



TFR , a division of

TRANSNET SOC LTD

Registration Number 1990/000900/30

[hereinafter referred to as **Transnet**]

REQUEST FOR QUOTATION [RFQ] No BLE52391

**FOR THE SUPPLY OF: REPLENISHMENT OF OUTDOOR YARD STONES AND
INSTALLATION OF OUTDOOR EARTHING AT VARIOUS SUBSTATIONS**

**FOR DELIVERY TO: HUGUENOT, SOETENDAL, HUGO
AND GOUDA SUBSTATIONS**

ISSUE DATE: 21 August 2013

CLOSING DATE: 10 September 2013

CLOSING TIME: 10:00



RFQ BLE52391

SCHEDULE OF DOCUMENTS**REPLENISHMENT OF OUTDOOR YARD STONES AND INSTALLATION OF
OUTDOOR EARTHING AT VARIOUS SUBSTATIONS**

Section

1. Notice to Bidders
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 4. Standard Term and Conditions for the supply of Goods or services to Transnet
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Section 1
NOTICE TO BIDDERS

Quotations are requested from interested companies, close corporations or enterprises (hereinafter referred to as the "Respondent(s) to supply the above-mentioned to Transnet.

A briefing session will be conducted on the 29 August 2013, time 10:00, at the Transnet Park Building, Robert Sobukwe road, Bellville, for a period of ± one hour. **(All will depart to the sites after the briefing. Respondent to provide own transportation).**

Respondents arriving late will not be accommodated.

Respondents failing to attend the compulsory briefing session will be disqualified.

Respondents without a valid RFQ document in their possession will not be allowed to attend the briefing session.

Quotations must reach the Acquisition Council before the closing hour on the date shown below, and must be enclosed in a sealed envelope which must have indicated on the outside:

RFQ No : BLE52391
 Description : REPLENISHMENT OF OUTDOOR YARD STONES AT VARIOUS SUBSTATIONS HUGUENOT, SOETENDAL, HUGO AND GOUDA
 Closing date : 10 September 2013
 Closing time : 10:00

DELIVERY INSTRUCTIONS FOR THIS RFQ

- (i) **If posted**, the envelope must be addressed to the Acquisition Council, P.O. Box 2986, Bellville, 7535, and must be dispatched in time for sorting by the Post Office to reach the Secretary before the closing time of the RFQ. In the event of the late receipt of a Quotation, the Respondent's franking machine impression will not be accepted as proof that the response was posted in time.
- (ii) **If delivered by hand**, the envelope is to be deposited in the TRANSNET tender box which is located at the main entrance, Transnet Park Building, Robert Sobukwe road, Bellville, and should be addressed as follows:

ACQUISITION COUNCIL
 TRANSNET PARK BUILDING
 MODDERDAM ROAD
 BELLVILLE

It should also be noted that the above tender box is located at the main entrance and is if dispatched by courier, the envelope must be addressed as follows and delivered to the Office of The Acquisition Council.

Quotations which must be completed as indicated in Section 2 of this RFQ are to be submitted as follows:

METHOD: post and/or courier]
CLOSING VENUE: [courier and/or tender box at physical address]

1 Responses to RFQ

Responses to this RFQ [**Quotations**] must not include documents or reference relating to any other quotation or proposal. Any additional conditions must be embodied in an accompanying letter.

2 Broad-Based Black Economic Empowerment [B-BBEE]

Transnet fully endorses and supports the Government's Broad-Based Black Economic Empowerment Programme and it would therefore prefer to do business with local business enterprises who share these same values. Transnet will accordingly allow a "preference" to companies who provide a B-BBEE Verification Certificate. All procurement transactions will be evaluated accordingly.

2.1 B-BBEE Scorecard and Rating

As prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations, Respondents are to note the following:

- Proposals will be evaluated on price which will be allocated 80 points and preference which will be allocated 20 points, dependent on the value of the Services
- The 80/20 preference point system applies where the acquisition of the Services will be less than R1 000 000.00.
- If the 80/20 preference point system is stipulated and all Bids received exceed R1 000 000.00, the RFQ will be cancelled

In compliance with the Government Gazette No 34612, Notice No. 754 dated 23 September 2011, as from 1 October 2011 valid B-BBEE Verification Certificates must be issued by:

- a) Verification Agencies accredited by the South African National Accreditation System [SANAS]; or
- b) Registered Auditors approved by the Independent Regulatory Board of Auditors [IRBA], in accordance with the approval granted by the Department of Trade and Industry.

Enterprises will be rated by such agencies based on the following:

- c) **Large Enterprises** [i.e. annual turnover greater than R35 million]:
 - Rating level based on all seven elements of the B-BBEE scorecard
- d) **Qualifying Small Enterprises – QSE** [i.e. annual turnover between R5 million and R35 million]:
 - Rating based on any four of the elements of the B-BBEE scorecard
- e) **Exempted Micro Enterprises – EME** [i.e. annual turnover less than R5 million]:

In accordance with B-BBEE Codes of Good Practice [Statement 000, Section 4], any enterprise with an annual total revenue of R 5 million or less qualifies as an EME.

- Automatic rating of B-BBEE Level 4 irrespective of race or ownership
- Black ownership greater than 50% or Black Women ownership greater than 50% automatically qualify as B-BBEE Level 3

Sufficient evidence to qualify as an EME would be a certificate (which may be in the form of a letter) from an auditor or accounting officer or a certificate from a Verification Agency accredited by SANAS. The certificate must confirm the company's turnover, black ownership / black female ownership and B-BBEE status level.

Respondents are required to furnish proof of the above to Transnet. [i.e. a detailed scorecard as stipulated above in respect of Large Enterprises and QSEs, or a certificate in respect of EMEs].

Transnet will accordingly allocate a maximum of **20 [twenty] points** in accordance with the **80/20** preference point system prescribed in the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations to the Respondent's final score based on an entity's B-BBEE scorecard rating. *[Refer **Annexure A** for further details].*

N.B. Failure to submit a B-BBEE certificate, which is valid as at the Closing Date of this RFP, will result in a score of zero being allocated for B-BBEE.

[Refer Section 3, Vendor Application Form, for Returnable Documents required]

3 Communication

- Respondents are warned that a response will be liable for disqualification should any attempt be made by a Respondent either directly or indirectly to canvass any officer(s) or employee of Transnet in respect of this RFQ between the closing date and the date of the award of the business.
- A Respondent may, however, before the closing date and time, direct any written enquiries relating to the RFQ to the following Transnet employee:

Name: J P Carstens

Email: cobus.carstens@transnet.net

- Respondents may also, at any time after the closing date of the RFQ, communicate with Cobus Carstens on any matter relating to its RFQ response:

Telephone: 021 940-3833

Email: cobus.carstens@transnet.net

4 Tax Clearance

The Respondent's original valid Tax Clearance Certificate must accompany the Quotation. Failure to provide this document with the RFQ submission will result in disqualification.

5 VAT Registration

The valid VAT registration number must be stated here: _____ *[if applicable].*

6 Legal Compliance

The successful Respondent shall be in full and complete compliance with any and all applicable national and local laws and regulations.

7 Changes to Quotations

Changes by the Respondent to its submission will not be considered after the closing date and time.

8 Pricing

All prices must be quoted in South African Rand on a fixed price basis, excluding VAT.

9 Prices Subject to Confirmation

Prices quoted which are subject to confirmation will not be considered.

10 Negotiations

Transnet reserves the right to undertake post-tender negotiations with selected Respondents or any number of short-listed Respondents.

11 Binding Offer

Any Quotation furnished pursuant to this Request shall be deemed to be an offer. Any exceptions to this statement must be clearly and specifically indicated.

12 Disclaimers

Transnet is not committed to any course of action as a result of its issuance of this RFQ and/or its receipt of a Quotation in response to it. Please note that Transnet reserves the right to:

- modify the RFQ's goods / service(s) and request Respondents to re-bid on any changes;
- reject any Quotation which does not conform to instructions and specifications which are detailed herein;
- disqualify Quotations submitted after the stated submission deadline;
- not necessarily accept the lowest priced Quotation;
- reject all Quotations, if it so decides;
- place an order in connection with this Quotation at any time after the RFQ's closing date;
- award only a portion of the proposed goods / service/s which are reflected in the scope of this RFQ;
- split the award of the order/s between more than one Supplier/Service Provider; or
- make no award at all.

In addition, Transnet reserves the right to exclude any Respondent from the bidding 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. Respondents are required to indicate below whether or not they have been found guilty of a serious breach of law during the past 5 [five] years:

I/We _____ do hereby certify that *I/we have/have not been* found guilty during the preceding 5 [five] years of a serious breach of law, including but not limited to a breach of the Competition Act, 89 of 1998, by a court of law, tribunal or

other administrative body. The type of breach that the Respondent is required to disclose excludes relatively minor offences or misdemeanours, e.g. traffic offences.

Where found guilty of such a serious breach, please disclose:

NATURE OF BREACH:

DATE OF BREACH: _____

Furthermore, I/we acknowledge that Transnet SOC Ltd reserves the right to exclude any Respondent from the bidding process, should that person or entity have been found guilty of a serious breach of law, tribunal or regulatory obligation.

13 Evaluation Criteria

Transnet will utilise the following criteria [not necessarily in this order] in choosing a Supplier/Service Provider, if so required:

- Administrative responsiveness - Completeness of response and returnable documents
- Substantive responsiveness - Prequalification criteria, if any, must be met
- Weighted evaluation based on 80/20 preference point system:
 - Pricing and price basis [firm] - whilst not the sole factor for consideration, competitive pricing and overall level of unconditional discounts¹ will be critical

Transnet will utilise the following formula in its evaluation of Price:

$$Ps = 80 \left(1 - \frac{Pt - Pmin}{Pmin} \right)$$

Where:

Ps	=	Score for the Bid under consideration
Pt	=	Price of Bid under consideration
$Pmin$	=	Price of lowest acceptable Bid

- B-BBEE status of company

Preference points will be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

¹ Only unconditional discounts will be taken into account during evaluation. A discount which has been offered conditionally will, despite not being taken into account for evaluation purposes, be implemented when payment is effected.

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

14. Evaluation Criteria

Transnet will utilise the following criteria [not necessarily in this order] in choosing a Supplier, if so required:

- B-BBEE status of company

15 Validity Period

Transnet desires a validity period of 30 [thirty] days from the closing date of this RFQ.

This RFQ is valid until _____.

16 Banking Details

BANK: _____
 BRANCH NAME / CODE: _____
 ACCOUNT HOLDER: _____
 ACCOUNT NUMBER: _____

17 Company Registration

Registration Number of company / C.C. _____
 Registered name of company / C.C. _____

18 Disclosure of Prices Quoted

Respondents must indicate here whether Transnet may disclose their quoted prices and conditions to other Respondents:

YES NO

19 Returnable Documents

Returnable Documents means all the documents, Sections and Annexures, as listed in the tables below.

- a) Respondents are required to submit with their Quotations the **Returnable Documents**, as detailed below.

Failure to provide all these Returnable Documents may result in a Respondent's disqualification. Respondents are therefore urged to ensure that all these Documents are returned with their Quotations.

All Sections, as indicated in the footer of each page, must be signed, stamped and dated by the Respondent. Please confirm submission of these essential Returnable Documents by so indicating [Yes or No] in the table below:

Returnable Documents	Submitted [Yes or No]
SECTION 1 : Notice to Bidders	
<ul style="list-style-type: none"> - Valid B-BBEE Verification Certificate [RSA Large Enterprises and QSES] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the tender will result in an automatic score of zero being allocated for B-BBEE scorecard 	
<ul style="list-style-type: none"> - Valid B-BBEE certificate from auditor, accounting officer or SANAS accredited Verification Agency [RSA EMEs] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the tender will result in an automatic score of zero being allocated for B-BBEE scorecard 	
SECTION 2 : Quotation Form	
SECTION 3: Vendor Application Form	
<ul style="list-style-type: none"> • Original cancelled cheque or bank verification of banking details 	
<ul style="list-style-type: none"> • Certified copies of IDs of shareholder/directors/members [as applicable] 	
<ul style="list-style-type: none"> • Certified copy of Certificate of Incorporation [CM29/CM9 name change] 	
<ul style="list-style-type: none"> • Certified copy of share certificates [CK1/CK2 if C.C.] 	
<ul style="list-style-type: none"> • Entity's letterhead 	
<ul style="list-style-type: none"> • Certified copy of VAT Registration Certificate [RSA entities only] 	
<ul style="list-style-type: none"> • Certified copy of valid Company Registration Certificate [if applicable] 	
<ul style="list-style-type: none"> • Letter of Good Standing 	

MANDATORY DOCUMENT	Submitted [Yes or No]
<ul style="list-style-type: none"> • Original valid Tax Clearance Certificate [Consortia / Joint Ventures / Sub-contractors must submit a separate Tax Clearance Certificate for each party] 	

Respondent's Signature

Date & Company Stamp

Section 2
QUOTATION FORM

I/We _____
hereby offer to supply the goods/services at the prices quoted in the Price Schedule below, in accordance with the conditions related thereto.

I/We agree to be bound by those terms and conditions in:

- the Standard Terms and Conditions for the Supply of Goods and Services to Transnet [available on request]; and
- any other standard or special conditions mentioned and/or embodied in this Request for Quotation.

I/We accept that unless Transnet should otherwise decide and so inform me/us, this Quotation [and, if any, its covering letter and any subsequent exchange of correspondence, together with Transnet's acceptance thereof shall constitute a binding contract between Transnet and me/us.

I/We further agree that if, after I/we have been notified of the acceptance of my/our Quotation, I/we fail to deliver the said goods/service/s within the delivery lead time quoted, Transnet may, without prejudice to any other legal remedy which it may have, cancel the order and recover from me/us any expenses incurred by Transnet in calling for Quotations afresh and/or having to accept any less favourable offer.

Respondent's Signature

Date & Company Stamp

Price Schedule

HUGUENOT SUBSTATION						
Item	Description	Unit	Qty	Material	Labour	Total
1	Preliminary and General	sum	sum			
2	Remove the top layer of ground (45m x 25m)	m ³	225			
3	Treat with the weed killer and 25 - 37mm lay crusher stones over the whole area (45m x 25 m)	m ³	225			
4	Repair outdoor earthing complete including digging	sum	sum			
Total Excl VAT (forward total to the summery)						
SOETENDAL SUBSTATION						
Item	Description	Unit	Qty	Material	Labour	Total
1	Preliminary and General	sum	sum			
2	Remove the top layer of ground (35m x 25 m)	m ³	175			
3	Treat with the weed killer and lay 25 - 37mm crusher stones over the whole area (35m x 25m)	m ³	175			
4	Repair outdoor earthing complete including digging	sum	sum			
Total Excl VAT (forward total to the summery)						
HUGO SUBSTATION						
Item	Description	Unit	Qty	Material	Labour	Total
1	Preliminary and General	sum	sum			
2	Remove the top layer of ground (35m x 25 m)	m ³	175			
3	Treat with the weed killer and lay 25 - 37mm crusher stones over the whole area (35m x 25m)	m ³	175			
4	Repair outdoor earthing complete including digging	sum	sum			
Total Excl VAT (forward total to the summery)						
GOUDA SUBSTATION						
Item	Description	Unit	Qty	Material	Labour	Total
1	Preliminary and General	sum	sum			
2	Remove the top layer of ground (25m x 25m)	m ³	175			
3	Treat with the weed killer and lay 25 - 37mm crusher stones over the whole area (25m x 25m)	m ³	175			
4	Repair outdoor earthing complete including digging	sum	sum			
Total Excl VAT (forward total to the summery)						

Summery of totals :

SUBSTATION :	Total amount :
HUGUENOT	
SOETENDAL	
HUGO	
GOUDA	
Total (exc - VAT)	

Total amount in words :

_____ (exc VAT)

REFERENCES :

Please indicate below the company names and contact details of existing customers whom Transnet may contact to seek third party evaluations of your current service levels:

Name of Company	Contact Person	Telephone number

Section 3
VENDOR APPLICATION FORM

"PREVIEW COPY ONLY"

Respondent's Signature

Date & Company Stamp

Section 4

STANDARD TERMS AND CONDITIONS FOR THE SUPPLY OF GOODS OR SERVICES TO TRANSNET

A Supplier/Service Provider shall be obliged to adhere to the Standard Terms and Conditions for the Supply of Goods and Services to Transnet as expressed hereunder. Should the Respondent find any condition(s) unacceptable, it should indicate which condition(s) is/are unacceptable and offer an alternative(s). A Quotation submitted by a Respondent will be subjected to review and acceptance or rejection of its proposed contractual terms and conditions by Transnet's Legal Counsel, prior to consideration for an award of business.

1 SOLE AGREEMENT

Unless otherwise agreed in writing, these terms [Terms and each Term] and Transnet's purchase order(s) [Order or Orders] represent the only conditions upon which Transnet SOC Ltd [Transnet] procures goods or services specified in the Order [collectively, the Products] from the person to whom the Order is addressed [the Supplier/Service Provider]. Transnet does not accept any other conditions which the Supplier/Service Provider may specify, unless otherwise agreed to by Transnet in writing. In the event of any inconsistency between these Terms and any Order, these Terms shall take precedence.

20 CONFORMITY WITH ORDER

Products/Services shall conform strictly with the Order. The Supplier/Service Provider shall not vary the quantities specified and/or the specification, if any, stipulated in the Order, without the prior written consent of Transnet. The Supplier/Service Provider warrants that the Products/Services shall be fit for their purpose and of satisfactory quality.

21 DELIVERY AND TITLE

21.1 The delivery dates and addresses are those in the Order. Time shall be of the essence in respect of the Supplier's/Service Provider's obligations under the Order.

21.2 The Supplier/Service Provider will not be excused for delay in delivery or performance except due to circumstances outside its control and then only subject to the Supplier/Service Provider having notified Transnet in writing on becoming aware of such circumstances. Transnet may terminate an Order, in whole or in part, without incurring any liability to the Supplier/Service Provider if such a delay becomes, in Transnet's absolute opinion, significant.

21.3 If on delivery, the Products/Services do not conform to the Order, Transnet may reject the Products/Services and the Supplier/Service Provider shall promptly rectify any defects or in Transnet's opinion, supply appropriate replacement Products/Services at the Supplier's/Service Provider's expense within the specified delivery times, without any liability due by Transnet.

22 PRICE AND PAYMENT

22.1 Prices specified in an Order cannot be increased. Payment for the Products/Services shall be made by Transnet against an original undisputed invoice(s) [a Tax Invoice], supporting documentation and month-end statement from the Supplier/Service Provider. Tax Invoices plus supporting documentation shall be posted to the address shown in the Order.

22.2 Payment of the Supplier's/Service Provider's valid Tax Invoice(s) will be made by Transnet in the South African currency and on the terms stated in the Order, the standard payment terms being 30 [thirty] days from date of receipt by Transnet of a month-end statement, unless otherwise agreed to in writing. Transnet shall arrange for payment of such Tax Invoices and any pre-authorised additional expenses incurred, provided that the authorised expenses are supported by acceptable documentary proof of expenditure incurred [where this is available]. Any amounts due in terms of these Terms shall be paid to the Supplier/Service Provider, taking into account any deduction or set-off and bank charges.

23 PROPRIETARY RIGHTS LIABILITY

If any allegations should be made or any claim asserted against Transnet that ownership of, or any act or omission by Transnet in relation to Products/Services or any written material provided to Transnet relating to any Products/Services or pursuant to an Order being a violation or infringement of any third party's contractual, industrial, commercial or intellectual property rights including but not limited to any patent, registered design, design right, trade mark, copyright or service mark, on any application thereof, the Supplier/Service Provider hereby indemnifies Transnet against and holds it harmless from any and all losses, liabilities, costs, claims, damages and expenses [including any legal fees] arising directly or indirectly from such allegation or claim provided that this indemnity shall not apply where the allegation or claim arises solely as a result of the Supplier/Service Provider following a design or process originated and furnished by Transnet. The Supplier/Service Provider shall either

- a) procure for Transnet the right to continue using the infringing Products; or
- b) modify or replace the Products/Services so that they become non-infringing,

provided that in both cases the Products/Services shall continue to meet Transnet's requirements and any specifications stipulated in the Order. Should neither option be possible, the Supplier/Service Provider may remove, with Transnet's prior written consent, such Products/Services and will pay to Transnet a sum equivalent to the purchase price. If Transnet refuses to give such consent, the Supplier/Service Provider shall have no liability in respect of any continued use of the infringing Products/Services after Supplier's/Service Provider's prior written request to remove the same.

24 PROPRIETARY INFORMATION

All information which Transnet has divulged or may divulge to the Supplier/Service Provider and any information relating to Transnet's business which may have come into the Supplier's/Service Provider's possession whilst carrying out an Order, and the existence of the Order, shall be treated by the Supplier/Service Provider as confidential information and shall not, without Transnet's prior written consent, be disclosed to any third party, or be used or copied for any purposes other than to perform the Order. This clause does not apply to information which is public knowledge or available from other sources other than by breach of this Term. Upon request by Transnet, the Supplier/Service Provider shall return all materials issued pursuant to the Order and, pending this, shall protect Transnet's rights in any such materials. Such confidential information shall at all material times be the property of Transnet.

25 PUBLICITY

The Supplier/Service Provider shall not name Transnet or use its trademarks, service marks [whether registered or not] or Products in connection with any publicity without Transnet's prior written consent.

26 TERMINATION OF ORDER

- 26.1 Transnet may cancel an Order in whole or in part at any time upon at least 7 [seven] days' written notice to the Supplier/Service Provider, or when there is a change in control of the Supplier/Service Provider or the Supplier/Service Provider commits any serious breach or any repeated or continued material breach of its obligations under these Terms and/or Order or shall have been guilty of conduct tending to bring itself into disrepute, or written notice to the Supplier/Service Provider when such work on the Order shall stop.
- 26.2 Transnet shall pay the Supplier/Service Provider a fair and reasonable price for justified work in progress, where such price reflects only those costs not otherwise recoverable by the Supplier/Service Provider, at the time of termination, and the Supplier/Service Provider shall give Transnet full assistance to check the extent of such work in progress. Payment of such price shall be in full and final satisfaction of any claims arising out of such termination and upon such payment the Supplier/Service Provider shall deliver to Transnet all work, including any materials, completed or in progress. The sum payable to the Supplier/Service Provider under this clause will not in any event exceed the total amount that would have been payable to the Supplier/Service Provider had the Order not been terminated.
- 26.3 In the event of termination the Supplier/Service Provider must submit all claims within 2 [two] months of termination after which time claims will only be met in what Transnet considers exceptional circumstances.
- 26.4 If the Products are not provided in accordance with an Order, the Order shall be deemed terminated and the Supplier/Service Provider shall compensate Transnet for any costs incurred in obtaining substitute Products or any damage caused due to the failure or delay in the delivery.

27 ACCESS

The Supplier/Service Provider shall be liable for the acts, omissions and defaults of its personnel or agents who, for the purposes of the Order, shall be treated as if they are the Supplier's/Service Provider's employees. The Supplier/Service Provider shall ensure that any such personnel or agents, whilst on Transnet's premises, shall comply with Transnet's health and safety, security and system security rules and procedures as and where required.

28 WARRANTY

The Supplier/Service Provider warrants that it is competent to supply the Products/Services in accordance with these Terms to the reasonable satisfaction of Transnet and that all Products/Services delivered under the Order: (a) conform and comply in all relevant legislation, standards, directives and orders related to [inter alia] the Services in force at the time of delivery, and to any specifications referred to in the Order; (b) will not cause any deterioration in the functionality of any Transnet equipment; and (c) do not infringe any third party rights of any kind. The Supplier/Service Provider hereby indemnifies Transnet against all losses, liabilities, costs, claims, damages, expenses and awards of any kinds incurred or made against Transnet in connection with any breach of this warranty.

29 INSOLVENCY

If the Supplier/Service Provider shall have a receiver, manager, administrator, liquidator or like person appointed over all or any part of its assets or if the Supplier/Service Provider compounds with its creditors or passes a resolution for the winding up or administration of the Supplier/Service Provider, Transnet is at liberty to terminate the Order or Orders forthwith, or at its option, to seek performance by any such appointed person.

30 ASSIGNMENT

The Supplier/Service Provider shall not assign its obligations under an Order without Transnet's prior written consent, which consent shall not be unreasonably withheld or delayed.

31 NOTICES

Notices under these Terms shall be delivered by hand to the relevant addresses of the parties in the Order or may be served by facsimile or by email, in which event notice shall be deemed served on acknowledgement of receipt by the recipient.

32 LAW

Orders shall be governed by and interpreted in accordance with South African law and any disputes arising herein shall be subject to South African arbitration under the rules of the Arbitration Foundation of South Africa, which rules are deemed incorporated by reference in this clause. The reference to arbitration shall not prevent Transnet referring the matter to any South African courts, having jurisdiction, to which the Supplier/Service Provider hereby irrevocably submits but without prejudice to Transnet's right to take proceedings against the Supplier/Service Provider in other jurisdictions and/or obtaining interim relief on an urgent basis from a court of competent jurisdiction pending the decision in other courts or from instituting in any court of competent jurisdiction any proceedings for an interdict or any other injunctive relief. If the Supplier/Service Provider does not have a registered office in the South Africa it will at all times maintain an agent for service of process in South Africa and shall give Transnet the name and address of such agent as such may be amended, in writing, from time to time.

33 GENERAL

Completion or termination of an Order shall be without prejudice to any Term herein which by its nature would be deemed to continue after completion or termination, including but not limited to clauses 23, 24, **Error! Reference source not found.**, 25 and 28. Headings are included herein for convenience only. If any Term herein be held illegal or unenforceable, the validity or enforceability of the remaining Terms shall not be affected. No failure or delay by Transnet to enforce any rights under these Terms will operate as a waiver thereof by Transnet. All rights and remedies available to either party under these Terms shall be in addition to, not to the exclusion of, rights otherwise available at law.

34 COUNTERPARTS

These Terms and conditions may be signed in any number of counterparts, all of which taken together shall constitute one and the same instrument. Any party may enter into this agreement by signing any such counterpart.

By signing this RFQ document, the Respondent is deemed to acknowledge that he/she has made himself/herself thoroughly familiar with all the conditions governing this RFQ, including those contained in any printed form stated to form part hereof and Transnet SOC Ltd will recognise no claim for relief based on an allegation that the Respondent overlooked any such condition or failed to properly take it into account for the purpose of calculating quoted prices or otherwise.

SIGNED at _____ on this _____ day of _____ 20__

.....
SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE

NAME: _____

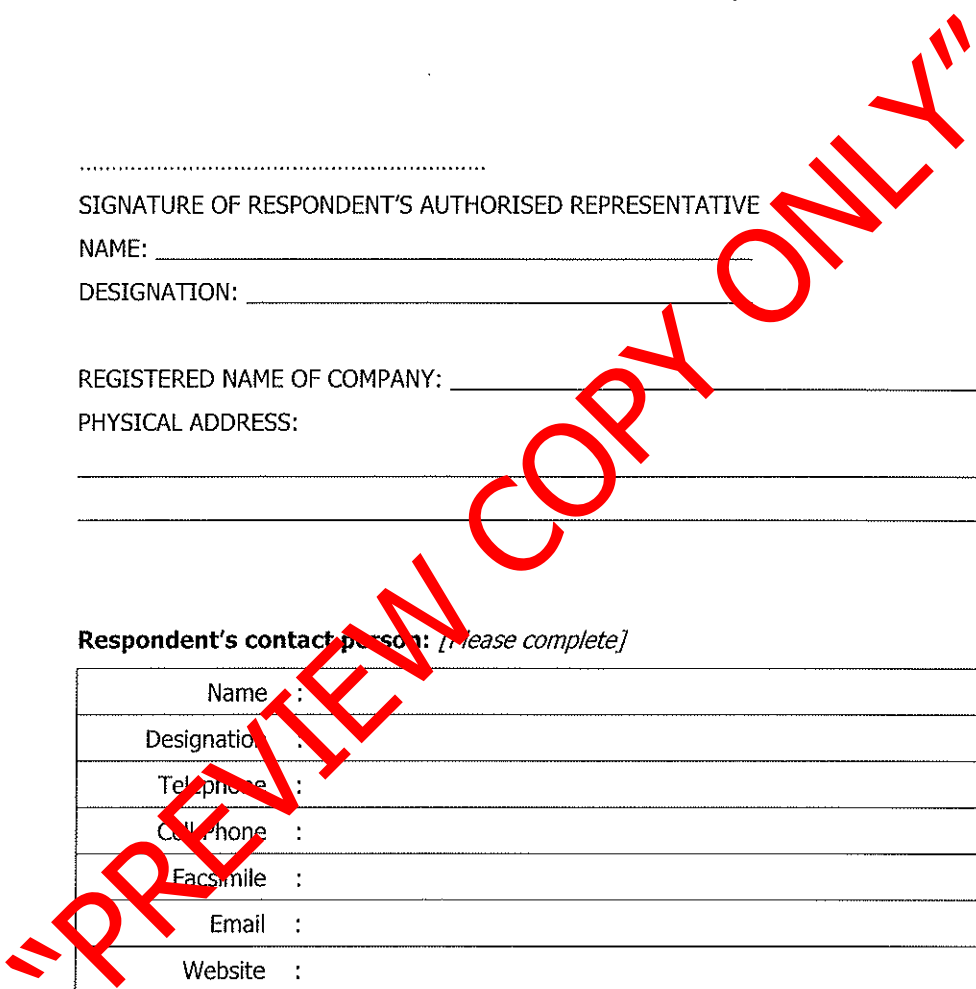
DESIGNATION: _____

REGISTERED NAME OF COMPANY: _____

PHYSICAL ADDRESS: _____

Respondent's contact person: *[Please complete]*

Name :	
Designation :	
Telephone :	
Cell phone :	
Facsimile :	
Email :	
Website :	



Transnet urges its clients, suppliers and the general public

to report any fraud or corruption to

TIP-OFFS ANONYMOUS : 0800 003 056

Section 5

General Bid Conditions - Appendix (i)

The Appendix (i) is not attached, this document is available on request.

"PREVIEW COPY ONLY"

Section 6

Standard term and conditions of contract (services) – Appendix (ii)

The Appendix (ii) is not attached, this document is available on request.

"PREVIEW COPY ONLY"

Annexure A

BLE52391 : THE REPLENISHMENT OF OUTDOOR YARD STONES AT VARIOUS SUBSTATION

SPECIAL CONDITIONS

1.1 Sufficiency of Tender

- 1.1.1 Tender shall indicate clause-by-clause compliance with the specifications. This shall take the form of a separate document listing all the specifications clause numbers indicating the individual statement of compliance or non-compliance. This document shall be used by Tenderers to elaborate on their response to a clause.
- 1.1.2 Where equipment offered does not comply with standards or publications referred to in any of the specifications, Tenderers shall state which standards of specifications apply and submit a copy of the applicable specification and or standard in English.
- 1.1.3 Any drawings and information required by Transnet but not included in the specification shall be furnished on request.
- 1.1.4 All relevant information of the material used for the installation shall be submitted with the tender document including the technical specification.
- 1.1.5 Transnet reserves the right to inspect the tenderer's facilities prior to awarding the contract in order to ensure that it is suitable for the type of repair required.
- 1.1.6 The Contractor shall indicate at the tendering stage what steps have been taken to implement a Quality System in terms of ISO 9002 and shall submit such a Quality Plan.
- 1.1.7 Incomplete tenders will be automatically disqualified.

1.2 Duration of contract

- 1.2.1 The contract will commence within 5 days of acknowledgement of receipt of the notification of acceptance of tender with Transnet Freight Rail.
- 1.2.2 The contract will be completed within 5 weeks of acknowledgement of receipt of the notification of acceptance of tender with Transnet Freight Rail.

1.3 Compliance with statutes

- 1.3.1. The Contractor shall comply with all applicable legislation, Codes of Practice and Local, Regional or Provincial Authority regulations. The Contractor shall in particular, comply with the following Instructions, Acts etc;
- SANS 1019 Standard voltage, current and insulating level for electrical supply
 - The compensation for Occupational Injuries and Diseases Act (Act 130 of 1993).
 - The Occupational Health and Safety Act (Act 85 of 1993)
 - Common law of nuisance

1.4 Maintenance period

A maintenance period of 6 months after the date of completion of the works will be instituted to ensure that replenishment work has been properly done. Contractor shall repair any defects within two weeks from the date of such notification of the defect(s).

1.5 Retention money

10% of the total value of the contract will be retained for the maintenance period, until work has been satisfactory completed.

1.6 Penalties for late completion

A penalty fee for late completion of R2000 per calendar day shall be levied.

1.7 To be provided by Transnet Freight Rail

NIL

1.8 To be provided by the contractor

- 1.8.1 In addition to all labour, water, materials, plant, equipment and incidentals needed to complete the work, the Contractor shall provide all accommodation and toilet facilities for his/her employees. No accommodation shall be erected or utilised on Transnet Freight Rail property.
- 1.8.2 The Contractor shall provide safe and secure storage facilities for all tools, machineries plant equipment brought onto and in use on the site. Such facilities shall be capable of ensuring that unauthorised persons or animals cannot gain access to such chemicals and equipment. Such storage facilities shall not be on Transnet Freight Rail property.
- 1.8.3 The Contractor shall provide at his/her own cost any security measures he/she may deem necessary for safe and effective execution of the work within the contract area. No persons may stand or walk within 5m of the centre of the track.
- 1.8.4 The Contractor shall appoint at each work site sufficient personnel whose sole task shall be to be on the lookout for approaching rail traffic. These employees shall operate an audible warning device to timorously warn all people on the work site of approaching rail traffic.
- 1.8.5 An effective safety procedure to be followed by all personnel on any work site shall be compiled by the Contractor and implemented before any work commences. The procedure shall be updated whenever the need arises and any changes shall be communicated to all employees on a work site before work proceeds.

1.9 Schedule of quantities and prices

- 1.9.1 The quantities in the Price List / Schedule of quantities (Section 2, page 11), are estimated and may be more or less than stated.
- 1.9.2 The tenderer shall price each item. If the Contractor has omitted to price any items in the Schedule, the cost of the work included in such items will be held to be included in the price given for preliminary and general.
- 1.9.3 The absence of stated quantities in the Price List is no guarantee that none will be required. Reasonable prices should therefore be inserted for every item as these prices may be considered in adjudication of tenders.
- 1.9.4 The short descriptions of the items in the Price List / Schedule are for identification purposes only. In so far as these documents have any bearing, they shall be referred to for details of the description, quality, and test of plant and material used, and the workmanship, conditions, obligations, liabilities and instructions generally which shall be complied with in carrying out the Contract. The cost of complying with all conditions, obligations and liabilities described in the contract documents including profit, shall be deemed to be included in the rates quoted by the Contractor in the Price List – Section 2.

1.10 Site meetings

The Contractor shall attend site meetings when required. These meetings will be held under the chairmanship of the Supervisor or his/her deputy. When sub-contractors are required to attend, the Contractor shall ensure their attendance.

1.11 Site books

- 1.11.1 The Contractor shall provide a site instruction book and a daily diary (both in triplicate) at the site as directed by the Supervisor for the duration of the contract.
- 1.11.2 The site instruction book shall only be used by the Supervisor or his/her deputy and will be used for the issuing of instructions to the Contractor.
- 1.11.3 The site diary book shall be used to record any unusual events during the period of the contract. All delays caused by the Contractor, Transnet Freight Rail employees and due to natural causes shall be recorded. Such delays must be counter-signed by the appointed Supervisor. Other delays caused by the 3rd party shall be reported to the Project Manager immediately in writing.
- 1.11.4 The Contractor shall complete the daily diary and a detailed description of the work done shall be recorded on a daily basis. Neither of the books shall be removed from the site without the permission of the Supervisor or his/her deputy.

1.12 Information to be provided with tender

- 1.12.1. The Contractor shall undertake the planning and programming of the entire refurbishing works and shall submit to the Supervisor for approval full particulars thereof with his/her tender.
- 1.12.2. An undertaking that all equipment will be ready for operation and that the work can commence timeously, to comply with requirements of the contract.
- 1.12.3. The contractor must indicate whether he/she intends using sub-contractors.

1.13 Damage to fauna and flora

- 1.13.1 The Contractor shall ensure that his/her employees at all times exercise care and consideration for the fauna and flora within and adjacent to the area to be treated for oil contamination.
- 1.13.2 The Contractor shall not apply any chemicals of an explosive, inflammable, highly volatile or corrosive nature, which may damage painting and steel components of Electrical Equipment or property, or be hazardous to humans or animals. The Contractor shall assume full responsibility for the efficiency and safety of whatever chemicals used to treat the oil contaminated yard stones and plinths.
- 1.13.3 Dumping or polluting of any kind will not be permitted. This stipulation is also applicable to the washing out of tanks and equipment containing harmful chemicals and pollutants.
- 1.13.4 The Contractor shall institute and maintain procedures for the safe disposal of all chemicals and residual materials originating from the execution of the works.
- 1.13.5 Containers and residual material shall not be disposed of on Transnet Freight Rail property or as part of Transnet Freight Rail refuse.
- 1.13.6 The Contractor shall take particular note of environmentally sensitive areas and shall plan and execute his/her work with the utmost care and responsibility.

- 1.13.7 Burning will not be allowed under any circumstances as a means of control. The making of fires, for whatever purpose, on Transnet Freight Rail property is also strictly prohibited.

1.14 Damage to adjoining property

The Contractor shall ensure that no damage occurs to adjoining property. He shall take all necessary precautions as the work progresses not to damage any structure, equipment, persons or other items on any adjoining property.

1.15 Hours of work

Hours of work will be limited from Monday to Friday, 08:00 – 16:00. No work shall be performed outside these hours unless prior approval is granted by Transnet Freight Rail.

1.16 Contractual obligation

- 1.16.1 The Contractor shall provide a provisional Gantt or a similar chart showing proposed work program. The final chart shall be submitted within seven working days of awarding the tender.
- 1.16.2 This Instruction book shall be used to record any instructions to the Contractor and disputes regarding the quality of work on site. This book will be filled in by the Supervisor or Manager and must be countersigned by the Contractor.
- 1.16.3 The site diary and the site instruction book shall be the property of Transnet and shall be handed over to the Supervisor or Manager on the day of energizing or handing over.
- 1.16.4 Calibration certificates less than 12 months old issued by a recognized authority for all the instruments to conduct tests on lightning arresters shall be made available for inspection, if requested by Transnet.
- 1.16.5 The Contractor shall repair any damage resulting from negligence of his or her staff to the substation equipment.
- 1.16.6 No sub-contractor shall be appointed without obtaining prior authority from the Project Manager.

1.17 Safety requirements

- 1.17.1 The Contractor or his sub-Contractor shall be required to work on site in accordance with Transnet Freight Rail's safety specification E4E_of April 1997 and the occupation Health and safety act 85 of 1993.
- 1.17.2 The Contractor shall be required to work under direct supervision of Transnet's appointed Supervisor on site and shall work only in the area, which shall be demarcated by suitable barriers.
- 1.17.3 Transnet shall during the contract have a Supervisor available on site for the necessary isolation of electrical equipment and issuing of work permits.
- 1.17.4 Substation permit condition shall be determined during site meeting and should be approximately 1-4 weeks.
- 1.17.5 All team members, visitors or casual workers are to be inducted if they do not have a current induction certificate valid for the site.
- 1.17.6 Ensure that safety performance expectations are clearly communicated regularly to the project team.
- 1.17.7 Lengthy discussion of safety performance expectations preferably face-to-face (where possible) shall be held by the Contractor of which Transnet Freight Rail's Project Manager, Safety Rep or Supervisor has the right to be a witness.
- 1.17.8 The Contractor shall produce Health & Safety Plan for the team including all sub-contractors.
- 1.17.9 The Contractor shall list all training requirements for the team for any specific competency and/or awareness training according to various Transnet Freight Rail policies

- 1.17.10 Workers must carry proof of training attended for execution of the works
- 1.17.11 The contractor shall carry out the risk assessment of the work site to identify hazards before work commences
- 1.17.12 Records to be kept in Health and Safety file including sub-contractors:
 - i. All safety audits will be discussed and corrective actions monitored
 - ii. All audit results are to be recorded in the site diary
 - iii. Unscheduled visits and "STOP" Visits using stop cards shall be conducted by Transnet Freight Rail
 - iv. The Contractor must communicate Safety Critical incidents via Green Areas to the rest of TFR
 - v. The Contractor shall check if assets are safe for operations e.g. Train ops, safe access and exit of buildings etc
 - vi. Review safety performance stats: Incidents, Corrective Action matrix, audits etc.
 - vii. The contractor must supply his own PPE
 - viii. Employees that do not wear the necessary PPE will not be allowed on site.
 - ix. Defective PPE must be reported immediately to their Supervisor.

1.18 **SUBSTANCE ABUSE TESTING**

The OHSA (Act 85 of 1993) clearly states in the Safety Regulations no. 2A "INTOXICATION" **An employer or user, as the case may be, shall not permit any person who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace".** Transnet Freight Rail enforces this legislation by means of its Substance Abuse Policy, and therefore reserves the right to do substance abuse testing on anyone who enters their premises.

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Annexure B

BLE52391 : REPLENISHMENT OF OUTDOOR YARD STONES AND INSTALLATION OF OUTDOOR EARTHING AT VARIOUS SUBSTATIONS

PROJECT SPECIFICATION

Scope of work

This contract covers the replenishment of outdoor yard stones and installation of outdoor earthing at various substations.

Description of work

The Contractor shall perform the following at Hugo, Huguenot, Goula and Soetendal 3kV Substation:

Yard Stone

The contractor shall remove all stones on areas which are contaminated with oil. Care must be taken not to disturb the earthing system

After treatment with the weed killer, a 100mm layer of 25mm to 37mm crusher stone shall be laid over the whole area of the Transnet Freight Rail high voltage outdoor yard (within the apron).

The contractor shall remove all stones on areas that are contaminated with oil and sand whilst care is taken not to damage the earthing system

This specification covers the technical part for the excavating and backfill of 3 different types of trenches and 2 different types of holes

Before any trenching commences the contractor shall consult with Transnet staff for approval with regards to routing of the trenches in the outdoor yard. All busbar connections shall be greased by means of silicon substance

Before the trenches are closed a representative from Transnet shall inspect for damage to earth system

Steelwork

The design, supply and installation of all steel structures for the support of equipment and tensioning of conductors shall be the responsibility of the contractor.

The manufacture of any steelwork shall not take place prior to the approval of the design drawing by the supervisor

Transnet Freight Rail shall inspect the steelwork at the manufacturer's works prior to dispatch.

All fasteners (nuts & bolts) shall be secured using flat as well as lock washer.

Earthing Layout

The following electrical equipment in the outdoor yard shall be bonded directly to earth mat:

- The support steel structures for the surge arrestors at the Eskom supply side
- All surge arrestors

The material to be utilized shall be 16 mm diameter copper plated earth rods. The rods shall comply with SANS 1063 and shall be electro-plated to minimum thickness of 250 microns

The length of the rods will be dependant on the application:

- Earth electrodes (earth spikes). Minimum length of 1.5 meters shall be used.
- Down conductors, earth tails and interconnecting conductors. Rods of varying length may be used

Copper plated rods shall have the SANS mark of approval and the manufacturers name

For the installation or replacement of the main earth mat/earth electrode, Copper conductor of at least 16 mm diameter shall be buried at least 1,5 meters below the ground. The earth mat shall cover an area of at least 1,5 square meter

The earth mat shall be provided with a test point connection for test purposes. This test shall protrude a minimum of 10 mm above ground level and shall be protected by means of a metal pipe or metal housing

The location of earth mat/earth spike shall be as close as possible to the main surge arrestors support structures.

For the new installations the contractor shall carry out earthing survey in accordance with the methods as described in specification CEE.0177 or SANS 10199 to determine the type of earthing system required.

The contractor shall be required to submit a separate quotation for the survey.

For existing substations the contractor shall carry out earth resistance test to establish the condition of the existing earth mat/earth spike and shall replace such earth mat/earth spike where required.

Before any trenching commences the contractor shall consult with Transnet staff for approval with regards to the routing of the trenches in the outdoor yard

Trenching shall include all trenches required for the installation of the earthing system

The perimeter fence trenching shall be as close as possible to the perimeter fence on the inside of the HV yard

The depth of trenching shall be at least 700 millimeter. Care must be taken not to damage the existing cable in the high voltage outdoor yard during trenching operations.

Before the trenches are closed, a representative from Spoornet shall inspect the earthing system for damage to earth rods

Earth electrodes shall be driven into the ground at the corners of the outdoor yard and in between the corners.

In the case of double unit substation the number of earth electrodes between the corner electrodes shall be determined in consultation with Transnet Freight Rail.

The depth of the earth electrodes driven into the ground shall be such that the top of the earth electrodes shall be a minimum of 700 mm below the surface of the ground.

The earthing of the support steel structure for the surge arrestors shall be in accordance with Transnet Freight Rail. Drawing BBB 3620

The surge arrestors base shall be connected directly to earth mat/earth spike

Where surge arresters are fitted on the main transformer provision shall be made to install earth electrode in close proximity to the transformer. The earth electrode shall be connected directly to the system as shown in drawing BBB 3620.

All underground connection which include connections to the earth electrodes, the joints in the copper plated steel rods, connections to the perimeter fence posts, support steel structure and the connection to the new or existing earth mat shall be exothermic welded.

Where exothermic welding cannot be carried out, galvanised studs, nuts, tinned cable lugs and any other approved means may be used for the termination of the earthing conductors to the fence post, surge arresters down leads and other electrical equipment.

Exothermic welded joints and steel components exposed to corrosion shall be sealed with a durable waterproofing compound i.e. Bitumen, Denso tape or Noxide.

All crimped connections that are above ground level must be filled with an anti corrosive compound.

Where the exothermic welding is carried out on galvanised surface of the support steel structures, the Galvanising must be removed and the surface cleaned. After completion of the exothermic weld, the surface area on the support steel structure where the galvanising was removed shall be treated using zinc rich paint which complies with the requirements of SANS 926 and SANS 1391.

Exothermic joints shall be hammer tested on recommendation of the manufacture to ensure that the mechanical strength of the joints are adequate. The exothermic weld is tapped by a hammer and by sound it is determined whether the joints are solid or that there voids in the joint.

Where two earthing conductors run parallel to each other, exothermic parallel joint shall be installed every 1,5 meter on all straight section between these conductors.

The contractor shall replace any copper plated steel rods, damaged during installation.

Exothermic welding

Only contractors who are certified and accredited by the exothermic welding industry shall be used for the installation.

Guarantee and defects

The Contractor shall guarantee the satisfactory operation of the complete electrical installation supplied and erected by him and accept liability for maker's defects that may appear in design, materials and workmanship.

The Contractor shall be issued with a completion certificate with the list of all defects to be repaired within 14 working days after commissioning.

Any defects that may become apparent during the guarantee period shall be rectified to the satisfaction of Transnet Freight Rail, and to the account of the Contractor.

The Contractor shall undertake work on the rectification of any defects that may arise during the guarantee period within 7-days of him being notified by Transnet Freight Rail of such defects.

Should the Contractor fail to comply with the requirements stipulated above, Transnet Freight Rail shall be entitled to undertake the necessary repair work or effect replacement of defective apparatus or materials, and the Contractor shall reimburse Transnet Freight Rail the total cost of such repair or replacements, including the labour costs incurred in replacing defective material.

If urgent repairs have to be carried out by Transnet Freight Rail staff to maintain supply during the guarantee period, the Contractor shall inspect such repairs to ensure that the guarantee period is not affected and should they be covered by the guarantee, reimburse Transnet Freight Rail the cost of material and labour.

Quality and inspection

During the progress of the contract all work being undertaken by the Contractor shall be subject to periodic inspection by the Technical Officer. All work shall be performed to the entire satisfaction of the Technical Officer or his duly authorized representative.

Should at any stage in the progress of the said Works, or on completion, an inspection visit reveal any defects in the construction, which are due to the part of the Contractor, such defects shall immediately be remedied by the Contractor at his own expense and to the satisfaction of the Technical Officer or his duly authorized representative

Annexure B BLE52391 Project Specifications

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Annexure C

BLE52391 : REPLENISHMENT OF OUTDOOR YARD STONES AND INSTALLATION OF OUTDOOR EARTHING AT VARIOUS SUBSTATIONS

MEASUREMENTS AND PAYMENT

Preliminary and general shall be measured and paid for as lump sum. Tendered rates must therefore include labour, site establishment, transport, civil works, soil testing, preparations, security and all necessary resources required to complete the works.

For all the substations, the supply and laying of the crusher stones shall be measured and paid for as a lump sum. Tendered rates must therefore include all necessary resources required to complete the work.

For all the substations, the supply and installation of outdoor earthing system shall be measured and paid for as lump sum. Tendered rates must therefore include supply, delivery of materials, installation, trenching and laying of earthing cables including brackets, clamps, joints, bolts, nuts etc and all necessary resources required to complete the work.

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Annexure D

BLE52391 : THE REFURBISHMENT OF OUTDOOR YARD STONES AT VARIOUS SUBSTATION

SCHEDULE OF APPLICABLE SPECIFICATIONS, INSTRUCTIONS & DRAWINGS

South African National Standards:

- SANS 1091 National Colour Standard
- SANS 8528 Reciprocating internal combustion engine driven alternating current generating set.
- SANS 10142 Wiring Code

Transnet Freight Rail:

1. BBB 3620 version 5: 3kV DC earthing arrangement Traction Substation
2. BBB 3059 version 2: 3kV DC Traction Substation Earthing System For High Voltage Outdoor Yard
3. BBB 5452 version 6: Transnet Freight Rail requirements for installation of electrical equipment for 3kV DC substations
4. CEE-TBD-0007: Earthing arrangement for traction substations
5. BBB 0198 version 1: Specifications for the supply of cables
6. CEE. 0023.90: Specifications for installation of cables

The above-mentioned specifications, numbers 1 – 6 are available on the enclosed CD

TRANSNET LIMITED

(Registration no. 1990/000900/30)

**SAFETY ARRANGEMENTS AND PROCEDURAL COMPLIANCE
WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT
(ACT 85 OF 1993) AND APPLICABLE REGULATIONS****1. General**

- 1.1 The Contractor and Transnet Limited (hereinafter referred to as "Transnet") 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 (the Act) and applicable Regulations.
- 1.2 The Contractor accepts, in terms of the General Conditions of Contract and in terms of the 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. He shall, before commencement with the execution of the contract work, comply with the provisions set out in the Act, and shall implement and maintain a Health and Safety Plan as described in the Construction Regulations, 2003 and as approved by Transnet, on the Site and place of work for the duration of the Contract.
- 1.3 The Contractor accepts his obligation to complying fully with the Act and applicable Regulations notwithstanding the omission of some of the provisions of the Act and the Regulations from this document.
- 1.4 Transnet accepts, in terms of the 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 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 Work.
- 1.5 In the event of any discrepancies between any legislation and this specification, the applicable legislation will take precedence.

2. Definitions

- 2.1 In this Specification any word or expression to which a meaning has been assigned in the Construction Regulations, shall have the meaning so assigned to it, unless the context otherwise indicates: -
- 2.2 The work included in this Contract shall for the purposes of compliance with the Act be deemed to be "**Construction Work**", which, in terms of the Construction Regulations, 2003 means any work in connection with: -
- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;

- (b) the installation, erection, dismantling or maintenance of fixed plant where such work includes the risk of a person falling;
 - (c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
 - (d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;
- 2.3 **“competent person”** in relation to construction work, means any person having the knowledge, training and experience specific to the work or task being performed: Provided that where appropriate qualifications and training are registered as per the South African Qualifications Authority Act, 1995 these qualifications and training shall be deemed to be the required qualifications and training;
- 2.4 **“contractor”** means principal contractor and **“sub-contractor”** means contractor as defined by the Construction Regulations, 2003.
- 2.5 **“fall protection plan”** means a documented plan of all risks relating to working from an elevated position, considering the nature of work undertaken, and setting out the procedures and methods applied to eliminate the risk;
- 2.6 **“health and safety file”** means a file, or other record in permanent form, containing the information required to be kept on site in accordance with the Act and applicable Regulations;
- 2.7 **“Health and Safety Plan”** means a documented plan which addresses the hazards identified and include safe work procedures to mitigate, reduce or control the hazards identified;
- 2.8 **“Risk Assessment”** means a programme to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard;
- 2.9 **“the Act”** means the Occupational Health and Safety Act No. 85 of 1993.

3. **Procedural Compliance**

3.1 The Contractor who intends to carry out any construction work shall, before carrying out such work, notify the Provincial Director in writing if the construction work:-

- (a) includes the demolition of a structure exceeding a height of 3 metres; or
- (b) includes the use of explosives to perform construction work; or
- (c) includes the dismantling of fixed plant at a height greater than 3m,

and shall also notify the Provincial Director in writing when the construction work exceeds 30 days or will involve more than 300 person days of construction work and if the construction work:-

- (a) includes excavation work deeper than 1m; or

- (b) includes working at a height greater than 3 metres above ground or a landing.
- 3.2 The notification to the Provincial Director shall be on a form similar to Annexure A of the Construction Regulations, 2003, also shown in Annexure 1 of this Specification. The Contractor shall ensure that a copy of the completed notification form is kept on site for inspection by an inspector, Technical Officer or employee.
- 3.3 The Contractor shall, in accordance with the Act and applicable Regulations, make all the necessary appointments of competent persons in writing on a form similar to Annexure 2 of this Specification and deliver copies thereof to the Technical Officer. Copies should also be retained on the health and safety file.
- 3.4 Subcontractors shall also make the above written appointments and the Contractor shall deliver copies thereof to the Technical Officer.
- 3.5 In the case of a self-employed Contractor or any subcontractor who has the appropriate competencies and supervises the work himself, the appointment of a construction supervisor in terms of regulation 6.1 of the Construction Regulations, 2003 will not be necessary. The Contractor shall in such a case execute and sign a declaration, as in Annexure 3, by which he personally undertakes the duties and obligations of the "Chief Executive Officer" in terms of section 16(1) of the Act.
- 3.6 The Contractor shall, before commencing any work, obtain from the Technical Officer an access certificate as in Annexure 4, executed and signed by him, permitting and limiting access to the designated site or place of work by the Contractor and any subcontractors under his control.
- 3.7 Procedural compliance with Act and Regulations, as above, shall also apply to any subcontractors as employers in their own right. The Contractor shall furnish the Technical Officer with full particulars of such subcontractors and shall ensure that they comply with the Act and Regulations and Protekon's safety requirements and procedures.

4. Special Permits

Where special permits are required before work may be carried out such as for hotwork, isolation permits, work permits and occupations, the Contractor shall apply to the 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 permits.

5. Health and Safety Programme

- 5.1 The Tenderer shall, with his tender, submit a Health and Safety Programme setting out the practical arrangements and procedures to be implemented by him to ensure compliance by him with the Act and Regulations and particularly in respect of: -
- (i) 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 Act;

- (ii) the execution of the contract work in such a manner as to ensure in terms of section 9 of the 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;
 - (iii) ensuring, as far as is reasonably practical, in terms of section 37 of the 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.
- 5.2 The Contractor's Health and Safety Programme 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.
- 5.3 The Contractor shall cause a risk assessment contemplated in clause 5.2 above to be performed by a competent person, appointed in writing, before commencement of any Construction Work and reviewed during construction. The Risk Assessments shall form part of the Health and Safety programme to be applied on the site and shall include at least the following:
- (a) The identification of the risks and hazards that persons may be exposed to;
 - (b) the analysis and evaluation of the hazards identified;
 - (c) a documented Health and Safety Plan, including safe work procedures to mitigate, reduce or control the risks identified;
 - (d) a monitoring and review plan.
- 5.4 The Health and Safety Plan shall include full particulars in respect of: -
- (a) The safety management structure to be instituted on site or place of work and the names of the Contractor's health and safety representatives and members of safety committees where applicable;
 - (b) the safe working methods and procedures to be implemented to ensure the work is performed in compliance with the Act and Regulations;
 - (c) the safety equipment, devices and clothing to be made available by the Contractor to his employees;
 - (d) the site access control measures pertaining to health and safety to be implemented;
 - (e) the arrangements in respect of communication of health and safety related matters and incidents between the Contractor, his employees, subcontractors and the Technical Officer with particular reference to the reporting of incidents in compliance with Section 24 and General Administrative Regulation 8 of the Act and with the pertinent clause of the General Conditions of Contract forming part of the Contract and

- (f) the introduction of control measures for ensuring that the Safety Plan is maintained and monitored for the duration of the Contract.
- 5.4 The Health and Safety programme shall be subject to the 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 Technical Officer's opinion, are necessary to ensure full compliance by the Contractor with his obligations as an employer in terms of the Act and Regulations. The Technical Officer or his deputy shall be allowed to attend meetings of the Contractor's safety committee as an observer.
- 5.5 The Contractor shall take reasonable steps to ensure that each subcontractor's Health and Safety Plan is implemented and maintained on the construction site: Provided that the steps taken, shall include periodic audits at intervals mutually agreed to between them, but at least once every month.
- 5.6 The Contractor shall stop any subcontractor from executing any construction work, which is not in accordance with the Contractor's and/or subcontractor's Health and Safety Plan for the site or which poses a threat to the health and safety of persons.
- 5.7 The Contractor shall ensure that a copy of the Health and Safety Plan is available on site for inspection by an inspector, Technical Officer, agent, subcontractor, employee, registered employee organisation, health and safety representative or any member of the health and safety committee.
- 5.8 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.
- 5.9 The Contractor shall ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the Risk Assessment.
- 5.10 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 times as may be determined in the Risk Assessment.
- 5.11 The Contractor shall ensure that all visitors to a construction site undergoes health and safety induction pertaining to the hazards prevalent on the site and shall be provided with the necessary personal protective equipment.

6. Fall Protection Plan

- 6.1 In the event of the risk and hazard identification, as required in terms of clause 5.3 of this Specification, revealing risks relating to working from an elevated position the contractor shall cause the designation of a competent person, responsible for the preparation of a fall protection plan;

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

6.3 The fall protection plan shall include:-

- (a) A Risk Assessment of all work carried out from an elevated 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 elevated positions;
- (d) the training of employees working from elevated positions; and
- (e) the procedure addressing the inspection, testing and maintenance of all fall protection equipment.

7. Hazards and Potential Hazardous Situations

The Contractor and the Technical Officer shall immediately notify one another of any hazardous or potentially hazardous situations which may arise during performance of the Contract by the Contractor 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.

8. Health and Safety File

- 8.1 The Contractor shall ensure that a health and safety file is opened and kept on site and shall include all documentation required as per the Act and applicable regulations, and made available to an inspector, the Technical Officer, or subcontractor upon request.
- 8.2 The Contractor shall ensure that a copy of the both his Health and Safety Plan as well as any subcontractor's Health and Safety Plan is available on request to an employee, inspector, contractor or the Technical Officer.
- 8.3 The Contractor shall hand over a consolidated health and safety file to the Technical Officer upon completion of the Construction Work and shall in addition to documentation mentioned in the Act and applicable Regulations include a record of all drawings, designs, materials used and other similar information concerning the completed structure.

ANNEXURE 1**OCCUPATIONAL HEALTH AND SAFETY ACT, 1993****Regulation 3(1) of the Construction Regulations****NOTIFICATION OF CONSTRUCTION WORK**

-
-
- 1(a) Name and postal address of principal contractor:

- (b) Name and tel. no of principal contractor's contact person:

2. Principal contractor's compensation registration number: _____
- 3.(a) Name and postal address of client:

- (b) Name and tel no of client's contact person or agent:

- 4.(a) Name and postal address of designer(s) for the project:

- (b) Name and tel. no of designer(s) contact person:

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6(1).

6. Names of principal contractor's construction sub-ordinate supervisors on site appointed in terms of regulation 6(2).

7. Exact physical address of the construction site or site office:

8. Nature of the construction work:

9. Expected commencement date: _____
10. Expected completion date: _____

11. Estimated maximum number of persons on the construction site: _____

12. Planned number of contractors on the construction site accountable to the principle contractor:

13. Name(s) of contractors already chosen.

Principal Contractor

Date

Client

Date

* THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR PRIOR TO COMMENCEMENT OF WORK ON SITE.

* ALL PRINCIPAL CONTRACTORS THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

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ANNEXURE 2

(COMPANY LETTER HEAD)

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 OF 1993) :

SECTION/REGULATION: _____

REQUIRED COMPETENCY: _____

In terms of _____ I, _____

representing the Employer) do hereby appoint _____

As the Competent Person on the premises at _____

(physical address) to assist in compliance with the Act and the applicable Regulations.

Your designated area/s is/are as follows :-

Date : _____

Signature :- _____

Designation :- _____

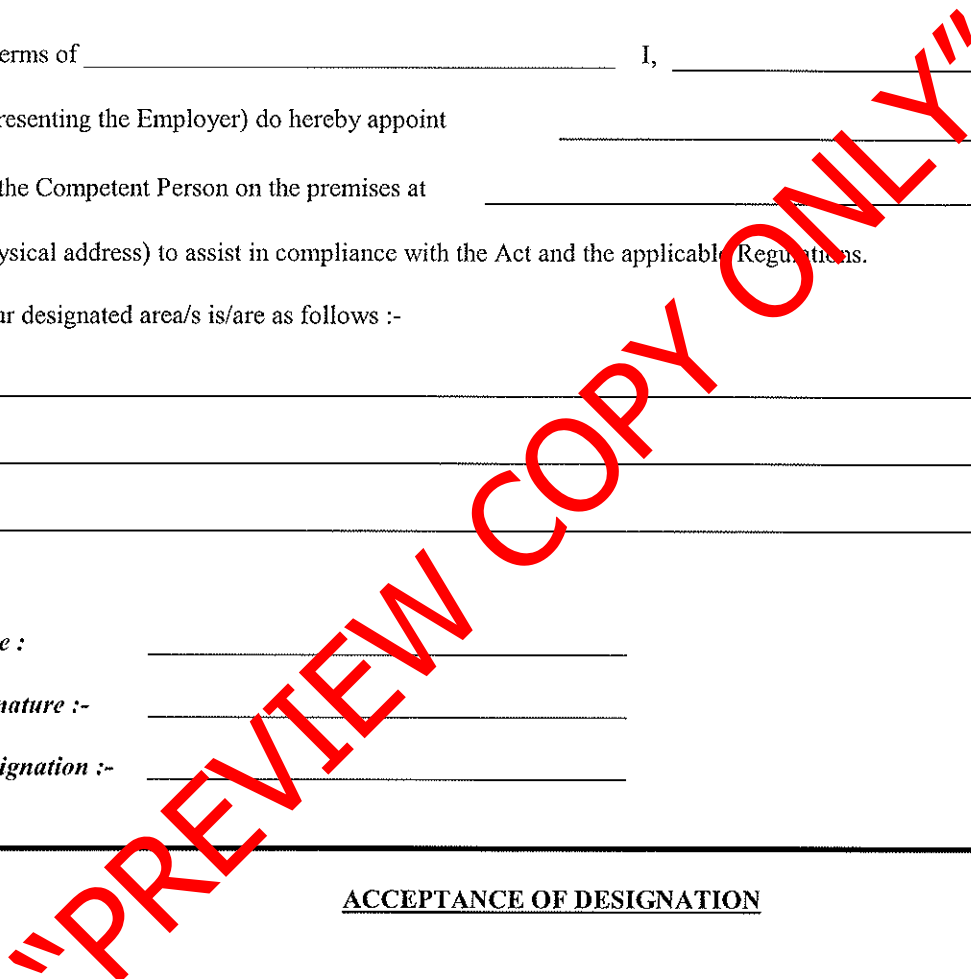
ACCEPTANCE OF DESIGNATION

I, _____ do hereby accept this Designation and acknowledge that I understand the requirements of this appointment.

Date : _____

Signature :- _____

Designation :- _____



ANNEXURE 3**(COMPANY LETTER HEAD)****OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 OF 1993) :****DECLARATION**

In terms of the above Act I, _____ am personally assuming the duties and obligations as Chief Executive Officer, defined in Section 1 of the Act and in terms of Section 16(1), I will, as far as is reasonably practicable, ensure that the duties and obligations of the Employer as contemplated in the above Act are properly discharged.

Signature :- _____

Date : _____

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ANNEXURE 4

(LETTER HEAD OF BUSINESS DIVISION OR UNIT OF TRANSNET LIMITED)

SITE ACCESS CERTIFICATE

Access to : _____ (Area)
Name of Contractor/Builder :- _____
Contract/Order No.: _____

The contract works site/area described above are made available to you for the carrying out of associated works

In terms of your contract/order with
(company) _____

Kindly note that you are at all times responsible for the control and safety of the Works Site, and for persons under your control having access to the site.

As from the date hereof you will be responsible for compliance with the requirements of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended and all conditions of the Contract pertaining to the site of the works as defined and demarcated in the contract documents including the plans of the site or work areas forming part thereof.

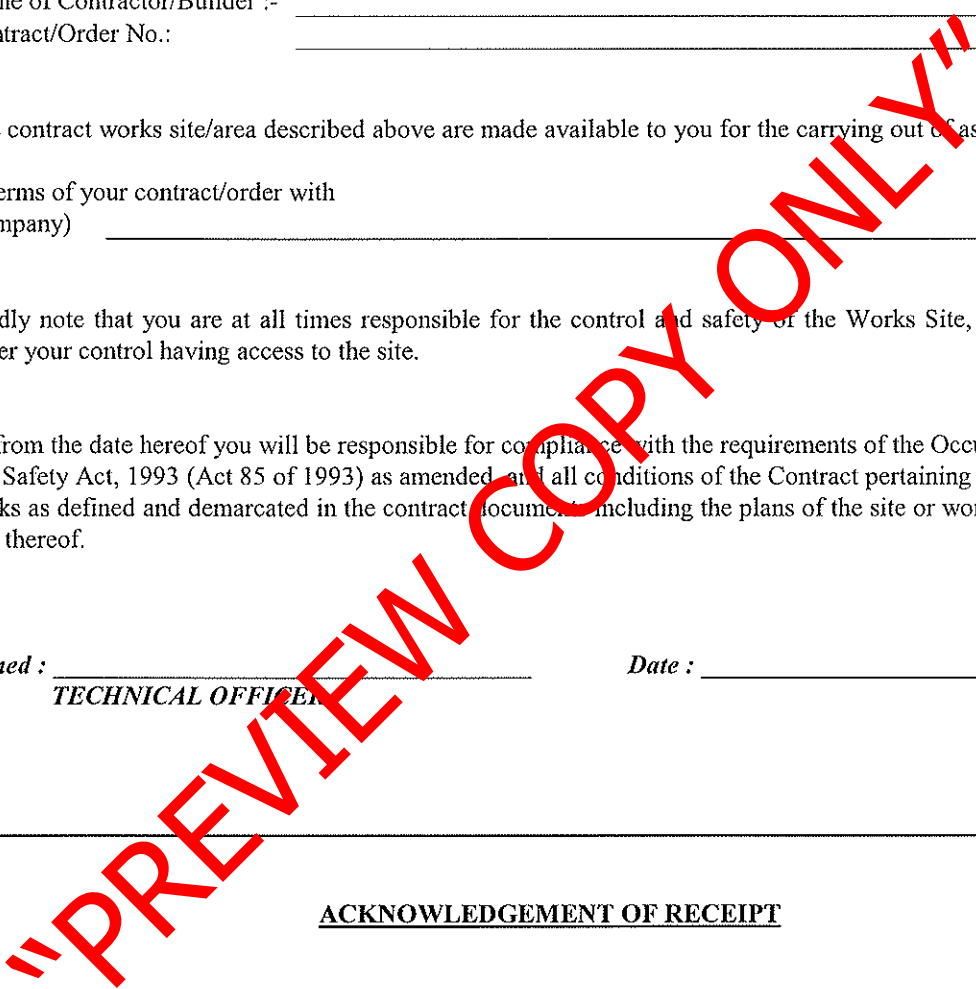
Signed : _____ Date : _____
TECHNICAL OFFICER

ACKNOWLEDGEMENT OF RECEIPT

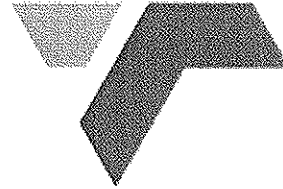
Name of Contractor/Builder :- _____ I,
_____ do hereby acknowledge and accept the duties
and obligations in respect of the Safety of the site/area of Work in terms of the Occupational Health and
Safety Act; Act 85 of 1993.

Name : _____ Designation : _____

Signature : _____ Date : _____



TRANSNET



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)




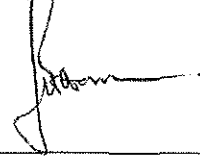
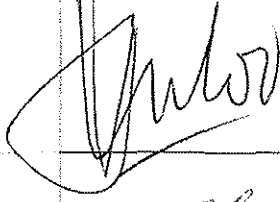

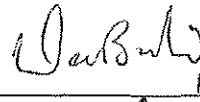

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(This page not to be issued with contract)

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

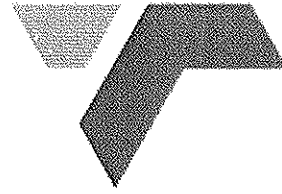
Author:	Project Manager Capital Program (Electrical)	G. Maposa	
Approved:	Senior Engineer Infra Engineering (Train Authorisation Systems)	J. van den Berg	
"	Principal Engineer Infra Engineering (Track)	M. Marutla	
"	Principal Engineer Infra Engineering (Structures)	J. Honan	
"	Principal Engineer Infra Engineering (Electrical)	J. Vosloo	
"	Principal Engineer Technology Management (Electrical)	W. Coetzee	
"	Chief Engineer Transport/Telecoms	D. Botha	 17 June 11
Authorised:	Chief Engineer Infrastructure Engineering	J. van Aardt	 2011/06/30

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Date: May 2011

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TRANSNET



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
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(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's 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 2 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.

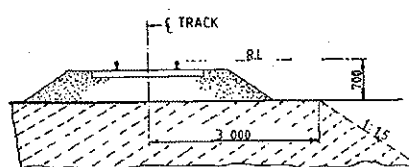


Fig. 1

- 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 50m 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-, tele-communications- 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-, tele-communications- 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 veld 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, work place 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 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.

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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 shoring 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 machines, 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

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HORIZONTAL CLEARANCES :
1 065mm TRACK GAUGE

ANNEXURE 1
SHEET 1 of 5



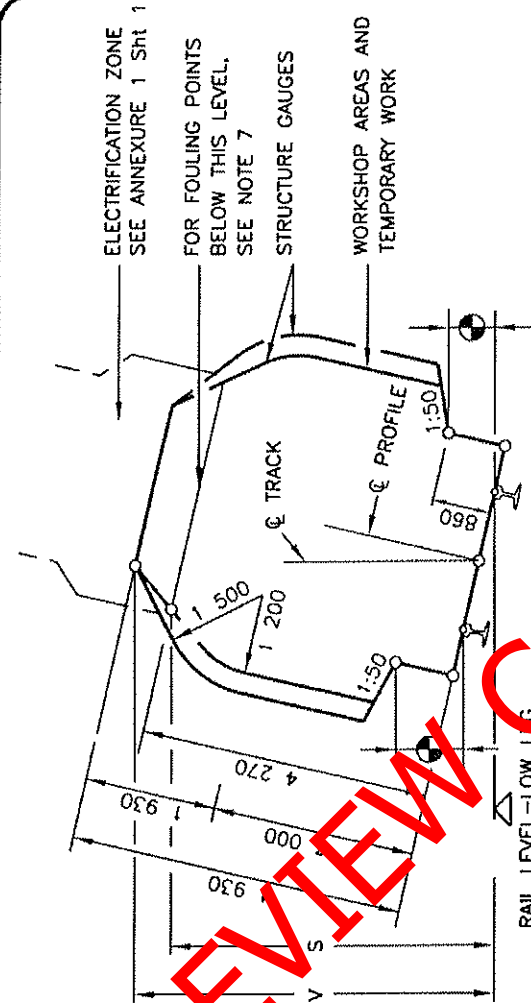
RADIUS (m)	WITH CANT		NO CANT		WITH CANT	
	H (mm)	L (mm)	H & L	B (mm)	C (mm)	C (mm)
90	2 730	3 090	2 780	1 350	2 100	2 100
100	2 700	3 030	2 750	1 140	2 050	2 050
120	2 650	2 970	2 700	1 160	2 000	2 000
140	2 620	2 920	2 660	1 175	1 950	1 950
170	2 590	2 870	2 630	1 190	1 970	1 970
200	2 570	2 820	2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

REMARKS:

1. H AND B IS THE REQUIRED HORIZONTAL CLEARANCE ON THE HIGH LEG OF THE CURVE BASED ON MINIMUM CANT.
2. L AND C IS THE REQUIRED HORIZONTAL CLEARANCE ON THE LOW LEG OF THE CURVE BASED ON MAXIMUM CANT.
3. INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
4. FOR WORKSHCP 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.
7. USE SMALLER RADIUS IF RADIUS INBETWEEN

VERTICAL CLEARANCES :
1 065mm TRACK GAUGE

ANNEXURE 1
SHEET 2 of 5



LOCATION	NOT ELECTRIFIED		ELECTRIFIED (PRESENT OR FUTURE)	
	RADIUS (mm)	S (mm)	V (mm)	3kV & 25kV (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:

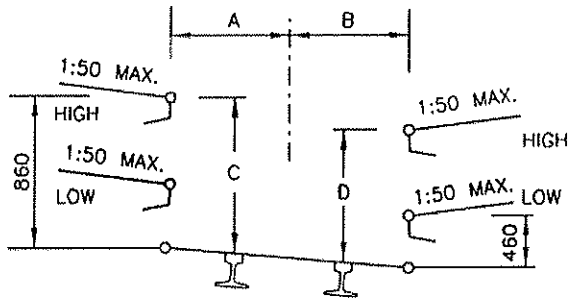
1. V IS THE REQUIRED VERTICAL CLEARANCE EXCEPT WHERE REDUCED CLEARANCE S APPLIES.
2. S IS THE MINIMUM VERTICAL CLEARANCE FOR STRUCTURES AND TEMPORARY WORK OVER NON-ELECTRIFIED LINES.
3. INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
4. FOR APPLICATION AT CURVES
 - 4.1 APPLY INCREASED 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

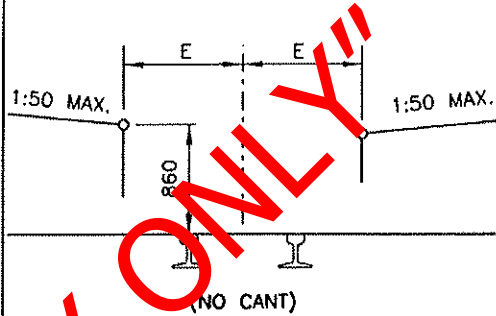
ANNEXURE 1
SHEET 3 of 5

PLATFORMS : TRACK GAUGE 1 065mm

PASSENGERS



GOODS

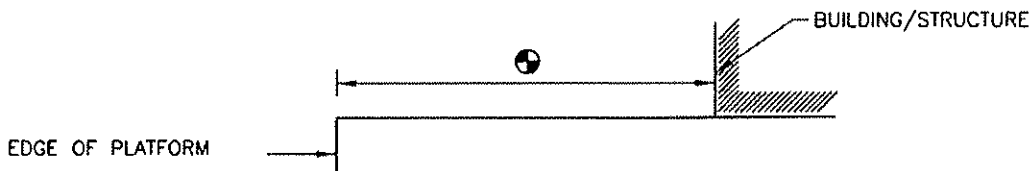


RADIUS (m)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
90	1 690	1 820	890	810	1 840
100	1 650	1 790	890	810	1 810
120	1 610	1 740	890	810	1 760
140	1 580	1 700	890	810	1 720
170	1 550	1 660	890	810	1 690
200	1 530	1 630	890	820	1 670
250	1 520	1 600	890	820	1 640
300	1 520	1 580	890	830	1 620
350	1 520	1 560	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:

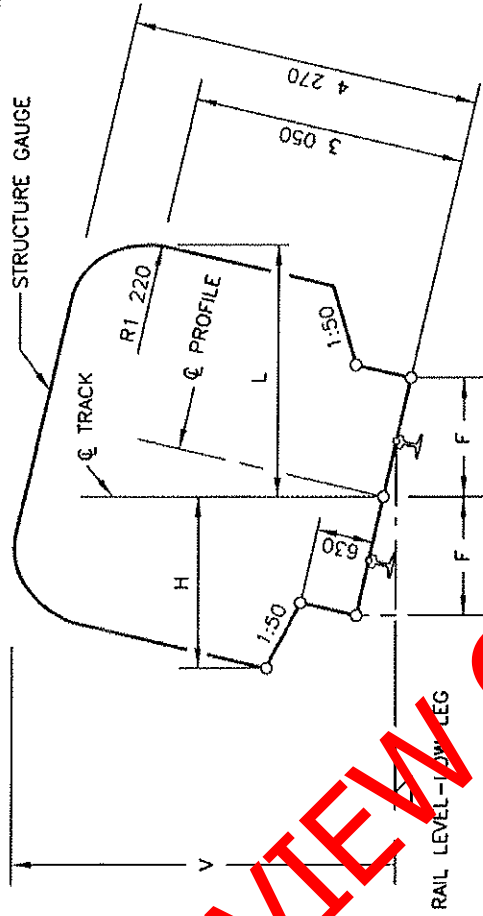
1. NO CANT TO BE APPLIED EXCEPT WHEN THE GOODS PLATFORM IS ON A RUNNING LINE.
2. INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
3. 8m TO MAIN STATION-BUILDINGS AND 3m TO ALL OTHER STRUCTURES.
4. TOLERANCES : SEE CLAUSE 8.0.10.
5. ALWAYS USE THE SMALLEST RADIUS

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



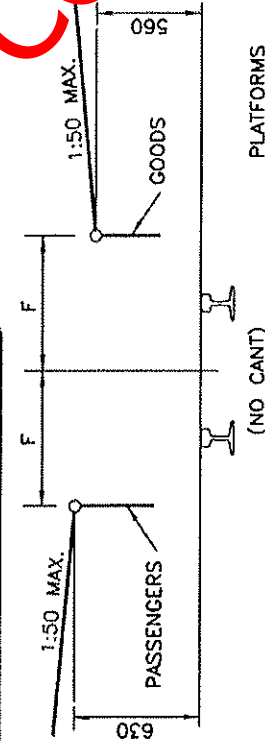
CLEARANCES : 610mm TRACK GAUGE

ANNEXURE 1
SHEET 5 of 5



RADIUS (m)	F (mm)
50	1 550
60	1 510
80	1 460
100	1 430
120	1 410
140	1 390
170	1 380
200	1 370
250	1 360
300	1 350
600	1 330
1 000	1 320
>2 000	1 320
STRAIGHT	1 310

RADIUS (m)	WITH CANT		NO CANT	
	H (mm)	L (mm)	H & L (mm)	V (mm)
50	2 370	2 490	2 400	4 370
70	2 310	2 420	2 330	4 310
100	2 260	2 370	2 280	4 10
140	2 220	2 340	2 250	4 310
200	2 200	2 300	2 220	4 300
300	2 190	2 270	2 200	4 300
500	2 180	2 230	2 190	4 290
700	2 170	2 200	2 180	4 270
1 000	2 170	2 170	2 170	4 270
>2 000	2 160	2 160	2 160	4 270



REMARKS:

- H IS THE MINIMUM HORIZONTAL CLEARANCE ON THE OUTSIDE OF THE CURVE BASED ON MINIMUM CANT.
- L IS THE MINIMUM HORIZONTAL CLEARANCE ON THE INSIDE OF THE CURVE BASED ON MAXIMUM CANT.
- V IS THE MINIMUM VERTICAL CLEARANCE.
- FOR APPLICATION AT CURVES:
 - 4.1 APPLY INCREASED CLEARANCES FOR CURVES TO POINTS 2m 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 18m ALONG STRAIGHTS.
- INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
- ALSO REFER TO REMARKS 5, 6 AND 7 OF ANNEXURE 1 SHEET 2.
- CLEARANCES ARE BASED ON 9 700mm BOGIE CENTRES AND 13 700mm VEHICLE BODY LENGTH.
- SEE ANNEXURE 1 SHEET 3 FOR STRUCTURES ON PLATFORMS.