

Transnet Freight Rail

an Operating Division **TRANSNET SOC LTD**

[Registration Number 1990/000900/30]

REQUEST FOR PROPOSAL (RFP)

**FOR DESIGN, SUPPLY, INSTALL, TEST AND COMMISSIONING OF OUTDOOR AND
INDOOR TRACTION SUBSTATION EQUIPMENT INCLUDING THE REMOVAL OF OLD
AND OBSOLETE ELECTRICAL EQUIPMENT AT VARIOUS TRACTION SUBSTATIONS
UNDER HEIDELBERG, LADYSMITH AND DURBAN DEPOTS**

RFP NUMBER	: SIE21015CIDB (HOAC_HO_36727)
ISSUE DATE	: 24 June 2022
COMPULSORY BRIEFING	: 01 July 2022
CLOSING DATE	: 02 August 2022
CLOSING TIME	: 10h00am
TENDER VALIDITY PERIOD	: 12 weeks from closing date

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

SECTION 1: NOTICE TO TENDERERS

1. INVITATION TO TENDER

Responses to this Tender [hereinafter referred to as a **Tender**] are requested from persons, companies, close corporations or enterprises [hereinafter referred to as a Tenderer].

DESCRIPTION	FOR DESIGN, SUPPLY, INSTALL, TEST AND COMMISSIONING OF OUTDOOR AND INDOOR TRACTION SUBSTATION EQUIPMENT INCLUDING THE REMOVAL OF OLD AND OBSOLETE ELECTRICAL EQUIPMENT AT VARIOUS TRACTION SUBSTATIONS UNDER HEIDELBERG, LADYSMITH AND DURBAN DEPOTS.
TENDER DOWNLOADING	<p>This Tender may be downloaded directly from the National Treasury eTender Publication Portal FREE OF CHARGE at Transnet Freight Rail website on the following links; www.etenders.gov.za or www.transnetfreightrailfr.net/Supplier/Pages/Tenders.aspx</p> <p>NOTE:</p> <p>It is the responsibility of the tenderer to ensure downloading or receipt of a complete RFP all specifications, drawings and annexures.</p>
ISSUE DATE AND COLLECTION DEADLINE	<p>Tenderers can download the document from 24 June 2022 until 30 June 2022</p> <p>Collections of bids: Kindly note that due to the "National Lockdown" directive as announced by the President of the Republic of South Africa on 23 March 2020, No collection of physical documents will be possible or allowed during the "Lockdown" period, documents are only available for download from National Treasury's "eTender Publication" website on the following link; www.etenders.gov.za or www.transnetfreightrailfr.net/Supplier/Pages/Tenders.aspx</p>
COMPULSORY BRIEFING	<p>A Compulsory Tender Clarification Meeting will be conducted at Transnet Freight Rail Inyanda House 1 Second Floor, Dangani Boardroom East Wing Parktown, Johannesburg on the 01 July 2022 at 1:00am [1 O'clock] for a period of ± 2 (two) hours and</p> <p>Non-compulsory site visit will be on the 04 July 2022 @ 11: am [11 O'clock] at Kroomdraai 3kV traction substation, Heidelberg Depot.</p> <p>[Tenderers to provide own transportation and accommodation].</p> <p>The Compulsory Tender Clarification Meeting will start punctually and information will not be repeated for the benefit of Tenderers arriving late.</p>

	<p>A Site visit/walk will take place, tenderers are to note:</p> <ul style="list-style-type: none"> • Tenderers are required to wear safety shoes, goggles, long sleeve shirts, high visibility vests and hard hats. • Tenderers without the recommended PPE will not be allowed on the site walk. • Tenderers and their employees, visitors, clients and customers entering Transnet Offices, Depots, Workshops and Stores will have to undergo breathalyser testing. • All forms of firearms are prohibited on Transnet properties and premises. • The relevant persons attending the meeting must ensure that their identity documents, passports or drivers licences are on them for inspection at the access control gates. <p>Certificate of Attendance in the form set out in the Returnable Schedule T2.2-01 hereto must be completed and submitted with your Tender as proof of attendance is required for a compulsory site meeting and/or tender briefing.</p> <p>Tenderers are required to bring this Returnable Schedule T2.2-01 to the Compulsory Tender Clarification Meeting to be signed by the Employer's Representative.</p> <p>Tenderers failing to attend the compulsory tender briefing will be disqualified.</p> <p>Tenderers are required to submit the intention to attend the meeting with their details not later than the 29 June 2022;</p> <p>Link for Technical Specifications and any other Specification https://www.transfernow.net/dl/20220622ZMfqFmQi</p>
CLOSING DATE	<p>10:00am on (02 August 2022)</p> <p>Tenderers must ensure that tenders are uploaded timeously onto the system. If a tender is late, it will not be accepted for consideration.</p>
VALIDITY PERIOD	<p>Twelve (12) weeks Business Days from Closing Date 31 October 2022</p> <p>Tenderers are to note that they may be requested to extend the validity period of their tender, at the same terms and conditions, if the internal evaluation process has not been finalised within the validity period. However, once the adjudication body has approved the process and award of the business to the successful Tenderer(s), the validity of the successful Tenderer(s)' bid will be deemed to remain valid until a final contract has been concluded.</p>

2. TENDER SUBMISSION

Transnet has implemented a new electronic tender submission system, the e-Tender Submission Portal, in line with the overall Transnet digitalization strategy where suppliers can view advertised tenders, register their information, log their intent to respond to bids and upload their bid proposals/responses on to the system.

a) The Transnet e-Tender Submission Portal can be accessed as follows:

- Log on to the Transnet eTenders management platform website (<https://www.transnet.net>);
 - Click on "TENDERS";
 - Scroll towards the bottom right hand side of the page;
 - On the blue window click on "register on our new eTender Portal";
 - Click on "ADVERTISED TENDERS" to view advertised tenders;
 - Click on "SIGN IN/REGISTER – for bidder to register their information (must fill in all mandatory information);
 - Click on "SIGN IN/REGISTER" - to sign in if already registered;
 - Toggle (click to switch) the "Log an Intent" button to submit a bid;
 - Submit bid documents by uploading them into the system against each tender selected.
- b) The tender offers to this tender will be opened as soon as possible after the closing date and time. Transnet shall not, at the opening of tenders, disclose to any other company any confidential details pertaining to the Tender Offers / information received, i.e. pricing, delivery, etc. The names and locations of the Tenderers will be divulged to other Tenderers upon request.
- c) Submissions must not contain documents relating to any Tender other than that shown on the submission.

3. CONFIDENTIALITY

All information related to this RFP is to be treated with strict confidentiality. In this regard Tenderers are required to certify that they have acquainted themselves with the Non-Disclosure Agreement. All information related to a subsequent contract, both during and after completion thereof, will be treated with strict confidence. Should the need however arise to divulge any information gleaned from provision of the Works, which is either directly or indirectly related to Transnet's business, written approval to divulge such information must be obtained from Transnet.

4. DISCLAIMERS

Tenderers are hereby advised that Transnet is not committed to any course of action as a result of its issuance of this Tender and/or its receipt of a tender offer. In particular, please note that Transnet reserves the right to:

- 4.1. Award the business to the highest scoring Tenderer/s unless objective criteria justify the award to another tenderer.
- 4.2. Not necessarily accept the lowest priced tender or an alternative Tender;
- 4.3. Go to the open market if the quoted rates (for award of work) are deemed unreasonable;
- 4.4. Should the Tenderers be awarded business on strength of information furnished by the Tenderer, which after conclusion of the contract is proved to have been incorrect, Transnet reserves the right to terminate the contract;

- 4.5. Request audited financial statements or other documentation for the purposes of a due diligence exercise;
 - 4.6. Not accept any changes or purported changes by the Tenderer to the tender rates after the closing date;
 - 4.7. Verify any information supplied by a Tenderer by submitting a tender, the Tenderer/s hereby irrevocably grant the necessary consent to the Transnet to do so;
 - 4.8. Conduct the evaluation process in parallel. The evaluation of Tenderers at any given stage must therefore not be interpreted to mean that Tenderers have necessarily passed any previous stage(s);
 - 4.9. Unless otherwise expressly stated, each tender lodged in response to the invitation to tender shall be deemed to be an offer by the Tenderer. The Employer has the right in its sole and unfettered discretion not to accept any offer.
 - 4.10. Not be held liable if tenderers do not provide the correct contact details during the clarification session and do not receive the latest information regarding this RFP with the possible consequence of being disadvantaged or disqualified as a result thereof.
 - 4.11. Transnet reserves the right to exclude any Tenderers from the tender process who has been convicted of a serious breach of law during the preceding 5 [five] years including but not limited to breaches of the Competition Act 89 of 1998, as amended. Tenderers are required to indicate in tender returnable [clause 12 on T2.2-20, **[Breach of Law]** whether or not they have been found guilty of a serious breach of law during the past 5 [five] years.
5. Transnet will not reimburse any Tenderer for any preparatory costs or other work performed in connection with this Tender, whether or not the Tenderer is awarded a contract.

6. NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE

Tenderer are required to self-register on National Treasury's Central Supplier Database (CSD) which has been established to centrally administer supplier information for all organs of state and facilitate the verification of certain key supplier information. The CSD can be accessed at <https://secure.csd.gov.za/>. Tenderer are required to provide the following to Transnet in order to enable it to verify information on the CSD:

Supplier Number..... and Unique registration reference number.....(Tender Da

Transnet urges its clients, suppliers and the general public
to report any fraud or corruption to
TIP-OFFS ANONYMOUS: 0800 003 056 OR Transnet@tip-offs.com

RFP No: SIE21015CIDB (HOAC_HO_36727)RFP deadline for questions / RFP Clarifications: **12:00pm 11 July 2022**

TO: Transnet SOC Ltd
 ATTENTION: Governance, Transnet Freight Rail Tender Office
 EMAIL: Prudence.Nkabinde@transnet.net
 Cc: Delisiwe.Mngomezulu@transnet.net
 DATE: _____
 FROM: _____

Indicate whether this query is general in nature and applicable to all service categories Yes ☐ No ☐

1. For all clarification questions **prior** to the tender closing date and time, direct the communication to the RFP Administrator at Delisiwe.Mngomezulu@transnet.net
2. For all clarification questions **after** the tender closing date and time, direct the communication to:

TO: Transnet SOC Ltd
 ATTENTION: Governance, Transnet Freight Rail Tender Office
 EMAIL: Prudence.Nkabinde@transnet.net
 Cc: Delisiwe.Mngomezulu@transnet.net
 DATE: _____
 FROM: _____

REQUEST FOR RFP CLARIFICATION

SIGNED at _____ on this _____ day of _____ 20____

SIGNATURE OF TENDERER

SIGNATURE OF WITNESS

NAME OF TENDERER

NAME OF WITNESS

**ACKNOWLEDGMENT OF RECEIPT OF DOCUMENTS AND INTENTION TO TENDER AND ATTEND
TENDER BRIEFING****(To be returned: By 12:00pm 29 June 2022)**

RETURN TO: Transnet Freight Rail Project No.: SIE21015CIDB
Fax No. **n/a** Tender No.: SIE21015CIDB
Attention: Lerato.morailane@transnet.net Tender Closing Date: **02 August 2022**
Delisiwe.Mngomezulu@transnet.net

**FOR DESIGN, SUPPLY, INSTALL, TEST AND COMMISSIONING OF OUTDOOR AND INDOOR TRACTION
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Check

We: Do wish to tender for the work and shall return our tender by the due **Yes** ☐
date above

Do not wish to tender on this occasion and herewith return all your **No** ☐
documents receive

Company Name _____

**Company
Representative** _____

Designation _____

Address _____

Contact Number _____

Email Address _____

Signature: _____

**NB: Bidders are required to return this document after downloading the tender document from the National Treasury
eTender Publication Portal at www.etenders.gov.za or www.transnetfreightrailfr.net/Supplier/Pages/Tenders.aspxso**

T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts. The Standard for Uniformity in Construction Procurement was first published in Board Notice 62 of 2004 in Government Gazette No 26427 of 9 June 2004. It was subsequently amended in Board Notice 67 of 2005 in Government Gazette No 28127 of 14 October 2005, Board Notice 93 of 2006 in Government Gazette No 29138 of 18 August 2006, Board Notice No 9 of 2008 in Government Gazette No 31823 of 30 January 2009, Board Notice 86 of 2010 in Government Gazette No 33239 of 28 May 2010, Board Notice 136 of 2015 in Government Gazette 38960 of 10 July 2015 and Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019.

This edition incorporates the amendments made in Board Notice 423 of 2019 in Government Gazette 42622 of 8 August 2019. (see www.cidb.org.za).

The Standard Conditions of Tender make several references to Tender data for detail that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced in the left-hand column to the clause in the Standard Conditions of Tender to which it mainly applies.

Clause	Data
C.1.1	The <i>Employer</i> is Transnet SOC Ltd (Reg No. 1990/000900/30)
C.1.2	The tender documents issued by the <i>Employer</i> comprise: Part T: The Tender Part T1: Tendering procedures T1.1 Tender notice and invitation to tender T1.2 Tender data Part T2 : Returnable documents T2.1 List of returnable documents T2.2 Returnable schedules Part C: The contract Part C1: Agreements and contract data C1.1 Form of offer and acceptance C1.2 Contract data (Part 1 & 2) C1.3 Form of Securities Part C2: Pricing data C2.1 Pricing instructions C2.2 Bill of Quantities Part C3: Scope of work C3.1 Works Information Part C4: Site information C4.1 Site information

C.1.4	The Employer's agent is:	Procurement Officer /Procurement Manager
	Name:	Delisiwe Mngomezulu
	Address:	Inyanda House 2, 3rd Floor, 15 Girton Road, Parktown.
	Tel No.	011 584-1129
	E – mail	Delisiwe.Mngomezulu@transnet.net

C.2.1 Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:

1. Stage One - Eligibility with regards to attendance at the compulsory clarification meeting:

An authorised representative of the tendering entity or a representative of a tendering entity that intends to form a Joint Venture (JV) must attend the compulsory clarification meeting in terms C2.7

Any tenderer that fails to meet the stipulated pre-qualifying criteria will be regarded as an unacceptable tender.

2. Stage Two - Eligibility in terms of the Construction Industry Development Board:

a) Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, designation of 7EP **or higher** class of construction works, are eligible to have their tenders evaluated.

b) Joint Venture (JV)

Joint ventures are eligible to submit tenders subject to the following:

1. every member of the joint venture is registered with the CIDB;
2. the lead partner has a contractor grading designation of not lower than one level below the required grading designation in the class of construction works under consideration and possesses the required recognition status; and
3. the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a 7EP or higher class of construction works or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations
4. The tenderer shall provide a certified copy of its signed joint venture agreement.

Any tenderer that fails to meet the stipulated pre-qualifying criteria will be regarded as an unacceptable tender.

3. Stage Three – Preferential procurement in terms of the Preferential Procurement Regulations, 2017 –

- a) The minimum B-BBEE threshold in this instance is a B-BBEE Level 1
- b) Minimum 30% subcontracting

4. Stage Four as per PPPFA: Eligibility Criteria Schedule

Declaration Certificate of Local Production and Content (SBD 6.2)

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Steel Power Pylons, Monopole Pylons, Steel Substation Structures, Powerline Hardware, Street Light Steel Poles, Steel Lattice Towers Masts	100%
Transformers, Shunt Reactors And Associated Equipment	80%
Electrical Cable Products Conversion	90%
Steel Products And Components For Construction	100%

5. Functionality:

Only those tenderers who obtain the minimum qualifying score for functionality will be evaluated further in terms of price and the applicable preference point system. The minimum qualifying for score for functionality is 80 points.

The evaluation criteria for measuring functionality and the points for each criteria and, if any, each sub-criterion are as stated in C.3.11.3 below.

Any tenderer that fails to meet the stipulated pre-qualifying criteria will be regarded as an unacceptable tender.

- C.2.7 The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. **Tenderers must complete and sign the attendance register.** Addenda will be issued to and tenders will only be received from those tendering entities including those entities that intends forming a joint venture appearing on the attendance register.

Tenderers are also **required to bring their RFP document to the briefing session and have their returnable document T2.2-01 certificate of attendance** signed off by the Employer's authorised representative.

- C.2.12 No alternative tender offers will be considered.

- C.2.13.3 Parts of each tender offer communicated on paper shall be as an **original, one (1) copy** and **a clearly marked electronic version** (compact disc or memory stick) in the same format as the original submission which shall be in the **English Language**.

C.2.13.5 The *Employer's* details and address for delivery of tender offers and identification details
C2.15.1 that are to be shown on each tender offer package are:

- a) The Transnet e-Tender Submission Portal can be accessed as follows: Log on to the Transnet eTenders management platform website (<https://www.transnet.net>);
- Click on "TENDERS";
 - Scroll towards the bottom right hand side of the page;
 - On the blue window click on "register on our new eTender Portal";
 - Click on "ADVERTISED TENDERS" to view advertised tenders;
 - Click on "SIGN IN/REGISTER – for bidder to register their information (must fill in all mandatory information);
 - Click on "SIGN IN/REGISTER" - to sign in if already registered;
 - Toggle (click to switch) the "Log an Intent" button to submit a bid;
 - Submit bid documents by uploading them into the system against each tender selected.

Identification details:

The tender documents must be submitted labelled with:

- Name of Tenderer:
- Contact person and details:
- The Tender Number: SIE21015CIDB (HOAC_HO_36727)
- The Tender Description

Documents must be marked for the attention of: ***Employer's Agent:***

C.2.13.9 Telephonic, telegraphic, facsimile or e-mailed tender offers will not be accepted.

C.2.15 The closing time for submission of tender offers is:
Time: **10:00pm** on the **28 June 2022**
Location: The Transnet e-Tender Submission Portal: www.transnet.net

NO LATE TENDERS WILL BE ACCEPTED

C.2.16 The tender offer validity period is **12 weeks** after the closing date. Tenderers are to note that they may be requested to extend the validity period of their tender, on the same terms and conditions, if Transnet's internal evaluation and governance approval processes has not been finalised within the validity period.

C.2.23 The tenderer is required to submit with his tender:

1. A valid Tax Clearance Certificate issued by the South African Revenue Services.
Tenderers also to provide Transnet with a TCS PIN to verify Tenderers compliance status.
2. A **valid B-BBEE Certificate** from a Verification Agency accredited by the South African Accreditation System [**SANAS**], or a **sworn affidavit** confirming annual turnover and level of black ownership in case of all EMEs and QSEs with 51% black ownership or more together with the tender;

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3. A valid CIDB certificate in the correct designated grading;
 4. Proof of registration on the Central Supplier Database;
 5. Letter of Good Standing with the Workmen's compensation fund by the tendering entity or separate Letters of Good Standing from all members of a newly constituted JV.

Note: Refer to Section T2.1 for List of Returnable Documents

C3.4 The time and location for opening of the offers are after the opening submissions at the venue as stated in C.2.15.

C3.11 The minimum number of evaluation points for functionality is: **80**

The procedure for the evaluation of responsive tenders is Functionality and Price:

Only those tenderers who attain the minimum number of evaluation points for Functionality will be eligible for further evaluation, failure to meet the minimum threshold will result in the tender being disqualified and removed from any further consideration.

Functionality Criteria

The functionality criteria and maximum score in respect of each of the criteria are as follows:

Technical Capability:		
Quality Criteria	Weighting points	Scoring Guideline
<p>T2.2-3(a)</p> <p>Compliance to specification</p> <p>BBH5026</p>	20	<p>0 = Not comply/ No submission</p> <p>100 = Fully comply</p>
<p>T2.2- 3 Approach Paper</p> <p>Technical approach and methodology</p> <p>Key Elements</p> <ul style="list-style-type: none"> • Factory Acceptance Test • Testing and Commissioning • Site Installation • Switching 	155	<p>0 = No submission received</p> <p>20 = The method statement contains no key elements.</p> <p>40 = The method statement contain some of the key elements but not all and also stated in generic form.</p> <p>60 = The method statement has all the key elements but are stated in a generic form.</p> <p>80 = The method statement is well detailed and contains all the key elements and is specific tailored for the project.</p> <p>100 = The method statement is well detailed and contains all the key elements specific to the project and additional elements to address the requirements of the project. The approach paper details ways to improve the project outcomes and the quality of the outputs</p>
<p>T2.2- Programme</p> <p>Work plan/program indicating the sequencing of tasks on site</p> <p>Key Elements</p> <ul style="list-style-type: none"> • Factory Acceptance Test 	10	<p>0 = No submission received</p> <p>20 = Work plan does not have any key elements</p> <p>40 = Work plan has some of the key elements in generic form but not all and there is no sequencing..</p> <p>60 = Work plan has all key elements in a generic form and the sequencing of activities is inconsistent.</p> <p>80 = The work plan addresses all the key elements in detail. The sequencing is well defined and resources are well optimised.</p>

<ul style="list-style-type: none"> Testing and Commissioning Site Installation Switching 		100 = The work plan addresses all the elements stated in the method statement in detail. The sequencing is well defined and resources are optimised. The work plan permits flexibility to accommodate contingencies.
T2.2-5- Delivery Schedule Timeframes (Delivery Period in months). Realistic timeframe of 36 months to complete the works is envisaged.	10	0 = No submission received 20 = Delivery period of more than 54 Months. 40 = Delivery period greater than 48 but less than 54 Months. 60 = Delivery period greater than 42 but less than 48 Months. 80 = Delivery period of greater than 36 but less than 42 Months. 100 = Delivery period of 36 Months or less.
T2.2-6-Management CV and Qualifications Experience of the key staff (assigned personnel) in relation to the scope of work <ul style="list-style-type: none"> General Qualifications 	10	0 = No submission received 20 = Key staff have no levels of general qualifications and experience in electrical high voltage field. 40 = Key staff have limited levels of general qualifications and experience in electrical high voltage field. (i.e. N3 qualification without Trade Test or Master Installation license) 60 = Key staff have reasonable levels of general qualifications and general experience in electrical high voltage field. (i.e. Trade test or Master Installation license) 80 = Key staff have extensive levels of general qualifications and general experience in electrical high voltage field. (i.e. Trade test or Master Installation license plus National Diploma in electrical engineering and registered with ECSA) 100 = Key staff have exceptional levels of general qualifications and general experience in electrical high voltage field. (i.e. Trade test or Master Installation license plus degree in electrical engineering and registered with ECSA)
T2.2-7 Experience	15	0 = No submission received

Experience of the key staff (assigned personnel) in relation to the scope of work		<p>20 = Key staff have no education, training and experience in electrical substations installations nor in 3kV DC traction installations.</p> <p>40 = Key staff have limited levels of project specific education, training and experience in electrical substations installations but no experience in 3kV DC traction installations and commissioning.</p> <p>60 = Key staff have reasonable levels of project specific education, training and experience in electrical substations installation with 1 to less than 3 years' experience in 3kV DC traction installations and commissioning.</p> <p>80 = Key staff have extensive levels of project specific education, training and experience in electrical substations installations with 3 to less than 5 years' experience in 3kV DC traction installations and commissioning.</p> <p>100 = Key staff have exceptional levels of project specific education, training and experience in electrical substations installations with 5 years or more experience in 3kV DC traction installations and commissioning.</p>
T2.2-8 Safety Health and Safety Compliance	10	T2.2-08 Health and Safety Evaluation Replacement of an old and obsolete electrical equipment in traction substation
T2.2-9 Comprehensive Environmental Management Plan, Risk Register and Business Continuity Plan	10	<p>T2.2-10.Risk Management Plans CPM 2020 Rev 01</p> <p>And;</p> <p>T2.2-09 Evaluation Schedule_ Environmental Management Plan (005)</p>

Functionality shall be scored independently by not less than 3 (three) evaluators and averaged in accordance with the following schedules:

- T2.2-3a... Clause by Clause
- T2.2-3... Approach Paper
- T2.2-4... Programme
- T2.2-5... Delivery Schedule
- T2.2-6... Management CV and Qualifications
- T2.2-7... Previous Experience
- T2.2-8... Health and Safety Requirements
- T2.2-9... Environmental Management

Each evaluation criteria will be assessed in terms of scores of 0, 20, 40, 60, 80 or 100

The scores of each of the evaluators will be averaged, weighted and then totalled to obtain the final score for functionality, unless scored collectively. (See CIDB Inform Practice Note #9).

Note: Any tender not complying with the above-mentioned requirements, will be regarded as non-responsive and will therefore not be considered for further evaluation. This note must be read in conjunction with Clause C.2.1.

C.3.11. Only tenders that achieve the minimum qualifying score for functionality will be evaluated further in accordance with the 90/10 preference points systems

90 where the financial value of one or more responsive tenders received have a value equal to or above R50 million, inclusive of all applicable taxes.

Up to 100 minus W1 tender evaluation points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed.
Should the BBBEE rating not be provided, tenderers with no verification will score zero points for preferencing.

Note: Transnet reserves the right to carry out an independent audit of the tenderers scorecard components at any stage from the date of close of the tenders until completion of the contract.

C.3.13 Tender offers will only be accepted if:

1. The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
 2. the tenderer does not appear on Transnet's list for restricted tenderers and National Treasury's list of Tender Defaulters;
 3. the tenderer has fully and properly completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the
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tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state.

4. Transnet reserves the right to award the tender to the tenderer who scores the highest number of points overall, unless there are **objective criteria** which will justify the award of the tender to another tenderer. Objective criteria include but are not limited to the outcome of a due diligence exercise to be conducted. The due diligence exercise may take the following factors into account inter alia;

the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
- c) has the legal capacity to enter into the contract,
- d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data and
- f) is able, in the option of the employer to perform the contract free of conflicts of interest.

C.3.17 The number of paper copies of the signed contract to be provided by the Employer is 1 (one).

T2.1 List of Returnable Documents

2.1.1 These schedules are required for pre-qualification and eligibility purposes:

- T2.2-01 Stage One as per CIDB: Eligibility Criteria Schedule - Certificate of attendance at Compulsory Tender Clarification Meeting
- T2.2-02 Stage Three as per CIDB: Eligibility Criteria Schedule - CIDB Registration
- T2.2-02a **Stage Three as per PPPFA: Pre-qualification Criteria Schedule** – BBBEE Level or Sworn Affidavit Certificate
- T2.2-02b **Stage Four as per PPPFA: Eligibility Criteria Schedule** - Declaration Certificate of Local Production and Content (SBD 6.2)

1.2 Stage Five as per CIDB: these schedules will be utilised for Functionality evaluation purposes:

- T2.2-03a Clause by Clause
- T2.2-03 Approach Paper
- T2.2-04 Programme
- T2.2-05 Delivery Schedule
- T2.2-06 Project Organogram, Management & CV's
- T2.2-07 Previous experience
- T2.2-08 Health and Safety Management or
- T2.2-08a Letter of Good Standing
- T2.2-08b Health and Safety Questionnaire
- T2.2-08c SHE Specification
- T2.2-08d SHE Cost Breakdown
- T2.2-08e Section 37 Mandatory Agreement
- T2.2-08f BBD8210_VER_1 E7.1
- T2.2-09 Environmental Management
- T2.2-10 Risk Management Plans
- T2.2-10a Risk Elements

2.1.3 Returnable Schedules:

General:

- T2.2-11 Authority to submit tender
- T2.2-12 Record of addenda to tender documents

- T2.2-13 Availability of equipment and other resources
- T2.2-14 Site Establishment requirements
- T2.2-15 Certificate of Acquaintance with Tender Document
- T2.2-16 Site Establishment Requirements

Agreement and Commitment by Tenderer:

- T2.2-17: CIDB SFU ANNEX G Compulsory Enterprise Questionnaire
- T2.2-18 Non-Disclosure Agreement
- T2.2-19 RFP Declaration Form
- T2.2-20 RFP – Breach of Law
- T2.2-21 Service Provider Integrity Pact
- T2.2-22 Supplier Code of Conduct

1.3.2 Bonds/Guarantees/Financial/Insurance:

- T2.2-23 Insurance provided by the Contractor
- T2.2-24 Foreign Exchange requirements (if applicable)
- T2.2-24a Form of Intent to provide a Performance Guarantee
- T2.2-25 Job Creation
- T2.2-26 Agreement in terms of Protection of Personal Information Act (POPIA)
- T2.2-27 Forecast Rate of Invoicing
- T2.2-28 Three (3) years audited financial statements

2.2 C1.1 Offer portion of Form of Offer & Acceptance

2.3 C1.2 Contract Data

2.4 C1.3 Forms of Securities

2.5 C2.1 Pricing Instructions (Bill of Quantities)

2.6 C2.2 Bill of Quantities

T2.2-01: Eligibility Criteria Schedule:

Certificate of Attendance at Tender Clarification Meeting

This is to certify that

(Company Name)

Represented
by:

(Name and
Surname)

Was represented at the compulsory tender clarification meeting

Held at:		
On (date)		Starting time:

Particulars of person(s) attending the meeting:

Name

Signature

Capacity

Attendance of the above company at the meeting was confirmed:

Name

Signature

**For and on Behalf of the
Employers Agent.**

Date

T2.2-02: Eligibility Criteria Schedule - CIDB Grading Designation

Note to tenderers:

Tenderers are to indicate their CIDB Grading by filling in the table below. **Attach a copy of the CIDB Grading Designation or evidence of being capable of being so registered.**

CRS Number	Status	Grading	Expiry Date

1. Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a **7EP** class of construction work, are eligible to have their tenders evaluated.

2. Joint Venture (JV)

Joint ventures are eligible to submit tenders subject to the following:

1. every member of the joint venture is registered with the CIDB;
2. the lead partner has a contractor grading designation of not lower than one level one level below the required grading designation in the class of construction works under consideration and possesses the required recognition status; and
3. the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a **7EP** class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations
4. the Contractor shall provide the employer with a certified copy of its signed joint venture agreement;
5. and in the event that the joint venture is an 'Incorporated Joint Venture' the Memorandum of Incorporation to be provided within 4 (four) weeks of the Contract Date.

T2.2-3a Eligibility Criteria Schedule: B-BBEE Status Level

In an endeavour to grow and develop Black Owned (BO) companies as well as to ensure that Transnet meets its Shareholder Compact Objectives, Potential Tenderers are required to meet the eligibility criteria of B-BBEE Status Level

It is a specific tendering condition that tenderers:

- A tender having a stipulated minimum B-BBEE status level of contributor of 1

Tenderers are required to submit the **valid B-BBEE certificates or Sworn Affidavits**

T2.2-03 Pre-qualification Criteria Schedule: Sub-Contract:

Tenderers are required to meet the pre-qualification criteria of Sub-contracting of **a minimum of 30%** to one or more company/ies that meets the requirements of **Regulation 4(1)(c)** of the **PPPFA Regulations 2017** as indicated hereto:

- i. an EME or QSE which is at least 51% owned by black people;
- ii. an EME or QSE which is at least 51% owned by black people who are youth;
- iii. an EME or QSE which is at least 51% owned by black people who are women; or
- iv. an EME or QSE which is at least 51% owned by black people with disabilities;
- v. an EME or QSE which is 51% owned by black people living in rural or undeveloped areas or townships;
- vi. a cooperative which is at least 51% owned by black people;
- vii. an EME or QSE which is at least 51% owned by black people who are military veterans.

Tenderer to note that if successful, any deviations from the list of proposed sub-contractors in the contract phase will be subject to acceptance by the *Project Manager* in terms of the Conditions of Contract. Please also note the applicable Z clauses in Contract Data by *Employer*.

Provide **detailed information** of the proposed Sub-contractors below:

	Name of proposed Subcontractor	Address and Region	Nature and extent of work	B-BBEEE Certificates or Sworn Affidavit attached behind this schedule? Yes/No	Percentage (%) of the sub-contracted works in terms of the tendered total of the prices.
1.					
2.					
3.					
4.					
5.					

6.					
7.					
8.					
9.					
10.					

The Tenderer is to submit the following document or copy thereof for each of the proposed sub-contractor(s) with this schedule:

- Valid B-BBEE Sworn Affidavit or B-BBEE Certificate of each of the proposed sub-contractor(s).

NOTE TO TENDERERS: FAILURE TO PROVIDE THE ABOVE DOCUMENT WILL RESULT IN THE PROPOSED SUBCONTRACTOR'S PERCENTAGE BEING DISCOUNTED TO ZERO.

Transnet reserves the right to request additional information of the proposed sub-contractor(s) should it be deemed necessary to verify the compliance to the black ownership percentage or sub-contractor(s) entity size. These may include but not limited to;

- Agreement or Letter of Intent confirming the Sub-Contracting Agreement between the tenderer and proposed sub-contractor(s);
- Copies of the identity documents of the members of shareholders of the sub-contractor(s);
- Copies of the Audited Financial Statements or Income Statement of the sub-contractor(s).

ANNEXURE B

SBD 6.2

DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

PROSPECTIVE BIDDER MUST DECLARE LOCAL CONTENT FOR ALL AREAS AS PER THE BILL OF MATERIALS, FAILURE TO COMPLY WILL LEAD TO DISQUALIFICATION.

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) makes provision for the promotion of local production and content.
- 1.2. Regulation 8.(2) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. In terms of Regulation 16(2) of the Preferential Procurement Regulations, 2017, any sector designated and minimum threshold determined for local production and content for purposes of regulation 9 of the 2011 Regulations and in force immediately before the repeal of the 2011 Regulations, are regarded as having been done under regulation 8(1) of the 2017 Regulations.
- 1.4. Where necessary, for bids referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.5. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.6. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial development/ip.jsp](http://www.thedti.gov.za/industrial%20development/ip.jsp) at no cost.

- 1.7. A bid will be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Steel Power Pylons, Monopole Pylons, Steel Substation Structures, Powerline Hardware, Street Light Steel Poles, Steel Lattice Towers Masts	100%
Transformers, Shunt Reactors And Associated Equipment	80%
Electrical Cable Products Conversion	90%
Steel Products And Components For Construction	100%

4. Does any portion of the services, works or goods offered have any imported content?
(***Tick applicable box***)

YES		NO	
-----	--	----	--

- 4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

5. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO. SIE21015CIDB (HOAC_HO_36727)

ISSUED BY: Transnet Freight Rail

NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names), do hereby declare, in my capacity as of (name of bidder entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
 - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

Transnet Freight Rail
Contract Number: SIE21015CIDB (HOAC_HO_36727)
Description of the Works: Design, supply, install, test and commissioning of Traction Substation equipment
Traction substations under Heidelberg, Ladysmith and Durban Depots

Annexure - 3 kV Traction Substation Specifications						
<p><i>Respondents are to complete this Annexure, giving sufficient detail to permit an accurate assessment of your technical abilities.</i></p> <p>Respondents to this bid are required to fully complete and return this compulsory document together with their bid document and any other annexure/Schedule/Section</p> <p>Failure to complete and return the document will lead to disqualification and excluded from this bid</p>						
Clause by Clause: MANDATORY REQUIREMENTS-100%						
Ref	Requirements	Comply	Non- Comply	Comments	Type of Proof Required	Cross Reference
BBH5026	Refurbishment and Replacement of Substation Equipment on the Container corridor					

Scoring	Description
0%	Non-Comply
100%	Comply

T2.2-03: Evaluation Schedule - Approach Paper

The Tenderer to submit an approach paper which responds to the *works* and outlines the proposed approach / methodology.

The Approach Paper should cover Key Elements :

- Factory Acceptance Test
- Testing and Commissioning
- Site Installation
- Switching

Index of documentation attached to this schedule

	DOCUMENT NAME
1	
2	
3	
4	
5	
6	
7	

The scoring of the approach paper will be as follows:

Score	Description
0	No submission received
20	The method statement contains no key elements.
40	The method statement contain some of the key elements but not all and also stated in generic form.
60	The method statement has all the key elements but are stated in a generic form.
80	The method statement is well detailed and contains all the key elements and is specific tailored for the project.
100	The method statement is well detailed and contains all the key elements specific to the project and additional elements to address the requirements of the project. The approach paper details ways to improve the project outcomes and the quality of the outputs

T2.2-04: Evaluation Schedule: Programme

Note to tenderers:

Programme

Work plan/program indicating the sequencing of tasks on site

Key Elements

- Factory Acceptance Test
- Testing and Commissioning
- Site Installation
- Switching

The scoring of the Programme will be as follows:

Score	Description
0	No submission received
20	Work plan does not have any key elements
40	Work plan has some of the key elements in generic form but not all and there is no sequencing.
60	Work plan has all key elements in a generic form and the sequencing of activities is inconsistent.
80	The work plan addresses all the key elements in detail. The sequencing is well defined and resources are well optimised.
100	The work plan addresses all the elements stated in the method statement in detail. The sequencing is well defined and resources are optimised. The work plan permits flexibility to accommodate contingencies

Attachment A: Electronic Copy of Programme

Attachment B: Hard Copy of Programme

T2.2-05: Evaluation Schedule - Approach Paper

The Tenderer to submit Timeframes (Delivery Period in months).

Realistic timeframe of 36 months to complete the works is envisaged.

Index of documentation attached to this schedule

	DOCUMENT NAME
1	
2	
3	
4	
5	
6	
7	

The scoring of the delivery schedule will be as follows:

Score	Description
0	No submission received
20	Delivery period of more than 54 Months.
40	Delivery period greater than 48 but less than 54 Months.
60	Delivery period greater than 42 but less than 48 Months.
80	Delivery period of greater than 36 but less than 42 Months
100	Delivery period of 36 Months or less.

T2.2-06: Evaluation Schedule: Project Organogram, Management & CV's

Submit the following documents as a minimum with your tender document:

1. A comprehensive and detailed **organogram** that shows the structure and composition of their management structure involved in the *works*, inclusive of the key staff/professionals, identified in the Contract Data Part two.
2. Detailed CV's providing the following:
3. Experience of the key staff (assigned personnel) in relation to the scope of work
 - General Qualifications Site Management resources should include at least, amongst others:

The scoring of the Project Organogram, Management & CV's will be as follows:

Score	Description
0	No submission received
20	Key staff have no levels of general qualifications and experience in electrical high voltage field.
40	Key staff have limited levels of general qualifications and experience in electrical high voltage field. (i.e. N3 qualification without Trade Test or Master Installation license)
60	Key staff have reasonable levels of general qualifications and general experience in electrical high voltage field. (i.e. Trade test or Master Installation license)
80	Key staff have extensive levels of general qualifications and general experience in electrical high voltage field. (i.e. Trade test or Master Installation license plus National Diploma in electrical engineering and registered with ECSA)
100	Key staff have exceptional levels of general qualifications and general experience in electrical high voltage field. (i.e. Trade test or Master Installation license plus degree in electrical engineering and registered with ECSA)

T2.2-07: Evaluation Schedule: Previous Experience

Note to tenderers:

Tenderers are required to demonstrate performance in comparable projects of similar size and nature by supplying the following:

- Experience of the key staff (assigned personnel) in relation to the scope of work.

Index of documentation attached to this schedule

	DOCUMENT NAME
1	
2	
3	
4	
5	

Score	Description
0	No submission received
20	Key staff have no education, training and experience in electrical substations installations nor in 3kV DC traction installations.
40	Key staff have limited levels of project specific education, training and experience in electrical substations installations but no experience in 3kV DC traction installations and commissioning.
60	Key staff have reasonable levels of project specific education, training and experience in electrical substations installation with 1 to less than 3 years' experience in 3kV DC traction installations and commissioning
80	Key staff have extensive levels of project specific education, training and experience in electrical substations installations with 3 to less than 5 years' experience in 3kV DC traction installations and commissioning.
100	Key staff have exceptional levels of project specific education, training and experience in electrical substations installations with 5 years or more experience in 3kV DC traction installations and commissioning.

T2.2-08(A) Letter/s of Good Standing with the Workmen's Compensation Fund

Attached to this schedule is the Letter/s of Good Standing.

- 1.
- 2.
- 3.
- 4.

Name of Company/Members of Joint Venture:

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

T2.2-08(A): Health and Safety Questionnaire

Health, Safety Questionnaire

1. SAFE WORK PERFORMANCE													
1A. Injury Experience / Historical Performance - Alberta													
Use the previous three years injury and illness records to complete the following:													
Year													
Number of medical treatment cases													
Number of restricted work day cases													
Number of lost time injury cases													
Number of fatal injuries													
Total recordable frequency													
Lost time injury frequency													
Number of worker manhours													
<table border="1"> <tr> <td>1 - Medical Treatment Case</td> <td>Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician</td> </tr> <tr> <td>2 - Restricted Work Day Case</td> <td>Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties</td> </tr> <tr> <td>3 - Lost Time injury Cases</td> <td>Any occupational injury that prevents the worker from performing any work for at least one day</td> </tr> <tr> <td>4 - Total Recordable Frequency</td> <td>Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours</td> </tr> <tr> <td>5- Lost Time Injury Frequency</td> <td>Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours</td> </tr> </table>				1 - Medical Treatment Case	Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician	2 - Restricted Work Day Case	Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties	3 - Lost Time injury Cases	Any occupational injury that prevents the worker from performing any work for at least one day	4 - Total Recordable Frequency	Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours	5- Lost Time Injury Frequency	Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours
1 - Medical Treatment Case	Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician												
2 - Restricted Work Day Case	Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties												
3 - Lost Time injury Cases	Any occupational injury that prevents the worker from performing any work for at least one day												
4 - Total Recordable Frequency	Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours												
5- Lost Time Injury Frequency	Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours												
1B. Workers' Compensation Experience													
Use the previous three years injury and illness records to complete the following (if applicable):													
Industry Code:		Industry Classification:											
Year													
Industry Rate													
Contractor Rate													
% Discount or Surcharge													
Is your Workers' Compensation account in good standing? (Please provide letter of confirmation)		<input type="checkbox"/> Yes <input type="checkbox"/> No											
2. CITATIONS													
2A.	Has your company been cited, charged or prosecuted under Health, Safety and/or Environmental Legislation in the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide details:												
2B.	Has your company been cited, charged or prosecuted under the above Legislation in another Country, Region or State? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide details:												

3. CERTIFICATE OF RECOGNITION

Does your company have a Certificate of Recognition?

☐ Yes ☐ No If Yes, what is the Certificate No. _____ Issue Date _____

4. SAFETY PROGRAM

Do you have a written safety program manual? ☐ Yes ☐ No

If Yes, provide a copy for review

Do you have a pocket safety booklet for field distribution? ☐ Yes ☐ No

If Yes, provide a copy for review

Does your safety program contain the following elements:

	YES	NO		YES	NO
CORPORATE SAFETY POLICY	<input type="checkbox"/>	<input type="checkbox"/>	EQUIPMENT MAINTENANCE	<input type="checkbox"/>	<input type="checkbox"/>
INCIDENT NOTIFICATION POLICY	<input type="checkbox"/>	<input type="checkbox"/>	EMERGENCY RESPONSE	<input type="checkbox"/>	<input type="checkbox"/>
RECORDKEEPING & STATISTICS	<input type="checkbox"/>	<input type="checkbox"/>	HAZARD ASSESSMENT	<input type="checkbox"/>	<input type="checkbox"/>
REFERENCE TO LEGISLATION	<input type="checkbox"/>	<input type="checkbox"/>	SAFE WORK PRACTICES	<input type="checkbox"/>	<input type="checkbox"/>
GENERAL RULES & REGULATIONS	<input type="checkbox"/>	<input type="checkbox"/>	SAFE WORK PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>
PROGRESSIVE DISCIPLINE POLICY	<input type="checkbox"/>	<input type="checkbox"/>	WORKPLACE INSPECTIONS	<input type="checkbox"/>	<input type="checkbox"/>
RESPONSIBILITIES	<input type="checkbox"/>	<input type="checkbox"/>	INVESTIGATION PROCESS	<input type="checkbox"/>	<input type="checkbox"/>
PPE STANDARDS	<input type="checkbox"/>	<input type="checkbox"/>	TRAINING POLICY & PROGRAM	<input type="checkbox"/>	<input type="checkbox"/>
ENVIRONMENTAL STANDARDS	<input type="checkbox"/>	<input type="checkbox"/>	COMMUNICATION PROCESSES	<input type="checkbox"/>	<input type="checkbox"/>
MODIFIED WORK PROGRAM	<input type="checkbox"/>	<input type="checkbox"/>			

5. TRAINING PROGRAM

5A. Do you have an orientation program for new hire employees? ☐ Yes ☐ No

If Yes, include a course outline. Does it include any of the following:

	YES	NO		YES	NO
GENERAL RULES & REGULATIONS	<input type="checkbox"/>	<input type="checkbox"/>	CONFINED SPACE ENTRY	<input type="checkbox"/>	<input type="checkbox"/>
EMERGENCY REPORTING	<input type="checkbox"/>	<input type="checkbox"/>	TRENCHING & EXCAVATION	<input type="checkbox"/>	<input type="checkbox"/>
INJURY REPORTING	<input type="checkbox"/>	<input type="checkbox"/>	SIGNS & BARRICADES	<input type="checkbox"/>	<input type="checkbox"/>
LEGISLATION	<input type="checkbox"/>	<input type="checkbox"/>	DANGEROUS HOLES & OPENINGS	<input type="checkbox"/>	<input type="checkbox"/>
RIGHT TO REFUSE WORK	<input type="checkbox"/>	<input type="checkbox"/>	RIGGING & CRANES	<input type="checkbox"/>	<input type="checkbox"/>
PERSONAL PROTECTIVE EQUIPMENT	<input type="checkbox"/>	<input type="checkbox"/>	MOBILE VEHICLES	<input type="checkbox"/>	<input type="checkbox"/>
EMERGENCY PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>	PREVENTATIVE MAINTENANCE	<input type="checkbox"/>	<input type="checkbox"/>
PROJECT SAFETY COMMITTEE	<input type="checkbox"/>	<input type="checkbox"/>	HAND & POWER TOOLS	<input type="checkbox"/>	<input type="checkbox"/>
HOUSEKEEPING	<input type="checkbox"/>	<input type="checkbox"/>	FIRE PREVENTION & PROTECTION	<input type="checkbox"/>	<input type="checkbox"/>
LADDERS & SCAFFOLDS	<input type="checkbox"/>	<input type="checkbox"/>	ELECTRICAL SAFETY	<input type="checkbox"/>	<input type="checkbox"/>
FALL ARREST STANDARDS	<input type="checkbox"/>	<input type="checkbox"/>	COMPRESSED GAS CYLINDERS	<input type="checkbox"/>	<input type="checkbox"/>
AERIAL WORK PLATFORMS	<input type="checkbox"/>	<input type="checkbox"/>	WEATHER EXTREMES	<input type="checkbox"/>	<input type="checkbox"/>

5B. Do you have a program for training newly hired or promoted supervisors? ☐ Yes ☐ No

(If Yes, submit an outline for evaluation. Does it include instruction on the following:

	Yes	No		Yes	No
EMPLOYER RESPONSIBILITIES	<input type="checkbox"/>	<input type="checkbox"/>	SAFETY COMMUNICATION	<input type="checkbox"/>	<input type="checkbox"/>
EMPLOYEE RESPONSIBILITIES	<input type="checkbox"/>	<input type="checkbox"/>	FIRST AID/MEDICAL PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>
DUE DILIGENCE	<input type="checkbox"/>	<input type="checkbox"/>	NEW WORKER TRAINING	<input type="checkbox"/>	<input type="checkbox"/>
SAFETY LEADERSHIP	<input type="checkbox"/>	<input type="checkbox"/>	ENVIRONMENTAL REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>
WORK REFUSALS	<input type="checkbox"/>	<input type="checkbox"/>	HAZARD ASSESSMENT	<input type="checkbox"/>	<input type="checkbox"/>
INSPECTION PROCESSES	<input type="checkbox"/>	<input type="checkbox"/>	PRE-JOB SAFETY INSTRUCTION	<input type="checkbox"/>	<input type="checkbox"/>
EMERGENCY PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>	DRUG & ALCOHOL POLICY	<input type="checkbox"/>	<input type="checkbox"/>
INCIDENT INVESTIGATION	<input type="checkbox"/>	<input type="checkbox"/>	PROGRESSIVE DISCIPLINARY POLICY	<input type="checkbox"/>	<input type="checkbox"/>
SAFE WORK PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>	SAFE WORK PRACTICES	<input type="checkbox"/>	<input type="checkbox"/>
SAFETY MEETINGS	<input type="checkbox"/>	<input type="checkbox"/>	NOTIFICATION REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>

6. SAFETY ACTIVITIES

Do you conduct safety inspections? Yes No Weekly Monthly Quarterly
☐ ☐ ☐ ☐ ☐

Describe your safety inspection process (include participation, documentation requirements, follow-up, report distribution).

Who follows up on inspection action items? _____

Do you hold site safety meetings for field employees? If Yes, how often?

Yes No Daily Weekly Biweekly
☐ ☐ ☐ ☐ ☐

Do you hold site meetings where safety is addressed with management and field supervisors?

Yes No Weekly Biweekly Monthly
☐ ☐ ☐ ☐ ☐

Is pre-job safety instruction provided before to each new task? ☐ Yes ☐ No

Is the process documented? ☐ Yes ☐ No

Who leads the discussion? _____

Do you have a hazard assessment process? ☐ Yes ☐ No

- Are hazard assessments documented? If yes, how are hazard assessments communicated and implemented on each project? Who is responsible for leading the hazard assessment process?

Does your company have policies and procedures for environmental protection, spill clean-up, reporting, waste disposal, and recycling as part of the Health & Safety Program?

☐ Yes ☐ No

How does your company measure its H&S success?

- Attach separate sheet to explain

7. SAFETY STEWARDSHIP

7A Are incident reports and report summaries sent to the following and how often?

	Yes	No	Monthly	Quarterly	Annually
Project/Site Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managing Director	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety Director/Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
/Chief Executive Officer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7B How are incident records and summaries kept? How often are they reported internally?

	Yes	No	Monthly	Quarterly	Annually
Incidents totaled for the entire company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incidents totaled by project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Subtotaled by superintendent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Subtotaled by foreman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7C How are the costs of individual incidents kept? How often are they reported internally?

	Yes	No	Monthly	Quarterly	Annually
Costs totaled for the entire company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs totaled by project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Subtotaled by superintendent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Subtotaled by foreman/general foreman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7D Does your company track non-injury incidents?

	Yes	No	Monthly	Quarterly	Annually
Near Miss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8 PERSONNEL

List key health and safety officers planned for this project. Attach resume.

Name	Position/Title	Designation

Supply name, address and phone number of your company's corporate health and safety representative. Does this individual have responsibilities other than health, safety and environment?

Name	Address	Telephone Number


Other responsibilities:

9 REFERENCES

List the last three company's your form has worked for that could verify the quality and management commitment to your occupational Health & Safety program

Name and Company	Address	Phone Number

TRANSNET FREIGHT RAIL SAFETY HEALTH AND ENVIRONMENTAL (SHE) COMPLIANCE SPECIFICATIONS FOR CONTRACTORS

CONTRACT NAME:	Replacement of an old and obsolete electrical equipment in traction substation	
CONTRACT NUMBER:	RFP: SIE 21015CIDB(HOAC-HO-36727)	
CONTRACT SCOPE:	<p>Design, supply, installation, testing and commissioning of indoor equipment such as rectifier, high speed circuit breakers, wave filter equipment, earthing etc. and outdoor equipment such as current transformers, AC disconnects, traction transformers etc. in accordance with specification BBB5452.</p> <p>The removal and transportation of old equipment to the respective depots.</p> <p>It also covers the requirements for the supply and installation of cables and earthing in traction substations and any other item necessary for the completion of the works.</p>	
CONTRACT LOCATION:	Various traction substations under Heidelberg, Ladysmith and Durban Depots	
CONTRACT DURATION:	36 Months	
CONTRACT MANAGER:	Selby Mathebula	
TFR TECHNICAL OFFICER:		
SHE SPECIFICATION APPROVAL		
TITLE:	NAME:	SIGNATURE:
TFR CONTRACT MANAGER / TECHNICAL OFFICER	Selby Mathebula	 DATE: 06/04/2022
RISK / ENVIRONMENTAL SPECIALIST	Yogan Gounden	 DATE: 06/04/2022
SAFETY SPECIALIST / MANAGER	Kedibone Moselane	 DATE: 06/04/2022

Contractor Signature.....

Date.....

1. Introduction

- 1.1 This Safety, Health and Environmental (SHE) specification is Transnet Freight Rail (TFR) minimum requirements to be met by contractors when performing work for or on behalf of TFR. They set out the requirements to be followed by the Contractor and other contractors so that the health and safety of all person's potentially at risk may receive the same priority as other facets of the contract.
- 1.2 The Contractor shall **develop a SHE plan and prepare a SHE file** based on these requirements, risk assessment as well as all the relevant applicable legislation. The contractor shall remain accountable for the quality and execution of his health and safety programme for his employees and sub-contractor employees. This specification in no way releases the contractors from compliance with the relevant legislation.

2 Purpose

- 2.1 The purpose of this specification is to ensure that the Contractor provides and maintains, as far as reasonably practicable a safe working environment for all employees and the public whilst performing work for or on behalf of TFR.
- 2.2 This specification form an integral part of the contract, and the Contractor shall forward this specification to all subcontractors at the bidding stage so that they can in turn prepare health and safety plans relating to their operations

3 Scope and Application

- 3.1 This specification is applicable to all contractors, suppliers and all activities and processes carried out for or on behalf of Transnet Freight Rail. The Specification defines the strategies to manage Health and Safety and is a compliance document drawn up in terms of the Occupational Health and Safety Act 85 of 1993 and Electrical Installation Regulations and National Railway Safety Regulator Act (Act no 16 of 2002) requirements as applicable.
- 3.2 This specification shall also apply to any subcontractors as employers in their own right. The Contractor shall furnish the TFR Contract Manager/Technical Officer with full particulars of such subcontractors and shall ensure that they comply with the OHS Act and Regulations and Transnet's safety requirements and procedures.
- 3.3 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 Contractor from his responsibilities and accountability in respect of the contract to which this specification document pertains. Any such inaccuracies, inconsistencies and/or inadequacies must immediately be brought to the attention of the TFR Contract Manager/Technical Officer or Client Agent.

Contractor Signature.....

Date.....

4 General

- 4.1 The Contractor and Transnet Freight Rail are individual employers, each in its own right, with their respective duties and obligations set out in the Occupational Health and Safety Act, Act 85 of 1993 (herein referred as the OHS Act) and applicable Regulations.
- 4.2 The Contractor accepts, in terms of the General Conditions of Contract and in terms of the OHS Act, his obligations as an employer in respect of all persons in his employ, other persons on the premises or the Site or place of work or on the work to be executed by him, and under his control. The Contractor shall, before commencement with the execution of the contract work, comply with the provisions set out in the OHS Act, and shall implement and maintain a SHE Plan approved by Transnet Freight Rail, on the Site and place of work for the duration of the contract.
- 4.3 The Contractor accepts his obligation to complying with the OHS Act and applicable Regulations notwithstanding the omission of some of the provisions of the OHS Act and the Regulations from this document.
- 4.4 Transnet Freight Rail accepts, in terms of the OHS Act, its obligations as an employer of its own employees working on or associated with the site or place of work, and the Contractor and TFR Contract Manager/Technical Officer or his deputy shall at all times, co-operate in respect of the health and safety management of the site, and shall agree on the practical arrangements and procedures to be implemented and maintained during execution of the works
- 4.5 In the event of any discrepancies between any legislation and this specification, the applicable legislation will take precedence.

5. Section 37(2) Agreements

- 5.1 Transnet Freight Rail and the Contractor shall enter into an agreement in terms of section 37(2) of the Occupational Health and Safety Act to the arrangements and procedures between them to ensure compliance by the Contractor with the provisions of the OHS Act.
- 5.2 The agreement shall be completed and signed by the Contractor mandated representative as soon as possible and returned to the relevant TFR Project Manager / TFR Contract Manager for his/her signature on behalf of TFR.
- 5.3 The Contractor shall enter into a Section 37(2) Agreement with their respective sub-contractors. Signed copy of such agreement must be kept on the Contractor's SHE file.

6. Definitions

Contractor Signature.....

Date.....

6.1 In this Specification the definitions as listed in the Occupational Health and Safety Act 85 of 1993 and Construction Regulations, 2014 shall apply, unless the context otherwise indicates: -

6.1.1 **Competent person** means a person who—

- a) has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and
- b) is familiar with the Act and with the applicable regulations made under the Act;

6.1.2 **Contractor** means an employer (organisation) or a person who performs ANY work and has entered into a legal binding business agreement contract to supply a product or provide services to Transnet. This applies to the Suppliers, Vendors, Consultants, Service Providers or Contractors. NB: A contractor is an employer in his/her own right (includes Principal Contractor and subcontractor);

6.1.3 **Construction work** means any work in connection with the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to building or any similar structure.
The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or the moving of land, the making of excavation, piling, any similar civil engineering structure or type of work

6.1.4 **"designer"** means—

- a) a competent person who—
 - (i) prepares a design;
 - (ii) checks and approves a design;
 - (iii) arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or Health and Safety is the employer; or
 - (iv) designs temporary work, including its components;
- b) an architect or engineer contributing to, or having overall responsibility for a design;
- c) a building services engineer designing details for fixed plant;
- d) a surveyor specifying articles or drawing up specifications;

Contractor Signature.....

Date.....

- e) a contractor carrying out design work as part of a design and building project; or
- f) an interior designer, shop-fitter or landscape architect
- 6.1.5 **Electrical contractor** means a person who undertakes to perform electrical installation work on behalf of any other person, but excludes an employee of such first –mentioned person
- 6.1.6 **Excavation work** means the making of any man made cavity, trench, pit, or depression formed by cutting, digging, or scooping
- 6.1.7 **Fall protection plan** means a documented plan, which includes and provides for-
- a) all risks relating to working from a fall risk position, considering the nature of work undertaken; and
 - b) the procedures and methods to be applied in order to eliminate the risk of fall rescue plan and procedures
- 6.1.8 **Health and safety (SHE) plan** means a site, activity or project specific documented plan in accordance with the client's health and safety specification;
- 6.1.9 **Responsibility for electrical installation** means the user or lessor of an electrical installation shall be responsible for the safety, safe use and maintenance of the electrical installation he or she uses or leases
Shall be responsible for the safety of the conductors on his or her premises connecting the electrical installation to the point of supply in case where the point of supply is not the point of control.
- 6.1.10 **Risk assessment** means a programme to determine any risk associated with any hazard at a work site, in order to identify the steps needed to be taken to remove, reduce or control such hazard
- 6.1.11 **Responsibility for electrical installation** means the user or lessor of an electrical installation shall be responsible for the safety, safe use and maintenance of the electrical installation he or she uses or leases
Shall be responsible for the safety of the conductors on his or her premises connecting the electrical installation to the point of supply in case where the point of supply is not the point of control.
- 6.1.12 **"Safety, Health and Environmental (SHE) File"** means a file or other record in permanent form, containing the information required to be kept on site in accordance with the OHS Act and applicable Regulations;
- 6.1.13 **"TFR"** means Transnet Freight Rail, a division of Transnet SOC Ltd (Registration No. 1990/000900/30), a public company incorporated in accordance with the company laws of the Republic of South Africa

Contractor Signature.....

Date.....



- 6.1.14 **"TFR Contract Manager"** means a TFR employee appointed to liaise with the contractor to ensure that the specifications of the contract are met (with special emphasis on safety, technical specifications, inspection of quality and quantity of work). It includes a Technical Officer, Depot Engineering Manager, Engineering Technician, Maintenance Supervisor's, Security Inspector, Depot Security Manager, Real Estate Manager, Facilities Manager etc
- 6.1.15 **"TFR"** means Transnet Freight Rail, a division of Transnet SOC Ltd (Registration No. 1990/000900/30), a public company incorporated in accordance with the company laws of the Republic of South Africa
- 6.1.16 **"Risk assessment"** means a programme to determine any risk associated with any hazard at a work site, in order to identify the steps needed to be taken to remove, reduce or control such hazard
- 6.1.17 **"Safety, Health and Environmental (SHE) File"** means a file or other record in permanent form, containing the information required to be kept on site in accordance with the OHS Act and applicable Regulations;

7. Notification of Construction Work

- 7.1 The Contractor who intends to carry out any construction work other than work where a Construction Work Permit is required, must at least 7 days before carrying out such work, notify the Provincial Director of the Department of Labour in writing if the construction work:-
- (a) includes excavation work
 - (b) includes working at a height where there is a risk of a person falling;
 - (c) includes the demolition of a structure; or
 - (d) includes the use of explosives to perform construction work,
- 7.2 The notification to the Provincial Director shall be on a form similar to Annexure 2 of the Construction Regulations, 2014. The Contractor shall ensure that a copy of the completed notification form is kept on site for inspection by an inspector, TFR Contract Manager/Technical Officer or employee.

8. Letter of Good standing

- 8.1 The Contractor shall submit proof of registration and Letter of Good Standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Diseases Act, 1993 (Act No. 130 of 1993) for his company and each of his sub-contractors'.
- 8.2 No contractor may do any work for TFR without a valid letter of good standing. The Contractor must ensure that the Letter of Good Standing remains valid for the duration of the contract period.

Contractor Signature.....

Date.....

- 8.3 The letter of good standing must reflect the name of the Contractor and/or Sub-contractor, registration number and, expiry date.

9. Management and Supervision

- 9.1 The Contractor and all subcontractors shall submit a SHE organogram outlining the site SHE management structure including the relevant appointments/competent persons or the intended appointments where such appointments have not been made.
- 9.2 The Contractor shall, in accordance with the OHS Act and applicable Regulations, make all the necessary appointments of competent persons in writing. Copies should also be retained on the SHE file.

10. SHE Committee Meetings and SHE Representatives

- 10.1 Where applicable, The Contractor and subcontractors shall appoint SHE Representative/s in writing after consultation with employees and ensure that they are trained in performing their duties.
- 10.2 SHE Representatives duties shall include inspections of the workplace, taking part in incident investigations, risk assessments, attending SHE Committee meetings etc. Records of monthly inspections of SHE Representatives must be kept on the SHE file.
- 10.3 The number of SHE Representatives appointed shall be in accordance with the requirements of the Occupational health and Safety Act 85 of 1993.
- 10.4 When required by legislation, the Contractor must ensure that a SHE Committee meeting is held monthly and minutes of such meeting shall be recorded and records kept on the SHE file. The Contractor representative and appointed SHE representatives shall attend the monthly SHE Committee meeting.
- 10.5 The TFR Contract Manager/Technical Officer or his deputy shall be allowed to attend meetings of the Contractor's health and safety committee as an observer.
- 10.6 Subcontractors appointed by the Contractor shall have their own internal monthly SHE Committee meeting.

11. SHE Audits and Contractor Monthly Reports

- 11.1 The TFR Contract Manager/Technical Officer or his deputy shall ensure that the Contractor's SHE Plan is audited at intervals mutually agreed to between them, but at least once every month to ensure that the SHE Plan is implemented and maintained on site.
- 11.2 TFR Safety Officers / Specialists shall at all reasonable times be allowed access to the work sites, the Contractor site offices and tool-sheds to inspect the Contractor's and its subcontractor's tools, equipment, registers and workplace.

Contractor Signature.....

Date.....

- 11.3 Should any non-compliances or contraventions to the TFR safety requirements, legal requirements, this specification or the Contractor's SHE Plan be identified, such non-compliances or contraventions shall be rectified by the contractor at its cost immediately or within a period specified by the TFR Contract Manager/Technical Officer, his deputy, or TFR Safety Officers / Specialists.
- 11.4 Should the Contractor refuse or fail to rectify such non-compliances or contraventions, TFR may take remedial action at the Contractor's cost as it may deem necessary to ensure safety at the TFR sites at all times.
- 11.5 TFR reserves the right to conduct safety audits without prior warning.
- 11.6 The Contractor on all contracts of more than 1 month shall provide a monthly safety performance report as required by TFR.
- 11.7 The Monthly safety performance report shall be compiled in terms of Annexure 1 or in any format that the Contractor has as long as it includes all items listed in Annexure 1.

12. Training, Competence and Awareness

12.1 Induction Training

- 12.1.1 The Contractor shall ensure that all his employees and subcontractors employees undergo a TFR SHE Induction with regard to the general hazards prevalent on the site, rules and regulations, and other related aspects before commencing work. It is the responsibility of the contractor to inform TFR whenever new employees are appointed after the initial induction was conducted.
- 12.1.2 In addition to the TFR SHE induction, it is the responsibility of the Contractor to develop and implement a site specific SHE Induction programme, a job specific induction programme and a general employee SHE awareness programme, to develop awareness amongst employees on the generic SHE issues associated with the scope of work and the specific environmental issues in question.
- 12.1.3 The Contractor shall ensure that all visitors and suppliers to the site undergo and comply with Contractors' site-specific safety induction requirement prior to being allowed access to site. All visitors and suppliers shall sign the attendance register.
- 12.1.4 All visitors and suppliers shall wear the necessary personal protective equipment whilst on site and shall remain in the care of the host who understand the scope of work and associated risks.
- 12.1.5 The Contractor shall maintain comprehensive attendance records of SHE induction training on the SHE file.

Contractor Signature.....

Date.....

12.2 Competency / Training

- 12.2.1 The Contractor must ensure that all his employees are adequately trained to perform the tasks allocated to them and that there is the requisite amount of supervision at all times to maintain safe work practices and standards.
- 12.2.2 The Contractor shall identify training requirements of employees whose work may have a significant impact on their health and safety or that might create a significant impact upon the environment and ensure that these employees will receive appropriate training. A Training matrix shall be used as a mechanism to manage and control the training of employees.
- 12.2.3 The Contractor shall identify all training needs and incorporate the site specific training into the SHE plan.
- 12.2.4 Each Contractor shall be required to ensure that before an employee commences work on the contract that the supervisor in control with responsibility for the employee has informed the employee of his scope of authority and any hazards associated with the work performed. This will include man-job specifications, the discussion of any standard task procedures or hazardous operational procedures to be performed by the employee
- 12.2.5 The Contractor is to ensure that the supervisor has satisfied himself that the employee is conversant with all hazards associated with any work to be performed by conducting task observations.
- 12.2.6 The Contractor must ensure that certificate/s of competence where applicable is/are provided in the SHE File.

12.3 Awareness Training

- 12.3.1 Awareness training required shall be identified for all employees on the contract using the SHE Policy, the SHE Plan, the SHE programmes and procedures.
- 12.3.2 The Contractor shall have a daily safety talk. This talk shall include subcontractor employees.
- 12.3.3 The talk must be brief and concise. Subject topics should be applicable to the job at hand, incidents, accidents and up-and-coming work will be discussed along with suggestions and comments. These meetings can be used as a training meeting with the central idea of educating employees.

13. Health and Safety Plan (SHE Plan)

- 13.1 Potential Contractor submitting tenders shall submit with their tender, a Health and Safety Plan setting out the practical arrangements and procedures to be implemented by him to ensure compliance by him with the OHS Act and Regulations, this SHE specification and particularly in respect of: -

Contractor Signature.....

Date.....

- (a) The provision, as far as is reasonably practical, of a working environment that is safe and without risk to the health of his employees and subcontractors in terms of section 8 of the OHS Act;
 - (b) the execution of the contract work in such a manner as to ensure in terms of section 9 of the OHS Act that persons other than those in the Contractor's employment, who may be directly affected by the contract work are not thereby exposed to hazards to their health and safety;
 - (c) ensuring, as far as is reasonably practical, in terms of section 37 of the OHS Act that no employee or subcontractor of the Contractor does or omits to do any act which would be an offence for the Contractor to do or omit to do.
- 13.2 The Contractor's Health and Safety Plan shall be based on a risk assessment in respect of the hazards to health and safety of his employees and other persons under his control that are associated with or directly affected by the Contractor's activities in performing the contract work and shall establish precautionary measures as are reasonable and practical in protecting the safety and health of such employees and persons.
- 13.3 The SHE Plan shall include full particulars in respect of: -
- (a) Safety Management Structure arrangements i.e. Appointments to be done and how;
 - (b) SHE Organisation arrangements i.e. SHE Committees, SHE Audits, Findings and Corrective Actions
 - (c) Risk Management i.e. Risk Assessment frequencies, methodology
 - (d) Education and Training i.e. safety induction, site / job specific training arrangements
 - (e) Emergency Planning
 - (f) Health and Safety Communication i.e. Toolbox talks, incident recall
 - (g) Safe working methods and procedures to be implemented i.e. safe work procedures, task observation
 - (h) Fall Protection Plan i.e. documented plan, training/competency, medical surveillance, rescue plan
 - (i) Personal protective Equipment and Clothing
 - (j) Contract Security i.e. site access control and security
 - (k) SHE Costs

Contractor Signature.....

Date.....

- (l) Occupational Health i.e Medical Surveillance, First Aid, Welfare Facilities, Substance Abuse testing, Noise, Vibration, Manual Handling etc
 - (m) Environmental management
 - (n) Incident Management i.e. reporting and investigation
 - (o) Operational Control
 - (p) Review plan of the SHE Plan and
 - (q) COVID-19 Requirements
- 13.5 The Contractor shall submit a final SHE Plan after awarding of the contract which shall be subject to the TFR Contract Manager/Technical Officer's approval and he may, in consultation with the Contractor, order that additional and/or supplementary practical arrangements and procedures be implemented and maintained by the Contractor or that different working methods or safety equipment be used or safety clothes be issued which, in the TFR Contract Manager/Technical Officer's opinion, are necessary to ensure full compliance by the Contractor with his obligations as an employer in terms of the OHS Act and Regulations.
- 13.6 The Contractor shall approve the SHE Plan of the subcontractor and further take reasonable steps to ensure that each subcontractor's SHE Plan is implemented and maintained on the site: Provided that the steps taken, shall include periodic audits at intervals mutually agreed to between them, but at least once every month.
- 13.7 The Contractor shall stop any subcontractor from executing any construction work, which is not in accordance with the Contractor's, and/or subcontractor's SHE Plan for the site or which poses a threat to the health and safety of persons.
- 13.8 The Contractor shall ensure that a copy of the SHE Plan is available on site for inspection by an inspector, TFR Contract Manager/Technical Officer, agent, subcontractor, employee, registered employee organisation, health and safety representative or any member of the health and safety committee.

14. Hazards Identification and Potential Hazardous Situations

- 14.1 The Contractor shall ensure a risk assessment is carried out by a competent person, appointed in writing, before commencement of any work and reviewed during the duration of the contract period. The Risk Assessments shall form part of the Health and Safety Plan to be applied on the site and shall include at least the following:
- (a) The identification of the risks and hazards (including ergonomic risks) that persons may be exposed to;
 - (b) The analysis and evaluation of the hazards identified;

Contractor Signature.....

Date.....

- (c) A documented plan, including safe work procedures to mitigate, reduce or control the; risks identified; and
 - (d) A monitoring and review plan.
- 14.2 Risk assessments shall be conducted by a competent person and such person shall use a documented method to analyse and evaluate identified risk and hazards.
 - 14.3 The Contractor shall consult with the health and safety committee or, if no health and safety committee exists, with a representative group of employees, on the development, monitoring and review of the risk assessment
 - 14.4 The risk assessment shall be reviewed when there are changes that affect the design of the structure that may affect the health, safety and environment on site or after an incident.
 - 14.5 The Contractor shall ensure that all employees are to be informed, instructed and trained regarding any risks, hazard and related SHE procedures by a competent person as outlined in the risk assessment prior to commencement of work and thereafter at predetermined intervals as outlined in the monitoring plan.
 - 14.6 The Contractor shall ensure that all subcontractors are informed regarding any hazard as stipulated in the risk assessment before any work commences, and thereafter at such intervals as may be determined in the risk assessment.
 - 14.7 The risk assessment shall be available on site for review. Where a risk assessment is not readily available or not communicated to contractor employees, the construction activities shall be stopped until such time the contractor complies.
 - 14.8 The Contractor and the TFR Contract Manager/Technical Officer shall immediately notify one another of any hazardous or potentially hazardous situations which may arise during performance of the contract or any subcontractor and, in particular, of such hazards as may be caused by the design, execution and/or location and any other aspect pertaining to the contract work.
 - 14.9 The Contractor shall be required to analyse his scope of work and define these critical activities. For each activity, a risk assessment shall be required which defines systems and safe work procedures that will be used in order to complete the activity safely.
 - 14.10 Copies of all safe work procedures and proof that employees have been trained on those safe work procedures shall be kept on the SHE file.
 - 14.11 Preliminary risk and hazard identification shall be conducted by the Contractor prior to work commencement on site. Should the Client's Agent, Project Manager, TFR Contract Manager/Technical Officer or his duly nominated alternative identify hazardous activities performed by the Contractor on the site for which the Contractor has not submitted a risk assessment, the Contractor shall be required to do so before continuing with work.

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15. Safety, Health and Environmental (SHE) File

- 15.1 The Contractor shall prepare a SHE file and submit to TFR Contract Manager for approval prior to commencement of work on site. The file shall include all documentation required as per the OHS Act and applicable regulations. ,
- 15.2 The approval time of the SHE file is at least 5 working days
- 15.3 The Contractor shall ensure that a copy of the both his SHE File as well as any subcontractor's SHE File is kept on site and made available to an inspector of the Department of Labour, the TFR Contract Manager/Technical Officer, or subcontractor upon request.
- 15.4 The Contractor shall hand over a consolidated SHE file to the TFR Contract Manager/Technical Officer upon completion of the Construction Work and shall in addition to documentation mentioned in the OHS Act and applicable Regulations include a record of all drawings, designs, materials used and other similar information concerning the completed structure.

16. Occupational Health

16.1 Medical Surveillance Programme

- 16.1.1 The Contractor shall ensure that all his and subcontractor employees have a valid medical certificate of fitness issued by an Occupational Health Practitioner.
- 16.1.2 Medical certificate of fitness must be available and be kept in the SHE file.

16.2 Substance Abuse

- 16.2.1 All Contractors must comply with the Transnet Substance Abuse Policy and Regulation 2A of the General Safety Regulations of the OHS Act.
- 16.2.2 No Contractor may possess, sell, offer to other person, use, store, manufacture, transport, distribute, or transfer drugs or alcohol during work hours, on or off TFR premises.
- 16.2.3 TFR will not tolerate substance abuse or use which put at risk the health and safety of its employees or threatens its services to our stakeholders. It is on this basis that a contractor employee will be considered unfit for work if:
- (a) He/she is subjected to alcohol screening and/or alcohol testing and is found to have alcohol in his/her breathe and/or blood;
 - (b) Refuses to undergo substance screening and/or testing;
 - (c) He /she produces a positive confirmatory test for any other substances, measured by sample analysis at a registered pathological laboratory and authorised by a medical practitioner; and/or

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- (d) Through observation by security personnel or TFR Contract Manager, it is evident that the contractor's physical, emotional, mental or behavioural state reflects that they are intoxicated or under the influence.

16.2.4 Any transgression of this policy will constitute a breach of the relevant contract and may result in the termination of services/contract.

16.2.5 Any contractor employee using medication that has a narcotic effect must declare before work to his / her supervisor.

16.3 Occupational Hygiene

16.3.1 The Contractor shall conduct Health Risk Assessments of all the Occupational Hygiene / Environmental stressors (e.g. noise, dust, illumination, HCS, heat & cold stressors, ergonomics, etc.) present in the area where they operate to determine if there is any possible worker exposure. Records of all these assessments should be documented and kept up to date.

16.3.2 The Contractor shall monitor the extent to which their employees are exposed to the occupational hygiene stressors. These assessments shall be conducted by an Approved Inspection Authority as listed on the Department of Labour database. The findings from these assessments should be kept on the SHE file, communicated to all affected parties and be reported to relevant authorities.

16.4 First Aid requirements

16.4.1 All Contractors shall ensure that their employees receive prompt first aid treatment in case of injury or emergency. The Contractor must have the necessary equipment and/or facility on site for treatment of injured persons.

16.4.2 Contractor shall ensure that the first aid box / boxes are available and accessible. More first aid boxes shall be provided if the risks, distance between work teams, or the working environment requires it.

16.4.3 Taking into account the type of injuries that are likely to occur on site, the nature of activities performed and the number of employees on site, the Contractor shall ensure that the first aid box contain suitable first aid equipment which includes at least the minimum contents as listed on Annexure 1 of General Safety Regulation (GSR).

16.4.4 The Contractor must ensure that trained / certificated first-aid personnel are appointed and be available on site at all times. The ratio of first aiders to employees shall be 1:50.

16.5 Asbestos Control

16.5.1 The Contractor shall inform the TFR Project Manager or TFR Contract Manager if during construction work asbestos or suspected asbestos containing material is found. Only Asbestos Approved Contractor can work on asbestos containing material.

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16.6 Noise

- 16.6.1 The Contractor shall ensure that the requirements of the Noise Induced Hearing Loss Regulations are complied with.
- 16.6.2 Contractor shall ensure that machinery and equipment are operated at noise levels not exceeding an equivalent level of 85-dB (A) during normal working conditions.
- 16.6.3 Where the noise levels at the Operator position or to employees working in the vicinity exceed an equivalent level of 85-dB (A) during normal working conditions, the Contractor shall take appropriate measures to reduce such levels to an equivalent level of 85-dB (A). The use of Personal Protective Equipment (PPE) should be the last resort.
- 16.6.4 All employees exposed to noise must be trained on the effects of exposure, precautionary measures to be taken to prevent exposure and the correct use of PPE.
- 16.6.5 Noise zones must be demarcated as such.

16.7 Vibration

- 16.7.1 Contractors must put measures to reduce the risks associated with hand–arm vibrations, avoid, whenever possible, the need for vibration equipment.
- 16.7.2 Contractor shall develop a good maintenance regime for tools and machinery. This may involve ensuring that tools are regularly sharpened, worn components are replaced or engines are regularly tuned and adjusted.
- 16.7.3 The Contractor must introduce a work pattern that reduces the time exposure to vibrations.
- 16.7.4 The Contractor shall issue employees with gloves and warm clothing. There is a debate as to whether anti-vibration gloves are really effective but it is agreed that warm clothing helps with blood circulation which reduces the risk of vibration white finger. Care must be taken so that the tool does not cool the hand of the operator.

16.8 Manual Handling

- 16.8.1 Contractor must reduce risk of injury due to manual handling by using mechanical assistance involving the use of mechanical aids to assist the manual handling operation. Mechanical aids such as hand-powered hydraulic hoists, specially adapted trolleys, hoist for lifting patients and roller conveyors can be used.
- 16.8.2 Contractor shall ensure all employees involved in manual handling are trained in good lifting techniques.

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16.9 Dust

16.9.1 The Contractor shall monitor dust caused by their activities, mobile equipment, generators and other equipment during construction. Factors such as wind can often affect the intensity to which the impact is experienced.

16.9.2 Dust suppression measures must be in place to reduce the dust caused by the activities on site.

16.9.3 Appropriate PPE should be provided to exposed employees.

16.10 Weather precautions

16.10.1 In the event of adverse weather (high winds, flooding, storm surge, lightning etc) or other conditions, the Contractor must institute precautionary measures to protect employees on site.

16.10.2 The Contractor shall take steps to prevent heat stroke, dehydration and exhaustion of employees as a result of exposure to excessive heat on site. Such steps may include employees taking regular breaks, consuming enough water, provision of sun brims for their hard hats and sun screen to protect them against sun burn.

16.10.3 The Contractor shall take steps to prevent hypothermia or dangerous overcooling of the body as a result of exposure to cold temperatures.

16.11. Welfare Facilities

16.11.1 The Contractor must ensure that all workplace facilities meet health, safety and welfare needs of all employees, including disabled persons where applicable.

16.11.2 The Contractor must in addition to Facilities Regulations 2004, provide at or within reasonable access of every construction site, the following clean, hygienic and maintained facilities:

- (a) shower facilities, at least one shower facility per 15 persons
- (b) at least one sanitary facility for each sex and for every 30 workers
- (c) changing facilities for each sex; and
- (d) sheltered eating areas

16.11.3 The Contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes or other suitable living accommodation, is not available

16.12 COVID 19 Requirements

16.12.1 The contractor shall complete and submit to the TFR Contract Manager a declaration stating that the contractor is permitted to operate in terms of the provisions of the Disaster Management Act 2002 (Act No 57 of 2002) and Regulations, Transnet COVID-

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19 Guidelines and COVID-19 Occupational Health and Safety Measures in Workplaces, COVID-19 (C19 OHS), 2020 and have prepared a COVID-19 Workplace Readiness Plan and shall operate within the regulated permissions and restrictions of applicable lockdown level.

- 16.12.2 The contractor must ensure that all its employees are trained on the health risks and hazards associated with COVID-19 and what precautionary measures they must follow for the protection of their health, including the proper use and maintenance of PPE. They are prepared and informed regarding updated rules, hygiene and behavioural practices, complete a "return to work interview" with their line manager and sign commitment to maintain social distancing.
- 16.12.3 The contractor shall ensure that every employee reporting for duty is screened to ascertain whether they have any observable symptoms associated with COVID-19 and require such employee to immediately inform the contractor if he/she experiences such symptoms
- 16.12.4 Non-essential physical work that requires close contact between workers should be avoided where it is possible to do so.
- 16.12.5 Where it is practicable, every employee must be issued with own tool for use for the duration of the shift. Tools and equipment in stores should be sanitised before issued and on return to the stores.
- 16.12.6 Washing hands facilities must be provided on site, and where it is not available, employees should be provided with hand sanitisers. Employees should be encouraged to regularly wash their hands.
- 16.12.7 Alcohol testing on site should be managed in such a way that no employee is exposed to the virus and contractors must promote personal hygiene. Breathalyzer equipped with disposable mouthpieces shall be used and shall be cleaned and/or disinfected after every use.
- 16.12.8 All non-essential visitors to site are not allowed, only suppliers are allowed. Suppliers must be advised in advance of the COVID-19 site screening tests and required COVID-19 PPE requirements for the site.
- 16.12.9 Where site meetings are held, only absolutely necessary meeting participants should attend. Social distancing should be maintained.
- 16.12.10 The contractor shall when transporting his employees to TFR premises comply with the regulations which outlines that 70% of the vehicle capacity can be utilised or as applicable at the time.
- 16.12.11 The contractor shall inform the TFR Contract Manager when any of its employees working on TFR premises has been diagnosed with COVID-19. The contractor shall investigate the cause and control failure and review its risk assessment to ensure that the necessary controls and PPE requirements are in place.

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16.13 Work in Confined Space

- 16.13.1 The Contractor shall ensure that a confined space is only entered by an employee or any other person only after the air therein has been tested and evaluated by a person who is competent to pronounce on the safety thereof, and who has certified in writing that the confined space is safe and will remain safe while any person is in the confined space, taking into account the nature and duration of the work to be performed therein.
- 16.13.2 The Contractor shall take steps to ensure that any confined space in which there exist or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or likely to have, an oxygen content of less than 20 percent by volume, is entered by an employee or other person only when:
- (a) the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken;
 - (b) the confined space is isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.
- 16.13.3 The Contractor shall ensure that the provisions of General Safety Regulation 5 are complied with regard to work on confined space
- 16.13.4 The Contractor must take into consideration that a tunnel is defined as a confined space in terms of the General Safety Regulations and must ensure compliance to the above when working in tunnels.

17 Incidents/Occurrences

- 17.1 All incidents referred to in Regulation 9 of General Administration Regulations of the OHS Act involving the contractor and his subcontractor on TFR premises, shall be reported to the TFR Contract Manager and Department of Labour as prescribed by the OHS Act.
- 17.2 TFR must be forwarded with a copy of a report of any investigation, formal inquiry conducted in terms of Section 31 and 32 of the Act into any incident involving the contractor, his subcontractor, any person or machinery under his control on TFR premises.
- 17.3 TFR Contract Manager must be informed of the above incidents/occurrences before the end of shift when the incident/occurrence occurred.
- 17.4 The Contractor shall make available its employees to attend as witnesses when required so by TFR during an investigation into any incident where TFR believes the said contractor employees were witnesses or may assist in the investigation.

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17.5 The contractor shall make available to TFR any documents required to assist in their investigation.

18. SHE Cost

18.1 The Contractor shall ensure that it has made adequate provision for the cost of health and safety measures in the tender offer.

18.2 The Contractor shall ensure that its subcontractors have made adequate provision for the cost of health and safety measures in the tender offer.

19. Personal Protective Equipment (PPE)

19.1 The Contractor shall ensure that all employees are provided with appropriate prescribed Personal Protective Equipment (PPE) free of charge (according to General Safety Regulations (2), suitable for the type of activities that the employees will perform.

19.2 Such PPE shall be approved by credible institution such as SABS, EN, or AN.

19.3 The Contractor shall manage the issuing of PPE and ensure that PPE is used at all times. Employees shall be trained in the proper use of PPE.

20. Emergency Evacuation Plan and Procedure

20.1 The Contractor must establish and implement an emergency evacuation plan to ensure that in the event of fire, explosion structural collapse etc. all staff is able to evacuate the area to a demarcated area for the purpose.

20.2 The area so selected must be demarcated and the relevant "Assembly Point" sign displayed where applicable or use TFR nearest assembly point.

20.3 An Emergency Evacuation Procedure must be drawn up; all staff members and contractors shall be given awareness training and participate in regular evacuation drills.

20.4 The Contractor and its employees shall collaborate and adhere to TFR evacuation drills and requirements.

21. Access Control and Security

21.1 The Contractor shall, before commencing any work, obtain from the TFR Contract Manager/Technical Officer a Site Access Certificate signed by him, permitting and limiting access to the designated site or place of work by the Contractor and any subcontractors under his control.

21.2 No Site Access Certificate will be granted to the Contractor who fails to comply with TFR minimum SHE requirements, with the SHE File not approved and without the SHE induction been concluded.

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- 21.3 The Contractor must assess the security risks and implement appropriate measures. All contractors are to strictly adhere to all security requirements on the premises.
- 21.4 The Contractor in collaboration with the TFR representative will ensure that proper access control is in place and functional at all times onto and out of the site. A form of access control will be issued to contractor employees who have been inducted and submitted copies of ID documents or work permits (where required).
- 21.5 Access Permits should be carried by a contract employee at all time when on site. Access Permits shall be produced at the point of entry / gate.
- 21.6 Contractors shall ascertain from TFR Contract Manager/Technical Officer the correct route along with their employees may proceed when coming on or going off shift and direct their employees accordingly.

22. Management of Subcontractors

- 22.1 The Contractor is directly responsible for the actions of his contractors/sub-contractors.
- 22.2 The Contractor will also be responsible for initiating any remedial action (recovery plan) that may be necessary to ensure that the contractor complies with all requirements.
- 22.3 The Contractor shall provide any contractor who is making a bid or appointed to perform construction work, with the relevant sections of the documented SHE specification, who would in turn provide a SHE plan for approval.
- 22.4 The Contractor shall carry out inspection/audits on the contractor/subcontractor to ensure that their SHE plan is being implemented and maintained and submit audit report to TFR Representative.
- 22.5 The Contractor shall stop any contractor/subcontractor from executing construction work which poses a threat to the safety and health of persons or the environment.
- 22.6 The Contractor shall ensure that the sub-contractors appointed have the necessary competencies and resources to perform the work safely.
- 22.7 The Contractor will be required to submit 37(2) mandatory agreement between the Contractor and subcontractor to the TFR Contract Manager

23. Environmental Management

- 23.1 The Contractor shall identify, document and comply with all pertinent Environmental laws and associated Regulations, approvals, licenses and permits which are applicable to the Services and activities undertaken.
- 23.2 Before commencement with any of the services to be rendered to TFR, the Contractor shall make available all personnel who will be working on the specified contract to be

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- given environmental induction training. All Contractor employees arriving on the site shall attend such induction.
- 23.3 The Contractor shall adhere to all instructions issued by Contract Manager or his /her delegated person in promotion of environmental management and legal compliance.
 - 23.4 The Contractor shall determine the correct positioning of topsoil stockpiling to avoid massive disturbance and prepare the topsoil for reuse during landscaping.
 - 23.5 Concrete shall not be mixed directly on the ground or any other permeable surface. Should concrete batching activities occur, these should be located in the designated area on site with low environmental sensitivity levels.
 - 23.6 All excess concrete shall be removed from site on completion of plastering or concrete pouring and disposed of in an environmentally acceptable manner.
 - 23.7 The Contractor shall ensure that his or her employees are aware of the procedures to be followed when dealing with spills and leaks, which shall include notifying the relevant authorities and TFR as required in terms of National Environmental Management Act (NEMA), 1998 and National Water Act (NWA), 1998. The Contractor shall ensure that all necessary material and equipment required for use during clean – up/rehabilitation of spills and leaks are available on site at all times. Treatment, remediation and/or rehabilitation of contaminated areas shall be undertaken to the reasonable satisfaction of the TFR Environmental Control Officer or relevant Environmental Specialist.
 - 23.8 Contractor shall be solely responsible for the control of dust generated from his or her activities. Excavation, handling and transport of erodible material shall be avoided under aggressive wind conditions or when a visible dust plume is present. If dust damping measures are deemed inadequate, working must cease until the wind speed drops to an acceptable level.
 - 23.9 Construction activities generating output levels of 85 db (A) or more shall be confined to the hours 08h00 to 17h00 Mondays to Fridays (close to residential areas).
 - 23.10 No on-site burying or dumping of waste material shall occur. Waste must be collected by a licensed waste transporting contractor and disposed of at a licensed disposal site. Disposal certificate must be made available to TFR on request.
 - 23.11 Waste bins must be provided in sufficient number and capacity to store solid waste produced on a daily basis. These bins must be kept closed and emptied regularly.
 - 23.12 A designated re-fuelling area (s) must be provided. The re-fuelling area must be protected from hydrocarbon spillage to the reasonable satisfaction of the TFR Environmental Control Officer or Relevant Environmental Specialist. As a minimum requirement, re-fuelling and workshop areas shall have a bunded floor surface and storm water collection mechanism. Refuelling shall always be accompanied by the use of drip trays.

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- 23.13 The Contractor must notify the Contract Manager immediately of any pollution incident. An incident record system shall be maintained on site for inspection by TFR and relevant authorities.
- 23.14 All vehicles and equipment's shall be kept in good working condition. All leaking equipment's shall be repaired immediately or removed from site. All vehicles and equipment shall be maintained and not emit excessive noise.
- 23.15 In case of major hydrocarbon spill or leakage as a result of equipment failure, Contract Manager must be made aware of such event and the affected area must be fenced off and be cleaned immediately to the reasonable satisfaction of the TFR Environmental Control Officer to prevent contamination of soil and both surface and groundwater.
- 23.16 The Contractor shall ensure that no spillage occurs when toilets are being cleaned or emptied and that the contents are removed from site by a licensed service provider.
- 23.17 The use of borrow pits for the construction of access roads must comply with the provisions of Minerals and Petroleum Resources Development Act of 2004 as amended and should not be located inside the border of any protected area (e.g. Nature Reserve).
- 23.18 All disturbed areas must be rehabilitated to the reasonable satisfaction of TFR Environmental Control Officer or Relevant Environmental Specialist.
- 23.19 Transportation, handling and storage of all substances classified as hazardous must comply with the provisions of the Hazardous Substances Act, 15 of 1973, relevant Regulations and SANS Codes.
- 23.20 Archaeological remains, artificial features and structures older than 60 years are protected by the Natural Heritage Resources Act, 25 of 1999. Should any archaeological artefact be exposed during construction or any contract work, such work must be stopped immediately. The TFR Environmental Control Officer must be called in for inspection and to recommend the way-forward. Under no circumstances may any artefacts be destroyed or removed from site.
- 23.21 The extraction of water for construction purposes must at all times comply with licensing requirements of Department of Water Affairs, where applicable. Extraction of water from a stream or a river requires approval.
- 23.22 Blasting work that may be required on site shall be carried out entirely within the provisions of the Explosives Act, 26 of 1956 and other relevant engineering and safety standards.
- 23.23 Office and camp sites shall be established, as far as is practicable, outside the flood plain, above the 1:50 flood level mark within the boundaries of the construction area.
- 23.24 No camp or office site shall be located closer than 100 metres from a stream, river, spring, dam or pan.

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- 23.25 The area chosen for these purposes shall be the minimum reasonably required and which will involve the least disturbance to vegetation.
- 23.26 Camps and site offices shall be fenced (where necessary) in consultation with the landowner.
- 23.27 The Project Manager or TFR Contract Manager may, at his or her discretion stop any work, activity or process not in accordance with Environmental laws and associated Regulations, approvals, licenses and permits.
- 23.28 The contractor shall preserve wild life in terms of the NEMA.

24 Operational Safety

24.1 National Safety Regulator requirements

- 24.1.1 The Contractor shall ensure that its equipment, machinery and employees when on TFR premises complies fully with all applicable railway safety requirements and/or regulations of the National Safety Regulator Act 16 of 2002 and the relevant SANS Codes of Practice.
- 24.1.2 Permission for the engagement of a subcontractor by the Principal both initially and during a contract shall be subject to a review by TFR of the capability of the proposed subcontractor to comply with railway safety requirements and user specifications.
- 24.1.3 The Contractor and/or his subcontractors must grant TFR access, during the term of the contract, to review any railway safety related activities, including the coordination of such activities across all parts of the organisation.
- 24.1.4 The Contractor shall ensure that where applicable, such work is performed by person who has the necessary competencies as required in terms of any applicable railway safety standard or code of practice.
- 24.1.5 The Contractor shall ensure that all his employees are protected from the risk of being hit by moving trains.
- 24.1.6 The Contractor must ensure that it complies to the requirements of RSR 00-4-1.2016 Edition 1, Part 4-1 Human Factors Management-Fatigue Management standard.

24.2 Special Permits

- 24.2.1 Where special work permits are required before work may be carried out such as for e.g. hot work (welding, cutting etc.), isolation, and occupations, the Contractor shall apply to the TFR Contract Manager/Technical Officer or the relevant authority for such permits to be issued. The Contractor shall strictly comply with the conditions and requirements pertaining to the issue of such work permits.

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24.3 Vehicle Safety

With respect to vehicles, vehicles and mobile plants the Contractor must ensure that:

- 24.3.1 They are of an acceptable design and maintained in a good working order and are used in accordance with their design and the intention for which they were designed
- 24.3.2 Are operated by a person who has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate such vehicle and mobile plant;
- 24.3.3 Are operated by a person who has a medical certificate of fitness to operate those vehicle and mobile plant, issued by an occupational health practitioner;
- 24.3.4 Vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried. No employees will be allowed to be transported at the back of LDV's / bakkies unless it is provided with a seat and safety belt and further that the risk assessment has indicated it to be a low risk.
- 24.3.5 Vehicles are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- 24.3.6 Vehicle must be equipped with an acoustic warning device which can be activated by the operator and an automatic acoustic reversing alarm
- 24.3.7 Vehicles must be inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.
- 24.3.8 No person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose.
- 24.3.9 All vehicles or mobile plant when not in use, have buckets, booms or similar appendages, fully lowered or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set and ignition secured.
- 24.3.10 Whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation
- 24.3.11 Tools, material and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees.
- 24.3.12 Where applicable, also in collaboration with the TFR representative and other appropriate personnel develop a traffic management plan for the site to ensure the safe movement of all construction related mobile plant where applicable
- 24.3.13 This plan is to be reviewed as and when required to ensure its applicability where applicable.

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24.3.14 Those working or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.

24.4 Housekeeping and general safeguarding on sites

24.4.1 Contractor must ensure that suitable housekeeping is continuously implemented on each work site

24.4.2 The Contractor must ensure proper storage of materials and equipment and the removal of scrap, waste and debris at appropriate intervals.

24.4.3 The Contractor must ensure that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways

24.4.4 The Contractor must ensure that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals.

24.5 Hazardous Chemical Substances (HCS)

24.5.1 The Contractor must ensure that all employees exposed to hazardous chemicals are trained on the potential source of exposure, potential risk to health caused by exposure and measures to be taken by the contractor and employees against any risk of exposure.

24.5.2 HCS risk assessment to be conducted and where it indicates that any employee may be exposed, the contractor shall ensure that monitoring is carried out in terms of regulation 6 and 7 of the Hazardous Chemical Substances Regulations.

24.5.3 Employees exposed to hazardous substances shall be under medical surveillance

24.5.4 Where herbicides are used, the contractor shall comply with all relevant legislative requirements pertaining to the use of herbicides and that work is undertaken under the supervision of a person with a valid certificate in Pest Control.

24.6 Stacking and Storage

24.6.1 The Contractor shall ensure that a competent person is appointed in writing with the duty of supervising all stacking and storage.

24.6.2 Adequate storage areas are provided, demarcated as storage areas and are kept neat and under control.

24.7 Fire Precautions and Fire Safety

24.7.1 The Contractor must ensure that all appropriate measures are taken to avoid the risk of fire. The Contractor shall comply to the fire precautions as stipulated in the Environmental Regulations for Workplaces, 1987 and regulation 29 of the Construction Regulations, 2014

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- 24.7.2 Sufficient and suitable storage is provided for flammable liquids, solids and gases.
- 24.7.3 Smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials
- 24.7.4 The Contractor shall ensure that the work areas are clear, at all times, of any material, which could fuel a fire and that combustible materials do not accumulate, oily rags, waste and other substances liable to ignite are without delay removed to a safe place.
- 24.7.5 A thorough inspection is made of the work site at the end of any working period to ensure that no material is left at the work site or any situation left in such a manner that a fire or accident could result (all machines to be turned off at main switches, and cylinders to be closed and hoses deflated).
- 24.7.6 Suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned and that such equipment is maintained in a good working order.
- 24.7.7 The fire equipment is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof
- 24.7.8 Sufficient number of employees are trained in the use of fire extinguishing equipment and familiarise themselves with locations of fire fighting equipment in the work site.
- 24.7.9 There is an effective evacuation plan providing for all persons to be evacuated speedily without panic, accounted for and a siren is installed and sounded in the event of a fire.
- 24.7.10 Where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire and the means of escape is kept clear at all times.
- 24.7.11 The Contractor must ensure that fire fighting equipment are not to be used for any purpose other than their intended use.

24.8 Demarcation of the site

- 24.8.1 The Contractor shall ensure that its activities are conducted within a limited area to facilitate control and to minimize the impact on the existing natural environment and other TFR activities.
- 24.8.2 The Contractor shall demarcate the boundaries of the site in order to restrict activities to the site.
- 24.8.3 The method of demarcation and the location of the demarcated area shall be determined by the Contractor and approved by the TFR Contract Manager prior to any work being undertaken. The Contractor shall ensure that all his plant, labour and materials remain within the boundaries of the site.

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24.8.4 Failure to do so may result in the Contractor being required to fence off the boundaries of the site at his own expense to the satisfaction of the TFR .The contractor is responsible for the safeguarding of his/her own equipment and material while on site.

24.9 Fall Protection Plan

24.9.1 In the event of the risk and hazard identification, as required in terms of clause 14 of this Specification, revealing risks relating to working from a fall risk position the contractor shall cause the designation of a competent person, responsible for the preparation of a fall protection plan;

24.9.2 The Contractor shall implement, maintain and monitor the fall protection plan for the duration of the contract. The Contractor shall also take such steps to ensure the continued adherence to the fall protection plan.

24.9.3 The fall protection plan shall include:-

- (a) a risk assessment of all work carried out from a fall risk position;
- (b) the procedures and methods to address all the identified risks per location;
- (c) the evaluation of the employees physical and psychological fitness necessary to work at fall risk positions;
- (d) the training of employees working from fall risk positions;
- (e) rescue plan; and
- (f) the procedure addressing the inspection, testing and maintenance of all fall protection equipment

24.10 SHE Signage (Symbolic Safety Signs) on plant and in buildings

24.10.1The Contractor's employees shall comply with all SHE signage posted at various locations of TFR sites.

24.10.2The Contractor shall after occupation of the construction site ensure that appropriate SHE signs (Symbolic Safety Signs) are displayed on site

24.11 General Machinery, Tools and Equipment

24.11.1 The Contractor shall ensure that all machinery, tools and equipment are identified, numbered or tagged, listed on an inventory list.

24.11.2 The Contractor shall ensure that all machinery, tools and equipment are safe to be used and is maintained in a good condition.

Contractor Signature.....

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24.11.3 The Contractor shall ensure that all machines driven by means of belts, gear wheels, chains and couplings shall be adequately guarded in such a manner that persons cannot gain inadvertent access to the moving parts.

24.11.4 All machinery, tools and equipment to be regularly inspected at least monthly or as required by legislation and risk assessments. Records of such inspections shall be kept on the SHE file.

24.11.5 Where applicable machinery, tools and equipment must have the necessary approved test or calibration documentation.

24.11.6 The Contractor shall ensure that all machinery, tools and equipment are operated by persons who have been trained to operate such machinery, tools or equipment.

24.12 Portable Electrical Tools and Explosive Power Tools

24.12.1 The Contractor shall ensure that use and storage of all explosive power tools and portable electrical tools comply with all applicable legislation.

24.12.2 The Contractor shall ensure that only trained employees are authorised to use portable electrical tools and explosive power tools

24.12.3 The Contractor shall ensure that all portable electrical tools and explosive power tools are kept in a safe working condition.

24.12.4 All portable electrical tools and explosive power tools are inspected monthly by a competent person and daily before use by the operator of such tool. Records of such inspections must be kept in the safety file.

24.12.5 Users / Operators of electrical power tools and explosive power tools should be issued with suitable protective equipment

24.13 Lifting Machine, Lifting Tackle and Suspended Loads

24.13.1 The Contractor shall ensure that lifting machine and tackle comply with Driven Machinery Regulation 18 and all other applicable legislative requirements and standards.

24.13.2 The Contractor shall ensure that lifting machine operators shall be competent to operate a lifting machine. They must be in possession of a valid permit. The training should have been done according to the Code of Practice by a provider registered by the Department of Labour.

24.13.3 A lock out system should be implemented to ensure that only an operator that is competent can draw lifting machines and fork lifts.

24.13.4 The Contractor shall ensure that before using any lifting machines or tackle the operator inspect it. Records of such inspections and examinations shall be kept on the safety file.

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24.13.5 All lifting machines shall be examined and subjected to a performance test by an accredited person/company at intervals not exceeding 12 months.

24.13.6 All lifting tackle should be recorded on a register and should be examined by an accredited person/company at intervals not exceeding 3 months.

24.13.7 All hooks shall be fitted with a safety latch/catch.

24.13.8 All lifting tackle should be conspicuously and clearly marked with identification particulars and the maximum mass load which it is designed for.

24.13.9 No person shall be moved or supported by means of a lifting machine unless such a machine is fitted with a cradle approved by an inspector.

24.13.10 Rigging of loads to be done in accordance with acceptable safe work practices

24.13.11 Contractors and their employees shall keep out from under suspended loads, including excavators, and between a load and a solid object where they might be crushed if the load should swing or fall. They shall not pass or work under the boom or any crane or excavator.

24.13.12 Contractors and their employees shall ensure that crane loads are not carried over the heads of any workmen.

24.13.13 The Contractor shall ensure proper supervision in terms of guiding the load including the use of guide ropes to prevent loads from swinging and a trained person to direct lifting operations and checking the lifting tackle and attachments daily.

24.14 Hand Tools and Pneumatic Tools

24.14.1 All hand tools (hammers, chisels, spanners, etc) must be recorded on a register and inspected by a competent person on a monthly basis as well as by users prior to use.

24.14.2 All pneumatic tools should be numbered, recorded and inspected at least monthly as well as by users prior to use. And the revolutions per minutes measured in accordance with the manufacturer specifications

24.14.3 Tools with sharp points in tool boxes must be protected with a cover.

24.14.4 All files and similar tools must be fitted with handles.

24.14.5 The Contractor must have a policy on private and make shift tools on site.

24.14.6 No pneumatic tool shall be operated by using a compressed gas cylinder. Pneumatic equipment shall only draw supply from mobile air compressors or from compressed air lines installed within the premises.

Contractor Signature.....

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24.15 Management and control of exposure to Polychlorinated Biphenyls (PCB) contaminated material

24.15.1 The Contractor shall ensure that all personnel, persons who work with material that contains PCBs and persons who might come into contact with such material are appropriately familiarized with the danger of working with PCBs.

24.15.2 The Contractor shall ensure that provide systems to ensure that personnel who are involved in activities that affect the safe and acceptable use of material that contains PCBs have, at all times, current and suitably authorized documented procedures and standards available, and that such documentation can be retrieved and updated when required.

24.15.3 The Contractor shall ensure adequate ventilation in the working area; portable fans at ground level should be used in enclosed substations.

24.15.4 The Contractor shall ensure full protective clothing shall be worn, which includes:

- a) a one-piece chemical resistant suit,
- b) chemical resistant gloves,
- c) disposable covers for shoes,
- d) in confined spaces, approved self-contained breathing apparatus, and
- e) a full-face mask with a type "CC" replacement canister can be used for lower level exposure.

24.15.5 A respiratory protection device with a full-face mask and a cartridge or canister suitable for use with PCBs is required when PCB liquids hotter than 55 °C are handled, where a significant amount of PCB liquid is exposed to the air, or where adequate ventilation is not possible. In a fire situation where PCBs are involved, self-contained breathing apparatus should be used.

24.15.6 The Contractor shall ensure impervious gloves made of butyl rubber, neoprene, nitrile rubber, polyvinyl alcohol, Viton saranex or teflon (NOT ordinary rubber) should be worn when PCB liquids are handled.

24.15.7 The Contractor shall ensure that all PPE shall be disposed of after use and potentially contaminated protective equipment shall be treated as material that contains PCB and shall be disposed of accordingly.

24.15.8 The Contractor shall ensure that respiratory protective equipment is provided and worn when required as per the requirements of clause 5.2 of SANS 290:2016.

24.15.9 The Contractor shall ensure that employees likely to be exposed to PCB contaminated material are trained in first aid measure to be taken in case of exposure.

Contractor Signature.....

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24.16 Ladders

- 24.16.1 A contractor shall ensure that all ladders are numbered, inspected before use and weekly inspections are recorded in a register. A contractor shall ensure that a competent person who carries the above inspections is appointed in writing.

24.17 Electrical Equipment

The Contractor must ensure that:

- 24.17.1 Implementation and compliance with Electrical Installation Regulations, Electrical Machinery Regulations and regulation 24 of the Construction Regulations and OH&S Act.
- 24.17.2 All electrical installations, machinery and electrical work is performed in compliance with TFR Electrical Safety Instructions.
- 24.17.3 Connections are not made to any power supply without the prior written approval of the TFR Contract Manager.
- 24.17.4 All electrical machines and appliances provided by the Contractor for his own use on the Site are in a serviceable condition
- 24.17.5 Power tools used on the Site are protected by residual current devices approved by TFR Contract Manager and are double insulated.
- 24.17.6 All extension cords, portable tools and electrical plant supplied at a voltage above 32 volts are inspected, tested and tagged by a Licensed Electrician at regular monthly intervals. Details of inspections and tests are kept in Log Books available for inspection by the TFR Contract Manager or any other authorised Officer of TFR.
- 24.17.7 All electrical installations are inspected by the TFR Contract Manager (or his nominee) to ensure that the installation complies with the Statutory Regulations applicable to the site and TFR Electrical Safety Instructions. Any installations deemed unsatisfactory by the TFR Contract Manager should be removed by the Contractor at his expense.
- 24.17.8 Portable lights have adequate stability and are fitted with a mechanical guard to protect the lamp. Temporary festoon lighting is of the 'double insulated' type and is supported at least 2.5m above the floor, if possible. Hand lamps are of the 'all insulated' type.
- 24.17.9 All temporary light fittings are supplied from more than one final sub-circuit, with the supply from a residual current device, extra low voltage source or an isolating transformer.
- 24.17.10 The Contractor must obtain approval from the TFR Contract Manager before any of his employees or Sub-contractors commence work within three (3) metres of conductor rails or high tension wires, or where there is a possibility of equipment coming close

Contractor Signature.....

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to and/or touching a power source, and must provide suitable protective insulating barriers. For the erection of scaffolding, the distance is five (5) metres.

- 24.17.11 Only authorised persons may enter Electrical Contactor Houses, Motor Rooms, Switch Rooms, Control Rooms or Cable Ducts. Should the Contractor require entering such places to carry out work, he must first obtain permission from the TFR Contract Manager and obtain a valid Permit to Work.
- 24.17.12 The Contractor's employees required to enter such electrical spaces "authorised persons", with the names entered in the TFR Authorised Persons Register, after receiving approval from the TFR Electrical Officer, or they are accompanied by an authorised person who must supervise the placement of Danger Tags and Out-of-Service Tags, as well as Electrical Isolation Permit.
- 24.17.13 Electrical equipment supply cabling distribution boards, fixed lighting and portable appliances, extension leads, welding machines, compressors, pumps and hand portable tools are inspected on a monthly basis and also by the user daily before use.
- 24.17.14 Such monthly inspection(s) are to be performed by an appropriately qualified Electrician.
- 24.17.15 Contractors working on, over, under, or adjacent to railway lines and near high voltage equipment shall comply with the TFR E7/1 Specification for Works On, Over, Under or Adjacent to Railway Lines and Near High Voltage Equipment.
- 24.17.16 No person may do electrical installation work as an electrical contractor unless that person has been registered as an electrical contractor in terms of the Electrical Installation Regulations.
- 24.17.17 No person shall authorize, design, install or permit or require the installation of an electrical installation, other than in accordance with a health and safety standard provided that the components within an electrical installation shall comply with the standards and proof of compliance shall be identifiable on the components or certification shall be available from the supplier or manufacturer of the components.
- 24.17.18 Contractor shall provide further that items of an electrical installation not covered by such incorporated safety standard, and the conductors between the point of supply and the point of control, shall be installed in accordance with the by-laws or regulations of the supplier concerned.
- 24.17.19 A registered person shall exercise general control over all electrical installation work being carried out, and no person shall allow such work without such control: Provided that where the voltage exceeds 1kV, the installation shall be designed and supervised by a person deemed competent
- 24.17.20 No supplier shall restrict the application of a health and safety standard when an electrical installation is installed, except where the distribution system of the supplier may be adversely affected by the application thereof.

Contractor Signature.....

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25. Scaffolding

- 25.1 The Contractor must ensure that all scaffolding operations are carried out under the supervision of a competent person and that all erectors, team leaders and inspectors are competent to carry out their work.
- 25.2 The Contractor must ensure that scaffolding when used and erected, complies with the safety standards as per SANS 10085-1:2004 Please note that Scaffold also need to comply with CR 12 Temporary Works.
- 25.3 All scaffolding equipment to be inspected and proclaimed safe to use or rectified as to be safe to use after any inclement weather. Signage must be posted to indicate the status of the scaffolding.

26. Excavations, Floor Openings and Trenches

The Contractor must ensure that:

- 26.1 All excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose.
- 26.2 Evaluation of the stability of the ground, as far as is reasonably practicable, before excavation work begins.
- 26.3 Sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation.
- 26.4 No person is permitted to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or such an excavation is in stable material: Provided that permission has been given in writing by the appointed competent person upon evaluation by him or her of the site conditions.
- 26.5 Where any uncertainty pertaining to the stability of the soil still exists the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be.
- 26.6 The shoring or bracing used is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question.
- 26.7 No load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;

Contractor Signature.....

Date.....

- 26.8 Where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons.
- 26.9 Convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six meters from the point where any worker within the excavation is working.
- 26.10 The location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved.
- 26.11 Every excavation, including all bracing and shoring, is inspected by the competent person, daily, prior to the commencement of each shift; after every blasting operation; after an unexpected fall of ground; after damage to supports; and after rain in order to ensure the safety of the excavation and of persons.
- 26.12 The results of such inspections must be recorded in a register kept on site and made available on request to an inspector, the client, the client's agent, any other contractor or any employee.
- 26.13 Every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor.
- 26.14 All precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation.
- 26.15. Where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosives legislation.
- 26.16 Warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

27. Duties of designer

- 27.1 Ensure that the applicable safety standards incorporated into these Regulations under section 44 of the Act are complied with in the design;
- 27.2 Take into consideration the health and safety specification submitted by the client;
- 27.3 Make available in a report to the client, all relevant health and safety information about the design of the relevant structure that may affect the pricing of the construction work, the geotechnical-science aspects, where appropriate; and the loading that the structure is designed to withstand;

Contractor Signature.....

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- 27.4 Inform the client in writing of any known or anticipated dangers or hazards relating to the construction work, and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered;
- 27.5 Refrain from including anything in the design of the structure necessitating the use of dangerous procedures or materials hazardous to the health and safety of persons, which can be avoided by modifying the design or by substituting materials;
- 27.6 Take into account the hazards relating to any subsequent maintenance of the relevant structure and must make provision in the design for that work to be performed to minimize the risk;
- 27.8 Carry out the necessary inspections at appropriate stages to verify that the construction of the relevant structure is carried out in accordance with the design;
- 27.9 Stop any contractor from executing any construction work which is not in accordance with the relevant design's health and safety aspects;
- 27.8 During the final inspection of the completed structure in accordance with the National Building Regulations, include the health and safety aspects of the structure as far as reasonably practicable, declare the structure safe for use, and issue a completion certificate to the client and a copy thereof to the contractor; and
- 27.9 Ensure that ergonomic design principles are taken into consideration in order to minimize ergonomic related hazards in all phases of the life cycle of a structure

28. Confidentiality

- 28.1 The Contractor must, at all times, consider all data or information given to him or that is required in connection with the work of the Company, as confidential and not makes unauthorized use of it.
- 2.8.2 He/she must ensure that such data or information is not given to any non-employee of the contractor without written consent of the TFR Contract Manager.
- 28.3 The Contractor shall be aware of the confidentiality of the mentioned information and is compelled to treat it accordingly.
- 28.4 The Contractor must provide adequate physical protection for any confidential documents, etc, which were obtained from Transnet in connection with the contract work as well as any copies made thereof. If any documents or sketches are lost, the TFR Contract Manager must be notified immediately.

Contractor Signature.....

Date.....

ANNEXURE 1

CONTRACTOR MONTHLY SHE REPORT

For Month/Year		Name of Contractor		
Name of Contract				
Contract Number	Date of Commencement	Date of Completion		
Number of employees	Man-hours worked this Month	Cumulative (Contract duration man-hours)	Man-hours Since last Lost Time Incident (LTI)	DIFR

1. Details of SHE Incidents

Incident	This Month	Cumulative(Contract duration)	Short description of major/ significant incidents and preventative action taken
Number of fatalities			
Number of disabling incidents			
Number of Medical Treatment Cases			
Number of first aid Cases			
Number of near miss incidents			
Motor vehicle incidents			
Number of environmental incidents			
Positive substance abuse incidents			
Substandard Act/ Conditions observed			
Legal violations observed			

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2. Details of SHE Meetings

Date	No of participants	Major SHE Concerns	Action taken

3. Details of Audits/Inspections

Date	Area / Facility	Findings/Recommendations	Action taken

5. Details of any SHE Promotional activities for the month

Date	Activity	Remarks

6. Safety Communication

Month	Number of Safety talks held	Remarks

Attach separate sheets for further or other details

.....
Name of Contractor Representative

.....
Signature

.....
Date

Contractor Signature.....

Date.....

T2.2-08(D) Health and Safety Cost Breakdown

NB: This Safety Cost breakdown is required to illustrate to Transnet that safety costs have been factored into your tender price, and will not be paid for as a separate expense.

Tenderer (Company)	Responsible Person	Designation	Date
Project/Tender Title	Project/Tender No.	Project Location / Description	

#	Cost element	Unit Cost (R)	# of Units	Total Cost (R)
1.	Human Resources			
2.	Systems Documentation			
3.	Meetings & Administration			
4.	H&S Training			
5.	PPE & Safety Equipment			
6.	Signage & Barricading			
7.	Workplace Facilities			
8.	Emergency & Rescue Measures			
9.	Hygiene Surveys & Monitoring			
10.	Medical Surveillance			
11.	Safe Transport of Workers			
12.	HazMat Management (e.g. asbestos /silica)			
13.	Substance Abuse Testing (3 kits @R500 pm)			
14.	H&S Reward & Recognition			
15.	Other			

Total Health and Safety Estimate (R)	
Total Estimate Value (R)	
H&S Cost as % of Tender value	

Mandatory Agreement

OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (AS AMENDED)

AGREEMENT WITH MANDATORY

In terms of Section 37(1) & (2)

WRITTEN AGREEMENT ENTERED INTO AND BETWEEN

Transnet SOC Ltd

(Hereinafter referred to as the Employer)

AND

(Hereinafter referred to as Mandatory (Principal Contractor))

Compensation Fund Number :

Project Name :

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PREAMBLE

WHEREAS section 37(1) & (2) of the Occupational Health and Safety Act No 85 of 1993 ("the Act") requires that parties have an agreement in writing to ensure compliance by a mandatory in line with the provisions of the Act.

AND WHEREAS Transnet SOC Ltd requires the services of the Contractors to execute certain projects within its workshops.

AND WHEREAS TRANSNET SOC LTD can be better served by Contractors who have the infrastructure, specialist employees and expertise to execute such projects at the highest level of efficiency on short notice.

NOW THEREFORE the parties agree as follows;

1. DEFINITIONS

For the purpose of this agreement, unless the context indicates otherwise, the following definitions are set out for the terms indicated:

- 1.1 **"Act"** means the Occupational Health and Safety Act No 85 of 1993;
- 1.2 **"Agreement"** means this Mandatory agreement;
- 1.3 **"Contractor "** means the Mandatory;
- 1.4 **"COID Act"** means the Compensation for Occupational Injuries and Diseases Act No 130 of 1993.
- 1.5 **"Effective Date"** means the date of signature of this Agreement by the last party signing hereto;
- 1.6 **"Employer"** refers to TRANSNET SOC LTD;
- 1.7 **"Mandatory"** means an agent, Contractor or sub-contractor for work, but without derogating from the status in his own right as an employer or user;
- 1.8 **"Parties"** means TRANSNET SOC LTD and the Contractor, and **"Party"** shall mean either one of them, as the context indicates;
- 1.9 **"Principal Contract"** means the appointed contractor whereby such contractor has to provide goods and or services to TRANSNET SOC LTD.
- 1.10 **"Regulations"** means regulations promulgated in terms of the relevant legislation.
- 1.11 **"Section"** means the relevant section of the Occupational Health and Safety Act No 85 of 1993
- 1.12 **"Services"** means the services to be provided by the Contractor to TRANSNET SOC LTD.
- 1.13 **"TRANSNET SOC LTD"** means Transnet Group and all its operating divisions and Specialist units with (Registration No. **1990/000900/06**), a public company incorporated in accordance with the company laws of the Republic of South Africa;

2. INTERPRETATION

- 2.1 Clause headings in this Agreement are included for ease of reference only and do not form part of this Agreement for the purposes of interpretation or for any other purpose. No provision shall be construed against or interpreted to the disadvantage of either Party hereto by reason of such Party having or being deemed to have structured or drafted such provision.



- 2.2 Any term, word or phrase used in this Agreement, other than those defined under the clause heading "Definitions" shall be given its plain English meaning, and those terms, words, acronyms, and phrases used in this Agreement will be interpreted in accordance with the generally accepted meanings accorded thereto.
- 2.3 A reference to the singular incorporates a reference to the plural and vice versa.
- 2.4 A reference to natural persons incorporates a reference to legal persons and vice versa.
- 2.5 A reference to a particular gender incorporates a reference to the other gender.

3. REPORTING

- 3.1 The Mandatary and/or his designated person appointed in terms of Section 16(2) of the Occupational Health and Safety Act 85 of 1993 ("the OHS Act") shall report to the Risk Manager and/or a Project Manager and/or a representative designated by the Employer prior to commencing the work at the premises of the Employer.

4. WARRANTY OF COMPLIANCE

- 4.1 In terms of this Agreement the Mandatary warrants that he agrees to any of the arrangements and procedures as prescribed by the Employer and as provided for in terms of Section 37(2) of the OHS Act for the purposes of compliance with the OHS Act.
- 4.2 The Mandatary further warrants that he and/or his employees undertake to maintain such compliance with the OHS Act. Without derogating from the generality of the above, nor from the provisions of the said Agreement, the Mandatary shall ensure that the clauses as hereunder described are at all times adhered to by himself and his employees.
- 4.3 The Mandatary hereby undertakes to ensure that the health and safety of any other person on the premises is not endangered by the conduct of his activities and that of his employees.

5. APPOINTMENTS AND TRAINING

- 5.1 The Mandatary shall appoint competent persons as per Section 16(2) of the OHS Act. Any such appointed person shall be trained on any occupational health and safety matter and the OHS Act provisions pertinent to the work is to be performed under his responsibility. Copies of any appointments made by the Mandatary shall immediately be provided to the Employer.
- 5.2 The Mandatary shall further ensure that all his employees are trained on the health and safety aspects relating to the work to be done on the premises of the Employer and that they understand the hazards associated with such work being carried out on the premises. Without derogating from the foregoing, the Mandatary shall, in particular, ensure that all his users or operators of any materials, machinery or equipment are properly trained in the use of such materials, machinery or equipment.
- 5.3 Notwithstanding the provisions of the above, the Mandatary shall ensure that he, his appointed responsible persons and his employees are at all times familiar with the provisions of the OHS Act, and that they comply with the provisions of the Act.

6. SUPERVISION, DISCIPLINE AND REPORTING

- 6.1 The Mandatary shall ensure that all work performed on the Employer's a premise is done under strict supervision and that no unsafe or unhealthy work practices are permitted. Discipline regarding health and safety matters shall be strictly enforced against any of his employees regarding non-compliance by such employee with any health and safety matters.

- 6.2 The Mandatary shall further ensure that his employees report to him all unsafe or unhealthy work situations immediately after they become aware of such conditions and that he in turn immediately reports these to the Employer and/or his representative.

7. ACCESS TO THE OHS ACT

- 7.1 The Mandatary shall ensure that he has an updated copy of the OHS Act on site at all times and that this is accessible to his appointed responsible persons and employees, save that the parties may make arrangements for the Mandatary and his appointed responsible persons and employees to have access to the Employer's updated copy/copies of the Act.

8. COOPERATION

- 8.1 The Mandatary and/or his responsible persons and employees shall provide full co-operation and information if and when the Employer or his representative inquires into any occupational health and safety issues concerning the Mandatary. It is hereby recorded that the Employer and his representative shall at all times be entitled to make such inquiry.
- 8.2 Without derogating from the generality of the above, the Mandatary and his responsible persons shall make available to the Employer and his representative, on request, all and/or any checklists and inspection registers required to be kept by him in respect of any of his materials, machinery or equipment.

9. WORK PROCEDURES

- 9.1 The Mandatary shall, after having established the dangers associated with the work performed, develop and implement mitigation measures to minimize or eliminate such dangers for the purpose of ensuring a healthy and safe working environment. The Mandatary shall then ensure that his responsible persons and employees are familiar with such mitigation measures.
- 9.2 The Mandatary shall implement any other safe work practices as prescribed by the Employer and shall ensure that his responsible persons and employees are made conversant with such other safe work practices as prescribed by the Employer and that his responsible persons and employees adhere to such safe work practices.
- 9.3 The Mandatary shall ensure that work for which any permit is required by the Employer is not performed by his employees prior to the Employer obtaining such permit from the Mandatary.

10. HEALTH AND SAFETY MEETINGS

- 10.1 If required in terms of the OHS Act, the Mandatary shall establish his own health and safety committee(s) and ensure that his employees, being the committee members, provide health and safety representatives to attend the Employer's health and safety committee meetings.

11. COMPENSATION REGISTRATION

- 11.1 The Mandatary shall ensure that he has a valid proof of registration with the Compensation Commissioner, as required in terms of **COID Act**, and that all payments owing to the Commissioner are discharged. The Mandatary shall further ensure that the cover remain in force while any such employee is present on the premises.

12. MEDICAL EXAMINATIONS

- 12.1 The Mandatary shall ensure that all his employees undergo routine medical examinations and that they are medically fit for the purposes of the work they are to perform.

13. INCIDENT REPORTING AND INVESTIGATION

- 13.1 All incidents referred to in Section 24 of the OHS Act shall be reported by the Mandatary to the Department of Labour and to the Employer. The Employer shall further be provided with copies of any written documentation relating to any incident.
- 13.2 The Employer retains an interest in the reporting of any incident as described above as well as in any formal investigation and/or inquiry conducted in terms of section 32 of the OHS-Act into such incident.

14. SUBCONTRACTORS

- 14.1 The Mandatary shall notify the Employer of any subcontractor he may wish to perform work on his behalf on the Employer's premises. It is hereby recorded that all the terms and provisions contained in this clause shall be equally binding upon the subcontractor prior to the subcontractor commencing with the work. Without derogating from the generality of this paragraph:
 - 14.1.1 The Mandatary shall ensure that training as discussed under appointments and training, is provided prior to the subcontractor commencing work on the Employer's premises.
 - 14.1.2 The Mandatary shall ensure that work performed by the subcontractor is done under his strict supervision, discipline and reporting.
 - 14.1.3 The Mandatary shall inform the Employer of any health and safety hazards and/or issue that the subcontractor may have brought to his attention.
 - 14.1.4 The Mandatary shall inform the Employer of any difficulty encountered regarding compliance by the subcontractor with any health and safety instruction, procedure and/or legal provision applicable to the work the subcontractor performs on the Employer's premises.

15. SECURITY AND ACCESS

- 15.1 The Mandatary and his employees shall enter and leave the premises only through the main gate(s) and/or checkpoint(s) designated by the Employer. The Mandatary shall ensure that employees observe the security rules of the Employer at all times and shall not permit any person who is not directly associated with the work from entering the premises.
- 15.2 The Mandatary and his employees shall not enter any area of the premises that is not directly associated with their work.
- 15.3 The Mandatary shall ensure that all materials, machinery or equipment brought by him onto the premises are recorded at the main gate(s) and/or checkpoint(s). Failure to do this may result in a refusal by the Employer to allow the materials, machinery or equipment to be removed from the Employer's premises.

16. FIRE PRECAUTIONS AND FACILITIES

- 16.1 The Mandatary shall ensure that an adequate supply of fire-protection and first-aid facilities are provided for the work to be performed on the Employer's premises, save that the Parties may mutually make arrangements for the provision of such facilities.
- 16.2 The Mandatary shall further ensure that all his employees are familiar with fire precautions at the premises, which includes fire-alarm signals and emergency exits, and that such precautions are adhered to.

17. ABLUTION FACILITIES

- 17.1 The Mandatary shall ensure that an adequate supply of ablution facilities are provided for his employees performing work on the Employer's premises, save that the parties may mutually make arrangements for the provision of such facilities.

18. HYGIENE AND CLEANLINESS

- 18.1 The Mandatary shall ensure that the work site and surround area is at all times maintained to the reasonably practicable level of hygiene and cleanliness. In this regard, no loose materials shall be left lying about unnecessarily and the work site shall be cleared of waste material regularly and on completion of the work.

19. NO NUISANCE

- 19.1 The Mandatary shall ensure that neither he nor his employees undertake any activity that may cause environmental impairment or constitute any form of nuisance to the Employer and/or his surroundings.
- 19.2 The Mandatary shall ensure that no hindrance, hazard, annoyance or inconvenience is inflicted on the Employer, another Mandatary or any tenants. Where such situations are unavoidable, the Mandatary shall give prior notice to the Employer.

20. INTOXICATION NOT ALLOWED

- 20.1 No intoxicating substance of any form shall be allowed on site. Any person suspected of being intoxicated shall not be allowed on the site. Any person required to take medication shall notify the relevant responsible person thereof, as well as the potential side effects of the medication.

21. PERSONAL PROTECTIVE EQUIPMENT

- 21.1 The Mandatary shall ensure that his responsible persons and employees are provided with adequate personal protective equipment (PPE) for the work they may perform and in accordance with the requirements of General Safety Regulation 2 (1) of the OHS Act. The Mandatary shall further ensure that his responsible persons and employees wear the PPE issued to them at all material times.

22. PLANT, MACHINERY AND EQUIPMENT

- 22.1 The Mandatary shall ensure that all the plant, machinery, equipment and/or vehicles he may wish to utilize on the Employer's premises is/are at all times of sound order and fit for the purpose for which it/they is/are attended to, and that it/they complies/comply with the requirements of Section 10 of the OHS Act.
- 22.2 In accordance with the provisions of Section 10(4) of the OHS Act, the Mandatary hereby assumes the liability for taking the necessary steps to ensure that any article or substance that it erects or installs at the premises, or manufactures, sells or supplies to or for the Employer, complies with all the prescribed requirements and will be safe and without risks in terms of health and safety when properly used.

23. NO USAGE OF THE EMPLOYER'S EQUIPMENT

- 23.1 The Mandatary hereby acknowledges that his employees are not permitted to use any materials, machinery or equipment of the Employer unless the prior written consent of the Employer has been obtained, in which case the Mandatary shall ensure that only those persons authorized to make use of such materials, machinery or equipment, have access thereto.

24. TRANSPORT

- 24.1 The Mandatary shall ensure that all road vehicles used on the premises are in a roadworthy condition and are licensed and insured. The Mandatary shall ensure that all drivers shall have relevant and valid driving licenses and the Mandatary shall ensure that no vehicle/s shall carry passengers unless it is

specifically designed to do and that all drivers shall adhere to the speed limits and road signs on the premises at all times.

- 24.2 In the event that any hazardous substances are to be transported on the premises, the Mandatory shall ensure that the requirements of the Hazardous Substances Act 15 of 1973 are complied with fully all times.

25. CLARIFICATION

- 25.1 In the event that the Mandatory requires clarification of any of the terms or provisions of this Agreement, he should take the necessary steps to contact the Risk Manager of the Employer to obtain such clarification.

26. DURATION OF AGREEMENT

- 26.1 This Agreement shall remain in force for the duration of the work to be performed by the Mandatory and/or while any of the Mandatory's employees are present on the Employer's premises.

27. NON COMPLIANCE WITH THE AGREEMENT

- 27.1 If the Mandatory fails to comply with any provisions of this Agreement, the Employer shall be entitled to give the mandatory 7 (seven) days written notice to remedy such non-compliance and if the Mandatory fails to comply with such notice, then the Employer shall forthwith be entitled but not obliged, without prejudice to any other rights or remedies which the mandatory may have in law,

271.1 to suspend the main Agreement; or

27.1.2 To claim immediate performance and/or payment of such obligations.

- 27.2 Should mandatory continue to breach the contract on three occasions, then the Employer is authorised to suspend the main contract without complying with the condition stated in the clause above.

28. HEADINGS

The headings as contained in this Agreement are for reference purposes only and shall not be construed as having any interpretative value in them or as giving any indication as to the meaning of the contents of the paragraphs contained in this Agreement.

Thus done and signed

at _____ on the _____ day of _____ 201__

For and on behalf of the Employer

Witnesses:

1. _____

2. _____

at _____ on the _____ day of _____ 201____

for and on behalf of the Mandatary

Witnesses:

3. _____

4. _____



Transnet SOC Limited Registration Number 1990/00900/06

TRANSNET SPECIFICATION

E7/1 - SPECIFICATION FOR GENERAL WORK AND WORKS ON, OVER, UNDER OR ADJACENT TO RAILWAY LINES AND NEAR HIGH VOLTAGE EQUIPMENT





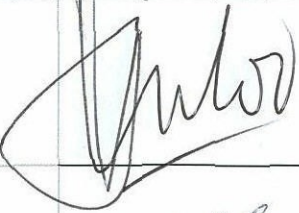



(This specification shall be used in network operator contracts)

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SPECIFICATION FOR GENERAL WORK AND WORKS ON, OVER, UNDER OR ADJACENT TO RAILWAY LINES AND NEAR HIGH VOLTAGE EQUIPMENT

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Date: May 2011

(This page not to be issued with contract)



Transnet SOC Limited Registration Number 1990/00900/06

TRANSNET SPECIFICATION

E7/1 - SPECIFICATION FOR GENERAL WORK AND WORKS ON, OVER, UNDER OR ADJACENT TO RAILWAY LINES AND NEAR HIGH VOLTAGE EQUIPMENT

(This specification shall be used in network operator contracts)

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1.0 SCOPE

- 1.1 This specification covers the network operator's requirements for general work and works on, over, under or adjacent to railway lines and near high voltage equipment.

2.0 DEFINITIONS

The following definitions shall apply:

"Authorised Person" - A person whether an employee of the network operator or not, who has been specially authorised to undertake specific duties in terms of Transnet' publication Electrical Safety Instructions, and who holds a certificate or letter of authority to that effect.

"Barrier" Any device designed to restrict access to "live" high-voltage electrical equipment.

"Bond" - A short conductor installed to provide electrical continuity.

"Contractor" - Any person or organisation appointed by the network operator to carry out work on its behalf.

"Contract Supervisor" - The person or juristic person appointed by the network operator from time to time as the Contract Supervisor, to administer the Contractor's performance and execution of the Works according to the powers and rights held by and obligations placed upon the Contract Supervisor in terms of the Contract.

"Dead" - Isolated and earthed.

"Electrical Officer (Contracts)" - The person appointed in writing by the Project Manager in terms of this specification as the person who shall be consulted by the Contractor in all electrical matters to ensure that adequate safety precautions are taken by the Contractor.

"Executive Officer" - The person appointed by the network operator from time to time as the Executive Officer to act according to the rights and powers held by and obligations placed upon him in terms of the Contract.

"High-Voltage" - A voltage normally exceeding 1000 volts.

"Live" - A conductor is said to be "live" when it is at a potential different from that of the earth or any other conductor of the system of which it forms a part.

"Near" - To be in such a position that a person's body or the tools he is using or any equipment he is handling may come within 3 metres of "live" exposed high-voltage electrical equipment.

"Occupation" - An authorisation granted by the network operator for work to be carried out under specified conditions on, over, under or adjacent to railway lines.

"Occupation Between Trains" - An occupation during an interval between successive trains.

"Optical Fibre Cable" - Buried or suspended composite cable containing optical fibres used in:

- telecommunication networks for transmission of digital information and
- safety sensitive train operations systems.

"Project Manager" – As defined in the special conditions of the contract. The person or juristic person appointed by the network operator from time to time as the Project Manager, to administer the Contract according to the powers and rights held by and obligations placed upon him in terms of the Contract.

"Responsible Representative" - The responsible person in charge, appointed by a contractor, who has undergone specific training (and holds a certificate) to supervise (general or direct) staff under his control who perform general work or to work on, over, under or adjacent to railway lines and in the vicinity of high-voltage electrical equipment.

"Total Occupation" - An occupation for a period when trains are not to traverse the section of line covered by the occupation.

"Work on" - Work undertaken on or so close to the equipment that the specified working clearances to the "live" equipment cannot be maintained.

"Work Permit" - A combined written application and authority to proceed with work on or near dead electrical equipment.

"Works" – The contractual intent for the work to be done as defined in the contract at a defined work site.

PART A - GENERAL SPECIFICATION

3.0 AUTHORITY OF OFFICERS OF TRANSNET

- 3.1 The Contractor shall co-operate with the officers of the network operator and shall comply with all instructions issued and restrictions imposed with respect to the Works which bear on the existence and operation of the network operator's railway lines and high-voltage equipment.
- 3.2 Without limiting the generality of the provisions of clause 3.1, any duly authorised representative of the network operator, having identified himself, may stop the work if, in his opinion, the safe passage of trains or the safety of the network operator's assets or any person is affected. **CONSIDERATIONS OF SAFETY SHALL TAKE PRECEDENCE OVER ALL OTHER CONSIDERATIONS.**

4.0 CONTRACTOR'S REPRESENTATIVES AND STAFF

- 4.1 The Contractor shall nominate Responsible Representatives of whom at least one shall be available at any hour for call-out in cases of emergency. The Contractor shall provide the Contract Supervisor with the names, addresses and telephone numbers of the representatives.
- 4.2 The Contractor guarantees that he has satisfied himself that the Responsible Representative is fully conversant with this specification and that he shall comply with all his obligations in respect thereof.
- 4.3 The Contractor shall ensure that all contractor staff receives relevant awareness, educational and competence training regarding safety as prescribed.

5.0 OCCUPATIONS AND WORK PERMITS

- 5.1 Work to be done during total occupation or during an occupation between trains or under a work permit shall be done in a manner decided by the Contract Supervisor and at times to suit the network operator requirements.
- 5.2 The Contractor shall organise the Works in a manner which will minimise the number and duration of occupations and work permits required.
- 5.3 The network operator will not be liable for any financial or other loss suffered by the Contractor arising from his failure to complete any work scheduled during the period of an occupation or work permit.
- 5.4 The Contractor shall submit to the Contract Supervisor, in writing, requests for occupations or work permits together with details of the work to be undertaken, at least 21 days before they are required. The network operator does not undertake to grant an occupation or work permit for any particular date, time or duration.
- 5.5 The network operator reserves the right to cancel any occupation or work permit at any time before or during the period of occupation or work permit. If, due to cancellation or change in date or time, the Contractor is not permitted to start work under conditions of total occupation or work permit at the time arranged, all costs caused by the cancellation shall be born by the Contractor except as provided for in clauses 5.6 to 5.8.
- 5.6 When the Contractor is notified less than 2 hours before the scheduled starting time that the occupation or work permit is cancelled, he may claim reimbursement of his direct financial losses caused by the loss of working time up to the time his labour and plant are employed on other work, but not exceeding the period of the cancelled occupation or work permit.
- 5.7 When the Contractor is notified less than 2 hours before the scheduled starting time, or during an occupation or work permit, that the duration of the occupation or work permit is reduced, he may claim reimbursement of his direct financial losses caused by the loss of working time due to the reduced duration of the occupation or work permit.
- 5.8 Reimbursement of the Contractor for any loss of working time in terms of clause 5.6 and 5.7, shall be subject to his claims being submitted within 14 days of the event with full details of labour and plant involved, and provided that the Contract Supervisor certifies that no other work on which the labour and plant could be employed was immediately available.
- 5.9 Before starting any work for which an occupation has been arranged, the Contractor shall obtain from the Contract Supervisor written confirmation of the date, time and duration of the occupation.
- 5.10 Before starting any work for which a work permit has been arranged, the Responsible Representative shall read and sign portion C of the Work Permit, signifying that he is aware of the work boundaries within which work may be undertaken. After the work for which the permit was granted has been completed, or when the

work permit is due to be terminated, or if the permit is cancelled after the start, the same person who signed portion C shall sign portion D of the Work Permit, thereby acknowledging that he is aware that the electrical equipment is to be made "live". The Contractor shall advise all his workmen accordingly.

6.0 SPEED RESTRICTIONS AND PROTECTION

- 6.1 When speed restrictions are imposed by the network operator because of the Contractor's activities, the Contractor shall organise and carry out his work so as to permit the removal of the restrictions as soon as possible.
- 6.2 When the Contract Supervisor considers protection to be necessary the Contractor shall, unless otherwise agreed, provide all protection including flagmen, other personnel and all equipment for the protection of the network operator's and the Contractor's personnel and assets, the public and including trains.
- 6.2.1 The network operator will provide training free of charge of the Contractor's flagmen and other personnel performing protection duties. The Contractor shall consult with the Contract Supervisor, whenever he considers that protection will be necessary, taking into account the minimum permissible clearances set out in the Manual for Track Maintenance (Document no. BBB0481):
- Drawing no. BE-97 Sheet 1: Horizontal Clearances: 1065mm gauge (Annexure 1 sheet 1)
 - Drawing no. BE-97 Sheet 2: Vertical Clearances: 1065mm gauge (Annexure 1 sheet 2)
 - Drawing no. BE-97 Sheet 3: Clearances: Platform (Annexure 1 sheet 3)
 - Drawing no. BE-97 Sheet 5: Clearances: 610mm Gauge (Annexure 1 sheet 5)
- 6.3 The Contractor shall appoint a Responsible Representative to receive and transmit any instruction which may be given by the network operator personnel providing protection.

7.0 ROADS AND ROADS ON THE NETWORK OPERATOR'S PROPERTY

- 7.1 The Contractor shall take every reasonable precaution to prevent damage to any roads or bridges used to obtain access to the site, and shall select routes, use vehicles, and restrict loads so that any extraordinary traffic as may arise from the moving of plant or material to or from the site shall be limited as far as is reasonably possible.
- 7.2 The Contractor shall not occupy or interfere in any way with the free use of any public or private road, right-of-way, path or street unless the Contract Supervisor has obtained the approval of the road authority concerned.

8.0 CLEARANCES

- 8.1 No temporary works shall encroach on the appropriate minimum clearances set out in the Manual for Track Maintenance (Document no. BBB0481):
- Drawing no. BE-97 Sheet 1: Horizontal Clearances: 1065mm gauge (Annexure 1 sheet 1)
 - Drawing no. BE-97 Sheet 2: Vertical Clearances: 1065mm gauge (Annexure 1 sheet 2)
 - Drawing no. BE-97 Sheet 3: Clearances: Platform (Annexure 1 sheet 3)
 - Drawing no. BE-97 Sheet 5: Clearances: 610mm Gauge (Annexure 1 sheet 5)

9.0 STACKING OF MATERIAL

- 9.1 The Contractor shall not stack any material closer than 3m from the centre line of any railway line without prior approval of the Contract Supervisor.

10.0 EXCAVATION, SHORING, DEWATERING AND DRAINAGE

- 10.1 Unless otherwise approved by the Contract Supervisor any excavation adjacent to a railway line shall not encroach on the hatched area shown in Figure 1.

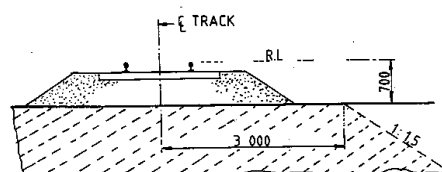


Fig. 1.

- 10.2 The Contractor shall provide, at his own cost any shoring, dewatering or drainage of any excavation unless otherwise stipulated elsewhere in the Contract.
- 10.3 Where required by the Contract Supervisor, drawings of shoring for any excavation under or adjacent to a railway line shall be submitted and permission to proceed, obtained before the excavation is commenced.
- 10.4 The Contractor shall prevent ingress of water to the excavation but where water does enter, he shall dispose of it as directed by the Contract Supervisor.
- 10.5 The Contractor shall not block, obstruct or damage any existing drains either above or below ground level unless he has made adequate prior arrangements to deal with drainage.

11.0 FALSEWORK FOR STRUCTURES

- 11.1 Drawings of falsework for the construction of any structure over, under or adjacent to any railway line shall be submitted to the Contract Supervisor and his permission to proceed obtained before the falsework is erected. Each drawing shall be given a title and a distinguishing number and shall be signed by a registered professional engineer certifying that he has checked the design of the falsework and that the drawings are correct and in accordance with the design.
- 11.2 After the falsework has been erected and before any load is applied, the Contractor shall submit to the Contract Supervisor a certificate signed by a registered professional engineer certifying that he has checked the falsework and that it has been erected in accordance with the drawings. Titles and numbers of the drawings shall be stated in the certificate. Notwithstanding permission given by the Contract Supervisor to proceed, the Contractor shall be entirely responsible for the safety and adequacy of the falsework.

12.0 PILING

- 12.1 The Contract Supervisor will specify the conditions under which piles may be installed on the network operator's property.

13.0 UNDERGROUND SERVICES

- 13.1 No pegs or stakes shall be driven or any excavation made before the Contractor has established that there are no underground services which may be damaged thereby.
- 13.2 Any damage shall be reported immediately to the Contract Supervisor, or to the official in charge at the nearest station, or to the traffic controller in the case of centralised traffic control.

14.0 BLASTING AND USE OF EXPLOSIVES

- 14.1 When blasting within 500m of a railway line, the Contractor shall observe the requirements stipulated in this specification.
- 14.2 No blasting shall be carried out except with the prior written permission of the Contract Supervisor and under such conditions as he may impose.
- 14.3 On electrified lines the Contractor shall also obtain the permission of the Electrical Officer (Contracts) before blasting, and shall give at least 21 days notice of his intention to blast. No blasting shall be done in the vicinity of electrified lines unless a member of the network operator's electrical personnel is present.
- 14.4 The Contractor shall arrange for the supply, transport storage and use of explosives.
- 14.5 The Contractor shall have labour, tools and plant, to the satisfaction of the Contract Supervisor, available on the site to clear immediately any stones or debris deposited on the track or formation by blasting, and to repair any damage to the track or formation immediately after blasting. Repairs to the track shall be carried out only under the supervision of a duly authorised representative of the network operator.
- 14.6 The Contractor shall notify the Contract Supervisor of his intention to blast at least 21 days before the commencement of any blasting operations.
- 14.7 Before any blasting is undertaken, the Contractor and the Contract Supervisor shall jointly examine and measure up any buildings, houses or structures in the vicinity of the proposed blasting to establish the extent of any existing cracking or damage to such structures, etc. The Contractor, shall, subject to the provisions stipulated in the Contract Insurance Policy, make good any deterioration of such buildings, houses, or structures, which, in the opinion of the Contract Supervisor, was directly caused by the blasting.
- 14.8 After completion of the blasting the Contractor shall obtain a written clearance from each landowner in

the vicinity of the blasting operations to the effect that all claims for compensation in respect of damage caused by the blasting operations to their respective properties, have been settled.

- 14.9 The Contractor shall provide proof that he has complied with the provisions of clauses 10.17.1 to 10.17.4 of the Explosives Regulations (Act 26 of 1956 as amended).
- 14.10 Blasting within 500m of a railway line will only be permitted during intervals between trains. A person appointed by the Contract Supervisor, assisted by flagmen with the necessary protective equipment, will be in communication with the controlling railway station.
- Only this person will be authorised to give the Contractor permission to blast, and the Contractor shall obey his instructions implicitly regarding the time during which blasting may take place.
- 14.11 The flagmen described in clause 14.10, where provided by the network operator, are for the protection of trains and the network operator's property only, and their presence does not relieve the Contractor in any manner of his responsibilities in terms of Explosives Act or Regulations, or any obligation in terms of this Contract.
- 14.12 The person described in clause 14.10 will record in a book provided and retained by the network operator, the dates and times:-
- (i) when each request is made by him to the controlling station for permission to blast;
 - (ii) when blasting may take place;
 - (iii) when blasting actually takes place; and
 - (iv) when he advises the controlling station that the line is safe for the passage of trains.
- 14.13 Before each blast the Contractor shall record in the same book, the details of the blast to be carried out. The person appointed by the Contract Supervisor and the person who will do the blasting shall both sign the book whenever an entry described in clause 14.12 is made.

15.0 RAIL TROLLEYS

- 15.1 The use of rail trolleys or trestle trolleys on a railway line for working on high voltage equipment will be permitted only if approved by the Contract Supervisor and under the conditions stipulated by him.
- 15.2 All costs in connection with trolley working and any train protection services requested by the Contractor shall, be borne by the Contractor, unless otherwise agreed.

16.0 SIGNAL TRACK CIRCUITS

- 16.1 Where signal track circuits are installed, the Contractor shall ensure that no material capable of conducting an electrical current makes contact between rails of railway line/lines.
- 16.2 No signal connections on track-circuited tracks shall be severed without the Contract Supervisor's knowledge and consent.

17.0 PENALTY FOR DELAYS TO TRAINS

- 17.1 If any trains are delayed by the Contractor and the Contract Supervisor is satisfied that the delay was avoidable, a penalty will be imposed on the Contractor as stipulated in the contract, for the period and number of trains delayed.

18.0 SURVEY BEACONS AND PEGS

- 18.1 The Contractor shall not on any account move or damage any beacon, bench mark, reference mark, signal or trigonometrical station in the execution of the Works without the written approval of the Contract Supervisor.

Should the Contractor be responsible for any such occurrence, he shall report the circumstances to the Contract Supervisor who will arrange with the Director-General of Surveys for replacement of the beacon or mark at the cost of the Contractor.

- 18.2 The Contractor shall not move or damage any cadastral or mining beacon without the written approval of the Contract Supervisor and before it has been referenced by a registered land surveyor. Any old boundary beacon, which becomes an internal beacon on creation of new boundaries, shall not be moved without the written approval of the Contract Supervisor.

Should the Contractor move or damage any cadastral or mining beacon without authority, he shall be responsible for having it replaced, at his cost, by a land surveyor.

- 18.3 The Contractor shall preserve all pegs and bench marks. Such survey points shall not be removed without the written approval of the Contract Supervisor. Should any peg or benchmark be removed without authority, the Contract Supervisor will arrange for its replacement and the cost will be recovered from the Contractor. No claim will be considered for delay in replacing any such peg or bench mark. Each peg replaced shall be checked by the Contractor.
- 18.4 Where a new boundary has been established, beacons on the fence line shall not be disturbed, and fence posts or anchors may not be placed or excavations made within 0,6 m of any beacon without the prior written approval of the Contract Supervisor.

19.0 TEMPORARY LEVEL CROSSINGS

- 19.1 The Contract Supervisor may, on request of the Contractor, and if necessary for the purpose of execution of the Works, permit the construction of a temporary level crossing over a railway a line at a position approved by the Contract Supervisor and at the Contractor's cost. The period for which the temporary level crossing is permitted will be at the discretion of the Contract Supervisor.

- 19.2 The Contractor will provide protection and supervise the construction of the road over the track(s) and within the railway servitude at the level crossing, as well as the erection of all road signs and height gauges. All cost to be borne by the applicant.

The Contractor shall exercise extreme caution in carrying out this work, especially in respect of damage to tracks, services, overhead power and communications routes and prevent contact with "live" overhead electrical equipment.

Unless otherwise agreed, the Contractor will provide the service deviations or alterations to the network operator's track-, structure-, drainage-, electrical-, telecommunications- and train authorisation systems to accommodate the level crossing.

- 19.3 The Contractor shall take all necessary steps including the provision of gates, locks and, where necessary, watchmen to restrict the use of the temporary level crossing to himself and his employees, his subcontractors and their employees, the staff of the network operator and to such other persons as the Contract Supervisor may permit and of whose identity the Contractor will be advised. If so ordered by the Contract Supervisor, the Contractor shall provide persons to control road traffic using the temporary level crossing. Such persons shall stop all road traffic when any approaching train is within seven hundred and fifty (750) metres of the temporary level crossing, and shall not allow road traffic to proceed over it until the lines are clear.
- 19.4 The Contractor shall maintain the temporary level crossing within the railway servitude in good condition for the period it is in use. A temporary agreement with the road authority to be concluded for the maintenance of the level crossing outside the railway servitude.
- 19.5 When the temporary level crossing is no longer required by the Contractor, or permitted by the network operator, the Contractor shall at his own cost remove it and restore the site and the network operator's track-, structure-, drainage-, electrical-, telecommunications- and train authorisation systems to its original condition. Work over the tracks and within the railway servitude will be supervised by the network operator.

20.0 COMPLETION OF THE WORKS

- 20.1 On completion of the works, the Contractor shall remove all the remaining construction plant and material from the site, other than material which is the property of the network operator, and leave the site in a clean, neat and tidy condition. If material and plant is required for the liability and maintenance period the Contract supervisor must authorise it's retention on site.

21.0 PROTECTION OF PERSONS AND PROPERTY

- 21.1 The Contractor shall provide and maintain all lights, guards, barriers, fencing and watchmen when and where necessary or as required by the Contract Supervisor or by any statutory authority, for the protection of the Works and for the safety and convenience of the public.

Red, yellow, green or blue lights may not be used by the Contractor as they can be mistaken for signals. Red, yellow, green or white flags shall only be used for protection by the Contractor. Within the precincts of a port the Contractor shall obtain the permission of the Port Captain before installing any light.

- 21.2 The Contractor shall take all the requisite measures and precautions during the course of the Works to:
- (i) protect the public and property of the public,
 - (ii) protect the property and workmen of both the network operator and the Contractor,
 - (iii) avoid damage to and prevent trespass on adjoining properties, and
 - (iv) ensure compliance with any instruction issued by the Contract Supervisor or other authorised person, and with any stipulation embodied in the contract documents which affects the safety of any person or thing.
- 21.3 The network operator will provide, at its own cost, protection for the safe working of trains during such operations as the Contract Supervisor may consider necessary. Protection by the network operator for any purpose whatsoever, does not absolve the Contractor of his responsibilities in terms of the Contract.
- 21.4 The Contractor shall take all precautions and appoint guards, watchmen and compound managers for prevention of disorder among and misconduct by the persons employed on the Works and by any other persons, whether employees or not, on the work site and for the preservation of the peace and protection of persons and property in the direct neighbourhood. Any relocation of camps because of disorder shall be at the Contractor's expense.
- 21.5 All operations necessary for the execution of the Works, including the provision of any temporary work and camping sites, shall be carried out so as not to cause veldt fires, ground and environmental pollution, soil erosion or restriction of or interference with streams, furrows, drains and water supplies.
- If the original surface of the ground is disturbed in connection with the Works, it shall be made good by the Contractor to the satisfaction of the land owner, occupier or responsible authority.
- 21.6 The Contractor shall take all reasonable steps to minimise noise and disturbance when carrying out the Works, including work permitted outside normal working hours.
- 21.7 Dumping of waste or excess materials by the Contractor shall, in urban areas, be done under the direction and control of, and at sites made available by the local authority. Dumping outside local authority boundaries shall be done only with the express permission and under the direction and control of the Contract Supervisor.
- 21.8 The Contractor shall comply with environmental protection measures and specifications stipulated by the Contract Supervisor and/or local and environmental authorities.
- 22.0 INTERFERENCE WITH THE NETWORK OPERATOR'S ASSETS AND WORK ON OPEN LINES**
- 22.1 The Contractor shall not interfere in any manner whatsoever with an open line, nor shall he carry out any work or perform any act which affects the security, use or safety of an open line except with the authority of the Contract Supervisor and in the presence of a duly authorised representative of the network operator.
- 22.2 The Contractor shall not carry out any work or operate any plant, or place any material whatsoever nearer than three metres from the centre line of any open line except with the written permission of the Contract Supervisor and subject to such conditions as he may impose.
- 22.3 Care must be taken not to interfere with or damage any services such as overhead wire routes, cables or pipes and optical fibre cable, except as provided for the work specified. The Contractor will be held responsible for any damage to or interruption of such services arising from any act or omission on his part or of any of his employees, or persons engaged by him on the Works. The cost of repairing, replacing or restoring the services, as well as all other costs arising from any damage to services, shall be borne by, and will be recovered from the Contractor.
- 22.4 Authority granted by the Contract Supervisor and the presence of an authorised representative of the network operator in terms hereof, shall not relieve the Contractor of his duty to comply with this specification.
- 23.0 ACCESS, RIGHTS-OF-WAY AND CAMPSITES**
- 23.1 Where entry onto the network operator's property is restricted, permission to enter will be given only for the purpose of carrying out the Works and will be subject to the terms and conditions laid down by the network operator.
- 23.2 The Contractor shall arrange for campsites, workplaces and access thereto as well as for any right-of-

way over private property to the site of the Works, and for access within the boundaries of the network operator's property. The owners of private property to be traversed shall be approached and treated with tact and courtesy by the Contractor, who shall, if necessary, obtain a letter of introduction to such property owners from the Contract Supervisor.

The Contractor shall be responsible for the closing of all gates on roads and tracks used by him or his employees. Except with the prior approval of the Contract Supervisor and the owner or occupier of any private land to be traversed, the Contractor shall not cut, lower, damage, remove or otherwise interfere with any fence or gate which is either on the network operator's property or on private property and which restricts access to the Works. Where such approval has been given, the Contractor shall prevent entry of animals or unauthorised persons onto the network operator's or private property, and shall make the fences safe against trespass at the close of each day's work.

23.3 The Contractor shall take all reasonable steps to confine the movement of vehicles and plant to the approved right-of-way to minimise damage to property, crops and natural vegetation.

23.4 When access is no longer required, and before completion of the Works, the Contractor shall repair, restore or replace any fence or gate damaged during execution of the Works to the satisfaction of the Contract Supervisor and shall furnish the Contract Supervisor with a certificate signed by the owner and occupier of land over which he has gained access to a campsite, workplace and the Works, certifying that the owner and occupier have no claim against the Contractor or the network operator arising from the Contractor's use of the land. Should the Contractor be unable to obtain the required certificate, he shall report the circumstances to the Contract Supervisor.

24.0 SUPERVISION

24.1 The Contract Supervisor will provide overall technical superintendence of the Works, and may direct the Contractor in terms of the provisions of the Contract or in respect of any measures which the Contract Supervisor may require for the operations of the network operator, the safety of trains, property and workmen of the network operator, and for the safety of other property and persons. The Contractor shall carry out the directions of the Contract Supervisor. The superintendence exercised by the Contract Supervisor, including any agreement, approval, refusal or withdrawal of any approval given, shall not relieve the Contractor of any of his duties and liabilities under the Contract, and shall not imply any assumption by the network operator or by the Contract Supervisor of the legal and other responsibilities of the Contractor in carrying out the Works.

24.2 The Contract Supervisor may delegate to any deputy or other person, any of his duties or functions under the Contract. On receiving notice in writing of such delegation, the Contractor shall recognise and obey the deputy or person to whom any such duties or functions have been delegated as if he were the Contract Supervisor.

24.3 The Contractor shall exercise supervision over the Works at all times when work is performed or shall be represented by an agent having full power and authority to act on behalf of the Contractor. Such agent shall be competent and responsible, and have adequate experience in carrying out work of a similar nature to the Works, and shall exercise personal supervision on behalf of the Contractor. The Contract Supervisor shall be notified in writing of such appointment which will be subject to his approval.

24.4 The Contractor or his duly authorised agent shall be available on the site at all times while the Works are in progress to receive the orders and directions of the Contract Supervisor.

25.0 HOUSING OF EMPLOYEES

25.1 The Contractor shall, where necessary, make his own arrangements for suitable housing of his employees. Where temporary housing is permitted by the Contract Supervisor on any part of the site, the Contractor shall provide suitable sanitation, lighting and potable water supplies in terms of the requirements of the local authority or the current network operator's specification; Minimum Communal Health Requirements in Areas outside the Jurisdiction of a Local Authority - E.4B, as applicable.

25.2 Fouling the area inside or outside the network operator's boundaries shall be prevented. The Contractor will be called upon by the Contract Supervisor to dispose of any foul or waste matter generated by the Contractor.

26.0 OPTICAL FIBRE CABLE ROUTES

26.1 The Contractor shall not handle, impact, move or deviate any optical fibre cable without prior approval.

26.2 Works that in any way affect the optical fibre cable requires prior approval from the Contract Supervisor

who will determine the work method and procedures to be followed.

PART B - SPECIFICATION FOR WORK NEAR HIGH-VOLTAGE ELECTRICAL EQUIPMENT

27.0 GENERAL

- 27.1 This specification is based on the contents of Transnet's publication ELECTRICAL SAFETY INSTRUCTIONS, as amended, a copy of which will be made available on loan to the Contractor for the duration of the contract.
- These instructions apply to all work near "live" high-voltage equipment maintained and/or operated by the network operator, and the onus rests on the Contractor to ensure that he obtains a copy.
- 27.2 This specification must be read in conjunction with and not in lieu of the Electrical Safety Instructions.
- 27.3 The Contractor's attention is drawn in particular to the contents of Part I, Sections 1 and 2 of the Electrical Safety Instructions.
- 27.4 The Electrical Safety Instructions cover the minimum safety precautions which must be taken to ensure safe working on or near high-voltage electrical equipment, and must be observed at all times. Should additional safety measures be considered necessary because of peculiar local conditions, these may be ordered by and at the discretion of the Electrical Officer (Contracts).
- 27.5 The Contractor shall obtain the approval of the Electrical Officer (Contracts) before any work is done which causes or could cause any portion of a person's body or the tools he is using or any equipment he is handling, to come within 3 metres of any "live" high-voltage equipment.
- 27.6 The Contractor shall regard all high-voltage equipment as "live" unless a work permit is in force.
- 27.7 Safety precautions taken or barriers erected shall comply with the requirements of the Electrical Officer (Contracts), and shall be approved by him before the work to be protected is undertaken by the Contractor. The Contractor shall unless otherwise agreed, bear the cost of the provision of the barriers and other safety precautions required, including the attendance of the network operator's staff where this is necessary.
- 27.8 No barrier shall be removed unless authorised by the Electrical Officer (Contracts).

28.0 WORK ON BUILDINGS OR FIXED STRUCTURES

- 28.1 Before any work is carried out or measurements are taken on any part of a building, fixed structure or earthworks of any kind above ground level situated within 3 metres of "live" high-voltage equipment, the Electrical Officer (Contracts) shall be consulted to ascertain the conditions under which the work may be carried out.
- 28.2 No barrier erected to comply with the requirements of the Electrical Officer (Contracts) shall be used as temporary staging or shuttering for any part of the Works.
- 28.3 The shuttering for bridge piers, abutments, retaining walls or parapets adjacent to or over any track may be permitted to serve as a barrier, provided that it extends at least 2,5 metres above any working level in the case of piers, abutments and retaining walls and 1,5 metres above any working level in the case of parapets.

29.0 WORK DONE ON OR OUTSIDE OF ROLLING STOCK, INCLUDING LOADING OR UNLOADING

- 29.1 No person may stand, climb or work, whilst on any platform, surface or foothold:
- 29.1.1 higher than the normal unrestricted access way, namely -
 - 29.1.1.1 external walkways on diesel, steam and electric locomotives, steam heat vans, etc. and
 - 29.1.1.2 walkways between coaches and locomotives.
 - 29.1.2 of restricted access ways in terms of the Electrical Safety Instructions namely -
 - 29.1.2.1 the floor level of open wagons
 - 29.1.2.2 external walkways or decks of road-rail vehicles, on-track maintenance machines and material trains.
 - 29.1.3 Unauthorised staff working on these platforms must be directly supervised by duly authorised persons in terms of clause 607.1.3 of the Electrical Safety Instructions. These persons must attend the relevant electrical safety module training. A letter of training must then be issued by an accredited training authority. A Category C Certificate of Authority must be obtained from the

local depot examining officer.

- 29.2 When in the above positions no person may raise his hands or any equipment he is handling above his head.
- 29.3 In cases where the Contractor operates his own rail mounted equipment, he shall arrange for the walkways on this plant to be inspected by the Electrical Officer (Contracts) and approved, before commencement of work.
- 29.4 The handling of long lengths of material such as metal pipes, reinforcing bars, etc should be avoided, but if essential they shall be handled as nearly as possible in a horizontal position below head height.
- 29.5 The Responsible Representative shall warn all persons under his control of the danger of being near "live" high-voltage equipment, and shall ensure that the warning is fully understood.
- 29.6 Where the conditions in clauses 30.1 to 30.4 cannot be observed the Electrical Officer (Contracts), shall be notified. He will arrange for suitable Safety measures to be taken. The Electrical Officer (Contracts), may in his discretion and in appropriate circumstances, arrange for a suitable employee of the Contractor to be specially trained by the network operator and at the Contractor's cost, as an Authorised Person to work closer than 3 metres from "live" overhead conductors and under such conditions as may be imposed by the senior responsible electrical engineer of the network operator.

30.0 USE OF EQUIPMENT

30.1 Measuring Tapes and Devices

- 30.1.1 Measuring tapes may be used near "live" high-voltage equipment provided that no part of any tape or a person's body comes within 3 metres of the "live" equipment.
- 30.1.2 In windy conditions the distance shall be increased to ensure that if the tape should fall it will not be blown nearer than 3 metres from the "live" high-voltage equipment.
- 30.1.3 Special measuring devices longer than 2 metres such as survey sticks and rods may be used if these are of non-conducting material and approved by the responsible Electrical Engineer of the network operator, but these devices must not be used within 3 metres of "live" high-voltage equipment in rainy or wet conditions.
- 30.1.4 The assistance of the Electrical Officer (Contracts) shall be requested when measurements within the limits defined in clauses 31.1.1 to 31.1.3 are required.
- 30.1.5 The restrictions described in 31.1.1 to 31.1.3 do not apply on a bridge deck between permanent parapets nor in other situations where a barrier effectively prevents contact with the "live" high-voltage equipment.

30.2 Portable Ladders

- 30.2.1 Any type of portable ladder longer than 2 metres may only be used near "live" high-voltage equipment under the direct supervision of the Responsible Representative. He shall ensure that the ladder is always used in such a manner that the distance from the base of the ladder to any "live" high-voltage equipment is greater than the fully extended length of the ladder plus 3 metres. Where these conditions cannot be observed, the Electrical Officer (Contracts) shall be advised, and he will arrange for suitable safety measures to be taken.

31.0 CARRYING AND HANDLING MATERIAL AND EQUIPMENT

- 31.1 Pipes, scaffolding, iron sheets, reinforcing bars and other material which exceeds 2 metres in length shall be carried completely below head height near "live" high-voltage equipment. For maximum safety such material should be carried by two or more persons so as to maintain it as nearly as possible in a horizontal position. The utmost care must be taken to ensure that no part of the material comes within 3 metres of any "live" high-voltage equipment.
- 31.2 Long lengths of wire or cable shall never be run out in conditions where a part of a wire or cable can come within 3 metres of any "live" high-voltage equipment unless the Electrical Officer (Contracts) has been advised and has approved appropriate safety precautions.
- 31.3 The presence of overhead power lines shall always be taken account of especially when communications lines or cables or aerial cables, stay wires, etc. are being erected above ground level.

32.0 PRECAUTIONS TO BE TAKEN WHEN ERECTING OR REMOVING POLES, ANTENNAE, TREES ETC.

- 32.1 A pole may be handled for the purpose of erection or removal near high-voltage equipment under the following conditions:

(i) If the distance between the point at which the pole is to be erected or removed and the nearest "live" high-voltage equipment is more than the length of the pole plus 3 metres, the work shall be supervised by the Responsible Representative.

(ii) If the distance described in (i) is less than the length of the pole plus 3 metres, the Electrical Officer (Contracts) shall be consulted to arrange for an Authorised Person to supervise the work and to ensure that the pole is earthed where possible. The pole shall be kept in contact with the point of erection, and adequate precautions shall be taken to prevent contact with "live" high-voltage equipment.

32.2 The cost of supervision by an Authorised Person and the provision of earthing shall, unless otherwise agreed, be borne by the Contractor.

32.3 The provisions of clauses 33.1 and 33.2 shall also apply to the erection or removal of columns, antennae, trees, posts, etc.

33.0 USE OF WATER

33.1 No water shall be used in the form of a jet if it can make contact with any "live" high-voltage equipment or with any person working on such equipment.

34.0 USE OF CONSTRUCTION PLANT

34.1 "Construction plant" entails all types of plant including cranes, piling frames, boring machines, excavators, draglines, dewatering equipment and road vehicles with or without lifting equipment.

34.2 When work is being undertaken in such a position that it is possible for construction plant or its load to come within 3 metres of "live" high-voltage equipment, the Electrical Officer (Contracts) shall be consulted. He will arrange for an Authorised Person to supervise the work and to ensure that the plant is adequately earthed. The Electrical Officer (Contracts) will decide whether further safety measures are necessary.

34.3 The cost of any supervision by an Authorised Person and the provision of earthing shall, unless otherwise agreed, be borne by the Contractor.

34.4 When loads are handled by cranes, non-metallic rope hand lines shall be used, affixed to such loads so as to prevent their swinging and coming within 3 metres of "live" high-voltage equipment.

34.5 Clauses 35.1 to 35.4 shall apply *mutatis mutandis* to the use of maintenance machines of any nature.

35.0 WORK PERFORMED UNDER DEAD CONDITIONS UNDER COVER OF A WORK PERMIT

35.1 If the Responsible Representative finds that the work cannot be done in safety with the high-voltage electrical equipment "live", he shall consult the Electrical Officer (Contracts) who will decide on the action to be taken.

35.2 If a work permit is issued the Responsible Representative shall-

(i) before commencement of work ensure that the limits within which work may be carried out have been explained to him by the Authorised Person who issued the permit to him, and that he fully understands these limits.

(ii) sign portion C of the permit before commencement of work;

(iii) explain to all persons under his control the limits within which work may be carried out, and ensure that they fully understand these limits;

(iv) care for the safety of all persons under his control whilst work is in progress; and

(v) withdraw all personnel under his control from the equipment on completion of the work before he signs portion D of the work permit.

36.0 TRACTION RETURN CIRCUITS IN RAILS

36.1 DANGEROUS CONDITIONS CAN BE CREATED BY REMOVING OR SEVERING ANY BOND.

36.2 Broken rails with an air gap between the ends, and joints at which fishplates are removed under "broken bond" conditions, are potentially lethal. The rails on either side of an air gap between rail ends on electrified lines shall not be touched simultaneously until rendered safe by the network operator personnel.

36.3 The Contractor shall not break any permanent bonds between rails or between rails and any structure. He shall give the Contract Supervisor at least 7 days written notice when removal of such bonds is necessary.

36.4 No work on the track which involves interference with the traction return rail circuit either by cutting or removing the rails, or by removal of bonds shall be done unless the Electrical Officer (Contracts) is consulted. He will take such precautions as may be necessary to ensure continuity of the return circuit before permitting the work to be commenced.

37.0 HIGH-VOLTAGE ELECTRICAL EQUIPMENT NOT MAINTAINED AND/OR OPERATED BY THE NETWORK OPERATOR

Where the work is undertaken on or near high-voltage electrical equipment which is not maintained and/or operated by the network operator, the Occupational Health and Safety Act No. 85 of 1993, and Regulations and Instructions, or the Mines Health and Safety Act (Act 29 of 1996), shall apply.

Such equipment includes:-

- (i) Eskom and municipal equipment;
- (ii) The Contractor's own power supplies; and
- (iii) Electrical equipment being installed but not yet taken over from the Contractor.

END

T2.2-08: Evaluation Schedule - Health and Safety Requirements

Submit the following documents as a minimum with your tender:

1. The Tenderer provided project specific health and safety Plan.
2. Health and safety cost breakdown (Bill of Quantities) is provided.
3. Safety, Policy is signed the Chief Executive Officer, included or cover the following elements –
 - Commitment to Safety, prevention of pollution,
 - Continual improvement,
 - Compliance to legal requirements, appropriate to the nature of contractor's activities,

Should cover:

- Hold management accountable for development of the safety systems
 - Include objectives and targets.
4. Outline the Roles & Responsibilities, such as S16.2 CEO, CR8.1 Construction manager, CR8.2 Assistant Construction manager, CR8.5 Safety officer, CR8.7 Construction Supervisor, CR8.8 Construction assistant supervisor, CR9.1 Risk Assessor, 17.1 SHE Reps, etc. as per the Occupational health and safety Act 85 of 1993 and listed on the SHE Plan
 5. List of job categories for project and competencies required per category and develop a training Matrix for all employees who will be working on the project. This matrix must include Management and highlight training planned
 6. Overview of the project specific Baseline Risk Assessment (RA), indicating major activities of the project
 7. **Three years** synopsis of SHE incidents, description, type and action taken to prevent re-occurrence.
 8. Complete and return with tender documentation the Contractor Safety Questionnaire included as an Annexure B.

Attached submissions to this schedule:

The valid letters of good standing are provided

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The scoring of the Tenderer's Health and Safety Requirements will be as follows:

MAXIMUM POINTS	4	1	1	2	1	1
10	SHE Plan, Letter of Good standing & Safety, Health & Environmental Policy	Roles & Responsibilities as stipulated from above	List of Job Categories for project as stipulated from above	Overview of the project specific Baseline Risk Assessment (RA), indicating major activities of the project namely:	Three years synopsis of SHE incidents, descriptions, type and action taken	Complete and return the <i>Contractor</i> Safety Questionnaire attached hereto
(score 0)	The Tenderer has submitted no information or inadequate information to determine a score.					
(score 20)	SHE Plan is not project specific and information supplied is totally insignificant to achieve the required standard of service. The Health and safety bill of quantities supplied is totally insignificant to achieve the required standard of service. 1 of the 5 key policy components are recognized and meet the <i>Employer's</i> requirement.	Roles and responsibilities do not meet the Occupational health and safety Act as per construction regulations and TFR health and safety specification.	Key responsible persons are not included on training matrix as per proposed organogram structure.	Information supplied is totally insignificant/inadequate to achieve the required standard of service.	Information supplied is totally insignificant/inadequate to achieve the required standard of service.	Information supplied is totally insignificant/inadequate to achieve the required standard of service.
(score 40)	SHE plan is project specific, but the information lacks convincing evidence, that stated <i>Employer's</i> requirements will be	Roles and responsibilities are unlikely to ensure compliance as per the <i>works</i> information and not	Not all key responsible persons are included in the training matrix. Trainings matrix submitted does not cover all SHE training	Poor response/answer/solution lacks convincing evidence, medium risk that stated <i>Employer's</i>	Poor response/answer/solution lacks convincing evidence, medium risk that stated <i>Employer's</i>	Poor response/answer/solution lacks convincing evidence, medium risk that stated <i>Employer's</i> requirements will not be met.



	<p>met.</p> <p>The information provided in the Health and safety bill of quantities is poor and lacks convincing evidence. There's a medium risk that stated <i>Employer's</i> requirements will not be met.</p> <p>2 of the 5 key policy components are recognized and meet the <i>Employer's</i> requirement.</p>	in line with OHS Act and TFR health and safety specification.	listed on Health and Safety specification. Training matrix not signed by responsible personnel.	requirements will not be met.	requirements will not be met.	
(score 60)	<p>SHE plan is project specific. The information is satisfactory to the particular aspect, and evidence given is sufficient that <i>Employers</i> requirements will be met.</p> <p>The information provided in the Health and safety bill of quantities is satisfactory and the evidence is convincing, that stated <i>Employer's</i> requirements will be met.</p> <p>3 of the 5 key policy components are recognized and meet the</p>	Satisfactory response on roles and responsibilities as per <i>Employer's</i> requirements.	Satisfactory response on the list of job categories and trainings as per proposed project organogram structure. Training matrix covers most of the trainings listed on TFR Health and safety specification.	Satisfactory response/answer/solution to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i> requirements will be met.	Satisfactory response/answer/solution to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i> requirements will be met.	Satisfactory response/answer/solution to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i> requirements will be met.



	<i>Employer's requirements.</i>					
(score 80)	<p>SHE plan is project specific. The information is good and demonstrate real understanding & ability to meet stated <i>Employer's</i> requirements.</p> <p>The information provided in the Health and safety bill of quantities is good and demonstrates real understanding and evidence of ability to meet stated <i>Employer's</i> requirements.</p> <p>4 of the five key policy components are recognized and meets the <i>Employer's</i> requirements.</p>	Roles and responsibilities are likely to ensure compliance as per Works Information, OHS Act and TFR health and safety specification.	Most of key persons listed on the training matrix as per proposed project organogram structure. Trainings specified on the matrix are in line with TFR health and safety specification.	Good response/answer/solution which demonstrates real understanding and evidence of ability to meet stated <i>Employer's</i> requirements.	Good response/answer/solution which demonstrates real understanding and evidence of ability to meet stated <i>Employer's</i> requirements.	Good response/answer/solution which demonstrates real understanding and evidence of ability to meet stated <i>Employer's</i> requirements.



(score 100)	<p>She plan is project specific. The information is very good and gives real confidence that the tenderer, is most likely to ensure compliance with stated <i>Employer's</i> requirements.</p> <p>The information provided in the Health and safety bill of quantities is very good and gives real confidence that the tender is most likely to ensure compliance with stated <i>Employer's</i> requirements.</p> <p>All 5 key policy components are recognized and meets the <i>Employer's</i> requirements.</p>	Roles and Responsibilities most likely to ensure compliance as per requirements of OHS Act and TFR Health and Safety Management Specification.	Training matrix include Management and all employees /personnel in the project. Training matrix had been signed by responsible personnel.	Very good response/answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated <i>Employer's</i> requirements.	Very good response/answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated <i>Employer's</i> requirements.	Very good response/answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated <i>Employer's</i> requirements.
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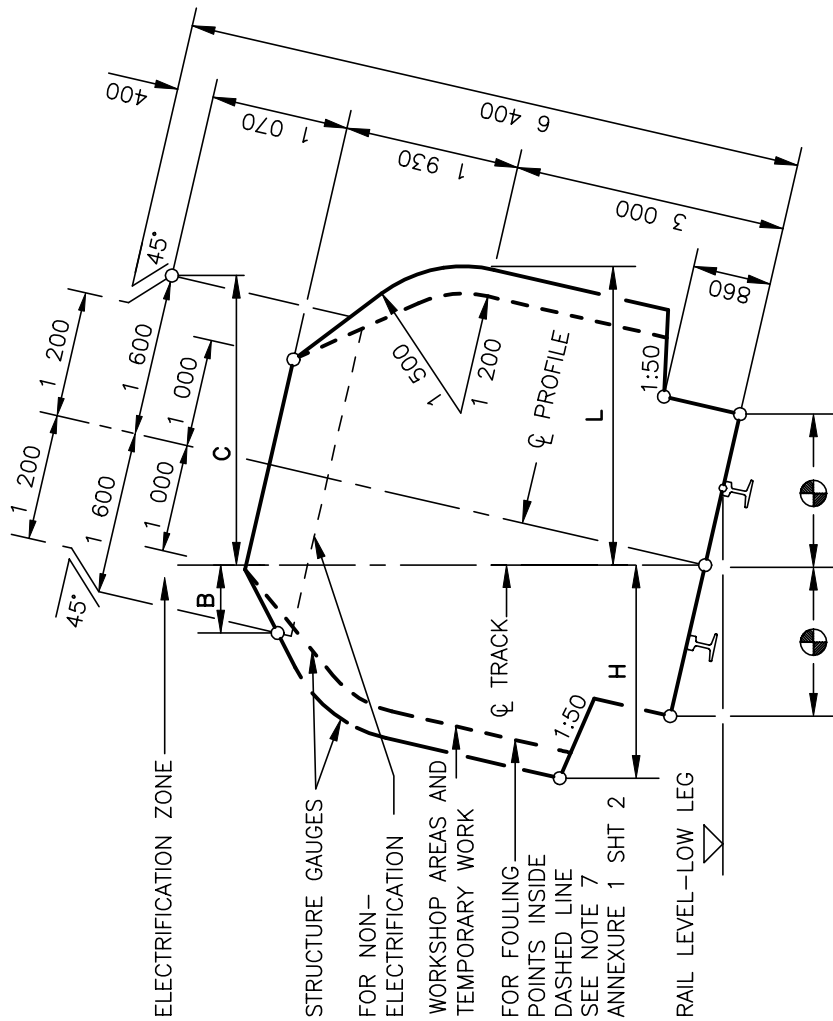
TRANSNET FREIGHT RAIL

TENDER NUMBER: SIE21015CIDB (HOAC_HO_36727)

DESCRIPTION OF THE WORKS: FOR DESIGN, SUPPLY, INSTALL, TEST AND COMMISSIONING OF OUTDOOR AND INDOOR TRACTION
SUBSTATION EQUIPMENT INCLUDING THE REMOVAL OF OLD AND OBSOLETE ELECTRICAL EQUIPMENT AT VARIOUS TRACTION SUBSTATIONS
UNDER HEIDELBERG, LADYSMITH AND DURBAN DEPOTS



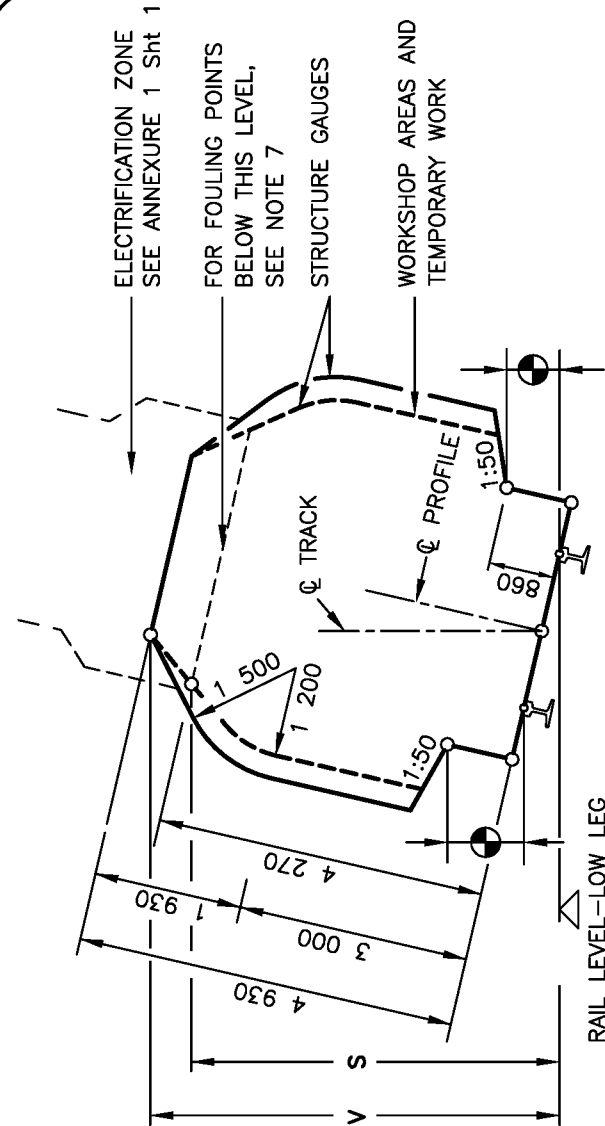
HORIZONTAL CLEARANCES : 1 065mm TRACK GAUGE



RADIUS (m)	WITH CANT		NO CANT H & L	WITH CANT	
	H (mm)	L (mm)		B (mm)	C (mm)
90	2 730	3 090	2 780	1 130	2 100
100	2 700	3 030	2 750	1 140	2 050
120	2 650	2 970	2 700	1 160	2 010
140	2 620	2 920	2 660	1 175	1 990
170	2 590	2 870	2 630	1 190	1 970
200	2 570	2 820	2 600	1 205	1 950
250	2 550	2 790	2 580	1 230	1 920
300	2 540	2 760	2 560	1 250	1 900
350	2 530	2 730	2 540	1 270	1 890
400	2 520	2 710	2 530	1 290	1 875
500	2 510	2 680	2 520	1 320	1 850
600	2 500	2 660	2 510	1 340	1 830
800	2 490	2 620	2 500	1 365	1 790
1 000	2 480	2 600	2 490	1 380	1 760
1 200	2 480	2 580	2 490	1 200	1 730
1 500	2 480	2 550	2 480	1 415	1 700
2 000	2 480	2 500	2 480	1 440	1 660
3 000	2 470	2 470	2 470	1 500	1 600
>5 000	2 460	2 460	2 460	1 600	1 600

REMARKS:

1. H AND B IS THE REQUIRED HORIZONTAL CLEARANCE ON THE OUTSIDE OF THE CURVE BASED ON MINIMUM CANT.
2. L AND C IS THE REQUIRED HORIZONTAL CLEARANCE ON THE INSIDE OF THE CURVE BASED ON MAXIMUM CANT.
3. INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
4. FOR WORKSHOP AREAS AND TEMPORARY WORK, CLEARANCES H AND L MAY BE REDUCED BY 300mm.
5. SEE ANNEXURE 1 SHEET 3 FOR PLATFORM CLEARANCES.
6. ALSO REFER TO REMARKS 4 TO 8 OF ANNEXURE 1 SHEET 2.



LOCATION	RADIUS (mm)	NOT ELECTRIFIED S (mm)	ELECTRIFIED (PRESENT OR FUTURE)	
			3kV & 25kV V (mm)	50kV V (mm)
ALL AREAS OTHER THAN THOSE INDICATED BY * BELOW	100	4 470	5 050	5 400
	300	4 410	5 020	5 370
	600	4 370	5 000	5 350
	1 000	4 350	4 990	5 340
	1 500	4 310	4 960	5 310
	2 000	4 290	4 940	5 290
	>3 000	4 270	4 930	5 280
* OVER OR NEAR POINTS AND CROSSING IF REQUIRED BY ELECTRICAL IRRESPECTIVE OF RADIUS			5 650	6 000

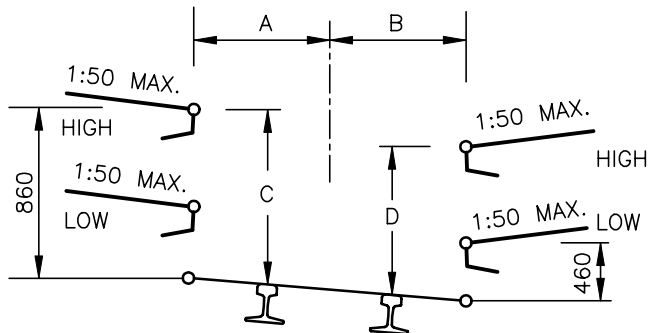
REMARKS:

1. V IS THE REQUIRED VERTICAL CLEARANCE EXCEPT WHERE REDUCED CLEARANCE S APPLIES.
2. S IS THE MINIMUM VERTICAL CLEARANCE FOR STRUCTURES AND TEMPORARY WORK OVER NON-ELECTRIFIED LINES.
3. INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
4. FOR APPLICATION AT CURVES
 - 4.1 APPLY INCREASED CLEARANCES FOR CURVES TO POINTS 3m BEYOND THE ENDS OF THE CIRCULAR CURVE.
 - 4.2 REDUCE CLEARANCES AT A UNIFORM RATE OVER THE REMAINDER OF THE TRANSITION CURVE.
 - 4.3 FOR NON-TRANSITIONED CURVES REDUCE AT A UNIFORM RATE OVER A LENGTH OF 15m ALONG STRAIGHTS.
5. NEW STRUCTURES: SEE BRIDGE CODE.
6. TUNNELS: SEE DRAWING BE 82-35.
7. FOULING POINTS: SEE CLAUSE 8.1.
8. CLEARANCES ARE BASED ON 15m BOGIE CENTRES AND 21.2m VEHICLE BODY LENGTH.
9. SEE ANNEXURE 1 SHEET 3 FOR PLATFORM CLEARANCES.

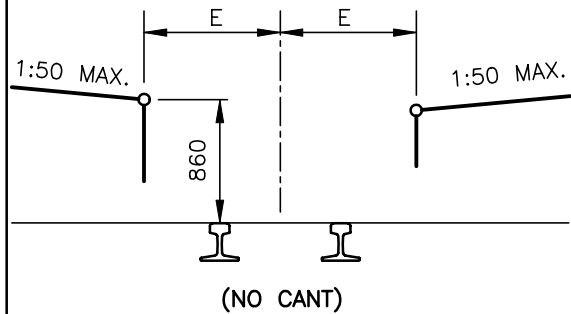
CLEARANCES : PLATFORMS

PLATFORMS : TRACK GAUGE 1 065mm

PASSENGERS




GOODS



RADIUS (m)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
90	1 690	1 820	890	810	1 840
100	1 650	1 790	890	810	1 810
120	1 610	1 740	890	810	1 760
140	1 580	1 700	890	810	1 720
170	1 550	1 660	890	810	1 690
200	1 530	1 630	890	820	1 670
250	1 520	1 600	890	820	1 640
300	1 520	1 580	890	830	1 620
350	1 520	1 560	880	830	1 600
400	1 520	1 550	880	840	1 590
500	1 520	1 540	880	850	1 580
600	1 520	1 530	870	850	1 570
800	1 520	1 520	860	860	1 560
1 200	1 520	1 520	860	860	1 550
2 000	1 520	1 520	860	860	1 540
3 000	1 520	1 520	860	860	1 530
STRAIGHT	1 520	1 520	860	860	1 520

REMARKS:

1. NO CANT TO BE APPLIED EXCEPT WHEN THE GOODS PLATFORM IS ON A RUNNING LINE.
2. INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
3.  8m TO MAIN STATION-BUILDINGS AND 3m TO ALL OTHER STRUCTURES.
4. TOLERANCES : SEE CLAUSE 8.0.10.

STRUCTURES ON PLATFORMS : 1 065mm AND 610mm TRACK GAUGE

