file is adequately protected against any form of damage, abuse or fraud.***

Registers as follows:

* Accident/Incident Register (Annexure 1 of the General Administrative Regulations)
* H&S Representatives ('SHE - Reps') Inspection Register
* Arc & Gas Welding & Flame Cutting Equipment Inspections
* Inspection of Cranes
* Inspection of Ladders
* Inspection of Vessels under Pressure plus all other excluded under VUP regulations
* Fire fighting equipment

The H&S Representatives (SHE-Reps) will be required to submit the abovementioned registers as well as other legally required registers, also from the list below, on a monthly basis to the chairman of the H&S committee for submission to, and endorsement by the H&S Committee. Also refer to the suggested Agenda for the H&S Committee under 12.8.3

Documents as follows:

Copy of OH&S Act (updated) (General Administrative Regulation 4.)
Proof of Registration and good standing with a COID Insurer (Construction Regulation 4(1)(g)
Appointments – in terms of the Construction Regulations * [See references Page 4]
Notification of Construction Work – Annexure 1 [CR 3]
H&S Specifications [CR 4]
H&S Plan – Principal Contractor, Contractor & Sub-contractors [CR 5(1) & (4)]
Proof of Periodic Audits [CR 4, 5 & 6]
List of all Contractors (accountable to Principal Contractor) on site [CR 5(9)]
Contractor Agreements [CR 5(9)]
Type of work done on site [CR 5(9)]

Records of drawings, designs, materials used and similar information concerning the completed structure [CR 5(8)]
Input by Construction Safety Officer [CR 6(7)]
Risk Assessment [CR 7(1)]
Copy of Risk Assessment [CR 7(2)]
Proof of H&S Induction Training [CR 7(4) & (7) & (9)(b)]
Proof of training on Hazards and Work Related Procedures [CR (7(4)]
Fall Protection Plan [CR 8]
Designer notice to contractor of dangers and hazards relating to construction work [CR 9(2)(b)]
Drawings design of structure [CR 9(3)]
Records of Inspections of Structure [CR 9(4)]
Maintenance records – structure safety [CR 9(5)]
Record Excavation Inspection [CR 11(3)(h)]
Method Statement [CR 11(3)(k)]
Method Statement [CR 12(2)]
Method Statement [CR 12(11)]
Operational Compliance Plan [CR 15(2)(c)]
Certificates, design calculations, sketches and test results [CR 15(3)]
Examination results [CR 15(9)]
Suspended Platform Inspection and Performance Test records [CR 15(11)]
Medical Certificate of Fitness [CR 15(12)(b)]
Proof of Training [CR 15(12)(c)]
Material Hoist Inspections [CR17(8)(c)]
Maintenance Records Material hoist [CR17(8)(d)]
Record Batch Plant Maintenance & Repair [CR18(9)]
Register for control of cartridges/nails studs – explosive powered tools [CR19(2)(g)(ii)]
Medical Certificates of Fitness [CR 20(g)]
Medical Certificates of Fitness [CR 21(1)(d)(ii)]
Findings of daily inspections Construction Vehicles & Mobile Plant [CR21(1)(j)]
Record of Temporary Electrical Installation Inspections [CR22(d)]
Record of Electrical Machinery Inspections [CR22(d)]
Proof of Training [CR 27(i)]
Evacuation Plan [CR 27(l)]
H&S Rep & Committee Members details
H&S Committee Meetings' Minutes
Other appointments in terms of OHASA

The following further identified requirements in terms of the Act and other Regulations of the Act are similarly applicable as part of the contents of the 'Health and Safety File':

Details of Inspections (by DoL)
Recording and Investigation of Incidents – Annexure 1 [GAR 9(1-3)]
Action taken on all incidents [GAR 9(4)]
Certificates of Competency in First Aid [GSR 3(4)]
Record of Medical Surveillance required in terms of OHASA
Proof of compliance with Asbestos Regulation requirements
Proof of compliance with Major Hazard Installation requirements

****The Appointments to be made in writing with job descriptions as per the Construction Regulations may include some or all of the following:***

PRINCIPAL CONTRACTORS - [CR 4(1)(c)]
CONTRACTORS – [CR 5(3)(b) + (11)]
COMPETENT PERSONS - [CR 6(1) + (2)]
- [CR 6(6)]
- [CR 7(1) + (4)]
- [CR 8(1)(a)]
- [CR 10(a) + (e) + (f)]
- [CR 11(1) + (3)(b)(ii)(b) + (3)(k)]
- [CR 12(1) + (2) + (3) + (11)]
- [CR 14(2)]
- [CR 15(1) + (2)(c) + (8)(c) + (13)]

- [CR 17(8)(a)]
- [CR 18(1) + (7)]
- [CR 19(2)(b) + (2)(g)(i)]
- [CR 20(f)]
- [CR 21(1)(d)(i) + (1)(j)]
- [CR 22(d) + (e)]
- [CR 26(a)]
- [CR 27(h)]

CONSTRUCTION SAFETY OFFICER - [CR 6(6)]
DESIGNER - [CR 9(2)]

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IMPORTANT:

A copy of the following certification in terms of the **"SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS"** (Document attached) signed by the prospective tenderer / contractor is to be included in the Health and Safety File:

" I hereby certify that I have taken cognizance of the content of the document titled 'SAFETY AND SWITCHING PROCEDURES FOR ELECTRICAL INSTALLATIONS' and have included the relevant elements of the document applicable to the above project in my Health and Safety Plan and shall ensure adherence and compliance to the requirements thereof."

NATIONAL DEPARTMENT OF PUBLIC WORKS

SAFETY AND SWITCHING PROCEDURES

FOR

ELECTRICAL INSTALLATIONS

CONTENTS

1 REGULATIONS AND DEFINITION OF COMPETENT PERSON:

1.1 REGULATIONS:

All persons who carry out or arrange for work of any description for the Department in connection with electrical apparatus shall make themselves acquainted with the Occupational Health and Safety Act (Act 85 1993) with particular reference to the Electrical Machinery Regulations, Regulations 1 to 23 inclusive.

Access to the above Act and its Regulations can be arranged with the Regional Manager.

1.2 DEFINITION OF COMPETENT PERSON:

"competent person" in relation to machinery, means any person who—

(a) has served an apprenticeship in an engineering trade which included the operation and maintenance of machinery, or has had at least five years' practical experience in the operation and maintenance of machinery, and who during or subsequent to such apprenticeship or period of practical experience, as the case may be, has had not less than one year's experience in the operation and maintenance appropriate to the class of machinery he is required to supervise;

(b) has obtained an engineering diploma in either the mechanical or electro technical (heavy current) fields with an academic qualification of at least T3 or N5, or of an equivalent level, and who subsequent to achieving such qualification has had not less than two years' practical experience in the operation and maintenance appropriate to the class of machinery he is required to supervise;

(c) is a graduate engineer and has had not less than two years' post-graduate practical experience in the operation and maintenance appropriate to the class of machinery he is required to supervise and who has passed the examination on the Act and the regulations made there-under, held by the Commission of Examiners in terms of regulations E5 (2) of the regulations published under Government Notice R.929 of 28 June 1963; or

(d) is a certificated engineer;

2 SAFETY EQUIPMENT

The following equipment required for working on electrical installations and distribution systems, must be maintained in good order and repair and must be made available:-

Safety belt, overalls, hard hat, safety shoes or boots, rubber gloves, "Men Working" notice boards, locks for locking off switches, buss bar shutters in truck-type switchgear, isolators or earthing links, rubber sheet and length of rope with short circuiting earthing-chains, earthing sticks and testing/phasing sticks rated for the voltage of the equipment to be tested.

Under no circumstances shall work be carried out on electrical apparatus unless the proper safety equipment is used

With regard to overhead linesmen, no work shall be carried out unless use is made of a non-metallic ladder and the appropriate safety belt, rubber gloves, overalls, hardhat and safety shoes or boots are worn. The buddy system must also be implemented.

3 DEFINITION OF OPERATING TERMS

3.1 Alive or live

This means electrically connected to the power system and/or electrically charged.

Consider an isolated overhead line that is not earthed. An overhead line can be electrically connected to the system in the following ways:

(a) By means of a metallic conductor such as links and breakers or switches. This is the normal way of transmitting electrical energy.

(b) Electromagnetic induction or transformer action from a nearby current carrying line will induce a dangerous voltage in the isolated lines and are a hazard to all personnel that must work on or with the line.

(c) Electrostatic induction or condenser action from a nearby live line will induce a dangerous voltage in any isolated, but not earthed, overhead line. Electrically charged means at a potential difference or voltage above zero

3.2 Dead

This means that any apparatus so described is isolated from the power system. Rotating plant shall not be regarded as dead until it is stationary or is being slowly rotated by means of barring gear and is not excited.

The Occupational Health and Safety Act defines dead as: “dead” means at or about zero potential and isolated from any live system. Disconnected has the same meaning as isolated. An overhead line disconnected from all sources of supply but not earthed, cannot be regarded as dead because:

(a) It can retain a static charge.
(b) It can acquire a static charge due to atmospheric conditions.
(c) It can accidentally be made alive.
(d) Nearby lines continually induce voltage in them.

The regulations recognise only the following devices as disconnects or isolators:-

(a) Links.
(b) Fuses.
(c) Truck type switchgear.

3.3 Earthing

This means the connecting of apparatus electrically to the general mass of earth in such a manner as will ensure at all times an immediate safe discharge of electrical energy. This is done through an earth bar or spike by means of a good metallic conductor.

To fully appreciate this definition, we must refer to the Electrical Machinery Regulations, Regulation 3 of the Occupational Health and Safety Act which states:

"Work on Disconnected Electrical Machinery. —Without derogating from any specific duty imposed on employers or users of machinery by the Act, the employer or user shall, whenever work is to be carried out on any electrical machinery which has been disconnected from all sources of electrical energy but which is liable to acquire or to retain an electrical charge, as far as is practicable, cause precautions to be taken by earthing or other means to discharge the electrical energy to earth from such electrical machinery or any adjacent electrical machinery if there is danger if there is danger there from before it is handled and to prevent any electrical machinery from being charged or made live while persons are working thereon.”

Electrical apparatus and in particular overhead lines may become charged due to:-

(a) Direct lightning strokes.
(b) Electro magnetically induced currents due to a lightning stroke in the immediate vicinity of the line.
(c) Electro statically induced charges on the lines due to the presence of thunderclouds.
(d) Electrostatic charges imparted to the line by the friction of dust or snow blowing past the conductors.
e) Electrostatic charges imparted to the line due to changes in line altitude"

These changes are responsible for tremendously high voltages between overhead lines and earth, in fact, sometimes high enough to cause a flash over on insulators. A spark may span several centimetres of air to a person's hand should he approach too closely to an isolated unearthed overhead line.

An overhead line or apparatus can be made alive by:

(a) Unauthorised operating, i.e., closing the wrong links and breaker.
(b) Faulty wiring on consumer's stand-by sets. (Back feed from consumer)
(c) A broken overhead conductor from a different line falling onto the isolated line.
(d) Synchronising plugs.

From the foregoing paragraphs it is clear that the purpose of earthing isolated lines and apparatus are:

(a) To discharge them should there be a residual voltage or charge.
(b) To prevent them acquiring a static charge.
(c) To prevent danger to persons working on apparatus in the event of someone accidentally making it alive.
(d) To dissipate induced voltages continuously and safely.

Earthing gear means the fixed or portable appliances used for earthing electrical apparatus.
The dangers from inadequate or improper earth connections are:

(a) Electrocution.
(b) Burns from arcing.
(c) Electric shock leading to falls.

Earthing may be done by the closing of earthing links, or by the attaching of fixed earthing devices or by the affixing of portable earthing straps. In each case the main idea is to ensure the safety of personnel.

In affixing portable earth straps, the connection to the earthbar or earthed metal or spike must be made first and in removing such earthing straps, the disconnecting from the earthbar or earthed metal or spike must be done last. Also, a link stick or an insulated stick should be used to connect the earth wires to the overhead lines or apparatus.

These requirements are most important because connecting the portable strap first to earth and then to the conductors by means of a link stick avoids the risk of a shock to the operator from static charges or induced voltages.

REMEMBER: ***Always safety test before applying earths.***

3.4 Isolate

This means to disconnect from all Sources of electrical potential by means of opening of links or fuses or the withdrawal of truck-type circuit-breakers.

All sources of electrical potential mean all points or circuits from where the apparatus can be made alive. Links, fuses and truck-type switchgear can be regarded as isolators because:

(a) They leave a visible air gap in a circuit when open, removed or withdrawn.
(b) They contain no stored energy and will not close due to defects.
(c) They can be locked in a physical condition and thus can only be operated by the person with the correct key.

Opening links and locking them in the open position; removing fuses and locking them away; withdrawing truck-type switchgear and locking the buss bar shutters are the only safe methods of isolating.

3.5 Circuit Breaker

This is a device designed to make or break electric current under normal and fault conditions. A breaker can make or break an electric current because it is designed to extinguish the arc very rapidly and effectively. It is also designed to withstand the tremendous forces under short circuit conditions. The arc-extinguishing medium for high-voltage breakers is normally air, oil or vacuum and should this medium be lost, the breaker becomes a link. Never use a breaker without an arc-extinguishing medium to interrupt current flow because the breaker will probably explode or it will sustain severe damage.

A fault condition is any condition that will cause an excessive amount of current flow. The normal fault conditions are:

(a) Phase faults.
(b) Earth faults.
(c) Open circuit in one line of a three-phase system (Single-phasing).
(d) Too low a voltage. (Motors will draw a large current or even stall).

(e) Too high a voltage.
(f) Overloading.

For the following reasons breakers cannot be regarded as isolators:

(a) They leave no visible gap in a circuit.
(b) They contain stored energy and can close on their own due to various defects.
(c) It is normally not possible to lock them in an open position.
(d) Oil circuit-breakers are subjected to carbon tracking which could cause a flash-over between contacts.

3.6 Link

This is a device for making or breaking a circuit when no load current is flowing.
Links differ from breakers and switches in the following respects:

(a) They are not equipped with an arc extinguishing medium/device.
(b) Their movement is very slow.

Should current be interrupted by means of links, an uncontrollable arc will be struck at the points where the contacts part.

The temperature of the arc is so high (+ 2 000°C) that it will simply melt the parting contacts. As the contacts move further apart, the arc will lengthen and burn everything away. Molten metal could splash onto the operator and cause severe injuries.

As the arc lengthens, considerable noise is generated and the light intensity is so severe that the operator could suffer from "welding flash" of the eyes.

When apparatus equipped with earthing links is required to be earthed at more than one place, the earthing links shall always be closed first and thereafter, any necessary portable earthing gear may be affixed to the apparatus.

In removing the earths in readiness for making the apparatus alive, all portable earthing gear shall first be removed and earthing links shall be opened last.

Closing the earthing links first ensures maximum safety to the operator. These links are easily operated, make good contact and the operating handles are at a safe distance from the contact points.

Locks and keys shall also be provided for links. The operating mechanism of all manually operated links shall be fitted with fastenings for locks. The operating mechanisms of each set of manually operated links shall normally be locked whether the links are in the open or in the closed position.

The locking of links provides a safeguard against their being opened or closed in error by other persons apart from the one with the correct key and a written instruction to operate.

3.7 Operating methods

This means switching, linking, safety testing and earthing. This definition also indicates the order of operating when making apparatus safe to work on.

(a) Switching -
    (i) Open breaker or switch to interrupt current flow safely, i.e., prevent arcs.
    (ii) Close breaker or switch to start current flow - the only safe way.

(b) Linking - open at least one set of links from where the apparatus can be made alive and lock the links in the open position. Always ensure that you are not going to start or interrupt current flow with the links by ensuring that the breaker or switch is open.
(c) Safety test - test all three phases to ensure that the apparatus is disconnected from all sources of supply and that there is no back-feed from a consumer's standby set or other source.

(d) Apply earths - ensure safety of the workers by:-

(i) Discharging the line or apparatus.
(ii) Preventing the line from acquiring a static charge.
(iii) Preventing the line or apparatus from being accidentally made alive.

Before applying portable earths, ensure that they are mechanically and electrically in good condition. There should be no broken strands, the clamps should be rigid and without defect and when applied properly, should make intimate contact with the conductors and earthbar or spike. The earthing cable tails should be as short as possible. The current carrying capacity of the portable earth is greatly reduced by broken strands. It will act as a fuse and increase the danger to workmen.

4 GENERAL SAFETY PRECAUTIONS

No person shall carry out work of any description (including maintenance, repairs, cleaning and testing) on any part of electrical apparatus unless such parts of the apparatus are:

(a) dead;
(b) disconnected, isolated and all practicable steps taken to lock off from live conductors;
(c) efficiently connected to earth with the appropriate earthing sticks or gear designed for this purpose at all points of disconnection of supply;
(d) screened where necessary to prevent danger, and caution and danger notices fixed;

and unless such person is fully conversant with the nature and extent of the work to be done.

It is the duty of the competent person in charge of the work to ensure that the foregoing provisions are complied with. He shall also ensure that when the work has been completed, the apparatus is safe to be made alive and that all earths and temporary danger notices have been removed.

Provided that cleaning and painting of earthed metal enclosures, connections or disconnections of circuits to or from live systems may be carried out in accordance with instructions issued by the competent person concerned.

Provided also that where the design of the apparatus precludes the strict compliance with all details of these precautions, the work shall be carried out to the instructions of the senior competent person present.

When any person receives instructions: regarding work on or the operation of high voltage apparatus he shall report any objection to the carrying out of such instructions to the competent person who shall have the matter investigated and, if necessary, referred to higher authority.

5 ACCESS TO HIGH VOLTAGE ENCLOSURES AND APPARATUS

Enclosures, chambers, cubicles or cells containing high voltage conductors shall be kept locked and shall not be opened except by a competent person.

6 SWITCHING:

(a) No switching shall be carried out without the sanction of the appropriate competent person except for agreed routine switching or in cases of emergency.

All telephone instructions/messages relating to the switching operation shall be written down and be repeated in full to the sender to ensure that the message has been accurately received.

(b) When a switch shows any sign of distress after operating, its condition shall be immediately reported to the appropriate competent person, and it shall be examined before further operation.
(c) The examination of and necessary adjustments including inspection and/or changing of oil of any high voltage oil immersed circuit-breaker which has operated under fault conditions shall be carried out if possible before the circuit-breaker is re-closed, or at the earliest available opportunity thereafter.

7 WORK IN SUBSTATIONS AND SWITCHING STATIONS CONTAINING EXPOSED LIVE CONDUCTORS.

7.1 Safety Clearances to Live Conductors:

Unless the whole equipment is "dead", the section which is made dead for work to be carried out shall be defined by the use of barriers or roping such that the minimum clearance from the nearest exposed conductor to ground level or platform or access way shall be:-

Rated Voltage	Clearance
Up to 11 kV	3.0 m.
From 11kV to 33kV	3.4 m

The area at ground level shall be only that in which the work is to be carried out.

7.2 Insufficient Clearances

If the above clearances are not sufficient to avoid danger, other suitable arrangements shall be made to provide the requisite degree of safety.

7.3 Ladders and Other Long Objects

Ladders and other long objects shall not be used without the permission of the senior authorised person in charge of the work and the movement and erection of such ladders shall be under his/her direct supervision at all times.

8 WORK ON METAL CLAD SWITCHGEAR SPOUTS:

(i) The section of bus bars on which work is to be carried out shall be made dead and isolated from all points of supply.

(ii) The shutters of live spouts shall be locked closed.

(iii) The busbars shall be earthed with approved earthing equipment if possible, at a panel other than that at which work is to be carried out. Temporary earths shall in any case be applied to all phases on the busbar at the point of work. These earths may then be removed one phase at a time for work to be carried out. Each phase earth shall be replaced before a second phase earth is removed.

For the earthing of metal clad switchgear, approved appliances only shall be used. The insertion of the hand or any other tool in contact spouts for this purpose is forbidden.

9 WORK ON TRANSFORMERS:

When work is carried out on transformers, both the primary and secondary switches and isolators shall be opened. The transformer shall also be isolated from all common neutral earthing equipment from which it may become live. This does not require the disconnection of solidly earthed neutrals.

10 WORK ON CABLES, CONDUCTORS AND OVERHEAD LINES:

10.1 Cables and Conductors

(a) No person shall touch the insulation, which covers or supports any high voltage conductor unless the conductor is dead and earthed.

(b) Before carrying out work involving cutting into a high voltage cable, the responsible person shall satisfy himself that the cable has been made dead, isolated and earthed where practicable and identified. In all cases of doubt, the cable shall be spiked in an approved manner.

TESTING PROCEDURES AND PRECAUTIONS FOR COMMISSIONING OF ELECTRICAL CABLES

The aim of this section is to create an awareness of the latest standards and testing procedures for the commissioning of new and the re-commissioning of repaired electrical cables.

Before commissioning or re-commissioning cables tests must be carried out to ensure the integrity of the cable/s and to ensure the safety of operating personnel.

1. Low voltage Cables

1.1 Initial Tests

Carry out a meter test to ensure that the insulation resistance complies with the manufacture's and the relevant SABS requirements. For L.V. cables a 500V d.c. meter is adequate for this purpose.

1.2 Voltage Tests

This covers extruded solid dielectric cables (covered by SABS 1507), voltage ranges are as indicated in Table 1

After installation the cable has to be tested to ensure the integrity of the cable and the quality of the work. A.C. testing of solid dielectric cables is preferred. Very low frequency high voltage sinusoidal electrical testing methods are recommended to avoid the use of cumbersome large testing equipment.

Method: The test voltage should be applied between conductors and between each conductor and the metallic protection or earthed surroundings of the cable as appropriate. The voltage to be raised gradually to the specified values in the table and maintained for 15 minutes.

Table1 -Test Voltages After Installation

1	2	3	4
Cable operating voltage	e test voltage is to be applied	Test Voltage V	
		m.s)	d.c.
300/500	een Conductors and conductors/earth		
600/1000	een Conductors and conductors/earth		
1900/3300	een conductors		
1900/3300	een Conductors and conductors/earth		

2. Medium/High Voltage

Each section of the cable installation between substations shall be subjected to a preliminary voltage or insulation resistance test to prove the insulation resistance.

The installation resistance can be measured with a high voltage meter with a rating of 5000V.

2.1 Paper Insulated Lead covered Double Steel Tape or Wire Armoured Cable (covered by SABS 97), voltage ranges are as indicated in Table 2

The test voltage should be applied between conductors and between each conductor and the metal sheath, which should be held at earth potential. In each case, the voltage should be increased steadily to the stipulated value and maintained at this value for 15 minutes.

Table 2 in-situ test voltages.

1	2	3	4	5	6	7
tage Rating of Cable kV	Test Voltage					
	Belted Cables				ngle–core and screened cables	
	Between conductors		From conductor to sheath		tween conductor and sheath or screen	
	a.c.	d.c.	a.c.	d.c.	a.c.	d.c.
3.3/3.3	7	9	7	9	-	-
3.8/6.6	13	19	8	11	8	11
6.6/6.6	13	19	13	19	-	-
6.35/11	22	31	13	19	13	19
11/11	22	31	22	31	-	-
12.7/22	-	-	-	-	25	36
19/33	-	-	-	-	38	54

2.2 XLPE-Insulated Cables covered by SABS 0198 Part 13.

NOTE: If circumstances necessitate testing that is not in accordance with the recommendations of this section, the cable manufacturer or a test expert should be consulted before any testing is carried out.

The use of inappropriate or excessive test voltages or of unsuitable fault location methods can damage XLPE-insulated cables. Cables that are particularly prone to damage during testing are those that have water trees and those that have a construction that differs from that specified in the 1981 and in subsequent editions of SABS 1339.

The Types of Test Waveforms to be applied are:

a) Very low frequency (VLF): An Alternating waveform that is either sinusoidal orpseudo-square/cosine rectangular, of nominal frequency 0,1 Hz.
b) Power frequency: An alternating sinusoidal waveform of frequency in the range 25 Hz to 100 Hz.
c) Surge: A step waveform that has a rise time of a few microseconds and that gradually decays to zero within 5 s.

These waveforms are referred to in the various test tables below.

Note: Where the capacity of the test set permits, all three cores of a three-core cable may be tested together.

2.2.1 PRELIMINARY TESTS

2.2.1.1 Leakage Resistance. Before carrying out any testing or fault location, determine and accurately record the leakage resistance to earth and, if relevant, between conductors. Use an instrument that generates a d.c test voltage of not less than 250 V and not more than 5 kV. Typical minimum values of leakage resistance are given in Table 3.

TABLE 3—MINIMUM LEAKAGE RESISTANCE

1	2	3	4	5
Cable Operating voltage *U*, kV	Minimum leakage resistance, MΩ			
	Cable length, m			
	100	300	1 000	3 000
6,6	150	50	15	5
11	240	80	24	8
22	460	153	46	15
33	680	227	68	23

NOTE:

1 The value of leakage resistance multiplied by the cable length should not be less than (2 U + 2) MΩ.km, where U is the voltage rating of the cable in kilovolt.

2 This test is repeated after the required sequence of tests (see 2.2.2.7).

2.2.2 TESTING

2.2.2.1 Over voltage Commissioning Tests. When newly installed cables are being commissioned, they should be tested at the test voltages given in Table 4, appropriate to the test waveforms and test durations given in columns 1 and 2 of the table.

TABLE 4—COMMISSIONING TEST VOLTAGES (r.m.s.)

1	2	3	4	5	6
Test waveform (see 2.2)	Duration, Min	Commissioning test voltage, kV			
		Cable Operating voltage, kV			
		6.6	11	22	33
VLF (0,1 Hz)	60	11	19	38	57
Power frequency	60	8	13	25	38

NOTE:

1. Test sets for the above are commercially available.
2. Where the above test levels cannot be achieved, a reduced voltage for an extended time may be negotiated.

2.2.2.2 Overvoltage Maintenance/Repair Tests. When cables are tested for maintenance or repair purposes, they should be tested at the test voltages given in Table 5, appropriate to the waveforms and test durations given in columns 1 and 2 of the table.

2.2.2.3 Surge Test Method (see Table 5). The surge test is intended to be a practical basic safety test. It can be used as a non-damaging means of identifying fairly serious existing or potential faults when power frequency or VLF equipment is not available. The test avoids the application of a continuous d.c. voltage (see 2.2.2.4), but it is not as conclusive or rigorous as the other methods.

CAUTION: During the surge test, a peak voltage of up to twice the test voltage can be generated in the cable.

Method. Charge the surge generator to the appropriate test voltage given in Table 5. Using single-shot mode, release a surge into the cable and then soft-discharge the cable (see 2.2.5.5) within 5 s. Repeat the procedure up to five times and then fully discharge the cable by solidly earthing it for at least 5 min.

TABLE 5—MAINTENANCE/REPAIRS TEST VOLTAGES (r.m.s.)

1	2	3	4	5	6
Test waveform (see 2.2)	Duration	Maintenance/repair test voltage, kV			
		Cable operating voltage, kV			
		6.6	11	22	33
VLF (0,1 Hz)	15 min	8	13	25	38
Power frequency	15 min	7	11	22	33
Surge test (see 2.2.1.3)	5 surges, max.	7	11	22	33

2.2.2.4 D.c. Over voltage Testing. D.c. over voltage testing is likely to cause irreversible damage to XLPE-insulated cable systems, particularly if the cables have water trees. It often fails to identify potentially hazardous conditions in the cable. If d.c. testing has to be carried out because no other test methods are available, the voltage and duration should be limited to the appropriate values given in Table 6, which are recommended for quick identification of gross faults only. Use a d.c. test set or a surge generator in d.c. mode to apply the test voltage. After applying the voltage, soft-discharge the cable (see 2.2.2.5), using either the d.c. test set or a discharge stick. Fully discharge the cable by solidly earthing it for at least 8 h but preferably for 24 h.

TABLE 6—D.C. TEST VOLTAGES

1	2	3	4	5
Duration, s	D.c. test voltage, kV			
	Cable operating voltage, kV			
	6.6	11	22	33
10	6	10	20	30

2.2.2.5 SOFT DISCHARGE OF CABLE. An XLPE-insulated cable should always be soft-discharged through a resistance of at least 200 kΩ, for example by using a discharge stick. Discharging a conductor direct to earth by short-circuiting it with a lead can severely damage the cable. After the initial discharge, a cable should be solidly earthed for at least 5 min. If the cable has been subjected to any form of d.c. test, it should be solidly earthed for at least 8 h, but preferably for 24 h.

2.2.2.6 CABLE SHEATH TESTING. To avoid problems caused by the ingress of water into the cable, a cable should be subjected to sheath testing:

a) at commissioning,
b) annually, and
c) after the location and repair of a fault.

Cable sheath testing can also be used to locate conductor earth faults that have punctured the outer sheath, provided that multiple sheath faults are not present. A direct current sheath test voltage of 5 kV should be applied for 1 min, with a leakage current of 1 mA/km being regarded as acceptable.

2.2.2.7 AFTER TESTING. After completion of any of the above tests, the leakage test described in 2.2.1.1 should be repeated. A tenfold reduction in the value of leakage resistance could indicate a potential problem.

2.2.3 CIRCUIT-BREAKER CLOSURE

2.2.3.1 Faulty or Unknown Cable Conditions. Closing a circuit-breaker on an untested cable can be hazardous to the operator and can damage the cable. A fault should never be re-established by repeated closing of a circuit-breaker.

2.2.3.2 Voltage Doubling. During switch-in onto open circuit, voltage doubling occurs at the remote end of the cable. Voltages of up to 20 kV can occur on an 11 kV system. Switching onto a load such as a transformer avoids this voltage doubling.

IMPORTANT CONTACT DETAILS

(FOR HEALTH & SAFETY ASPECTS ONLY)

The contractor is to add all the important contact information about essentials services, support and assistance.

	SERVICE	NUMBER	CONTACT PERSON
	Hospital		
	Ambulance		
	Water		
	Electricity		
	Police		
	Fire Brigade		
	Engineer		

ADD OTHER IMPORTANT HEALTH & SAFETY CONTACT DETAILS AS MAY BE FOUND NECESSARY.

PART C4: SITE INFORMATION

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PG-03.2 (EC) SITE INFORMATION – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (edition 4.1 of March 2005)

Project title:	***Bergville magistrate: repairs and renovations including upgrade and installation of borehole***		
Tender no:	***DBN21/10/02***	**Reference no:**	*6203/0188/26/4*

C4 Site Information

1. *GENERAL*

The site is at, BERGVILLE JUSTICE OFFICE, BERGVILLE, KWAZULU-NATAL. The tenderer must acquaint himself with the site locations, adjacent buildings, etc.

A limited area within the site boundaries will be allocated to the Contractor for dumping sand or other material and for the offices and Sheds.

The contractor is to clean up this area as well as the entrance driveway of the entire builder's rubble, etc. after completion. Any of the existing improvements damaged by the contractor must be replaced and / or repaired and made good and is for the contractor's own account.

49 Tatham Rd, Bergville, 3350