

- information relating to the past, present and future research and development of the disclosing Party;
- information relating to the business activities, business relationships, products, services, customers, clients and Subcontractors of the disclosing Party where an onus rests on the disclosing Party to maintain the confidentiality of such information;
- information contained in the software and associated material and documentation belonging to the disclosing Party;
- technical and scientific information, Know-How and trade secrets of a disclosing Party including inventions, applications and processes;
- Copyright works;
- commercial, financial and marketing information;
- data concerning architecture, demonstrations, tools and techniques, processes, machinery and equipment of the disclosing Party;
- m) plans, designs, concepts, drawings, functional and technical requirements and specifications of the disclosing Party;
- n) information concerning faults or defects in goods, equipment, hardware or software or the incidence of such faults or defects; and information concerning the charges, Fees and / or costs of the disclosing Party or its authorised Subcontractors, or their methods, practices or service performance levels actually achieved;

1.2. FOREGROUND INTELLECTUAL PROPERTY”

- a) Means all Intellectual Property developed by either Party pursuant to this Agreement;

1.3. “INTELLECTUAL PROPERTY”

- a) Means Patents, Designs, Know-How, Copyright and Trade Marks and all rights having equivalent or similar effect which may exist anywhere in the world and includes all future additions and improvements to the Intellectual Property

1.4. “TRADE MARKS”

- a) Mean registered Trade Marks and trade mark applications and includes any sign or logo, or combination of signs and/or logos capable of distinguishing the goods or services of one undertaking from those of another undertaking.

1.5. INTELLECTUAL PROPERTY RIGHTS

Title to Confidential Information

- a) Transnet will retain all right, title and interest in and to its Confidential Information and Background Intellectual Property and the Supplier acknowledges that it has no claim of any nature in and to the Confidential Information and Background Intellectual Property that is proprietary to Transnet. For the avoidance of doubt, all the Supplier's Background Intellectual Property shall remain vested in the Supplier.
- b) Transnet shall grant to the Supplier an irrevocable royalty free non-exclusive license to use Transnet's Background Intellectual Property only for the Permitted Purpose. This license shall not permit the Supplier to sub-license to other parties.
- c) The Supplier shall grant to Transnet an irrevocable, royalty free, non-exclusive license to use the Supplier's Background Intellectual Property for the Permitted Purpose. This license shall not permit Transnet to sub-license to other parties.
- d) The Supplier shall grant Transnet access to the Supplier's Background Intellectual Property on terms which shall be bona fide negotiated between the Parties for the purpose of commercially exploiting the Foreground Intellectual Property, to the extent that such access is required.

1.6. TITLE TO INTELLECTUAL PROPERTY

- a) All right, title and interest in and to Foreground Intellectual Property prepared conceived or developed by the Supplier, its researchers, agents and employees shall vest in Transnet and the Supplier acknowledges that it has no claim of any nature in and to the Foreground Intellectual Property. The Supplier shall not at any time during or after the termination or cancellation of this Agreement dispute the validity or enforceability of such Foreground Intellectual Property, or cause to be done any act or anything contesting or in any way impairing or tending to impair any part of that right, title and interest to any of the Foreground Intellectual Property and shall not counsel or assist any person to do so.
- b) Transnet shall be entitled to seek protection in respect of the Foreground Intellectual Property anywhere in the world as it shall decide in its own absolute discretion and the Supplier shall reasonably assist Transnet in attaining and maintaining protection of the Foreground Intellectual Property.
- c) Where the Foreground Intellectual Property was created by the Supplier or its researchers, agents and employees and where Transnet elects not to exercise its option to seek protection or decides to discontinue the financial support of the prosecution or maintenance of any such protection, Transnet shall notify the Supplier who shall have the right of first refusal to file or continue prosecution or maintain any such applications and to maintain any protection issuing on the Foreground Intellectual Property.
- d) No consideration shall be paid by Transnet to the Supplier for the assignment of any Foreground Intellectual Property from the Supplier to Transnet, over and above the sums payable in terms of this Agreement. The Supplier undertakes to sign all documents and do all things as may be necessary to effect, record and perfect the assignment of the Foreground Intellectual Property to Transnet. Subject to anything contrary contained in this Agreement and/or the prior written consent of Transnet (which consent shall not be unreasonably be withheld), the Supplier shall under no circumstances be entitled as of right, or to claim the right, to use Transnet's Background Intellectual Property and/or Foreground intellectual Property.

1.7. TITLE TO IMPROVEMENTS

- a) Any improvements, developments, adaptations and/or modifications to the Foreground Intellectual Property, and any and all new inventions or discoveries, based on or resulting from the use of Transnet's Background Intellectual Property and/or Confidential Information shall be exclusively owned by Transnet. The Supplier shall disclose promptly to Transnet all such improvements, developments, adaptations and/or modifications, inventions or discoveries. The Supplier hereby undertakes to sign all documents and do all things as may be necessary to effect, record and perfect the assignment of such improvements, developments, adaptations and/or modifications, inventions or discoveries to Transnet and the Supplier shall reasonably assist Transnet in attaining, maintaining or documenting ownership and/or protection of the improved Foreground Intellectual Property.

1.8. UNAUTHORISED USE OF CONFIDENTIAL INFORMATION

- a) The Supplier shall not authorise any party to act on or use in any way any Confidential Information belonging to Transnet whether or not such party is aware of such Confidential Information, and shall promptly notify Transnet of the information if it becomes aware of an party so acting, and shall provide Transnet the information with such assistance as Transnet reasonably requires, at Transnet's cost and expense, to prevent such third party from so acting.

1.9. UNAUTHORISED USE OF INTELLECTUAL PROPERTY

- The Supplier agrees to notify Transnet in writing of any conflicting uses of, and applications of registrations of Patents, Designs and Trade Marks or any act of infringement, unfair competition or passing off involving the Intellectual Property of Transnet of which the Supplier acquires knowledge and Transnet shall have the right, as its own option, to proceed against any party infringing its Intellectual Property.
- It shall be within the discretion of Transnet to determine what steps shall be taken against the infringer and the Supplier shall co-operate fully with Transnet, at Transnet's cost, in whatever measure including legal action to bring any infringement of illegal use to an end.

- The Supplier shall cooperate to provide Transnet promptly with all relevant ascertainable facts.
- If proceedings are commenced by Transnet alone, Transnet shall be responsible for all expenses but shall be entitled to all damages or other award arising out of such proceedings. If proceedings are commenced by both Parties, both Parties will be responsible for the expenses and both Parties shall be entitled to damages or other award arising out of proceedings.

1.10. CONFIDENTIALITY

The Parties hereby undertake the following, with regard to Confidential Information -

- a) not to divulge or disclose to any person whomsoever in any form or manner whatsoever, either directly or indirectly, any Confidential Information of the other, without the prior written consent of such other Party, other than when called upon to do so in accordance with a statute, or by a court having jurisdiction, or by any other duly authorised and empowered authority or official, in which event the Party concerned shall do what is reasonably possible to inform the other of such a demand and each shall assist the other in seeking appropriate relief or the instituting of a defensive action to protect the Confidential Information concerned;
- b) not to use, exploit, permit the use of, directly or indirectly, or in any other manner whatsoever apply the Confidential Information, disclosed to it as a result of this Agreement, for any purpose whatsoever other than for the purpose for which it is disclosed or otherwise than in strict compliance with the provisions in this Agreement;
- c) not to make any notes, sketches, drawings, photographs or copies of any kind of any part of the disclosed Confidential Information, without the prior written consent of such other Party, except when reasonably necessary for the purpose of this Agreement, in which case such copies shall be regarded as Confidential Information;
- d) not to de-compile, disassemble or reverse engineer any composition, compilation, concept application, item, component de-compilation, including software or hardware disclosed and shall not analyze any sample provided by Transnet, or otherwise determine the composition or structure or cause to permit these tasks to be carried out except in the performance of its obligations pursuant to this Agreement:
 - not to exercise less care to safeguard Transnet Confidential Information than the Party exercises in safeguarding its own competitive, sensitive or Confidential Information;
 - Confidential Information disclosed by either Party to the other or by either Party to any other party used by such Party in the performance of this Agreement, shall be dealt with as "restricted" or shall be dealt with according to any other appropriate level of confidentiality relevant to the nature of the information concerned, agreed between the Parties concerned and stipulated in writing for such information in such cases;
 - the Parties shall not make or permit to be made by any other person subject to their control, any public statements or issue press releases or disclose Confidential Information with regard to any matter related to this Agreement, unless written authorization to do so has first been obtained from the Party first disclosing such information;
 - each Party shall be entitled to disclose such aspects of Confidential Information as may be relevant to one or more technically qualified employees or consultants of the Party who are required in the course of their duties to receive the Confidential Information for the Permitted Purpose provided that the employee or consultant concerned has a legitimate interest therein, and then only to the extent necessary for the Permitted Purpose, and is informed by the Party of the confidential nature of the Confidential Information and the obligations of the confidentiality to which such disclosure is subject and the Party shall ensure such employees or consultants honour such obligations;
 - each Party shall notify the other Party of the name of each person or entity to whom any Confidential Information has been disclosed as soon as practicable after such disclosure;
 - each Party shall ensure that any person or entity to which it discloses Confidential Information shall observe and perform all of the covenants the Party has accepted in this Agreement as if such person or entity has signed this Agreement. The Party disclosing the Confidential Information shall be responsible for any breach of the provisions of this Agreement by the person or entity; and

- Each Party may by written notice to the other Party specify which of the Party's employees, officers or agents are required to sign a non-disclosure undertaking.
 - a Party can demonstrate that such information is already in the public domain or becomes available to the public through no breach of this Agreement by that Party, or its Personnel.
 - was rightfully in a Party's possession prior to receipt from the other Party, as proven by the first-mentioned Party's written records, without an infringement of an obligation or duty of confidentiality; or
 - can be proved to have been rightfully received by a Party from a third party without a breach of a duty or obligation of confidentiality; or
 - is independently developed by a Party as proven by its written records.
- e) This clause Z1.10 shall survive termination for any reason of this Agreement and shall remain in force and effect from the Commencement Date of this Agreement and 5 (five) years after the termination of this Agreement. Upon termination of this Agreement, all documentation furnished to the Supplier by Transnet pursuant to this Agreement shall be returned to Transnet including, without limitation all corporate identity equipment including dies, blocks, labels, advertising matter, printing matter and the like.

1.11. FORCE MAJEURE

- a) Neither Party shall have any claim against the other Party arising from any failure or delay in the performance of any obligation of either Party under this Agreement caused by an act of force majeure such as acts of God, fire, flood, war, strike, lockout, industrial dispute, government action, laws or regulations, riots, terrorism or civil disturbance, defaults, delays or discontinuance on the part of independent contractors, suppliers, or other circumstances or factors beyond the reasonable control of either Party, and to the extent that the performance of obligations of either Party hereunder is delayed by virtue of the foregoing, any period stipulated for any such performance shall be reasonably extended.
- b) Each Party will take all reasonable steps by whatever lawful means that are available, to resume full performance as soon as practicable and will seek agreement to modification of the relevant provisions of this Agreement in order to accommodate the new circumstances caused by the act of force majeure. If a Party fails to agree to such modifications proposed by the other Party within 90 (ninety) days of the act of force majeure first occurring, either Party may thereafter terminate this Agreement with immediate notice.

1.12. EQUALITY AND DIVERSITY

- a) The Supplier will not victimise, harass or discriminate against any employee of either Party to this Agreement or any applicant for employment with either Party to this Agreement due to their gender, race, disability, age, religious belief, sexual orientation or part-time status. This provision applies, but is not limited to employment, upgrading, work environment, demotion, transfer, recruitment, recruitment advertising, termination of employment, rates of pay or other forms of compensation and selection for training.
- b) Both Parties to this Agreement undertake that they will not, and shall procure that its employees, agents and Subcontractors will not breach any applicable discrimination legislation and any amendments and re-enactments thereof.

1.13. THE CONTRACTOR'S GENERAL OBLIGATIONS

The following information in addition to Core Clause 2 of the Schedule of Options will apply:

- a) The Contractor's general obligations under the Contract comprise: -
- maintenance of railway track and the provision of on-track maintenance machinery and all accessory tools and equipment of the types and nature stipulated in the Particular Specifications and

- the provision of all labour, Service Manager's Deputy personnel and specialised tradesman required to undertake the duties and functions required in terms of the Contract and everything, whether of a temporary or permanent nature, required for performance of the Work and services to be provided in terms of the Contract.
- b) Transnet Freight Rail shall, in the case of a breach of contract by the Contractor in terms of clause 1.21 of Option Z : Additional Conditions of Contract, have a lien over the Contractor's machines and accessory tools and equipment and all temporary buildings of the Contractor used for carrying out the Work.
- c) The clause headings in these conditions of contract are not deemed to be part thereof and will not be taken into consideration in the interpretation of the Contract.
- d) Any grant by Transnet Freight Rail or the Contractor (the Grantor), or by any of the persons authorised to act on their behalf to the other, of any concession, waiver, condonation or allowance shall not, in respect of any specific event or circumstance other than that in respect of which the grant was made, constitute a waiver of the rights of the grantor in terms of the Contract or an estoppel of the grantor's right to enforce the provisions of the Contract.
- e) Value-added tax in terms of the Value-added Tax Act No. 89 of 1991 shall be dealt with as follows: -
 - In Tendering; Value-added tax shall not be included in the tendered rates and prices. In payment; Value-added tax shall not be reflected on monthly contract payment
 - Certificates, but paid separately on the presentation of a tax invoice by the Contractor. The value of the work reflected on the tax-invoice must correspond with the netto amount indicated on the contract payment certificate.
 - Changes to the VAT rate will be dealt with in terms of sections 67 and 67A of the Act

1.14. CESSION, ASSIGNMENT AND SUBCONTRACTING

- a) The Contractor shall not cede or assign the Contract or any part thereof without the prior written approval of the Service Manager.
- b) The Contractor shall not enter into any subcontract without the prior written approval of the Service Manager which approval shall not unreasonably be withheld. The subcontractor, in respect of whom approval is so granted and his employees or workmen shall for all the intentions and purposes of the Contract, be deemed to be workmen of the Contractor, as provided in clause 1.14 a) of Option Z hereof.
- c) Approval given in terms of clauses 1.14 a) and 1.14 b) of Option Z hereof shall not relieve the Contractor of any responsibility, duty or obligation imposed upon him by the Contract, and the Contractor shall in particular be and remain solely liable and responsible for all acts, omissions, negligence or breaches of contract on the part of the assignee or any of his employees, and for all acts, omissions or negligence of any subcontractor or any of his employees.

1.15. SUFFICIENCY OF TENDER

- a) The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender and of the rates and prices stated in the Price List. These rates shall be sufficient to cover his obligations under the Contract and everything necessary for the proper performance of the Work and services specified here in.

1.16. ACCESS, RIGHTS-OF-WAY AND CAMPSITES

- a) Where entry onto Transnet Freight Rail's property is restricted, permission to enter will be given only for the performing the Work and services included in the Contract and will be subject to the terms and conditions laid down by Transnet Freight Rail.

- b) The Contractor shall arrange for campsites, workplaces and access thereto as well as for any right-of-way over private property to the place of the Work, and for access within the boundaries of Transnet Freight Rail'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 Service Manager's Deputy.
- c) 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 Service Manager's Deputy 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 Transnet Freight Rail's property or on private property and which restricts access to the Work.
- d) Where such approval has been given, the Contractor shall prevent entry of animals or unauthorised persons onto Transnet Freight Rail's or private property and shall make the fences safe against trespass at the close of each day's work.
- e) 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.
- f) When access is no longer required and before completion of the Work, the Contractor shall repair, restore or replace any fence or gate damaged during execution of the Work and services to the satisfaction of the Service Manager's Deputy.

1.17. WORKMEN

- a) All persons employed by the Contractor to carry out the Contract shall be competent, responsible and of good character.
- b) If, in the opinion of the Service Manager's Deputy, any person employed by the Contractor is inefficient, negligent, disrespectful or objectionable, the Service Manager's Deputy may, after consultation with the Contractor, instruct that such person be removed from the Contract Work.
- c) During the currency of the Contract, the Contractor shall not approach any employee of Transnet Freight Rail with a view to offering him employment in any capacity whatsoever.
- d) The Contractor shall, upon request, provide the Service Manager's Deputy with a weekly statement of the number of persons employed on the Work each day by the Contractor and any sub-contractor, the capacity in which employed, the total number of hours worked in that week for each grade of staff separately and details of any incentive or bonus payment schemes introduced. The statement shall be supported by documentary evidence when so required by the Service Manager's Deputy.
- e) The Contractor shall ensure that all staff transported on on-track machines and Transnet Freight Rail wagons or coaches, shall at all times be transported in a safe and responsible way. Only authorised staff shall be transported.
- f) The attention of the Contractor is directed to the requirements of safety legislation and regulations with regard to storage and transport of dangerous substances, accommodation and transport of people.
- g) Staff shall only be allowed to travel on a train or machine in approved accommodation or cabin facilities.

1.18. HOUSING OF EMPLOYEES

- a) The Contractor shall, where necessary, make his own arrangements for suitable housing of his employees. Where temporary housing is permitted by the Service Manager's Deputy on Transnet Freight Rail land the Contractor shall provide suitable sanitation, lighting and portable water supplies.

- b) The Contractor may, where available and subject to the approval of the Service Manager's Deputy, use Transnet Freight Rail campsites and sanitary services. The Contractor may in such case use Transnet Freight Rail waste disposal service if available at such campsite.
- c) Fouling of the area inside or outside Transnet Freight Rail's boundaries must be prevented. The Contractor may be called upon by the Service Manager's Deputy to dispose of any foul or waste matter generated by the Contractor.

1.19. HOURS OF WORK

- a) The Contractor shall conform to the hours of duty laid down by the Service Manager's Deputy. When required, the Contractor shall work either overtime or shifts, on paid public holidays, Saturdays or Sundays. The machinery will not be required to work more than 6 shifts in any 7-day period or 11 shifts in any 14-day period.
- b) Work shall not be suspended for rain or inclement weather unless otherwise agreed by the Service Manager's Deputy. Before the end of each day's work the Contractor will be advised in writing of the commencement time and duration of the following day's occupation(s). The duration of the occupation will be subject to train operating conditions.
- c) The Contractor may be required to work SPLIT occupations as defined in clause 3.10 of the Service Information when a 2 hour period will be allowed between occupation periods for servicing of the machines.
- d) The Contractor will be allowed sufficient time on-track to calibrate and adjust the machine as part of the preventive maintenance of the machine. This time will be outside the scheduled occupation periods and will not be included in any of the contract measurements.

1.20. COMPLIANCE WITH STATUTES AND SAFETY RULES

- a) The Contractor shall comply with all applicable legislation and the Transnet safety requirements. The cost of such compliance shall be borne by the Contractor and shall be deemed to have been allowed for in the rates and prices in the Contract.
- b) The Contractor shall, in particular, comply with the following Acts: -
The Compensation for Occupational Injuries and Diseases Act, (Act 130 of 1993); The Contractor shall produce proof of his registration and good standing with the Compensation Commissioner in terms of the Act.
 - The Occupational Health and Safety Act (Act 85 of 1993); The Contractor is in terms of section 37(2) of Act 85 of 1993, deemed to be an employer in his own right with duties as prescribed in the Act and agrees to ensure that all work will be performed or machinery and plant used in accordance with the provisions of the Act in respect of all persons in his employ, other persons on the premises or the site or place of the Work or on the Work to be executed by him and under his control in terms of the Contract. The agreements in this Contract and all documents attached or referred to, form an integral part of the arrangements and procedures stipulated in the aforementioned section.
 - the Contractor shall comply with the current Transnet Specification E.4E, Safety Arrangements and Procedural Compliance with the Occupational Health and Safety Act, Act 85 of 1993 and Regulations as applicable, and shall, before commencement with the execution of the Contract, submit to the Service Manager's Deputy, documentary proof of his procedural compliance with the Act and particulars of his Health and Safety Policy and Programme to be implemented on the Work in accordance with Specification E.4E.
 - The Contractor's Health and Safety Policy and Programme will be subject to the agreement of the Service Manager's Deputy, who may order supplementary and/or additional safety arrangements and/or different safe working methods to ensure compliance by the Contractor with his obligations as an employer in terms of the Act.

- The Contractor shall comply with the current Specification for Work On, Over, Under or Adjacent to Railway Lines and near High Voltage Equipment - E7/1, where applicable, and shall take particular care of the safety of his employees working on or in close proximity to a railway line during track occupations as well as under normal operational conditions.
- He shall also comply with all other safety requirements, regulations and guidelines of Transnet applicable to the nature of Work carried out under the Contract and shall obtain the particulars thereof from the Service Manager's Deputy.
- In addition to compliance with clause 1.20 (b) of Option Z hereof, the Contractor shall report all incidents contemplated by Section 24 of the Act in writing to the Service Manager's Deputy. Any incident resulting in the death of or injury to any person on the WORK shall be reported within 24 hours of its occurrence and any other incident shall be reported within 48 hours of its occurrence.
- The term "safety rules" is used in a generic sense and refers to all Transnet arrangements, procedures and requirements, pertaining to safety, specified or incorporated by reference in the contract documents, such as the Specification for Work On, Over, Under or Adjacent to Railway Lines and near High Voltage Equipment, E7/1, the Electrical Safety Instructions - High Voltage Equipment. (Copies of these documents are available for inspection at the offices of Transnet Freight Rail.

1.21. BREACHES AND REMEDIES

- a) Should the Contractor commit any breach or default of any kind mentioned in clause 1.21 b) of Option Z hereof, the Employer may exercise, subject to the provisions as stated in Option W1 as well as clause 1.21 c) of Option Z, for and on behalf of Transnet, immediately, in whole or in part and consecutively or concurrently, all or any of the options, rights and powers set out in clause 1.21 c) of Option Z hereof.
- b) Breaches or defaults entitling the Employer to act in terms of clause 1.21 c) of Option Z hereof shall be the following:
 - insolvency of the Contractor or an act of insolvency comprising inter alia, the following:
 - liquidation or sequestration of the Contractor's estate (provisionally or finally); or
 - the Contractor publishing a notice of surrender of his estate as insolvent; or
 - the Contractor entering into a compromise with the general body of his creditors; or
 - the Contractor having an execution levied on his goods.
 - material breach of the Contract by the Contractor comprising inter alia;
 - the abandonment or repudiation of the Contract;
 - suspension of progress of the Work without contractual cause;
 - assigning of the Contract without the consent in writing of the Employer having first being obtained
 - subcontracting any part of the Contract without the Service Manager's approval;
 - failing to provide the performance bond in terms of option X13 hereof;
 - failing to satisfy any judgment or arbitrator's award entered against him within 7 days after such judgment or award is so entered; or to satisfy any attachment order against property within 3 days of its issue;
 - failure, after he has been notified in terms of Option X17 clause 4.1.3 to achieve the specified output and/or availability of the machinery; or to rectify defective performance; or
 - conviction of the Contractor or any of his employees in a court of law for any offence which adversely affects the interests of Transnet
- c) In the event of any breach or default mentioned in clause 1.21 b) of Option Z hereof, the Employer may exercise any of the following options, rights and powers: -
- d) To cancel the Contract and to invoke the lien over the Contractor's machines, equipment, tools and temporary buildings, and any indemnities or safeguards in favour of Transnet in terms of the Contract.

- e) To take over full possession and control of the whole or any portion of the Work and the Contractor's machinery equipment, tools and material used thereon, and control of any or all of the Contractor's employees (with or without accepting any liability for arrear salaries or wages, or for any contracts of personal service) and to continue and complete the Work, by employment of such of the Contractor's employees and using such of his site establishment, temporary buildings, machinery equipment tools and materials, as is necessary in the discretion of the Service Manager, all for the account of and at the cost and risk of the Contractor.
- f) To remove and dismiss any person employed by the Contractor and, for the account of and at the cost and risk of the Contractor, to engage or appoint any other person under such conditions and to pay him such salary or wage as the Service Manager may deem fit.
- g) To obtain from any source whatsoever, at the cost of the Contractor, tools, equipment and material as are necessary, in the opinion of the Service Manager, for the proper completion of the Contract.
- h) To dismiss the Contractor from any further control of the execution of the Contract, and thereafter to take over full control of and to utilise the whole or any portion of the machinery, equipment, tools and material belonging to the Contractor, and to employ any person other than the Contractor to complete the Contract, in each case for the account of and at the risk and cost of the Contractor, after or without offering such work for tender and without the interference or intervention in any way by the Contractor. After the said work has been completed by such other person and such other person has been paid therefore, the Service Manager shall issue the Final Certificate when so authorised by the Employer.
- i) To reduce, in the case where the Contractor's defective workmanship and/or performance is accepted by Transnet, any one or all of the rates and prices in the Contract by the amounts of Transnet's losses or the costs of rectifying the defective workmanship and/or performance of the Contractor, or by the amounts that the Contract Work is reduced in value as a consequence of the deficiencies.
- j) Should any money as shown by the final certificate be due by the Contractor to Transnet, the Contractor and/or his guarantor shall forthwith pay such money to Transnet, failing which Transnet may recover the said amount from the Contractor.
- k) All wages, salaries, costs, expenses and damages paid, incurred or sustained by Transnet for which the Contractor is liable in terms of the Contract, shall be paid by the Contractor on demand or shall be recovered from monies owing to the Contractor or by legal action in a court of appropriate jurisdiction.
- l) In any action taken or instituted by Transnet in terms of clauses 1.21 a) of Option Z to 1.21 j) of Option Z hereof or any clause of the Contract read alone or in conjunction with these clauses, a certificate issued by the Service Manager shall be deemed to be proof of any amount due by the Contractor to Transnet or by Transnet to the Contractor.
- m) No action taken or instituted by Transnet in terms of clauses 1.21 a) of Option Z to 1.21 j) of Option Z hereof or any clause of the Contract read alone or in conjunction with these clauses shall prejudice or detract from Transnet's right to recover damages for any other breach or default committed by the Contractor in respect of the Contract. The remedies provided under clauses 1.21 c) of Option Z and 1.21 j) of Option Z hereof are additional to any other rights, claims or remedies that Transnet may have in law or under the Contract against the Contractor.

C1.2 CONTRACT DATA (TSC3)

Part Two – Data Provided by the *Contractor*

Completion of the data in full, according to the Options chosen, is essential to create a complete contract.

Statements given in all contracts

(a) The *Contractor* is

Name

Address

(b) The *direct fee percentage* is %

(c) The *subcontracted fee percentage* is %

(d) The *working areas* are the Site and

(e) The key people are

(1) Name

Job

Responsibilities

Qualifications

Experience

(2) Name

Job

Responsibilities

Qualifications

Experience

(3) Name

Job

Responsibilities

Qualifications

Experience

(4) Name

Job

Responsibilities

Qualifications

Experience

(f) The following matters will be included in the Risk Register

Optional statements

(a) If the **Contractor** is to provide Works Information for his design

The Works Information for the *Contractor's* design is in



(b) If a programme is to be identified by the Contract Data.

The programme identified in the Contract Data is

.....

(c) If the *Contractor* is to decide the *completion date* for the whole of the works

The *completion date* for the whole of works is

.....

If Option A or B is used

Data for SSCC

- (a) The percentage for people overheads is%.
- (b) The published list of Equipment is the last edition of the list published by
.....
- (c) The percentage for adjustment for Equipment in the published list is% (state plus or minus).
- (d) The rates for other Equipment are
- | Equipment | size or capacity | rate |
|-----------|------------------|-------|
| | | |
| | | |
| | | |
| | | |
| | | |
- (e) The hourly rates for Defined Cost of design outside the Working Areas are
- | category of employee | hourly rate |
|----------------------|-------------|
| | |
| | |
| | |
| | |
- (f) The percentage of design overheads is%
- (g) The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are **all of the categories listed above.**

C1.3 FORMS OF SECURITIES

Pro-formas for Bonds & Guarantees

For use with the NEC3 Term Service Contract (June 2005) (TSC3)

The *conditions of contract* stated in the Contract Data Part 1 may include one or more of the following Secondary Options:

Option X4: ~~Parent company guarantee~~
Option X13: Performance Bond
Option X14: ~~Advanced payment to the Contractor~~

Each of these Secondary Options requires a bond or guarantee "in the form set out in the Works Information".

Pro forma documents for these bonds and guarantee are provided here for convenience but are to be treated as part of the Works Information.

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

This pro forma document is available for use by the Surety on the *Employer's* web page at www.transnet.net

Drafting instructions:

1. Select the required pro formas by deleting the ones not required, then complete all the details except that which the bond / guarantee provider is required to complete.
2. There are two pro formas suitable for use with Option X13, but only one of them can be used; the Reducing Value Guarantee is generally used only for building works.
3. Then delete these drafting instructions. Delete this whole Securities section if none of the above secondary Options have been selected by the *conditions of contract*.

Pro forma Performance Bond (for use with Option X13)
(to be reproduced exactly as shown below on the letterhead of the Surety)

Transnet Freight Rail
A Division of Transnet SOC Ltd
Inyanda House 2, Table 3/71
P.O Box 8617
Johannesburg
2001

Date:

Dear Sirs,

Performance Bond for Contract No. S.I.C 12015CIDB

With reference to the above numbered contract made or to be made between

Transnet Freight Rail, A Division of Transnet SOC Ltd

(the *Employer*) and

{Insert registered name and address of the Contractor}

(the *Contractor*), for

**MAINTENANCE OF TRACK WITH ON-TRACK MACHINERY: MEDIUM
CLASS VEHICLE FOR THE 25 kV AC AND 3 kV DC OVERHEAD
TRACK EQUIPMENT, COUNTRY WIDE FOR A PERIOD OF 2 YEARS.**

(the *works*).

I/We the undersigned

on behalf of the Surety

of physical address

and duly authorised thereto do hereby bind ourselves as Surety and co-principal debtors in *solidum* for the due and faithful performance of all the terms and conditions of the Contract by the *Contractor* and for all losses, damages and expenses that may be suffered or incurred by the *Employer* as a result of non-performance of the Contract by the *Contractor*, subject to the following conditions:

1. The terms *Employer*, *Contractor*, *Project Manager*, *works* and Defects Certificate have the meaning as assigned to them by the *conditions of contract* stated in the Contract Data for the aforesaid Contract.
2. We renounce all benefits from the legal exceptions "Benefit of Execution and Division", "No value received" and all other exceptions which might or could be pleaded against the validity of this bond, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted.
3. The *Employer* has the absolute right to arrange his affairs with the *Contractor* in any manner, which the Employer deems, fit and without being advised thereof the Surety shall not have the right to claim his release on account of any conduct alleged to be prejudicial to

the Surety. Without derogating from the foregoing compromise, extension of the construction period, indulgence, release or variation of the *Contractor's* obligation shall not affect the validity of this performance bond.

4. This bond will lapse on the earlier of

- the date that the Surety receives a notice from the *Project Manager* stating that the last Defects Certificate has been issued, that all amounts due from the *Contractor* as certified in terms of the contract have been received by the *Employer* and that the *Contractor* has fulfilled all his obligations under the Contract, or
- the date that the Surety issues a replacement Performance Bond for such lesser or higher amount as may be required by the *Project Manager*.

5. Always provided that this bond will not lapse in the event the Surety is notified by the *Project Manager*, (before the dates above), of the *Employer's* intention to institute claims and the particulars thereof, in which event this bond shall remain in force until all such claims are paid and settled.

6. The amount of the bond shall be payable to the *Employer* upon the *Employer's* demand and no later than 7 days following the submission to the Surety of a certificate signed by the *Project Manager* stating the amount of the *Employer's* losses, damages and expenses incurred as a result of the non-performance aforesaid. The signed certificate shall be deemed to be conclusive proof of the extent of the *Employer's* loss, damage and expense.

7. Our total liability hereunder shall not exceed the sum of:

(words) _____

R _____

8. This Performance Bond is neither negotiable nor transferable and is governed by the laws of the Republic of South Africa, subject to the jurisdiction of the courts of the Republic of South Africa.

Signed _____ on this _____ day of _____ 2012
at _____

Signature(s) _____

Name(s) (printed) _____

Position in Surety company _____

Signature of Witness(s) _____

Name(s) (printed) _____

Part C1.4 Adjudicator's Contract

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CONTRACT DATA

- Statements given in all contracts**
- The *contract between the Parties* is **To be advised**.....
 - The *period of retention* is ...**N/A**..... weeks.
 - The *law of the contract* is the law of **the Republic of South Africa**
 - The *language of this contract* is **English**.....
 - The amount of the advanced payment is **N/A**.....
 - The Adjudicator's *fee* is...**To be advised**.....per hour.
 - The *interest rate* is **2%** per annum above the prime lending rate of the **Standard Bank of South Africa.**
 - The *currency of this contract* is **ZAR**.....
 - The Adjudicator's appointment terminates on **(To be advised)**.....

Optional statements **If the period for payment of invoices is not three weeks**

- The period for payment of invoices is **.four**.....weeks.

If additional conditions of contract are required

- The *additional conditions of contract* are

To be advised

.....

.....

.....

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Part C2: Pricing Data

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PART C2
PRICING DATA

CONTENTS

Section	Description
C2.1	PRICING INSTRUCTIONS
C2.2	PRICE LIST

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C2 Pricing Data

C2.1 Pricing Instructions

Entries in the first three columns in the Price List are made either by the *Employer* or the Tenderer.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the Tenderer enters the amount in the Price column only; the Unit, Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for the item of work which is the rate for the work multiplied by the quantity completed, the Tenderer enters the rate which is then multiplied by the expected quantity to produce the Price, which is also entered.

All Prices are to be shown excluding VAT unless instructed otherwise by the *Employer* in Tender Data or in an instruction the *Employer* has given before the Tenderer enters his Prices.

If there is insufficient space in the Price List which follows, state in which document the Price List is contained.

2.1 BASIS OF MEASUREMENT AND PAYMENT

- 2.1.1 Calculations for measuring availability of the vehicle in its entirety shall be based on the total number of hours that the vehicle is required per month, which will consist of the following:
 - 2.1.1.1 Normal working hours during normal working days as defined in Part C3 (Service Information). Always required, 52 weeks a year.
 - 2.1.1.2 Emergency call-out hours as defined in Part C3 (Service Information). This will only be applicable when the vehicle is actually required for this type of work.
 - 2.1.1.3 Pre-arranged work outside normal working hours as defined in Part C3 (Service Information). This will only be applicable when the vehicle is actually required for this type of work.
- 2.1.2 The Service Manager will measure availability of the vehicle on a monthly basis and certify payment thereof in accordance with the contract.
- 2.1.3 All measurements for availability will be logged to the nearest minute of the day and totalled at the month end, where after it shall be converted to hours, rounded off to 4 decimals. The Tenderer shall quote hourly rates when tendering.
- 2.1.4 Payment will be made on a monthly basis and shall be based on a 100% availability of the vehicle in its entirety.

- 2.1.4.1 All penalties for non-availability shall be calculated as per clauses 3.11.4 and 3.11.5 of Part C3 (Service Information) and will be deducted from the monthly payment certificate.

The penalties for a Medium Class Vehicle will be calculated as follows :

- 2.1.4.1.1 100% of the hourly rate for the time that the vehicle is immobile.
- 2.1.4.1.2 100% of the hourly rate for the time that the elevating platform or aerial work platform is inoperative.
- 2.1.4.1.3 50% of the hourly rate for the time in the event of a breakdown of the support mast.
- 2.1.4.1.4 20% of the hourly rate for the time that the 220V supply is inoperative.
- 2.1.4.1.5 20% of the hourly rate for the time that the air supply for pneumatic tools is inoperative.
- 2.1.4.1.6 20% of the hourly rate for the time that the high-pressure washer is inoperative.
- 2.1.5 The Tenderer shall not include fuel costs in his monthly and hourly rates. Fuel costs shall be provided as separate items on the Price List.
- 2.1.5.1 Transnet shall pay for fuel consumed on a monthly basis for actual distance (km) operated in "travel mode". See clause 2.1.6.1
- 2.1.5.2 Transnet shall pay for fuel consumed on a monthly basis for actual hours operated in "working mode." See clause 2.1.6.2.
- 2.1.6 Payment for fuel consumed as per clauses 2.1.5.1 and 2.1.5.2, shall be calculated as follows:
- 2.1.6.1 Fuel consumed in "travel mode": The distance covered during each individual trip, shall be logged (to 1/10th of a km where possible) at the conclusion of that trip. Total km travelled in "travel mode" shall be added up monthly (to 1/10th of a km where possible) before being multiplied by the appropriate charge to determine the amount due by Transnet. Distance travelled whilst operating in "work mode" will not be paid for.
- 2.1.6.2 Fuel consumed in "work mode": The duration in minutes of every individual period during which the vehicle operates in "work mode", shall be logged at the conclusion of that period. Total time operated in this mode shall be added up monthly and then converted to hours, rounded off to 4 decimal places, before being multiplied by the appropriate charge to determine the amount due by Transnet. Only fuel consumed for Transnet's purposes, will be paid for.
- 2.1.7 Transnet shall pay for actual overtime and Sunday time worked by the Fitter at the rates reflected in the Price list. (Only work requested by Transnet, not vehicle-related maintenance tasks etc.) NO overtime will be payable for the vehicle.
- 2.1.7.1 Payment for Fitter overtime and Sunday time, as described above and in Part C3 (Service Information), shall be calculated as follows:

2.1.7.1.1 The duration in minutes of every individual period of overtime or Sunday time shall be logged at the conclusion of that period. Total time worked for the two types, shall be added up monthly and then converted to hours, rounded off to 4 decimal places, before being multiplied by the appropriate rate to determine the amount due by Transnet. Only work performed for Transnet's purposes, will be paid for.

2.2 PAYMENT CERTIFICATES

2.2.1 On or about the last day of each month, the Service Manager will make a measurement of the availability of the vehicle for that month.

2.2.2 Thereafter the Service Manager will issue a certificate authorising payment of such sum of money as he may consider represents the value of the service.

2.2.3 The Contractor shall be entitled to receive payment of the amount authorised in the said certificate within 45 days from the day of measurement or receipt of the Contractor's VAT invoice, whichever is the later. Such payment will be regarded as an open payment, and both certificate and payment will be subject to revision and adjustment by the Service Manager if at any time he is of the opinion that the certificate does not represent accurately the value of the service.

2.2.4 The Service Manager shall, within six weeks after the settlement of all dispute or arbitration awards, or after the expiry of the contract period, whichever is the later, submit to the Contractor a final certificate who, by countersigning the final certificate, shall certify his acceptance of the amount shown due to him as being full and final payment.

2.2.5 Where the Contractor fails to certify the final certificate or has not disputed the correctness thereof within three months after its receipt by him, Transnet will deem the Contractor to be in agreement with such final certificate and will effect payment in terms thereof. Transnet will not consider or admit any claim arising from the final certificate or in connection with the contract, which has not been lodged with the Service Manager within a period of three months after the receipt by the Contractor of the final certificate, and the Contractor accepts and acknowledges that by his failure to lodge a claim within the above stipulated period of three months, he waives such claim and relieves Transnet of responsibility for such claim.

2.2.6 Neither the issue of the final certificate nor any payment made thereunder, shall release the Contractor from any liability to indemnify Transnet against and to reimburse it in respect of, any claim made or to be made against it by a third party for damage or loss sustained by such third party in consequence of any wrongful act or omission of the Contractor, or his employees or agents.

C2.3 Price List

MEDIUM VEHICLE

Item no.	Description	Unit	Monthly Rate	
			R	c
1	Monthly rate for vehicle as specified, including Fitter. See clauses 3.3.1 and 3.3.4 of Part C3 (Service Information).	Month		
2	Hourly rate for vehicle as specified, including Fitter. See clause 3.2.12 of Part C3 (Service Information).	Hour		
3	Hourly overtime rate for Fitter. See clause 2.1.7.	Hour		
4	Hourly Sunday time for Fitter. See clause 2.1.7.	Hour		
5	Fuel cost per km when running in Travel Mode See clause 2.1.6.1.	Kilometre		
6	Fuel cost per hour when operating in Working Mode. See clause 2.1.6.2.	Hour		
7	Driver / Operator training course per course group, for training inside Gauteng area. See clause 3.7.2 of Part C3 (Service Information).	Course Group		
8	Driver / Operator training course per course group, for training outside Gauteng area. See clause 3.7.2 of Part C3 (Service Information).	Course Group		

Part C3: Scope of Works

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C3: Scope of Work

PROVISION OF AN ON-TRACK MEDIUM CLASS VEHICLE FOR THE MAINTENANCE AND INSPECTION OF 25 kV AC AND 3 kV DC OVERHEAD TRACK EQUIPMENT, COUNTRY WIDE:

CONTENTS

SECTION	DESCRIPTION
3.1	SCOPE OF CONTRACT
3.2	DEFINITIONS AND INTERPRETATIONS
3.3	TERM OF CONTRACT AND OPTIONS
3.4	WORKING AREA
3.5	DELIVERY OF VEHICLE
3.6	TRANSNET SPECIFICATIONS APPLICABLE
3.7	OPERATION
3.8	BREAKDOWN AND MAINTENANCE SERVICING
3.9	RECORDS AND INSTRUCTION BOOKS
3.10	AVAILABILITY
3.11	NON-AVAILABILITY
3.12	TO BE SUPPLIED BY CONTRACTOR
3.13	TO BE SUPPLIED BY TRANSNET

PARTICULAR SPECIFICATIONS :

ANNEXURE 1:	MECHANICAL REQUIREMENTS FOR MEDIUM OHTE MAINTENANCE VEHICLES.
ANNEXURE 2:	REQUIREMENTS FOR ELECTRICAL EQUIPMENT ON MEDIUM OHTE MAINTENANCE VEHICLES.

3.1.0 SCOPE OF CONTRACT

- 3.1.1 This document covers the conditions governing the hiring of an on-track OHTE maintenance vehicle from the Contractor which he shall provide and maintain during the contract period and within the areas of operation specified, subject to the terms of the succeeding clauses, specifications and conditions pertaining to this contract.

3.2.0 DEFINITIONS AND INTERPRETATIONS

- 3.2.1 Executive Officer: The person appointed by Transnet 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.
- 3.2.2 Service Manager: The person appointed by Transnet from time to time as the Service Manager to administer the contract according to the powers and rights held by and obligations placed upon him in terms of the contract.
- 3.2.3 Service Manager's Deputy: The person appointed by Transnet from time to time as the Service Manager's Deputy to administer the Contractor's performance and execution of the work according to the powers and rights held by and obligations placed upon him in terms of the contract.
- 3.2.4 Paid public holidays : Paid public holidays shall be those applicable to Transnet.
- 3.2.5 Normal working days : Mondays to Fridays, but excluding paid public holidays.
- 3.2.6 Normal working hours : The hours of duty from Monday to Friday between 07:00 and 17:00 during normal working days.
- 3.2.7 Emergency call-out hours : All hours which fall outside normal working hours (clause 3.2.6) on normal working days (clause 3.2.5.)
- 3.2.8 Sunday time : The period between 00:00 and 23:59 on Sundays as well as paid public holidays.
- 3.2.9 Overtime : The period not covered by clauses 3.2.5, 3.2.6 and 3.2.8.
- 3.2.10 Pre-arranged work outside normal working hours : Planned work which has to be performed outside normal working hours due to particular conditions.
- 3.2.11 Month : The continuous period between the first day of a calendar month and the last day of the same calendar month, both days included.
- 3.2.12 Hourly rate: The monthly charge inclusive of the Fitter, but excluding fuel costs and overtime, divided by the total number of working hours in an average month. (See clause 3.2.6.)
- 3.2.13 Non-available : When required to work, the vehicle and associated equipment is not able to produce work to the standards specified, due to breakdown.

3.2.14 Vehicle : The on-track self-propelled machine provided complete with all equipment complying with the requirements of the specifications annexed hereto.

3.2.15 Words importing the singular, also include the plural and vice versa where the context requires.

3.3.0 TERM OF CONTRACT

3.3.1 The contract period shall commence on the date the vehicle is delivered on site, ready for use ("commencement date") and shall continue for a period of 24 (Twenty Four) calendar months, on which date it shall terminate. Tenderers shall provide, at time of tendering, a realistic schedule for delivery of the vehicle and will be expected to adhere to the schedule.

3.3.2 Should the Contractor be late in delivering the vehicle as undertaken by him, Transnet shall have the right to impose penalties at the rate of R500-00 (Five Hundred Rand) for every normal working day that delivery of the vehicle is late. Penalties will not be imposed indiscriminately and due cognisance will be taken of conditions truly beyond the control of the Contractor. Penalties for late delivery will be deducted from payment for the first invoice submitted by the Contractor for the vehicle.

3.3.4 The vehicle will be in use for twelve months per year over the period and shall be used during normal working hours as well as for emergency call-outs and pre-arranged work outside normal hours. (Refer to clauses 3.2.6, 3.2.7 and 3.2.10.)

3.4 WORKING AREA:

3.4.1 The working area shall be the overhead track equipment on all lines owned and / or maintained by Transnet within the borders of the Republic of South Africa.

3.4.2 The staging depots of the vehicle will normally be at the following Depots or their recognised Sub-Depots.

3.4.2.1 Bellville, Kimberley (North and South), Bloemfontein, Port Elizabeth & East London

3.4.2.2 Empangeni, Durban, Ladysmith & Heidelberg

3.4.2.3 Isando, Vereeniging & Krugersdorp

3.4.2.4 Pretoria, Nelspruit, Witbank & Polokwane

3.4.2.5 Ermelo, Vryheid & Empangeni (Coal Line)

3.4.2.6 Saldanha (Ore Line).

3.5.0 DELIVERY OF VEHICLE

3.5.1 The Service Manager shall determine where the vehicle will be delivered at the commencement of the Contract Period. The Contractor shall carry all costs for delivery of the vehicle from his workshops to the point of delivery and shall be responsible for all associated arrangements.

- 3.5.2 Similarly the Contractor shall carry all costs and do all arrangements for the return of the vehicle to his workshops after expiry of the contract.
- 3.5.3 The Service Manager's Deputy will determine where, when and how a vehicle shall be utilised on a day-to-day basis for the maintenance of Transnet assets. Only the Service Manager's Deputy may decide to stop work due to inclement weather, etc.
- 3.6.0 TRANSNET SPECIFICATIONS APPLICABLE AND DEEMED TO FORM PART OF THE CONTRACT
- 3.6.1 The latest edition of E.4E: Safety Arrangements and Procedural Compliance with the Occupational Health and Safety Act.
- 3.6.2 The latest edition of E.7/1: Specification for works on, over, under or adjacent to Railway lines and near high voltage equipment.
- 3.6.3 Mechanical requirements for Medium OHE Maintenance Vehicles. (Annexure 1 attached hereto.)
- 3.6.4 Requirements for Electrical Equipment on Medium OHE Maintenance Vehicles. (Annexure 2 attached hereto.)
- 3.7.0 OPERATION
- 3.7.1 The Tender shall include for the provision of a full-time Fitter with the vehicle. The Fitter shall be responsible for travelling movements (not crawling in work mode), off-tracking / on-tracking, as well as regular vehicle inspections, maintenance and repairs, so that maximum availability may be achieved.
- 3.7.1.1 The Fitter will be expected to be available during normal working hours during normal working days (see clauses 3.2.6 and 3.2.5), as well as for emergency work during emergency call-out hours (see clause 3.2.7.) He shall also be available for pre-arranged work outside normal working hours as described in clauses 3.2.10 and 3.10.2.
- 3.7.2 Although a Fitter must be provided with the vehicle, the Contractor shall provide and present to Transnet personnel a training course or courses for the operation of the vehicle with relation to:
- 3.7.2.1 The safe handling and driving of the vehicle, in "travel" as well as in "work" modes.
- 3.7.2.2 The safe operating of the elevating platform/s or aerial work platform/s (whichever are provided), as well as all other equipment to be used by Transnet personnel during the performance of their tasks.
- 3.7.2.3 The necessary daily inspections to be carried out on the vehicle and their equipment before trips and work are undertaken.
- 3.7.2.4 Transnet reserves the right to use the course literature and reproductions thereof for internal training purposes.
- 3.7.2.5 A course group of Transnet personnel will consist of between two and eight people.

- 3.7.2.6 The Service Manager may, at any time during the duration of the contract, request the Contractor to present a training course at any depot or sub-depot in the working area.
- 3.7.2.7.1 The Trainer/Assessor must be accredited by a registered organisation whose qualifications are recognised by the South African Qualifications Authority (SAQA).
- 3.7.2.7.2 The training and certification of Trainees must be done according to the Driven Machinery Regulations. (Regulation 18 of the Occupational Health and Safety Act (Act 85 of 1993).
- 3.7.3 Transnet will be responsible for the safety of the vehicle in so far as train working is concerned and will provide qualified employees who will be in charge and supervise the operation of the vehicle.
- 3.7.4 It is anticipated that the vehicle will travel approximately 18 000 km per year and that the elevating platform or aerial work platform will be operational daily, (Mondays to Fridays) during normal working hours, for approximately 6 hours. These quantities are estimated and may be more or less than stated. There could also be need for emergency call-outs and pre-arranged work outside normal working hours, as per clauses 3.2.7, 3.2.10 and 3.10.2.
- 3.8.0 BREAKDOWN AND MAINTENANCE SERVICING
- 3.8.1 The Contractor shall be responsible for vehicle breakdown services as and when required. Own transport to the site shall be supplied in this event.
- 3.8.2 The Service Manager's Deputy shall inform the Contractor in writing when the vehicle will be transferred to a new staging depot. Such notice shall be given at least 7 (seven) days prior to transfer.
- 3.8.3 The Contractor shall provide maintenance services on the vehicle as determined by him. These services shall be conducted at predetermined intervals and times agreed upon by both parties (see clauses 3.7.4 and 3.8.2). The vehicle shall be serviced at one of the staging depots or their sub-depots (see clause 3.4.2).
- 3.9.0 RECORDS AND INSTRUCTION BOOKS
- 3.9.1 The Contractor shall provide and keep on the vehicle two triplicate carbon copy books, one, in which instructions and events regarding the performance of the vehicle can be recorded and the other, a logbook where odometer readings and times that the vehicle was operational may be recorded, as well as the hours that the elevating platform or aerial work platform was operational. Statutory inspections of elevating devices must also be recorded as per requirements of the relevant laws and codes. Valid copies of relevant certificates for elevating devices must also be kept on the machine at all times.
- 3.10.0 AVAILABILITY
- 3.10.1 Availability of the vehicle in its entirety shall be 100% i.e. 10 (ten) hours daily during normal working hours during normal working days, (see clauses 3.2.6 and 3.2.5), as well as for call-outs during emergency call-out hours and during pre-arranged work outside normal working hours as described in clauses 3.2.7, 3.2.10 and 3.10.2.

- 3.10.2 Where practical needs dictate that Transnet staff will have to perform planned work at night or during weekends, the Contractor will be notified at least seven days in advance to allow the Fitter concerned to make the necessary arrangements for resting, service materials, etc.
- 3.11.0 NON-AVAILABILITY
- 3.11.1 If the non-availability of the vehicle is due to a breakdown, the Contractor or his representative shall advise the Service Manager of the estimated time needed to effect repairs, after inspection thereof.
- 3.11.2 The vehicle will be regarded as available after breakdown when it is declared available for the purpose of testing, unless after the period of testing the vehicle is still non-available. In the latter case, non-availability time will continue from the time that the vehicle previously became non-available.
- 3.11.3 Should a joint inspection of the vehicle by Transnet and the Contractor reveal that the vehicle is not in a safe working condition, the Service Manager may order the temporary withdrawal of the vehicle from service. The vehicle will then be regarded as non-available until it has been repaired and is available for work.
- 3.11.4 In the event of breakdown during normal working hours (clause 3.2.6), non-availability will be calculated in minutes from the instant of breakdown, until the vehicle is declared available (clause 3.11.2). For the purposes of this calculation, non-availability outside normal working hours will be ignored, except if the vehicle is required for pre-arranged work outside normal working hours (clause 3.2.10) or emergency work (clause 3.2.7).
- 3.11.5 If the vehicle is required for work as per clauses 3.2.10 and 3.2.7, non-availability will be measured in minutes from the instant the vehicle is required or the instant of breakdown, whichever occurs later, until the end of the particular work period. Should the vehicle become available while this work is in progress and the vehicle is present at the worksite, and is utilised for the rest of the work period by Transnet, non-availability will end at the instant the vehicle is taken back into service.
- 3.11.6 The Contractor shall state time of non-availability during which normal maintenance services will be carried out on the vehicle. For payment purposes the vehicle will be regarded as available during this time (see clauses 3.7.4 and 3.8.3).
- 3.12.0 TO BE SUPPLIED BY THE CONTRACTOR
- 3.12.1 The Contractor shall at his own cost provide labour, transport, consumable items, machinery equipment, tools and materials including spare parts required for maintaining the vehicle and carry out breakdown services to an acceptable standard.
- 3.12.2 A maintenance service schedule based on the usage stated in clause 3.7.4.
- 3.12.3 The Fitter with the vehicle, will be considered the contact person for the Contractor. An all-hours contact number must however still be provided where the Contractor may be reached in case of an emergency if the Fitter is not accessible.
- 3.12.4 A cellular telephone (with "car kit") for use by the Fitter.

- 3.12.5 Diesel fuel for the vehicle. (Both provision and filling.)
- 3.12.6 Security outside normal working hours. The vehicle would normally be parked in a Depot yard or in a station yard (manned or un-manned). Working conditions may, however, require that the vehicle be parked in a section at an off-tracking platform. The vehicle will not be parked in an area considered by Transnet Risk Management to be a high-risk location.
- 3.13.0 TO BE SUPPLIED BY TRANSNET
- 3.13.1 A radio transmitter/receiver and associated aerial for installation on the vehicle by the Contractor.
- 3.13.2 A three monthly programme in writing stating the proposed sections where the vehicle will be utilised (for reference purposes to breakdowns of the vehicle).
- 3.13.3 In the event of a breakdown, where difficulty is experienced in locating the site, Transnet's "Control" offices may be contacted for directions.
- 3.13.3.1 "Control" for the various areas:
- Cape Town, Kimberley, Klerksdorp, Sishen 011-544-9779
De Aar
- Port Elizabeth, East London, Bloemfontein, 011-544-9781
Springfontein, Kroonstad, Bethlehem
- Durban, Ladysmith, Empangeni, Harrismith, 011-544-9785
Newcastle
- Pretoria, Nelspruit, Phalaborwa, Polokwane 011-544-9787
Rustenburg, Thabazimbi, Witbank
- Johannesburg, Sentrarrand, Ogies, Springs, 011-544-9783
Heidelberg, Standerton, Vereeniging, Koekemoer
Potchefstroom, Lichtenburg
- 3.13.4 A training module regarding Electrical Safety for the Fitter.
- 3.13.4.1 The Fitter must pass the training course before the vehicle is delivered.

Particular specifications attached hereto as Annexures:

Annexure 1: Mechanical Requirements for Medium OHTE Maintenance Vehicles.

Annexure 2: Requirements for Electrical Equipment on Medium OHTE Maintenance Vehicles.

Annexure 1

Mechanical Requirements for Medium OHTE Maintenance Vehicles.

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1.0 GENERAL REQUIREMENTS

- 1.1 A reliable on-track self-propelled medium class vehicle for maintenance of 3kV DC and 25kV AC Overhead Track Equipment (OHE), suitable for 1 065mm rail gauge.
- 1.2 Facilities shall consist of a cab (section 13.0), an elevating platform (section 7.0) or an Aerial Work Platform (section 8.0) and all other facilities as specified.

2.0 OPERATING CONDITIONS

- 2.1 The vehicle will be required to transport 4 Transnet staff members and a driver (seated) with equipment / tools for maintenance.
- 2.2 The vehicle will be used anywhere on the network of Transnet in the R.S.A., in all weather conditions and at night.

3.0 OTHER APPLICABLE DOCUMENTS

This specification must be read in conjunction with:

- 3.1 Transnet's Requirements for Electrical Equipment on Medium OHE Maintenance Vehicles, attached hereto as Annexure 2.
- 3.2 SABS 1191 : Highly penetration-resistant layered safety glass for vehicles.
- 3.3 SABS 1193 : Tempered safety glass for vehicles.
- 3.4 SABS 0104 : Handrailing and balustrading.
- 3.5 ACT 85 OF 1993.
- 3.6 Code 29.
- 3.7 Drawing CCE Type Y 2044: Typical off-tracking platform.

4.0 TENDERING PROCEDURE

- 4.1 No changes may be made to the text of this specification as issued, including it's Appendices and (possible) Addendum/s.
- 4.2 Tenderers shall indicate compliance with the specification on a clause-by-clause basis. This shall take the form of a separate typewritten document listing all the specification clause numbers, against which the individual statements of compliance or non-compliance must be indicated. This document may be used by Tenderers to elaborate on their response to a clause.
- 4.3 Any statement of non-compliance shall be motivated by the Tenderer.

5.0 DIMENSIONS

- 5.1 The vehicle must be designed to run on railway track with a gauge of 1 065mm.
- 5.2 Total vehicle length (measured over headstocks) may not exceed 15,3m.
- 5.3 Wheelbase must not exceed 7,0m.
- 5.4 The maximum permissible overhang is 4,150m.
- 5.5 Nominal radius of the sharpest curve is 91m and such curves are check-railed. The vehicle must be capable of safely negotiating a curve of 85m radius.
- 5.6 The profile of the vehicle must comply with Transnet's vehicle gauge (for 1 065mm track) depicted on drawing No. BE-82-15 sht 1 attached hereto as Appendix A.
- 5.7 All components must clear rail level by a minimum of 76mm except for wheels and flexible rail sweepers. The clearance between the rail and rail sweepers must stay between 13mm and 20mm, regardless of loading on vehicle.

6.0 GENERAL PERFORMANCE

- 6.1 The fully laden vehicle must be capable of a top speed of at least 80km/h on level track in both directions. Bi-directionality may be achieved by means of a facility to safely turn the vehicle around whilst on the track, within 5 minutes by two persons.
- 6.2 The fully laden vehicle must be able to maintain a speed of at least 50km/h on track with a gradient of 1:40.
- 6.3 The vehicle must be able to travel continuously at the specified top speed without suffering any ill effects.
- 6.4 A minimum operating range of 600km at top speed is required.
- 6.5 The fully laden vehicle must be able to crawl at speeds up to 10 km/h in both directions (continuously variable), on gradients of up to 1:40.

7.0 ELEVATING PLATFORM (As alternative to clause 8.0 below.)

- 7.1 The elevating platform must be capable of carrying two men with tools (at least 300kg with a maximum of 200kg at any point) also while the machine is crawling at speeds up to 10 km/h.
- 7.2 The floor area of the platform must be at least 2,30m long x 1,50m wide, and fitted with protective hand rails 1,10m high with solid toe boards 150mm high. A standard size close to the specified dimensions may be offered. Tenderers must state the dimensions of the platform offered.
- 7.3 The platform must be adjustable in such a way that it would be possible for a person of average height to comfortably perform tasks in the individual areas denoted as A, B, C, D or E in Appendix B.

- 7.4 The support structure shall have sufficient rigidity for the fully laden platform to remain stable at all times whilst stationary, during acceleration or braking (during crawling movements) of the vehicle, even on track with a cant of 100mm, with the platform in all possible extended positions.
- 7.5 Raising and lowering of the platform shall be effected by a power driven system.
- 7.6 The platform floor shall be provided with a non-slip surface.
- 7.7 Suitable lockable access shall be provided to the platform from the deck of the vehicle.
- 7.8 Certain sections of the handrails must be removable/collapsible to make it possible for the platform floor to rise to the height of the contact wire, whether the platform is positioned on track centre or moved offset.
- 7.9 A facility shall be provided to temporarily restrict the platform and its structure envelope to a predefined clearance from an adjacent energised track. The facility shall operate by means of a key which can be removed in the locked position.
- 8.0 AERIAL WORK PLATFORM** (As alternative to clause 7.0 above.)
- 8.1 The Aerial Work Platform shall be power-driven and provided with a self-levelling cradle.
- 8.2 The cradle shall be capable of carrying two men with tools, (300kg minimum). The cradle must be at least 1,80m long x 0,80m wide. Hand rails 1 100mm high with solid toe boards, 150mm high, must be fitted. A lockable access gate must be provided. A standard size close to the specified dimensions may be offered. Tenderers must state the dimensions of the cradle offered.
- 8.3 The lifting reach of the cradle shall be such that a person of average height can comfortably perform tasks in the individual areas denoted as A, B, C, D and E in Appendix B. The cradle must be mechanically lockable in the parked position for safety during travel.
- 8.4 A facility shall be provided to enable the sideways movement of the Aerial Work Platform to be temporarily restricted to either side such that the respective edges of the cradle may be set to a predefined clearance from an adjacent energised track. The facility shall operate by means of a key which can be removed in the locked position.
- 8.5 The cradle shall be rotatable (in the horizontal plane) through at least 45° to either side of the boom of the Aerial Work Platform to allow alignment with the OHTE. (Power assistance is required.)
- 8.6 The platform floor shall be provided with a non-slip surface.
- 9.0 CATENARY SUPPORT MAST**
- 9.1 A telescopic mast for support and shifting of overhead lines must be provided on the vehicle centre line where it can be easily reached from the elevating platform or Aerial Work Platform cradle.

- 9.2 It shall extend at a rate of approximately 100mm per second and be able to lift not less than 300kg in the vertical position up to a height of 8m above rail level.
- 9.3 The mast must withstand a horizontal force, in a sideways direction, of 3,2kN at 8m above rail level.
- 9.4 It shall have a head that can swivel through 90° in the horizontal plane and shall be mechanically lockable in both positions.
- 9.5 The head of the telescopic mast must be 200mm wide with three notches, (as shown in Appendix C), capable of moving 450mm to either side of track centre by either a hand drive or a power drive.

10.0 CLEARING OF TRACK

- 10.1 The vehicle must be capable of clearing the track at any of the off-tracking stand types shown on Drawing CCE Type Y 2044 (Latest issue.)
- 10.2 It must be possible to remove the vehicle from the running tracks or to place it on the tracks within five minutes for each operation, with a crew of three.

11.0 AIR SUPPLY FOR PNEUMATIC TOOLS

- 11.1 Two pneumatic quick-disconnect couplers shall be provided on the elevating platform or in the Aerial Work Platform cradle.
- 11.2 A reel with a 5m length of pneumatic hose with a quick-disconnect coupler must be provided at the non-cab end of the vehicle, with the hose permanently connected to the supply.
- 11.3 Compressed air with a flow rate of at least 0,03 m³/min suitable for intermittently driving two commercial air hand tools, must be available at the tool supply points.
- 11.4 Pneumatic couplers must match the couplers of the air tools as required by the user.

12.0 HIGH PRESSURE WASHING EQUIPMENT

- 12.1 A portable high pressure washing device for use with water-based alkaline solvent detergent must be supplied on the vehicle. (Also see clause 24.1)
- 12.2 The detergent has a Ph of ±11,2.
- 12.3 Equipment to be supplied with 10m of flexible high pressure hose on a compact fireman's hose reel close to the elevating platform or Aerial Work Platform, as well as handles and spraying nozzles as recommended by the suppliers.
- 12.4 For improved portability and versatility, the equipment must be driven by 220V AC electrical current. The power cable must be at least 10m long.
- 12.5 A pressure of 130 bar on the high pressure side is required (before pipe losses.)
- 12.6 A water storage tank of at least 400 litres capacity, must be supplied and mounted on the vehicle.

12.7 Storage space for at least 4 x 25 litre containers of undiluted detergent shall be provided.

13.0 CAB

13.1 A fully enclosed, weatherproof cab shall be provided. The cab must protect passengers against inclement weather and shall provide seating accommodation for 4 Transnet staff members and a driver.

13.2 Good ventilation, heating and demisting are required.

13.3 One lockable access door shall be provided between the cab and the deck with easy access to the steps stipulated in Clause 14.3.

13.4 Windscreens must be HPR to SABS 1191 and shall be provided at both ends of the cab and fitted with suitable electric windscreen wipers.

13.5 At least one window on each side-wall shall be provided with a sliding pane and all window glazing must be tinted safety glass to SABS 1193. One of the side windows must be of the knockout type, for emergency exit purposes and shall be marked as such.

13.6 The floor shall be covered with non-slip surface material.

13.7 All seating shall be comfortably padded, whilst the driver's seat shall be adjustable in height and distance from the control panel. Where possible, each seat shall be provided with a 3-point safety belt. The remaining seats (if any) should have 2-point safety belts.

13.8 The driver must be seated in such a way that allows him a clear view of the track when travelling in either direction. The driver must be seated in a comfortable manner to travel for long distances.

13.9 Two tanks, each with a capacity of 25 litres, intended for potable water, must be provided in the cab, complete with dispensing facilities.

14.0 DECK

14.1 The open accessible deck shall be protected on all exposed sides with suitable handrails, 100 mm high and fitted with 150mm high solid toe boards.

14.2 The open accessible deck floor shall be provided with a non-slip surface.

14.3 Suitable steps with handrails and easy access shall be provided at the end of the vehicle to allow access from ground level close to the access door stipulated in Clause 13.3, on both sides of the vehicle.

14.4 Lockable access gates must be provided at all access steps from ground level.

15.0 CONTROLS AND DISPLAYS

15.1 Controls for the elevating platform: (Refer to clause 7.0)

- 15.1.1 All movements of the elevating platform shall be controlled from a control panel situated on the elevating platform.
- 15.1.2 In case auxiliary platforms are mounted on the elevating platform, their individual controls shall be situated on themselves.
- 15.1.3 It shall be possible to control vehicle crawling movements (variable up to 10 km/h in both directions) and braking from the elevating platform.
- 15.2 Controls for the Aerial Work Platform: (Refer to clause 8.0.)
- 15.2.1 All the movements of the Aerial Work Platform must be controlled from a control panel situated on the cradle.
- 15.2.2 It shall be possible to control vehicle crawling movements (variable up to 10 km/h in both directions) and braking from the cradle.
- 15.3 Controls for the catenary support mast: (Refer to clause 9.0)
- 15.3.1 The catenary support mast shall be operated from a suitable position on the elevating platform or Aerial Work Platform cradle.
- 15.4 Interlocking of crawling controls:
- 15.4.1 The vehicle crawling controls must be locked out if the catenary support mast or any outriggers possibly used for stabilising the vehicle are not parked.
- 15.5 Emergency controls:
- 15.5.1 Emergency stop buttons shall be provided on the elevating platform or in the Aerial Work Platform cradle, in the cab, and on both sides of the machine, to be reached from ground level.
- 15.5.2 Independent emergency controls for lowering the elevating platform or Aerial Work Platform, must be situated on the deck and on the elevating platform or Aerial Work Platform.
- 15.6 Automatic parking brake:
- 15.6.1 An automatic parking brake, working in conjunction with the crawling controls of the elevating platform or Aerial Work Platform, must be provided.
- 15.7 Cab controls and displays:
- 15.7.1 The driver's control panel(s) shall be positioned such that all controls are ergonomically accessible when driving in either direction.
- 15.7.2 Warning lights for elevating platform or Aerial Work Platform positions, catenary support mast not parked and pantograph / earthing contact positions must be provided.

- 15.7.3 An alarm which sounds if the earthing pantographs/ contacts are activated, but do not make contact with the contact wire, must be provided. This alarm must be audible in the working area.
- 15.7.4 Controls of the earthing pantographs/contacts are to be interlocked with the controls of all lifting/elevating devices in a manner that the latter can only be activated after contact has been made between the overhead conductor and the earthing pantographs/contacts.
- 15.7.5 The control panel shall contain all the necessary controls, instruments, warning devices and switches necessary to drive, monitor and operate the vehicle safely and efficiently under all conditions, including Speedo, Hour and Odo meters.
- 15.7.6 The driver's travelling controls must be locked out if any device, including a suspension lock, is not in its stored position.

16.0 TOWING EQUIPMENT

- 16.1 The vehicle shall be capable of being hauled in either direction by a locomotive if required to clear the section after breakdown on track.
- 16.2 Mounted next to the drawbar connection, must be a notice warning that the drawbar must only be used in case of breakdown.
- 16.3 Clear instructions regarding all precautions to be taken before vehicle is towed, as well as maximum towing speed and distance shall be mounted in the cab.

17.0 HYDRAULIC SYSTEM

- 17.1 The hydraulic capacity must allow for simultaneous operation of all the hydraulic equipment in the system.
- 17.2 The system must have flow restrictors to prevent a load from dropping due to a sudden pressure drop.
- 17.3 A system to prevent overloading (over pressurising) must be provided.

18.0 ENGINE AND TRANSMISSION

- 18.1 All points on the engine and transmission system that require to be checked regularly by the driver or operator, must be easily accessible.

19.0 FUEL SYSTEM

- 19.1 The fuel tank shall be provided with lockable filler. It shall have sufficient capacity for the vehicle operating range specified in clause 6.4 and driving the auxiliary systems. No fuel fumes must enter the passenger compartment.

20.0 RAIL WHEEL SETS

- 20.1 The resistance between the rail wheels of an axle shall not be greater than 0,05 ohms so as to operate the track circuits of the signalling system.

- 20.2 The axles and wheels shall be ultrasonically tested before assembly and test certificates shall be submitted by the contractor. Records of the tests shall be kept in such a manner that it shall be possible to associate test certificates with individual wheel/axle sets.
- 20.3 The "tyre" profile of the wheels must be as shown on Appendix D. Wheel diameter, hub proportions, etc. are not applicable.
- 20.4 The distance between wheel flanges must be $988 \pm 2\text{mm}$.

21.0 SUSPENSION

- 21.1 Suitable automatic suspension locking device(s) must be provided for stabilising the vehicle when the elevating platform or Aerial Work Platform are in use over their full operational range and capacity while the vehicle is standing/crawling on a track with a cant of 100mm. Locking of the axles shall be such that all wheels will stay in contact with the rails in the event of twist in the track.

22.0 BRAKES

- 22.1 The brake pneumatic system must be isolated from other pneumatic systems on the vehicle.
- 22.2 Service and emergency brake action shall be provided on all wheels in contact with the track. Service brakes should be air-operated to give a brake efficiency of not less than 12,5% G and the vehicle emergency brake shall be able to give a brake efficiency of not less than 6,5%G, all with a fully-laden vehicle.
- 22.3 The mechanical parking brake shall operate on all wheels in contact with the track and must be capable of holding the vehicle stationary at an incline of 1:25.
- 22.4 The emergency brake shall be controlled from the driver's seat and from the control panel on the elevating platform or from the cradle of the Aerial Work Platform.

23.0 ENGINE EXHAUST SYSTEM

- 23.1 The exhaust system must prevent fumes from entering the cab.
- 23.2 Exhaust gases must be discharged close to ground level, as far as possible from the elevating platform or Aerial Work Platform.
- 23.3 A system to ensure a healthy and safe environment for staff, when working or crawling under confined conditions (such as in tunnels), shall be provided.

24.0 STORAGE AND TOOL BOXES

- 24.1 Suitable lockable space to carry a high pressure washing device, must be provided on the vehicle in a suitable position. (Refer to clause 12.1.)
- 24.2 Two portable tool trays (500 x 200 x 200 mm deep) are to be provided on the elevating platform or Aerial Work Platform cradle. Trays must be capable of being hooked onto the hand rails.

24.3 Weatherproof storage boxes (lockable as a group) shall be provided on the open deck of the vehicle. Ideally boxes should be grouped together, but division into smaller groups will be acceptable. The following are minimum requirements:

24.3.1 One box 1 800mm long x 1 800mm wide x 300mm deep, to hold electrical conductors in rolls with diameters between 1 600mm and 1 800mm (contact wire), 1 200mm and 1 500mm (catenary wire) and between 800mm and 1 100mm for other conductors.

24.3.2 Six boxes, each 300mm long x 300mm high x 600mm deep and two boxes, each 900mm long x 300mm high x 600mm deep, all of the pigeon hole type.

24.4 Storage for documentation must be provided in the cab.

24.4.1 If passenger seats are of the bench type, the space below shall be fully enclosed to provide for additional storage. Seats shall be hinged to provide access to storage space.

24.5 Storage for flags and detonators is also required in the cab.

24.6 Individually lockable storage for the personal belongings of the crew of four and the driver, is required.

24.7 A suitable cradle to support and retain a pair of oxy-acetylene welding cylinders in a suitable position on the vehicle deck, must be provided.

25.0 SAFETY COMPLIANCE

25.1 The vehicle shall comply with the Machinery and Occupational Safety Act (Act 85 of 1993) as well as Transnet's Safety Instructions where applicable.

25.2 Weather proof safety notices indicating safe working loads, shall be mounted on all the equipment where appropriate.

25.3 Safe operating instructions and daily inspections to be carried out by the driver of the vehicle before trips are undertaken, shall be mounted on the inside of the cab.

25.4 Clear instructions regarding all precautions to be taken before vehicle is towed, as well as maximum towing speed and distance (if applicable) shall be mounted in the cab.

25.5 All hydraulic equipment and movable sections must be fitted with mechanical locks.

25.6 All hand rails must comply with SABS 0104.

26.0 QUALITY ASSURANCE

26.1 All processes for the manufacture and assembly of the product components must be subjected to a Quality Assurance System.

26.2 The tenderer will assume full responsibility for assuring that the products purchased, meet the requirements of Transnet for function and performance, including purchased products from sub-contractors.

26.3 The onus is on the manufacturer to prove the effectiveness of their system to Transnet.

- 26.4 SABS ISO 9000 to 9004 inclusive (SABS 0157 Parts 1 to 4) must be regarded as a guideline, where applicable.
- 26.5 The manufacturer must provide a description of the system employed to ensure that the above requirements will be met.
- 26.6 The following must accompany the description:
- 26.6.1 An organisational structure diagram highlighting the quality assurance function.
- 26.6.2 All inspection sheets and checklists in use.
- 26.7 The manufacturer must give detailed clarification regarding the quality assurance system when required.
- 26.8 The manufacturer must allow Transnet officials to carry out random audits of the system, without any prior warning.
- 26.9 The tenderer must ensure accessibility to all sub-contractors for audit purposes.

27.0 PAINTING

- 27.1 Paint colours shall be negotiated between the Contractor and the Client.
- 27.2 Mechanical locks on hydraulic equipment must be painted red.
- 27.3 Chevron boards must be mounted on both ends of vehicle.

28.0 FURTHER REQUIREMENTS

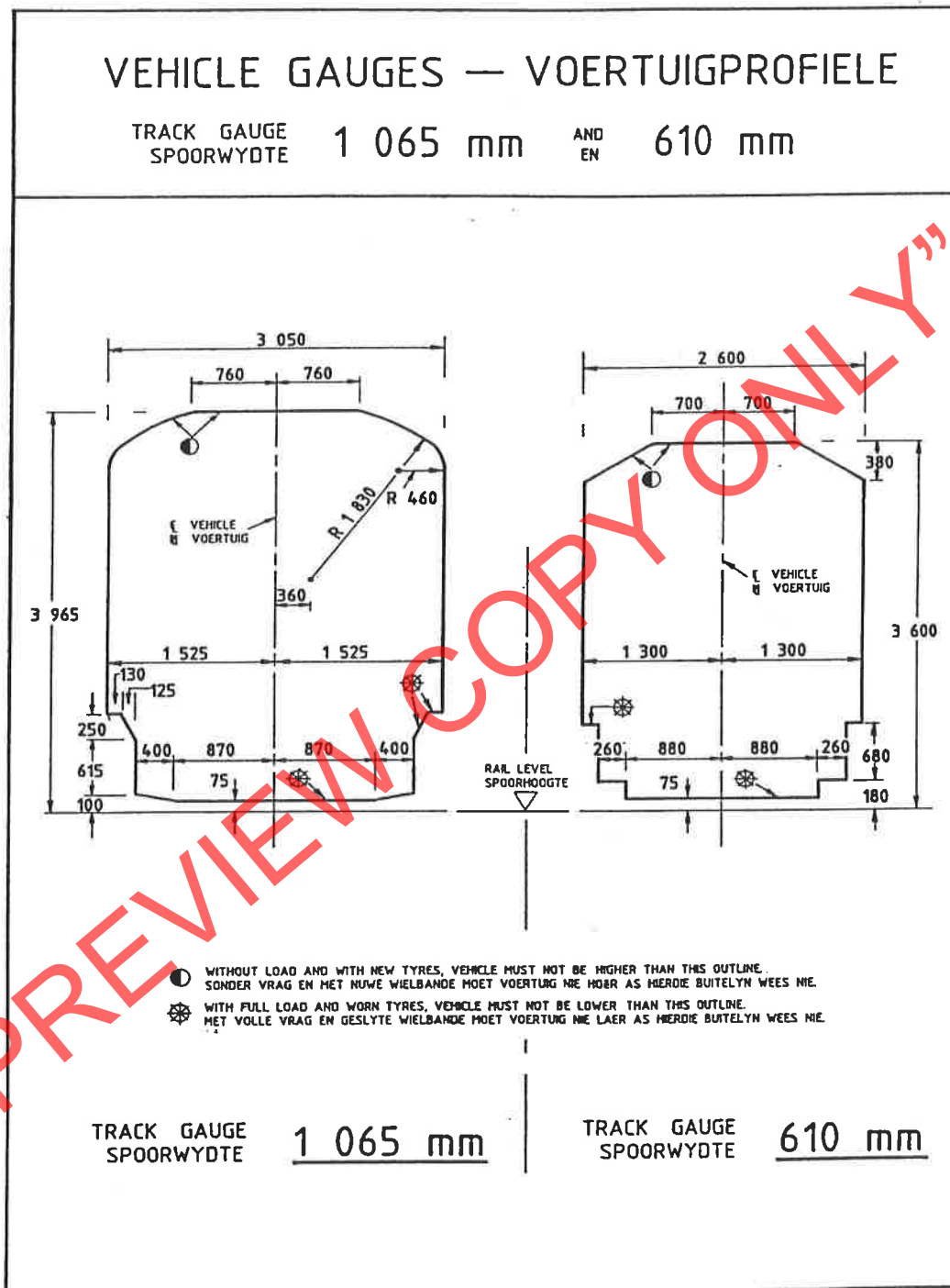
- 28.1 Flexible rail sweepers must be fitted at both ends of the vehicle.
- 28.2 A bracket for an end-of-train marker must be fitted at each end of the vehicle.
- 28.3 An emergency back-up system must be supplied for use in the event of a total failure of the main power source. The purpose of this back-up system is to make it possible to retract all systems to allow towing.
- 28.4 Noise levels in the working area must be less than 85dB (A).
- 28.5 "Cow Catchers" must be provided at both ends of the vehicle.
- 28.6 A bench vice must be mounted on the vehicle deck.

29.0 DOCUMENTATION

- 29.1 A complete operator's instruction manual must be supplied with the vehicle.
- 29.2 A complete maintenance manual and spare parts list must be supplied with the vehicle to assist in regular pre-trip maintenance or inspection.

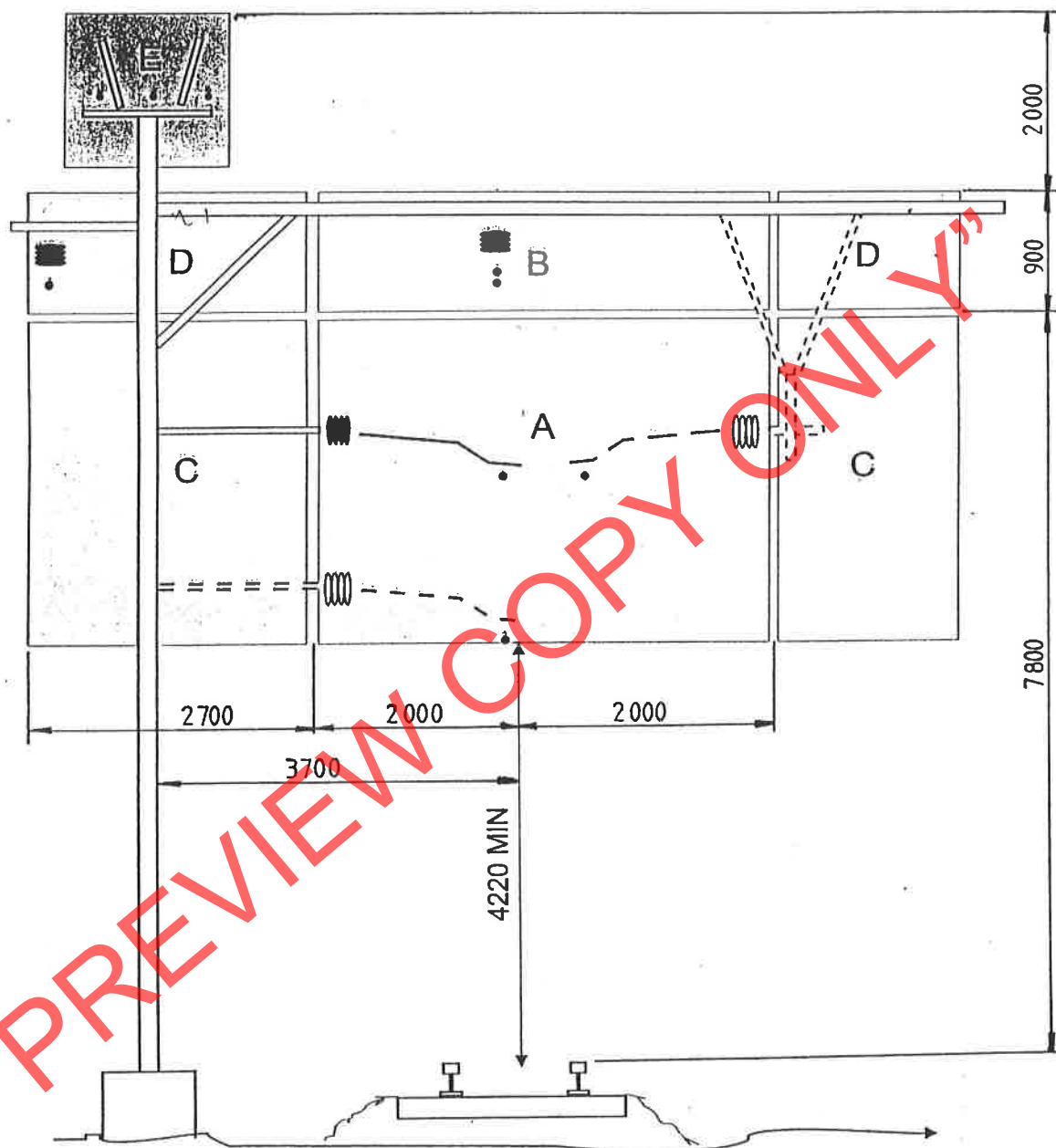
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Appendix A

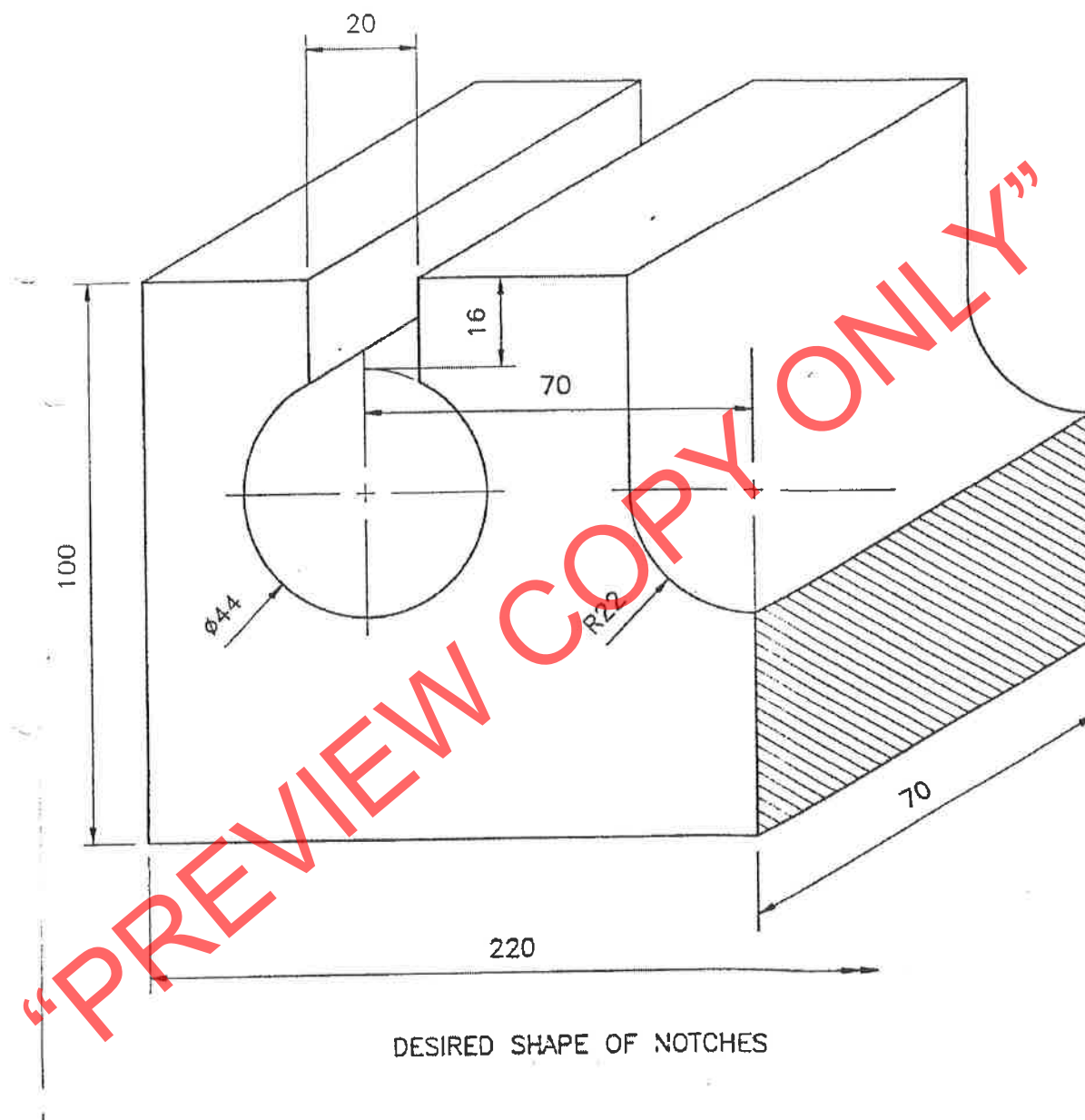


APPENDIX B

DIAGRAM VAN BOBAAN-WERKPOSISIES



APPENDIX C



NOTE: SAME AS DRAWING CME 69-000438-130/C DATED 1990-08-04

1 : 20 INCLINE
1 : 10 INCLINE

29
7
R13.16
39°
R16
R12
R100

SPOORNET **INFRASTRUCTURE (MTV)**
JOHANNESBURG

DRAWN	DATE	SCALE	APPROVED	FILE REFERENCE No.	No.	MTV
CJM	96.06				173	173

Annexure 2

Requirements for Electrical Equipment on Medium OHTE Maintenance Vehicles.

“PREVIEW COPY ONLY”

INDEX

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1.0	SCOPE
2.0	REFERENCES
3.0	TENDERING PROCEDURE
4.0	SERVICE CONDITIONS
5.0	TECHNICAL REQUIREMENTS

“PREVIEW COPY ONLY”

1 SCOPE

- 1.1 This Specification covers the electrical requirements for a hired medium self-propelled vehicle for on-track maintenance and inspection of both 3kV DC and 25kV AC designs of Overhead Track Equipment (OHE).

2 REFERENCES

The latest version of the following Transnet Specification is referred to herein:

- 2.1 Mechanical Requirements for Medium O.H.T.E. Maintenance Vehicles, attached as Annexure 2, which must be read in conjunction with this specification.

3.0 TENDERING PROCEDURE

- 3.1 No changes may be made to the text of this specification as issued, including its (possible) Addendum/s.
- 3.2 Tenderers shall indicate compliance with the specification on a clause-by-clause basis. This shall take the form of a separate typewritten document listing all the specification clause numbers, against which the individual statements of compliance or non-compliance must be indicated. This document may be used by Tenderers to elaborate on their response to a clause.
- 3.3 Any statement of non-compliance shall be motivated by the Tenderer.

4.0 SERVICE CONDITIONS

The vehicle will be required to operate under the following environmental conditions:

Altitude	: 0 - 1800m above sea level.
Ambient temperature	: Minus 5 °C to plus 45 °C.
Relative humidity	: 10% to 90%.
Lightning conditions	: Severe, flash density 11/km ² /year.
Contact wire heights	: 4,2m to 6,2m above rail level.

5.0 TECHNICAL REQUIREMENTS

5.1 VEHICLE ELECTRICAL SYSTEM:

- 5.1.1 The vehicle battery shall be mounted in a well-ventilated housing. (Not inside cab).

5.2 ELECTRICAL POWER REQUIREMENTS:

- 5.2.1 A 50Hz supply of 220V AC with a minimum continuous rated capacity of 4,0kVA shall be provided.
- 5.2.2 A portable supply would be acceptable, provided it is well-silenced and housed in a well-protected, lockable enclosure.

- 5.2.3 Two 220V, 50Hz socket outlets with a total capacity of 20A, must be installed in suitable positions inside the cab.
- 5.2.4 For the purpose of operating hand-held powertools, two 220V, 50Hz watertight socket outlets with a total capacity of 20A, shall be installed on the elevating platform or cherry picker cradle of the vehicle. One outlet shall also be provided at the non-cab end of the vehicle.
- 5.2.5 For the purpose of operating a handheld leadlight, one 24V DC watertight socket outlet with a capacity of 5A, shall be provided on the elevating platform or cherry picker cradle.
- 5.3 LIGHTING:
- 5.3.1 For the purpose of general night and tunnel work, two separately switched, weatherproof high pressure sodium floodlight,s each rated at 70W, shall be mounted as high as possible in the side handrails of the elevating platform or cherry picker cradle and aimed upwards (adjustable) to illuminate the OHTE. Lenses of luminaires to be manufactured from clear Polycarbonate or similar tough and shatter-proof material. Mounting must be on opposite sides of the platform and shall not cause an obstruction to staff working on the platform. Glare shall be reduced to a minimum. Luminaires must be removable for safe storage when not in use.
- 5.3.2 Four headlights (75W Halogen) for night driving on track shall be mounted on the vehicle, two at each end. Pairs of headlights (front and rear) shall be switched separately and shall have a dipping facility.
- 5.3.3 Four red tail lights shall be mounted on the vehicle, two at each end for on-track purposes.
- 5.3.4 The head- and tail lights of the vehicle shall be switched in such a way that, whichever pair of headlights is selected by the driver, will automatically cause the pair of tail lights on the opposite end of the vehicle to light up.
- 5.3.5 One spot light (55W Halogen) shall be provided on the cab. It shall be mounted in such a position that it can be aimed at the OHTE from inside the cab. The spotlight shall be separately switched, shall be fully adjustable and shall be capable of swivelling through 360°.
- 5.3.6 At least one fully-enclosed separately-switched fluorescent luminaire (cab light) with an adequate light output for filling in of documentation etc., shall be mounted on the inside of the cab roof of the vehicle.
- 5.4 EARTHING PANTOGRAPHS/CONTACTS:
- 5.4.1 The vehicle shall be equipped with two earthing pantographs/contacts. The pan of the pantograph/contact at the non-cab end shall be mounted directly above a set of rail wheels to double as basic measuring pantograph. The other pantograph/contact shall be mounted at the opposite (cab) end of the vehicle, preferably also above a set of rail wheels. They will only be activated when the vehicle is in crawling mode, i.e. at speeds varying between 0 and 10km/h.

- 5.4.1.1 Single-arm pantographs similar to those used on locomotives, are preferred. They must be calibrated to exert an upward force of $80N \pm 10\%$ on the contact wire. This force shall stay constant throughout the range of contact wire heights (see clause 3.0) and shall also not vary by more than 10% during sloping up or down of the contact wire when the vehicle is travelling at a speed of up to 15km/h.
- 5.4.1.2 Alternatively quick-acting servo-operated earthing contacts may be offered. They must be calibrated to exert an upward force of $80N \pm 10\%$ on the contact wire. This force shall stay constant throughout the range of contact wire heights (see clause 3.0) and shall also not vary by more than 10% during sloping up or down of the contact wire when the vehicle is travelling at a speed of up to 15km/h.
- 5.4.2 Both pantographs/contacts on the vehicle must be provided with both curved AC carbon pans as well as straight copper DC pans. Suitable storage space or brackets must be provided to allow the 2 pans not in use at a particular moment, to be safely carried on the vehicle at all times.
- 5.4.3 Both the AC and DC pans of the basic measuring/earthing pantograph/contact must be provided with a suitable scale on one side, so that contact wire stagger to the left or right of vehicle centre line, can be read off directly. (Vehicle centre line will also be track centre line on tangent track). The scales must have clear graduations every 10mm with figures every 100mm, arranged around a centre zero, i.e. 5-4-3-2-1-0-1-2-3-4-5. They must be legible from the elevating platform or cherry picker cradle.
- 5.4.4 This pantograph/contact must also be provided with a mechanical pointer to indicate contact wire height above rail. It must have clear graduations every 10mm over the full range of contact wire heights stipulated in clause 3.0, with figures every 100mm (e.g. 42-43-44-.....60-61-62) and red marks at 4,22m, 4,5m and 6,0m. It must be legible from the elevating platform or cherry picker cradle. Alternatively a digital height display may be provided on the elevating platform or cherry picker cradle.
- 5.4.5 The width of the support structure for the basic measuring/earthing pantograph/contact shall not exceed the width of the pantograph/contact base, right down to the lowest working height of the cherry picker cradle. This is to allow the execution of certain maintenance tasks adjacent to the pantograph. (This clause is only applicable if the vehicle is equipped with a cherry picker.)
- 5.4.6 Both the earthing pantograph/contact frames shall be mounted directly onto the vehicle chassis (without insulation) and shall have their current collectors connected directly to vehicle chassis via flexible Cu cables / braiding with a total cross-sectional area of at least 70mm².
- 5.4.7 In the event of engine or system failure, spring pressure shall cause the earthing pantographs/contacts to stay up against the contact wire if they were up at the instant of failure. A lock-down system to ensure safe travelling under live Overhead conductors shall be provided if necessary.
- 5.4.8 The earthing pantographs/contacts shall be controlled from the driver's position by means of a spring-loaded key switch and a pushbutton switch. The earthing pantographs/contacts must only be activated by using two hands simultaneously to operate these switches. Dropping the earthing pantographs/contacts shall require a similar two-hand operation. It shall only be possible to remove the key from the key switch in the centre-OFF position.

- 5.4.9 A manual override facility which is lockable in the OFF position by means of a removable key, must be provided at the driver's position of the vehicle, so that the elevating platform or cherry picker or catenary support mast may be operated without the earthing pantographs/contacts being in contact with the contact wire, for special conditions or operations.
- 5.4.10 The maximum height of the earthing pantographs/contacts (with pans mounted) shall not exceed 3,965m above rail level when fully lowered.
- 5.5 WARNING DEVICES:
- 5.5.1 An amber revolving light shall be mounted on the cab roof or other suitable position on the vehicle and shall be visible from all sides.
- 5.5.2 A suitable warning horn which shall be clearly audible at 300m, shall be provided. The air-horn type used on Transnet's electrical locomotives, is preferred.
- 5.5.3 A suitable siren must also be provided to warn staff against approaching trains.
- 5.6 VEHICLE EARTHING:
- 5.6.1 The vehicle chassis shall be earthed to rail by means of flexible Cu cables with a total cross-sectional area of at least 70mm², which shall be connected to sturdy earth brushes on two of the vehicle rail wheel axles, but not on the same bogie. These brushes will have at least the same current carrying capacity as the copper cables.
- 5.6.2 The cab, elevating platform or cherry picker, and catenary support mast must have flexible continuity connections with a total cross-sectional area of at least 70mm² Cu equivalent across all hinges and joints in the frames and down to vehicle chassis.
- 5.6.3 A connection point for portable earthing cables must be provided in a suitable position on the elevating platform or cherry picker cradle. A Cu cable with a cross-sectional area of at least 70mm² shall connect the connection point directly to vehicle chassis. This connection point must also make solid electrical contact with the platform or cradle framework.
- 5.6.3.1 The connection point shall consist of a 200mm length of approximately 50mm X 12mm Cu bar provided with two ø14mm holes, to allow for earthing cables to be either bolted on or clamped on. This connection point shall be left unpainted.
- 5.6.4 All earthing connections must be between clean metal surfaces. Vibration-resistant fasteners must be used wherever possible. A suitable jointing compound must be applied to prevent ingress of moisture and oxidation.

END

TRANSNET



(REGISTRATION NO.1990/000900/30)

**TRADING AS
TRANSNET FREIGHT RAIL**

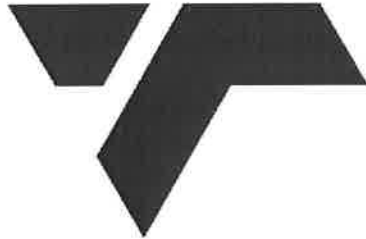
**ADDENDUM NO. 1 TO THE SECONDARY SPECIFICATIONS AND GENERAL SPECIFICATIONS TO
THE CONTRACT**

- 1) Wherever the word "Spoornet" appears in the secondary specifications, please replace it with "Transnet Freight Rail".
- 2) Wherever the word "Technical Officer" appears in the secondary specifications, please replace it with "Service Manager's Deputy".
- 3) Wherever the word "Project Manager" appears in the secondary specifications, please replace it with "Service Manager".

TRANSNET



TRANSNET



(REGISTRATION NO.1990/000900/30)

**TRADING AS
TRANSNET FREIGHT RAIL**

MINIMUM COMMUNAL HEALTH REQUIREMENTS IN AREAS OUTSIDE THE JURISDICTION OF A LOCAL AUTHORITY: TEMPORARY FACILITIES FOR CONTRACTOR'S PERSONNEL

1. CAMPS

- 1.1 Prior to the erection of any camp, the Contractor shall submit to the Technical Officer, for his approval, details of his proposals as to the site, water supply, sanitation, and size and type of buildings. Where the site is on private land, the Contractor shall submit the written approval for the use of the site of the relevant statutory authority and of the owner and occupier of the land (as applicable).
- 1.2 Camps must not be erected on land infested with field rodents.
- 1.3 Adequate drainage shall be provided to carry off storm and waste water.
- 1.4 Buildings shall be built to a neat and orderly pattern.
- 1.5 All buildings shall have smooth, hard, impervious floors, graded to provide effective drainage and to permit washing.
- 1.6 Camps shall be maintained by the Contractor at his own expense in a clean and tidy condition. The Contractor shall take such steps as the Technical Officer and landowner/occupier may demand to prevent the creation of a nuisance.
- 1.7 When so instructed by the Technical Officer, the Contractor shall, at his own expense, erect suitable screens between the camp and any public road, thoroughfare or railway line.
- 1.8 After removal of a camp, the Contractor shall, at his own expense, restore the site to its original condition to the satisfaction of the Technical Officer and of the landowner and occupier where the site is on private land.

TRANSNET



2. **HOUSING**

- 2.1 Every living room shall have cross ventilation, both constant and occasional. Where only one window is provided, it shall not be in the same wall as the door.
- 2.2 Dimensions of living rooms shall be sufficient to allow 3.5 square metres of floor area and 11 cubic metres of air space for each person over the age of 10 years. The floor area of any living room shall not be less than 7,8 square metres.
- 2.3 Flat-roofed quarters shall have a minimum roof height of 3 metres above floor level. For quarters with pitched roofs, the wall height shall be not less than 2,6 metres above the floor with a minimum height above floor of 3 metres at the top of the pitch.
- 2.4 Doors shall not be less than 2m x 0,75m and must be halved.
- 2.5 Windows of each living room shall have an area not less than one twelfth of the floor area and shall be capable of opening to at least half their full area.
- 2.6 In areas where malaria is prevalent, doors and windows must be fitted with gauze screens.
- 2.7 Cooking shelters shall comprise roofed structures, three sides of which shall be enclosed by a weatherproof material, approved by the Technical Officer to a height of at least 1m above ground level.
- 2.7.1 Sleeping quarters shall not accommodate more than 8 persons per room.
- 2.7.2 Pegboards shall be carried on metal or concrete supports and shall be separated by partitions not less than 0,4 metres high extending to within 150mm of the end of the bunk. Pegboards shall be removable for cleaning.

3. **WATER SUPPLY AND ABLUTION FACILITIES**

- 3.1 The Contractor shall ensure that an adequate and conveniently situated supply of potable water is provided.
- 3.2 Separate buildings for ablution facilities shall be provided. Where approval has been obtained for the housing of both males and females, separate facilities for each sex shall be provided. The proportion shall be 1 cubicle for 20 persons.
- 3.3 Waste water shall be hygienically disposed of.

4. **SANITATION**

- 4.1 Separate buildings for latrine facilities shall be provided. Where housing are provided for both males and females, separate facilities for each sex shall be provided. The proportions shall be at least one squatting seat for every 15 persons or less in the case of pit latrines, or one for every 10 persons or less in case of pail latrines.

SPECIFICATION E4.B
(November 1996)

Latrines shall be fly proof and sited at least 10 metres from any other building, and shall not face on any public road, thoroughfare, railway line or residential property. Pits shall not be less than 2,5 metres deep and sited not less than 120 metres from nearest underground water source.

- 4.2 Latrines shall be so constructed, situated and maintained, and night soil so disposed of as to prevent access by animals, breeding of flies, pollution of streams and domestic water supplies, and other nuisances. Where a night soil removal service is operated by a competent authority, use of such service shall be obligatory, and the use of pit latrines and atria pits will not be permitted.
- 4.3 At least one refuse bin of adequate size with close fitting lid shall be provided for each building. Refuse bins shall be emptied and cleaned out daily.
- 4.4 Labour shall be employed on camp sanitation duties on the following basis:-
- 4.4.1 Where the number of persons living at the camp is 20 or less - one unit.
- 4.4.2 For additional numbers over 20 living at the camp - one unit per 100 or part thereof.
- 4.5 Unless refuse is removed by a competent authority, it shall be disposed of in pits and covered over daily with a layer of earth or ash of sufficient thickness to prevent depredations by rodents and the breeding of flies.
- 4.6 Adequate measures shall be taken against all vermin and insects responsible for the spread of disease. Any instructions of a competent health authority shall be carried out promptly and implicitly.
- 4.7 Buildings and bed boards shall be treated whenever necessary with an approved insecticide.
- 4.8 The Contractor shall permit and facilitate inspection of the camp and structures on the site by the staff of Transnet or any other competent authority, and shall comply with any reasonable request by such staff or any other competent authority to eliminate any unsanitary condition.
- 4.9 Any outbreak of infectious disease shall immediately be reported telephonically and confirmed in writing to the Technical Officer.
- 4.10 The keeping of animals of any sort is not permitted.
- 4.11 The Contractor shall have on hand at the camp the necessary tools, disinfectants and cleaning materials to maintain and clean the sanitary facilities.

5. **RATIONS**

Rations, where supplied by the Contractor, shall be stored in a suitable and rodent proof building with sufficient shelving.

ooOoo

“PREVIEW COPY ONLY”

TRANSNET SOC LTD

(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 Project Manager or his deputy shall at all times, co-operate in respect of the health and safety management of the site, and shall agree on the practical arrangements and procedures to be implemented and maintained during execution of the Works.
- 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 **“subcontractor”** 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, Project Manager 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 Project Manager. 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 Project Manager.
- 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 Project Manager 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 Project Manager with full particulars of such subcontractors and shall ensure that they comply with the Act and Regulations and Transnet'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 Project Manager 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 Project Manager 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 Project Manager'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 Project Manager'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 Project Manager 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 the 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, Project Manager, 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 Project Manager 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 Project Manager, 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 Project Manager.
- 8.3 The Contractor shall hand over a consolidated health and safety file to the Project Manager 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. Name/s 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.

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 _____ am personally assuming the
Act I, _____ 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 : _____

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 :** _____

PROJECT MANAGER

ACKNOWLEDGEMENT OF RECEIPT

Name _____ **of** _____ **I,**
Contractor/Builder :- _____
_____ **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







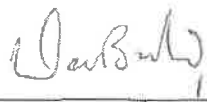

(This specification shall be used in network operator contracts)

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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. Homan	
"	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

Date:

May 2011

(This page not to be issued with contract)

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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1.0 SCOPE

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

2.0 DEFINITIONS

The following definitions shall apply:

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

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

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

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

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

"Dead" - Isolated and earthed.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PART A - GENERAL SPECIFICATION

3.0 AUTHORITY OF OFFICERS OF TRANSNET

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

4.0 CONTRACTOR'S REPRESENTATIVES AND STAFF

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

5.0 OCCUPATIONS AND WORK PERMITS

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