



**SUPPLY, REPAIRS AND REPLACEMENT  
OF FAULTY EQUIPMENT  
TO REINSTATE CCTV SYSTEM TO FULL  
FUNCTIONALITY, INCLUDING TESTING  
AND COMMISSIONING  
AT DURBAN MAIN CENTRE, ROTATING  
MACHINES DEPOT (RM), ELECTRICAL  
LOCOMOTIVES DEPOT (ELD), COIL SHOP  
AND WENTWORTH DEPOT.**

**311 SOLOMON MAHLANGU DRIVE,  
ROSSBURGH.**

**DOCUMENT No: PEMM\_DBN\_SPEC\_078**

**Revision 0**

**Date of release: JUNE 2023**

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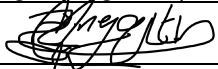
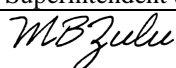

# Table of Contents

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Content	Page no
1. INTRODUCTION/ SCOPE OF WORK	4
2. SITE INSPECTION	4
3. INFORMATION REQUIRED	4
4. TECHNICAL REQUIREMENTS	5
5. SPECIFIC REQUIREMENTS	5
6. OTHER INFORMATION RELATED TO SCOPE	6
7. HEALTH AND SAFETY REQUIREMENTS	7
8. SPECIALIST SUB-CONTRACTORS	7
9. MATERIAL AND WORKMANSHIP	8
10. GENERAL REQUIREMENTS	8
11. DEFINITIONS AND ABBREVIATIONS	8
12. GENERAL	8
13. SITE ESTABLISHMENT	9
14. PENALTY CLAUSES	9
15. SCHEDULE OF PRICES	10
16. TENDER EVALUATION CRITERIA	13
17. COMPLIANCE VERIFICATION	14

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

## Document Authorities

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Signature	 15/06/2023

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

## 1. INTRODUCTION / SCOPE of Work

This specification is for the:

#	TASK	REQUIRED
1	Design	
2	Manufacture	
3	Configuration	✓
4	Integrate	✓
5	Supply	✓
6	Installation	✓
7	Documentation	✓
8	Testing	✓
9	Training	✓
10	Commissioning	✓

of the specified:

#	ITEM	REQUIRED
1	Supply, repairs and replacement of faulty equipment to reinstate CCTV system to full functionality, including testing and commissioning at Durban Main Centre, Rotating Machines Depot (RM), Electrical Locomotives Depot (ELD), Coil Shop and Wentworth Depot.	✓

## 2. SITE INSPECTION

- 2.1 All prospective contractors shall be required to undertake a compulsory site inspection to fully acquaint themselves with all aspects involved.
- 2.2 Arrangements to visit the site and confirmation of the date and time of the site inspection shall be made with Transnet Engineering Contract Manager.
- 2.3 The site inspection certificate shall be completed and countersigned by the Contract Manager on the day of the visit and must be submitted with the tender documents.

## 3. INFORMATION REQUIRED

- 3.1 Offers will not be considered unless full particulars and sufficient literature are provided at the tendering stage to enable Transnet Engineering Technical Officers the opportunity to assess each technical offer properly.
- 3.2 Prospective Contractors will complete the relevant questionnaire in full and must indicate whether their offer complies with each item of the specification
- 3.3 Should there be insufficient space for furnishing full details; contractors shall provide the additional details in their covering letter. The additional details shall be numbered in accordance with the applicable clause specified in the specification.
- 3.4 As prospective contractors are considered to be experts in their field, they are obliged to identify any shortcomings, such as omissions or sub-standard requirements, to the completeness of this specification. These must be brought to the attention of Transnet Engineering at tender stage with alternatives to address these shortcomings. However, each offer shall be quoted for separately.

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

#### 4. TECHNICAL REQUIREMENTS

The following regulation and codes must be complied with:-

- **SANS 10142-1 : The wiring of premises Part 1: Low-voltage installations.**
- 4.1 Except where otherwise provided for in the specification, all equipment offered will comply with the requirements of the relevant standard specifications of the SABS, if published, otherwise with the relevant standard of the British Standards Institution in force at the time of tendering.
- 4.2 Where equipment offered complies with the recognized standards of the country of manufacture and not specifically with the standards required by this specification, such equipment will be considered at the discretion of Management. In this case, tenders shall state fully all respects in which the equipment departs from the standard laid down in this specification.
- 4.3 The successful tender will at the conclusion of the installation provide a document along the lines “that the installation complies with national/international requirements and that all selected /designed items are compliant with Act 85 of 1993 and SABS practices applicable to the installation. The equipment has been commissioned/ calibrated and employees as specified have been trained and found competent to operate the plant.”

#### 5. SPECIFIC REQUIREMENTS

**Any person with the intention of procuring the equipment or material shall ensure that the information below is complied with.**

##### 5.1. Scope of work

ITEM	This scope of work document covers the minimum requirements	DETAILS OF OFFER Comply (Yes) / Do not comply (No)
5.1.1	This scope of work shall be read with Annexure 1 (Transnet Engineering Safety, Health and Environmental Management specification) and contractor management SOP 014. - Bidders shall include costs of Health, Safety and Environmental Management compliance.	
5.1.2	Supply, repair, configuration, testing and commissioning of CCTV camera system.	
5.1.3	The bidder to be have ability of working on Bosch CCTV system and shall have PSIRA registration. All necessary certificates and proof of registration shall be attached.	
5.1.4	A bidder to have experience in working with Bosch CCTV system.	
5.1.5	The successful contractor shall be liable for any damage caused to our (Transnet Engineering), as a result of their action(s). Any damage caused by a contractor shall be rectified by a contractor at his / her own expense.	

Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_

- 5.1.6 Operating Environment
- Dusty, very hot, water splashes and areas with smoke.
  - All bays have automatic lighting, however cameras with night vision are required.
- 5.1.7 Markings
- Appropriate markings required by an applicable standard for equipment and installation required shall be indelible and only removable by deliberate intent.
- 5.1.8 Testing
- All angle viewing plus zooming in and all lighting condition tests shall be conducted.
  - All other tests that are required by any applicable SABS standards including SANS 10222-5-2:2007/BS EN 50132-7:1997, MOD, Ed.1 (Electrical security installations Part 5-2: CCTV installations - Application guidelines) shall be performed to the satisfaction of the Plant engineer, risk Officials and security personnel.
- 5.1.9 Commissioning
- All the tests certificates referred to above and supply of all requirements referred to in the scope of work shall be supplied.
  - Supply of all electrical certificates of compliance.
  - Supply of all manuals including standard operating procedures, standard maintenance procedures for all equipment in three sets.
  - Supply all wiring and cabling diagrams in three sets.
  - Supply soft copies of the software used in three sets.
- 5.1.10 Spares
- The successful tenderer shall supply Transnet Engineering with the specifications of all critical parts list for all equipment supplied and installed.
- 5.1.11 Warranty
- All new equipment supplied shall have a 3 year free swop-out warranty from date of purchase.
- 5.1.12 After-Sales Service
- All materials and equipment used shall be standard components, regularly manufactured and utilised and be available on short notice (Maximum of two weeks delivery) for replacement.

## **6. OTHER INFORMATION RELATED TO THE SCOPE**

- 6.1 This specification states the minimum requirements relating to the work and in no way absolves the contractor From responsibility for sound ethical practice. Any omissions or sub-standard requirements of this specification must be brought to the attention of Transnet Engineering at tender stage and optional prices for addressing such omissions must be provided.
- 6.2 Any matter relating to this work, which requires a decision from Transnet Engineering shall be presented to the Project Manager in charge.
- 6.3 All offers shall be completed in every respect with this specification. Only completed / responsive tenders will be considered.
- 6.4 The Technical Officer reserves the right to have the proposal checked independently by a third party.
- 6.5 Tenders must allow for monthly progress and clarification meetings on site initially and after commissioning for defect meetings when required. A meeting will be held after issuing of the tender to establish the exact scope and magnitude of the contract. No tender will be considered unless it has this certificate signed by the Engineer or his representative.

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

## 7. HEALTH AND SAFETY REQUIREMENTS

- 7.1 All equipment and installation whether detailed in this specification or not shall comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended and all other applicable legislation including specific set of regulations and local authority bylaws where applicable.

The sudden power losses must not have an adverse effect on equipment and shall not unduly delay return to operation after power is restored.

- 7.2 All the necessary safety equipment such as guards over rotating equipment shall be supplied and the equipment shall comply fully with all the requirements of the South African Occupational Health and Safety Act, Act 85 of 1993 and all other applicable legislation including specific set of regulations and local authority bylaws where applicable. At all times during the manufacture, assembly and testing of the equipment the contractor will be responsible for the safety of all persons on site and the equipment.

### 7.3 SHE SPECIFICATION

Prior to commencement of contract, the contractor shall be issued with a SHE specification in order to compile a SHE file in line with TE requirements.

Prior to establishing on site, it is an explicit requirement of this contract that all of the Contractor's personnel directly involved with this contract, including those of sub-contractors, attend a **Safety induction course**. Transnet will provide the course free of charge and attendance is compulsory for all personnel under the control of the Contractor who, during the duration of the contract, will be present on site whether on a full time or adhoc basis.

The contractor must allow for all additional charges because of these requirements as no claims for extras will be accepted in connection with the foregoing.

### 7.4 As part of the legislative and TE SHE requirements.

The successful contractor is required to conduct a Risk assessment to ascertain all potential risks associated with this project. The completed risk assessment is to be formally submitted to the Risk department via the project manager at least two weeks prior to the commencement of the actual project. A safety file and associated documents will be required from a successful tenderer and such will be communicated by the Risk department.

## 8. SPECIALIST SUB-CONTRACTORS

- 8.1 Only specialist sub-contractors who have previously successfully completed work of the type and extent specified in this document should be engaged.  
The tenderer shall provide the technical officer with sufficient proof of having suitable experience regarding the design and manufacturing of similar equipment. To this end, complete and detailed reference list shall be submitted with the tender. Reference list shall include addresses as well as contact person who may be visited for inspection of the equipment during the adjudication period.
- 8.2 The tender shall submit a complete list of proposed sub-contractors and suppliers of major components with his tender.
- 8.3 The tenderer shall be prepared to commit themselves in writing to the technical officer with an adequate, experienced and stable project team for the duration of the contract.
- 8.4 Transnet Engineering will not consider any Tenderer's offer that, in the sole opinion of Transnet Engineering, does not have adequate experience in the design and manufacture of such equipment.

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

8.5 Contractors shall do the installation simultaneously with other contractors on-site busy with other work and shall plan work that it integrates with other work performed.

## 9. MATERIAL AND WORKMANSHIP

9.1 The equipment shall be offered complete in all respects, including all standard components normally offered by manufactures, all of which shall be specified in detail.

9.2 The equipment, as made and supplied, shall be complete in every respect, of modern design, using the most advanced proven technology extensively supported by reputable local companies, and be built to good engineering and technological practices. Tenderers shall supply a list of all the main components proposed as well as the addresses of local the support companies.

9.3 All parts and components shall be adequately protected against damage and corrosion during shipping, transport and storage.

Should any of the items called for be standard equipment, then the words “Standard Equipment” shall appear against the item.

9.4 The cameras shall be stable and drain sufficient to prevent accumulation of water.

9.5 The equipment, as made and supplied, shall be complete in every respect, of modern design, using the most advanced proven technology extensively supported by reputable local companies and be built to good engineering practices.

## 10. GENERAL REQUIREMENTS

Operation will be in the following conditions:

Altitude	Sea level
Ambient temperature	0°C to 45°C
Relative humidity	50% to 100%
Atmosphere	Heavy saline

10.1 Tenderers shall indicate clause-by-clause either that they comply in every respect with the specific requirements, or if not, exactly how it differs.

## 11. DEFINITIONS AND ABBEVIATIONS

CLIENT	Transnet Engineering
TECHNICAL OFFICER	Project Manager, Transnet Engineering Durban
CONTRACTOR	Contractor appointed under this specification document
SABS	South African Bureau of Standards
BS	British Standard Specification
FEM	Federation of European Mechanical Handling Standard
ISO	International Organisation for Standardisation

## 12. GENERAL

12.1 The successful tenderer will be subjected to a workshop inspection by Transnet Engineering, to ensure that the facilities are to the satisfaction of the Transnet Engineering in terms of the quality control and equipment capabilities for manufacturing such type of equipment.

12.2 The tenderers shall guarantee that the rating and size etc. of the equipment offered, will be adequate to perform the duties required.

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_



### **13. SITE ESTABLISHMENT**

- 13.1 The contractor shall be solely responsible for safety of his staff and for providing security to safeguard his works and material on site, until such a time.
- 13.2 The contractor shall be required to attend site meetings when convened by the Project Leader controlling the contract.
- 13.3 The contractor will be responsible for any damages caused by his staff to the building and civil works on site.

### **14 PENALTY CLAUSES**

- 14.1 Due to the criticality of this project, penalties will be levied for late deliveries.

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

## 15. SCHEDULE OF PRICES:

All prices exclude Vat and additional items listed (with prices) shall be clearly labelled as optional or essential.

Item no.	(Durban Main Centre)	Unit	Qty	Price
1	BVMS Software Maintenance SMA Licence for MBV-BPRO, non-expiry licence.	Ea	7	
2	BVMS Software Maintenance SMA Licence for MBV-XCHANPRO, non-expiry licence.	Ea	2142	
3	BVMS SMA license XWST for MBV-XWSTPRO, non-expiry licence.	Ea	14	
4	BVMS Software Maintenance SMA license for MBV-XKBDPRO, non- expiry licence.	Ea	7	
5	DIVAR IP all-in-one 7000 Management appliance, 3U 16X12TB 3rd gen	Ea	4	
6	Standard Application Server	Ea	1	
7	ZBV4 Workstation PC	Ea	4	
8	Keyboard, USB CCTV oriented	Ea	2	
9	10 way PDU with Surge	Ea	5	
10	48P PoE 1440W MANAGED NETWORK SWITCH	Ea	3	
11	Hdmi Cable Lead 30m	Ea	2	
12	Wireless Keyboard / Mouse with Rechargeable batteries and spare set	Ea	2	
13	24" LED Monitor with IPS panel and Borderless Design	Ea	4	
14	10 KVA UPS Online 4Hrs Runtime	Ea	1	
15	3 KVA UPS Online 4Hrs Runtime	Ea	3	
16	24P PoE 720W Managed Network Switch	Ea	2	
17	Clearline Gigabit 24 Port Lightning & Surge Protector (POE)	Ea	3	
18	19-inch Rack Mount Brush Panel	Ea	6	
19	Cage Nuts	Ea	300	
20	8-Port USB HDMI/Audio KVM Switch ATEN	Ea	1	
21	Cat6e Patch Leads 2m	Ea	32	
22	Ubiquiti Grounded Ethernet Surge Protector   ETH-SP-G2	Ea	32	
23	Dedicated Plug tops	Ea	60	
24	4way fan tray	Ea	20	
25	Rack netting 42U	Ea	3	
26	Small Materials allowance	Sum	1	
27	Installation	Sum	1	
28	Labelling	Sum	1	
29	As Built Drawings	Sum	1	
30	Health and safety File	Sum	1	
31	Commissioning	Sum	1	
32	Project Management	Sum	1	
33	Training	Sum	1	
34	1 Year Maintenance SLA	Sum	1	
35	Static cameras Dinion IP starlight 7000 (PEMM stores x 4, Nagoya x 2, Bay 1 x 6 and Bay 2 x 6) including installation and cabling).	Sum	18	

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

Item no.	(Durban Main Centre)	Unit	Qty	Price
36	Supply and install static cameras Dinion IP starlight 7000 (include lens, the cabling and housing are existing), at Bay 9, Bay 24, Bay 26, Bay 28 Bay 32, Bay 33, Bay 36, Bay 37, Bay 38, Bay 39, Bay 40, Bay 41, Bay 42 Bay 44, Bay 46, Bay 58, Bay 59, Bay 60, Bay 61, Bay 64 and Bay 65.	Sum	51	
37	Bosch Indoor mini domes (include housing and cabling) inside Human capital reception and permit office.	Sum	2	

Item no.	(RM, ELD and COIL SHOP Depots)	Unit	Qty	Price
1	Dinion IP 7000 NBN-733V-P+ 720P lens	Ea	9	
2	PTZ cameras VGS-7220-EPC 4+ Auto dome	Ea	4	
3	DIVAR IP all-in-one 7000 Management appliance, 3U 16X12TB 3rd gen	Ea	1	
4	DIVAR IP License Plus base for DIP AIO 6000-7000	Ea	1	
5	BVMS Software Maintenance SMA license for MBV-BPLU-DIP, non-expiry licence	Ea	1	
6	DIVAR IP Expansion License Camera/decoder expansion	Ea	29	
7	BVMS Software Maintenance SMA license for MBV-XCHANPLU, non-expiry licence	Ea	29	
8	ZBV4 Workstation PC	Ea	2	
9	Keyboard, USB CCTVoriented	Ea	1	
10	BOSCH UHO-HGS-11	Ea	9	
11	PTZ Pendant Mount Bracket	Ea	5	
12	PTZ Pole Mount Bracket	Ea	3	
13	POE 60W Midspans	Ea	8	
14	CCTV Transmission HDMI Cable Gold Plated Connectors 5M	Ea	3	
15	24" LED Monitor with IPS panel and Borderless Design	Ea	2	
16	32" UHD Monitor	Ea	1	
17	Wireless Keyboard / Mouse with Rechargeable batteries and spare set	Ea	2	
18	Wall Mount Bracket Pan tilt	Ea	1	
19	42U 1M Deep Cabinet 4 Fans & 3 Shelves	Ea	1	
20	1 KVA UPS Online	Ea	6	
21	3 KVA UPS Online	Ea	4	
22	10 way PDU with Surge	Ea	2	
23	6 way PDU with Surge	Ea	6	
24	Ubiquiti Grounded Ethernet Surge Protector   ETH-SP-G2	Ea	32	
25	Cat6e STP Cable	Ea	1600	
26	RJ45 Cat6 Shielded FTP Modular Plug	Ea	140	
27	Grey Boots for RJ45-6FTP	Ea	140	
28	Dedicated Plug tops	Ea	40	

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_

Item no.	(Durban Main Centre)	Unit	Qty	Price
29	19-inch Rack Mount Brush Panel	Ea	10	
30	19-inch Rack Mount 1U Blank Panel	Ea	10	
31	EMC Switch P-ON L2 24 ports RJ45 1GbE 12 ports PoE	Ea	6	
32	1.0mm 3 Core Cabtryre	m	100	
33	48 Port Fibre Patch Panel fully Populated LCSMDPLX	Ea	1	
34	Brush Panel	Ea	1	
35	Patch Leads LCSMDPLX	Ea	22	
36	Unjacketed Pigtails LCSMDPLX	Ea	38	
37	Splicing, Preparation and OTDR	Ea	41	
38	48V 120mm Fans	Ea	5	
39	12V 20Ah Batteries	Ea	30	
40	48V 100Ah Battery Protector	Ea	5	
41	48V 1000W Meanwell Battery Charger	Ea	1	
42	Small Materials allowance	Sum	1	
43	Installation	Sum	1	
44	Labelling	Sum	1	
45	As-built Drawings	Sum	1	
46	Health and safety File	Sum	1	
47	Commissioning	Sum	1	
48	Project Management	Sum	1	
49	Training	Sum	1	
50	1 Year Maintenance SLA	Sum	1	
51	Supply and install static cameras Dinion IP starlight 7000 (include lens, the cabling and housing at ELD main entrance gate, RM main entrance gate	Sum	4	

	<b>Grand -Total (Excl. VAT) to tender form</b>		<b>R</b>
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**Tenderer:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Witness 1:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Witness 2:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Signature of Bidder/s:** \_\_\_\_\_

**Date:** \_\_\_\_\_

## 16. TENDER EVALUATION CRITERIA

The following criteria will be used to award the tender. Should there be a criteria over and above the listed below, that will be used, such criteria will be specifically stated.

No.	<b>Pre-Qualification Criteria</b> <b>TECHNICAL DESCRIPTION (The technical evaluation will be used as a threshold. All bidders who do not meet the minimum threshold of 90 points will not proceed to the final stage of evaluation.)</b>	Weightings
16.1	The methodology, standards and working procedures that will be used in the execution of this contract (detailed written Process and Project Plan to be supplied by bidder): <ul style="list-style-type: none"> <li>Submitted methodology that will be used in the execution of this contract is provided. = 5 points</li> <li>No submitted methodology. = 0</li> </ul> <b>Lead time</b> <ul style="list-style-type: none"> <li>Lead time less than 60 working to commence and complete the repair work. = 15 points</li> <li>Lead time more than 60 working but less than 70 working days = 10 points</li> <li>Lead time of more than 70 working days but less than 80 working days. = 5 points</li> <li>Lead time of more than 80 working days = 0</li> </ul>	20 points
16.2	Ability to work on Bosch CCTV system and PSIRA registration. <ul style="list-style-type: none"> <li>Submitted certified copies of valid certificate of approval/registration/affiliation with Bosch. = 20 points</li> <li>Submitted certified copies of certificates of PSIRA Registration = 20 points</li> <li>If the abovementioned requirements are not met/submitted = 0</li> </ul>	40 points
16.3	Adherence to TE specification. <ul style="list-style-type: none"> <li>Full adherence to specification = 25 points</li> <li>Non adherence to specification = 0</li> </ul>	25 points
16.4	Specific knowledge relating to projects of this nature: <ul style="list-style-type: none"> <li>Previous experience of design, supply, installation, configuration, maintenance of CCTV camera system (only completed projects) in the past 10 years, with contactable references. Submit reference/testimonial letters with logo/emblem of previous client(s).</li> <li>3 Reference/testimonial letters of successful execution of design, supply, installation, configuration and maintenance of CCTV camera system =15 points</li> <li>2 Reference/testimonial letters of successful execution of design, supply, installation, configuration and maintenance of CCTV camera system =10 points</li> <li>1 Reference/testimonial letter of successful execution of design, supply, installation, configuration and maintenance of CCTV camera system =5 points</li> <li>Zero /No Reference/testimonial letters of successful execution of design, supply, installation, configuration and maintenance of CCTV camera system = 0</li> </ul>	15 points

**Total Weighting:**

**100 points**

**Minimum qualifying score required:**

**90 points**

Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_

### **17.COMPLIANCE TO THE SPECIFICATION VERIFICATION**

ITS IS MANDATORY FOR ALL THE SUPPLIERS/BIDDERS TO COMPLETE THIS FORM. AN INCOMPLETE FORM WILL RESULT IN DISQUALIFICATION.

No.	Heading/Subsection	Comply			Comments
		Yes	NO	N/A	
1.	Introduction				
2.	Site inspection				
4.	Technical requirements				
5.1	Scope of works				
7.	Health and safety requirements				
14.	Penalty Clauses				

Signature of Bidder/s: \_\_\_\_\_ Date: \_\_\_\_\_