

## **SPECIFICATION:**

### **Maintenance of Electric Elevators in Gauteng South**

#### **1. Scope Of Work**

1.1. The scope of the work / services to be provided by the contractor is as follows:

- Carry out preventative maintenance and corrective maintenance or repairs of electric elevators as listed in this Specification.
- The scope also includes a 24hr, Monday to Sunday emergency service as and when required by PRASA-CRES.
- The contractor will ensure that the unit (Electric Elevator) assigned to him/her works effectively and will point out all equipment defects to PRASA-CRES.

1.2. The contract will be for a period of 24 months.

#### **2. Definitions**

2.1 *PRASA-CRES*: One of the subsidiaries of Passenger Rail Agency of South Africa (PRASA) group responsible for managing the property portfolio of the group and the maintenance thereof.

2.2 *Facilities Manager*: A manager of PRASA-CRES responsible of building and infrastructure portfolio or any person authorised to act in that capacity.

2.3 *Maintenance Unit*: Electric elevator as listed in the Bill of Quantities.

2.4 *Normal Working Hours*: Hours of work as determined by a wage regulating measure or statutory enactment for any trade or activity, during which the basic minimum rate of pay is applicable and excludes all time for which a higher rate of pay is obligatory. Where no wage regulating measure is in force, the hours will be **07h00 to 17h00** Mondays to Fridays excluding a daily meal break.

2.5 *Contractor*: Successful tender who is appointed by PRASA-CRES and will be responsible to carry out the works as per this specification.

#### **3. Safety Practices & Precautions**

3.1. General Safety.

3.1.1. It is everybody's responsibility to ensure that safety practices are adhered to the maximum to prevent personnel injury and equipment failure.

3.1.2. Safety Definitions and Requirements found in operation rules and procedures (OR&P) and operation maintenance manual (O&MM) are designed to provide valuable source for safety. Use them to prevent injuries and illnesses resulting from unsafe acts or unsafe conditions.

3.1.3. The service technician must understand the operation of the equipment and the safety measures required to service this equipment.

- 3.1.4. Do not work on any equipment unless you understand how the equipment functions and you have been informed of potential hazards.
- 3.1.5. Make sure that the Station Agent and Central Control are notified that a preventative maintenance (PM) or a service will be performed in an elevator in the station.
- 3.1.6. Barricades are to be use around the exits and entrances of an elevator where a service will be performed, and/or place Out-of-Service signs in a prominent position to notify all persons that use of the elevator is prohibited.
- 3.1.7. Dirty, oily, and watery pits or machine rooms are safety hazards. They must be clean before performing any *PM* or service.
- 3.1.8. Before starting an elevator, make sure no bystanders have entered around safety barricades. Notify all personnel working in or around the elevator that the unit is ready to start. Wait for their reply before starting.
- 3.1.9. Ensure that there is adequate lighting in the machinery rooms and pits and especially around moving machinery.
- 3.1.10. Loose fitting clothing, neck chains, rings and watches that may become entangled in moving equipment should not be worn.
- 3.1.11. Eye, ear and respiratory protection should be worn as appropriate for the type of work being performed. Safety shoes must be worn.
- 3.2. Electrical.
  - 3.2.1. Lockout and tag-out of the main disconnect switch must be performed. After the work has been completed, the lock and tag or tags shall be removed by the same person whose name appears on the tag.
  - 3.2.2. Extreme caution should be exercised when doing any electrical work. Less than one 1 ampere or as low as twelve 12 volts can kill.
  - 3.2.3. Prior to working on any electrical circuits, check for live voltage.
  - 3.2.4. All electrical circuits must always be treated as live. All voltages can be dangerous. Contact with even low voltages can result in serious injury.
  - 3.2.5. To check a circuit, test the live side with a voltage tester set on a higher range, then test the dead side and retest the live side again. This action ensures the good condition of the voltage tester.
  - 3.2.6. As a general rule, use only one hand for switching. Keep the other hand clear. Before closing a switch, make sure that a circuit is ready and all moving parts are free, personnel near moving parts are notified that the circuit is to be energized and proper fuses are installed.
  - 3.2.7. When using a temporary circuit jumper, make sure that you understand what effect the jumper has on the elevator. Always remove your jumper when job is finished or before leaving the job site.

#### **4. Maintenance References**

4.1. All electrical and mechanical work will be in accordance with the following publications

- SANS 10360 The standard for the maintenance and repair of electric and hydraulic powered lifts, escalators and passenger conveyors
- SANS 3448/ISO 3448 Industrial liquid lubricants
- SANS 50081-1:2004/EN 81-1:1998
- SABS 0142 Code of Wiring for Premises
- SANS 53015: 2010/EN13015:2001
- SANS1543:2016
- E7/1 or E7/2, E4E Specifications
- No. R828 OHS Act 85 of 1993 as amended
- Applicable Municipal By-Laws and Regulations
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The Contractor shall ensure compliance to safety regulations and standards i.e. SANS, OSH Act lifts, escalator and passenger conveyor regulations, Driven Machinery Regulations and Applicable Engineering Standards.

## **5. Pre-Maintenance Procedures**

The following procedures must be followed before maintenance work can commence;

- 5.1. Proper work and personal safety equipment must be used. These include e.g. helmet, gloves and safety harness. Avoid wearing loose or unbuttoned clothing. All necessary control and access keys, tools and equipment must be ready on hand, the latter must be placed where they present no hazard to the public or other persons. If there is risk of injury from a fall, an adequate fall prevention system must be in place.
- 5.2. Ensure the elevator is free of traffic before taking elevator out of service. In the case of passengers already being present within the car, the service technician should ride with them, taking over key control of the elevator and deliver them to their required floor stops. Passengers waiting at landings should be directed to an alternative elevator.
- 5.3. Once free of passengers, out of service indicators should be illuminated and notices must be placed in clearly visible position at every landing and for every door.
- 5.4. Check that the car does not move when the landing pushes are pressed with the car doors closed.
- 5.5. Use barriers to segregate your work area so that your work does not cause a hazard to others. In particular keep access ways and fire exit clear.
- 5.6. When it is necessary to open the landing doors with the car away from the floor, safety barriers must always be placed, before opening of doors, so as to prevent the public or other non-maintenance personnel gaining access to the open-door area.
- 5.7. Following the above precautions, entry to the pit must be made only by means of the proper access route. NOTE:- In using of ladders, additional care must be taken. It should always be ensured that they are free from oil or other slippery materials and that the user himself has dry hands and is not wearing slippery or oily footwear.

## **6. During Maintenance**

- 6.1. One person should be in charge of control and access keys and responsible for safe and appropriate car movements as and when required;

- 6.2. **NOTE:** Where necessary movements are decided by the responsible person, he must properly inform fellow workers of the intended movements before making them. Or, if he is working under instructions, only make changes in control settings or initiate any car movements when he is certain that he has clearly heard and understood requirements and that the required action will not cause any hazard for colleagues.
- 6.3. Always switch off the current before attempting the cleaning or adjusting of rotating machinery;
- 6.4. When inspecting rotating equipment while it is moving, be especially careful of the “nip points” such as between ropes and sheaves;
- 6.5. **DO NOT** have tools or components all over the floor which may create a tripping hazard;
- 6.6. Exercise great care if working on live electrical equipment and use live working procedures with appropriate tools and protective clothing.
- 6.7. **DO NOT** “short cut” control safety circuits with a wire hooked onto the terminals or by a temporary shorting bridge;
- 6.8. Close and secure machine room doors when the room is unoccupied;
- 6.9. Keep the landing entrance gates or doors closed always when the lift car is away from floor level, except when working at a particular entrance
- 6.10. **DO NOT** use a naked flame in the lift well. Observe “no smoking” rules.

## **7. Preventative Maintenance**

- 7.1. All planned work will be carried out during normal working hours at the cost tendered for in the Bill of Quantities. Visits to the premises will be as scheduled for the contractor to carry work on the maintenance units as per this specification. The electric elevator will have a site log book which is to be properly completed by the Contractor on every visit and the reason for the visit recorded.
- 7.2. Planned work referred to herein will include
- 7.2.1. Monthly standard service interval on each electric elevator system  
**See Appendix 01 the minimum tasks to be performed for each maintenance schedule.**
- 7.2.2. Six months service interval on each elevator system  
**See Appendix 1 for the minimum tasks to be performed for each maintenance schedule.**
- 7.2.3. 1× annual **major** service on each elevator system  
**See Appendix 1 for the minimum tasks to be performed for each maintenance schedule.**  
**See Appendix 2 for the minimum viscosity measurements for guide rails.**
- 7.3. The Contractor shall produce and issue to PRASA-CRES a written report of any testing, inspection, examination, investigation and/or assessment undertaken and execution of any repairs by the Contractor. Reports will highlight
- The type of work or service done

- Problems experienced
- Results of inspection
- Faults found and their degree thereof
- The priority of faults thereof

Quotations for any corrective work required shall be submitted to PRASA-CRES and on the approval of such quotations the Contractor will correct or repair accordingly.

7.4. PRASA-CRES reserves the right to conduct an independent safety and quality audit to be carried out on the maintenance performance of the units. The contractor shall provide his own quality controls to ensure compliance with the specifications, unit's maintenance manuals, any changes to legislation or regulations applicable to the maintenance units and possible modernisation products to upgrade or to improve the reliability and performance of the units will be brought to PRASA-CRES for consideration.

**8. Service Level**

8.1. Work covered in this contract will be prioritised as per the table below;

Priority	Definition	Response Time	Work Complete
Emergency 1.	Mechanical breakdown of electric elevator while in operation.	4hrs	Within 48 hours
Planned	Preventative/Corrective maintenance of electric elevators.	As per the service schedule.	As per the service schedule

The table above form part of the service level agreement between the contractor and PRASA-CRES. The performance of the contract will be discussed on the monthly basis at meetings scheduled to sit at PRASA CRES offices. Performance Items to be discussed will include

- the number of breakdowns for specific period
- the turn-around time to attend to emergency callouts
- planned vs. actual progress
- submission of reports, invoices and other administration duties
- payment of invoices

**9. Terms Of Payment**

9.1. The terms of payment will be monthly and upon receiving the invoice, PRASA-CRES shall pay the Contractor within 30 days. This is subject to the invoicing being both correct and free from anomalies.

- 9.2. All pricing information shall be exclusive of VAT.
- 9.3. No sub-contracting shall be permitted.
- 9.4. Invoices shall show the period, the lump sum for the maintenance work and the breakdown of all work for which the payment is being claimed for. All non-maintenance invoices shall be presented on a per maintenance unit basis and a fully itemized list of the work being charged for will be incorporated into the invoice. A photocopy of the worksheet which shall indicate entry and exit times from site which shall be signed by the PRASA-CRES representative shall be attached to the invoice and any invoices submitted without this attachment and fully completed to the satisfaction of the PRASA-CRES will be rejected.
- 9.5. Additional works shall be separately invoiced, and these shall be submitted monthly. Where such works are covered by the Schedules of Rates the schedules shall be strictly adhered to in preparing the invoice. Works authorized by PRASA-CRES representative which falls outside the scope of the contract and the Bill Of Quantities shall be invoiced separately and fully detailed with the works involved and cross referenced to the issued order number. PRASA-CRES reserves the right to request the invoice for the material or spare parts purchased by the Contractor on the works done.
- 9.6. If invoices are presented which do not fully comply with the format as detailed, they will be rejected. All invoices shall portray the identity number of the maintenance unit involved and site location and VAT as a sum of money shall be included within the total monies being claimed. A schedule of accumulative costs shall be submitted each month showing the expenditure to date of non-contract repair works and misuse / vandalism as two separate totals. PRASA-CRES will accept no liability and/or responsibility for the late payment of the invoices which have been incorrectly addressed by the Contractor.
- 9.7. **No** payment shall be made by PRASA-CRES for any unauthorized service performed by the Contractor.

## **10. Pricing**

- 10.1. The Contractor shall familiarized himself/herself with the present conditions of the maintenance units and submit prices accordingly; changes to the maintenance contract rates will not be accepted.
- 10.2. The Contractor shall include for all costs associated with the works for his use to include plant, tools, test equipment, chemicals, sundry materials; temporary lighting, small plant and tools; temporary plant and equipment to maintain operations in breakdowns; off-loading, hoisting and handling of all

materials and plant; access to the works, administration and security; transport for staff; protecting the Works; safety, health and welfare of people; removing rubbish, protective casings and coverings away from the site and cleaning the works on completion; temporary screens, hoardings, guard rails, landing barriers, scaffolding and similar items; control of noise, pollution and all other statutory obligations; all necessary attendances in connection with examination and/or tests in compliance with OHS Act Regulations and all necessary management and supervision of the Works.

Service	Frequency
<p>Controller parts, Selectors and Dispatching Equipment, relays, solid state equipment transducers, resistors, condensers power amplifiers, transformers contacts. Leads, dashpots, timing devices, computer and microcomputer devices, mechanical and electrical driving equipment, signal lamps and position indicating equipment</p>	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>
<p>Door operators, car door hangers, car contacts, door protective devices, load weighing equipment, car frames, care safety mechanisms, platforms car and counterweight guide shoes including rollers and gibs and emergency car lighting</p>	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>
<p>Hoist way door interlocks and hangers, bottom door guides and auxiliary door closing devices</p>	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>
	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> </ul>

<p>Machines, worms. Gears, thrust bearings, drive sheaves, drive sheave shaft bearings, brake pulleys, brake coils, contacts, linings and components parts</p>	<ul style="list-style-type: none"> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>
<p>Motors, motor generators, motor windings, rotating elements, commutators, brushes, brush holders and bearings</p>	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>
<p>Governor components, governor sheaves and shaft assemblies, bearings, governor jaws, deflector or secondary sheaves, car and counter weights buffers, car and counter weights guide rails, car and counter weights assemblies and compensating sheave assemblies</p>	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>
<p>For the lifts that are hydraulic operated</p> <p>Pumps, pump motors, operating valves, levelling valves, plunger packing, exposed piping, ground plungers, cylinders and hydraulic fluid tanks</p>	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>
<p>Belt tension, Step chains, contacts and sensors, comb plates, handrail, skirting plates and brushes, Main drive motor and gearbox, brake lever</p>	<ul style="list-style-type: none"> <li>- As per Manufacturer's Maintenance Manual and Maintenance &amp; Engineering working procedures.</li> <li>- Must comply with SANS 53015: 2010 /EN13015:2001, SANS1543:2016 including applicable OHS Act regulations 7 for Lifts, Escalator and Passenger Conveyor, Driven Machinery Regulations and Applicable Engineering Standards</li> </ul>

## Spare Parts Requirements

The contractor shall provide spare parts for repair of each unit and ensures the supply of replacement parts that are manufactured by the original equipment manufacturers (OEM) or parts that are confirmed as equivalent by the Contractor shall be approved by PRASA technical representative. The contractor shall have sufficient spares readily available for delivery and installation/repairs for all elevator and escalators. Maintenance under this contract shall provide a constant, high quality service to properly protect all equipment from deterioration and to provide constant peak performance of all elevators and escalators, resulting in a minimum of down time to the system.

A list of attainable replacements parts, by part number shall be furnished when requested by the Facilities Manager and the contractor will be responsible to maintain an up-to-date inventory. The parts shall be kept on stock and if not, the contractor must source the required spare and be available within 24 Hours. The contractor will be responsible for providing all the critical spares foreseeable for the use of elevators and escalators.

### 1. List of Stations with Lift and Escalators

The list of lifts and escalators covered under the Scope of Works are as follows:

Item No.	Type	Asset Number	Make	Location
1	Lift A	3021834	KONE Elevators	Orlando Station
2	Lift B	3021835	KONE Elevators	Orlando Station
3	Lift A	3021859	KONE Elevators	Rhodesfield Station
4	Lift B	3021860	KONE Elevators	Rhodesfield Station
5	Lift C	3021861	KONE Elevators	Rhodesfield Station
6	Lift D	3021862	KONE Elevators	Rhodesfield Station
7	Escalator A	3021863	KONE Elevators	Rhodesfield Station
8	Escalator B	3021864	KONE Elevators	Rhodesfield Station
9	Escalator C	3021865	KONE Elevators	Rhodesfield Station
10	Escalator D	3021866	KONE Elevators	Rhodesfield Station
11	Lift A	3019380	KONE Elevators	Daveyton Station
12	Lift B	3019381	KONE Elevators	Daveyton Station
13	Lift C	3019382	KONE Elevators	Daveyton Station
14	Lift A	3011532	TOCO Elevators	Tembisa Station
15	Lift B	3011533	TOCO Elevators	Tembisa Station
16	Lift A	3018715	OTIS	Germiston Station
17	Lift B	3018716	OTIS	Germiston Station

18	Lift A		Schindler	Germiston Police Station
19	Lift A	3019884	Schindler	Nasrec Station
20	Lift B	3019885	Schindler	Nasrec Station
21	Lift C	3019886	Schindler	Nasrec Station
22	Lift D	3019887	Schindler	Nasrec Station
23	Lift A	3022409	Schindler	Springs Police Station
24	Lift B	3022459	Schindler	Springs Police Station
25	Lift A	3022713	Schindler	Krugersdorp Police Station
26	Lift A	3019835	KONE Elevators	Doornfontein Station
27	Lift B	3019836	KONE Elevators	Doornfontein Station
28	Lift C	3019837	KONE Elevators	Doornfontein Station

**Note: The units that have been switched off and not in use will not form part of the fixed planned maintenance but the contractor will be expected to conduct an assessment and submit a fault report and will attend to these units on a request where the adhoc rates will apply.**

## 11. Schedule Of Rates

### 11.1. Planned Service Schedule Of Rates

Item No.	Location	Type	Make	Year 1 Rates (Excl. VAT)	Year 2 Rates (Excl. VAT)
<b>1.0 Standard Monthly Service Rates</b>					
1.1	Orlando Station	Lift A	KONE Elevators	R	R
1.2	Orlando Station	Lift B	KONE Elevators	R	R
1.3	Rhodesfield Station	Lift A	KONE Elevators	R	R
1.4	Rhodesfield Station	Lift B	KONE Elevators	R	R
1.5	Rhodesfield Station	Lift C	KONE Elevators	R	R
1.6	Rhodesfield Station	Lift D	KONE Elevators	R	R
1.7	Rhodesfield Station	Escalator A	KONE Elevators	R	R
1.8	Rhodesfield Station	Escalator B	KONE Elevators	R	R
1.9	Rhodesfield Station	Escalator C	KONE Elevators	R	R
1.10	Rhodesfield Station	Escalator D	KONE Elevators	R	R
1.11	Daveyton Station	Lift A	KONE Elevators	R	R
1.12	Daveyton Station	Lift B	KONE Elevators	R	R
1.13	Daveyton Station	Lift C	KONE Elevators	R	R
1.14	Tembisa Station	Lift A	TOCO Elevators	R	R
1.15	Tembisa Station	Lift B	TOCO Elevators	R	R
1.16	Germiston Station	Lift A	OTIS	R	R
1.17	Germiston Station	Lift B	OTIS	R	R
1.18	Germiston Police Station	Lift A	Schindler	R	R
1.19	Nasrec Station	Lift A	Schindler	R	R

1.20	Nasrec Station	Lift B	Schindler	R	R
1.21	Nasrec Station	Lift C	Schindler	R	R
1.22	Nasrec Station	Lift D	Schindler	R	R
1.23	Springs Police Station	Lift A	Schindler	R	R
1.24	Springs Police Station	Lift B	Schindler	R	R
1.25	Krugersdorp Police Station	Lift A	Schindler	R	R
1.26	Doornfontein Station	Lift A	KONE Elevators	R	R
1.27	Doornfontein Station	Lift B	KONE Elevators	R	R
1.28	Doornfontein Station	Lift C	KONE Elevators	R	R
<b>Standard Monthly Service Rates Total:</b>				<b>R</b>	<b>R</b>

**2.0. Six Monthly Intermediate Service Rates**

2.1	Orlando Station	Lift A	KONE Elevators	R	R
2.2	Orlando Station	Lift B	KONE Elevators	R	R
2.3	Rhodesfield Station	Lift A	KONE Elevators	R	R
2.4	Rhodesfield Station	Lift B	KONE Elevators	R	R
2.5	Rhodesfield Station	Lift C	KONE Elevators	R	R
2.6	Rhodesfield Station	Lift D	KONE Elevators	R	R
2.7	Rhodesfield Station	Escalator A	KONE Elevators	R	R
2.8	Rhodesfield Station	Escalator B	KONE Elevators	R	R
2.9	Rhodesfield Station	Escalator C	KONE Elevators	R	R
2.10	Rhodesfield Station	Escalator D	KONE Elevators	R	R
2.11	Daveyton Station	Lift A	KONE Elevators	R	R

2.12	Daveyton Station	Lift B	KONE Elevators	R	R
2.13	Daveyton Station	Lift C	KONE Elevators	R	R
2.14	Tembisa Station	Lift A	TOCO Elevators	R	R
2.15	Tembisa Station	Lift B	TOCO Elevators	R	R
2.16	Germiston Station	Lift A	OTIS	R	R
2.17	Germiston Station	Lift B	OTIS	R	R
2.18	Germiston Police Station	Lift A	Schindler	R	R
2.19	Nasrec Station	Lift A	Schindler	R	R
2.20	Nasrec Station	Lift B	Schindler	R	R
2.21	Nasrec Station	Lift C	Schindler	R	R
2.22	Nasrec Station	Lift D	Schindler	R	R
2.23	Springs Police Station	Lift A	Schindler	R	R
2.24	Springs Police Station	Lift B	Schindler	R	R
2.25	Krugersdorp Police Station	Lift A	Schindler	R	R
2.26	Doornfontein Station	Lift A	KONE Elevators	R	R
2.27	Doornfontein Station	Lift B	KONE Elevators	R	R
2.28	Doornfontein Station	Lift C	KONE Elevators	R	R
<b>Six Monthly Intermediate Service Rates Totals:</b>				<b>R</b>	<b>R</b>
<b>3.0. Major Annual Service Rates</b>					
3.1	Orlando Station	Lift A	KONE Elevators	R	R
3.2	Orlando Station	Lift B	KONE Elevators	R	R
3.3	Rhodesfield Station	Lift A	KONE Elevators	R	R

3.4	Rhodesfield Station	Lift B	KONE Elevators	R	R
3.5	Rhodesfield Station	Lift C	KONE Elevators	R	R
3.6	Rhodesfield Station	Lift D	KONE Elevators	R	R
3.7	Rhodesfield Station	Escalator A	KONE Elevators	R	R
3.8	Rhodesfield Station	Escalator B	KONE Elevators	R	R
3.9	Rhodesfield Station	Escalator C	KONE Elevators	R	R
3.10	Rhodesfield Station	Escalator D	KONE Elevators	R	R
3.11	Daveyton Station	Lift A	KONE Elevators	R	R
3.12	Daveyton Station	Lift B	KONE Elevators	R	R
3.13	Daveyton Station	Lift C	KONE Elevators	R	R
3.14	Tembisa Station	Lift A	TOCO Elevators	R	R
3.15	Tembisa Station	Lift B	TOCO Elevators	R	R
3.16	Germiston Station	Lift A	OTIS	R	R
3.17	Germiston Station	Lift B	OTIS	R	R
3.18	Germiston Police Station	Lift A	Schindler	R	R
3.19	Nasrec Station	Lift A	Schindler	R	R
3.20	Nasrec Station	Lift B	Schindler	R	R
3.21	Nasrec Station	Lift C	Schindler	R	R
3.22	Nasrec Station	Lift D	Schindler	R	R
3.23	Springs Police Station	Lift A	Schindler	R	R
3.24	Springs Police Station	Lift B	Schindler	R	R
3.25	Krugersdorp Police Station	Lift A	Schindler	R	R
3.26	Doornfontein Station	Lift A	KONE Elevators	R	R

3.27	Doornfontein Station	Lift B	KONE Elevators	R	R
3.28	Doornfontein Station	Lift C	KONE Elevators	R	R
<b>Annual Major Service Rates Totals:</b>				<b>R</b>	<b>R</b>
<b>4.0. Inspection and Issuing COCs</b>					
4.1	Orlando Station	Lift A	KONE Elevators	R	R
4.2	Orlando Station	Lift B	KONE Elevators	R	R
4.3	Rhodesfield Station	Lift A	KONE Elevators	R	R
4.4	Rhodesfield Station	Lift B	KONE Elevators	R	R
4.5	Rhodesfield Station	Lift C	KONE Elevators	R	R
4.6	Rhodesfield Station	Lift D	KONE Elevators	R	R
4.7	Rhodesfield Station	Escalator A	KONE Elevators	R	R
4.8	Rhodesfield Station	Escalator B	KONE Elevators	R	R
4.9	Rhodesfield Station	Escalator C	KONE Elevators	R	R
4.10	Rhodesfield Station	Escalator D	KONE Elevators	R	R
4.11	Daveyton Station	Lift A	KONE Elevators	R	R
4.12	Daveyton Station	Lift B	KONE Elevators	R	R
4.13	Daveyton Station	Lift C	KONE Elevators	R	R
4.14	Tembisa Station	Lift A	TOCO Elevators	R	R
4.15	Tembisa Station	Lift B	TOCO Elevators	R	R
4.16	Germiston Station	Lift A	OTIS	R	R
4.17	Germiston Station	Lift B	OTIS	R	R
4.18	Germiston Police Station	Lift A	Schindler	R	R
4.19	Nasrec Station	Lift A	Schindler	R	R

4.2	Nasrec Station	Lift B	Schindler	R	R
4.21	Nasrec Station	Lift C	Schindler	R	R
4.22	Nasrec Station	Lift D	Schindler	R	R
4.23	Springs Police Station	Lift A	Schindler	R	R
4.24	Springs Police Station	Lift B	Schindler	R	R
4.25	Krugersdorp Police Station	Lift A	Schindler	R	R
4.26	Doornfontein Station	Lift A	KONE Elevators	R	R
4.27	Doornfontein Station	Lift B	KONE Elevators	R	R
4.28	Doornfontein Station	Lift C	KONE Elevators	R	R
<b>Inspections and Issuing COC Rates Totals:</b>				<b>R</b>	<b>R</b>
<b>Standard Monthly Service Rates Total + Six Monthly Intermediate Service Rates Totals + Annual Major Service Rates Totals + Inspections and Issuing COC Rates Totals</b>					
				<b>R</b>	<b>R</b>

## 11.2. Repairs Work Rates

Item	Description		Unit	Estimated Quantity	Rates (Excl. VAT)	Total Amount (Excl. VAT)	Rates (Excl. VAT)	Amount (Excl. VAT)
1	Provisional sum for approval of safety file as per annexure 2	Sum	Sum	R 15 000.00	R 15 000.00	R 15 000.00	R 15 000.00	R 15 000.00
2	Provisional Sum (Material)	Material	Sum	R300 000.00	R300 000.00	R300 000.00	R300 000.00	R300 000.00
3	Percentage mark-up for materials not listed	% Mark up	%	R300 000.00	%	R	%	R
4	The Service Provider is to tender their total cost per hour on site per qualified Artisan and an assistant to perform service and repairs during <b>Normal working hours (07H:00 – 17H:00)</b> .	Artisans	Rate/hour	2 200 hours	R	R	R	R
5		General Worker	Rate/hour	4 400 hours	R	R	R	R
6	The Service Provider is to tender their total cost per hour on site per qualified Artisan and an assistant to perform service and repairs during <b>After working hours and Saturdays (17:00 – 07:00)</b> .	Artisans	Rate/hour	200 hours	R	R	R	R
7		General Worker	Rate/hour	400 hours	R	R	R	R
8	The Service Provider is to tender their total cost per hour on site per qualified Artisan and an assistant to perform service and repairs during <b>Sunday and Public Holiday</b> . This cost shall exclude material, which has previously been dealt with in this contract	Artisan	Rate/hour	50 hours	R	R	R	R
9		General Worker	Rate/hour	100 hours	R	R	R	R
10	Provisional Sum Outsourced Specialised work	Outsourced	Sum	R 150 000.00	R 150 000.00	R 150 000.00	R 150 000.00	R 150 000.00
12	Percentage Mark-Up For Outsourced Specialised work	Percentage Mark-Up	%	R 150 000.00	%	R	%	R
13	Travel cost	Travel cost	Rate/ km	20 000 km	R	R		R
	<b>Total (Excl. VAT):</b>					R		R
	<b>15% VAT:</b>					R		R
	<b>Total (Incl. VAT):</b>					R		R

### Appendix 1: Minimum Service Tasks Per Schedules Per Elevator

ITEM		MAINTENANCE SCHEDULE	INSPECTION	METHOD
1.	Emergency	Monthly	Check for proper operation.	Insure phone rings in station booth & rolls over to OCC when not picked up by Agent.
2.	Shaft and Car Door	Monthly	Clean sills. inspect gibs, hanger & eccentric rollers for alignment & wear. Check for loose hardware. Lubricate as necessary.	Keep felt oilers saturated. Clean tracks. Replace bottom guides if worn. Check doors for alignment.
3.	Contactors & auxiliary relay	Monthly	Inspect coil insulation and contacts for pitting. Inspect pivots for wear	Do not lubricate any parts of contactors. Check for smooth operation & overheating
4.	Controller General	Monthly	Check all relays for freedom of movement, dust, dirt, contact pitting or burning and loose connections. Check ribbon connectors and terminal strips.	Clean controller. Insure all relays, boards, ribbon connectors and terminal strips are securely fastened. Check for burned components.
5.	Car & Hall Key Switches & Pushbuttons	Monthly	Check for broken buttons, burned out lamps, key switches, overhead lighting, emergency stop button & bell. Check ceiling fan operation.	Check for proper operation of all buttons, lamps, key switches, gongs, overhead lighting, emergency lighting and overhead ceiling fan.
6.	Car Door Clutch, Detectors, Saf-T-Edge	Monthly	Inspect retraction rollers and cables for wear, inspect pivots for wear. Check detector edges for proper operation.	Clean and lubricate all pivots & pins. Check door detector with obstruction to verify proper operation.
7.	Machine Room	Monthly	General Cleanliness, Ventilation windows etc.	Clean and/or replace AC or controller vent filter.
8.	Machine, DC Hoist Motor Brushes, DC Generator and Slip Rings & Generator Motor	Monthly	Check oil level in bearing reservoir. Feel motor for overheating. Check for excessive noise. Examine commutator for high mica. Undercut if necessary. Do not use brush-seating stone. Inspect the length and wear pattern of the brushes. Check all brushes pigtails and their holders for secured fasteners	Sleeve bearing - fill oil level. Ball bearings - open relief plugs & remove hardened grease, add grease to running motor until expelled through relief hole, run for 20 minutes. Replace worn brushes with new ones of the same size and grade. Insure that the holders/springs are not resting against the pigtails.
9.	Interlocks, Pick up rollers & Gate Switches	Monthly	Check contacts for pits & oxidation. Check linkage for tightness. Adjust locks for proper clearances. Inspect rollers.	Lubricate and wipe dry all pivot surfaces. Check each landing for proper operation.
10.	Car Door Operator, Motor, Linkage Belts Etc.	Monthly	Inspect for cleanliness and loose hardware. Inspect control contacts for pitting, wear & tear. Check for smooth operation.	Adjust door opening and closing for smooth operation. Check linkage and lubricate all bushings as necessary. Check belt tension
11.	Piston (Ram)	Monthly	Check oil tank level with car at Bottom. Check for sufficient oil with car at top. Check motor belt tension. Check air filter (if provided). Check control valve filters (only if erratic) Check for leaks, empty machine drip pan. Record amount of hydraulic oil added to tank Check piston packing head for excessive leak	Fill to level shown on dipstick. Tightened to 1/64 slack per inch of pulley diameter. Replace "O" rings or gaskets as required. Replace packing if necessary.

12	Brake	6 Months	Check lining for wear and glazing. Check stopping distance. And adjust as necessary.	Stop unit and measure stopping distance. Drop of oil pivot in holes provided.
13	Landing System	6 Months	Inspect landing system guides, tape and magnets. Measure run-by.	Clean & apply dry lubricant on tape. Inspect system guide shoes & tape brackets.
14	Cables; Car Comp. & Governor	6 Months	Inspect for worn or broken strands, dryness and rust spots. Inspect shackles and spring for cracks. Check cables for equal tension.	If cables are dry, apply a thin coat of lubricant. Remove excessive rust deposits. NOTE: Do not lubricate governor cables.
15	Car & Cwt. Rollers or Shoes	6 Months	Inspect shoes for wear and proper lubrication. Inspect rollers for wear, tension & clearance.	Wipe clean & adjust for proper tension & clearance. Replace worn gibs & rollers.
16	Camera Equipment	6 Months	Check if camera and enclosure equipment is intact.	Inspect camera enclosure and window. Report any damages.
17	Elevator Pit	6 Months	Clean & inspect pit floor. Check drain sump & oil scavenger for operation.	Remove debris & check oil absorbent pads. Verify sump operation with 5 gal of water
18	Governor & Tension Sheave	6 Months	Check for corrosion, obstructions and for bearing noise. Check linkage for binding.	Grease with pressure gun until expelled at hub. Drop oil at pivot pins in holes provided
19	Safety linkage	6 Months	Inspect links and pins for freedom of movement.	Lubricate all pivot points with a few drops of oil.
20	Traction Sheaves and Bearings	6 Months	Check for noise or vibration and sufficient lubrication. Inspect drive sheave grooves for unequal wear.	8 Strokes of pressure gun in fitting under swing cover in housing & in sheave bearing cap. Remove relief plug in spider hub.
21	Safety, Traction	6 Months	Check clearances between rail & gripping face of wedges or jaws. Refer to O.E.M.	Lubricate all pivots with a few drops of oil.
22	Gearbox Oil	6 Months	Inspect for contamination	Drain, clean gearbox and replace oil.
23	Gearbox	Annually	Check oil level & backlash of rotor shaft. Inspect ring gear for wear, gaskets and seals for leaks.	Fill oil to centre of worm. Add 4 to 5 drops of Dow-Corning anti-"Q" compound for excessive foaming
24	Deflector Sheaves Car	Annually	Check for noise or vibration and sufficient lubrication.	8 Strokes of pressure gun to shaft fitting or 2/3 of oil through hubcap.
25	Shaft Limit Switches	Annually	Inspect contacts for pits & oxidation. Check for smooth operation.	Drop of oil on pivot & roller pins.
26	Rails	Annually	Inspect splice plates for loose bolts. Inspect rails for nicks & burns and joints for smoothness	Fill rail lubricators or brush on slip-it. Do not lubricate roller guides. Inspect for alignment & smoothness. File as necessary.
27	Trail Cables	Annually	Inspect for breaks & scuff spots.	
28	Buffers	Annually	Check for proper operation	Check the overall condition of the buffer structure.
29	Oil Buffers	Annually	Check that the safety switch operates correctly.	Check the Oil Level. Drive the car or counterweight on the buffer and check that the piston returns to the normal position
30	Counterweight	Annually	Inspect for loose or broken weights. Check run by.	Tighten clamp, replace broken weights.

**Appendix 2: Viscosity Requirements of Guide Rails**

The following table describes the viscosity requirements for lubrication at various temperatures:

<b>OPERATING TEMPERATURE [°C]</b>	<b>LUBRICATING OIL VISCOSITY</b>
<b>-20 +5</b>	<b>68cSt / 40°C</b>
<b>-5 +35</b>	<b>ISO VG-320</b>
<b>+30 +50</b>	<b>ISO VG-460</b>

### ANNEXURE 3: Health Safety Requirements Template For Issuing of Site Access

#### CONTRACTOR SAFETY FILE CONTENTS LIST

The purpose of this checklist is to guide the contractors and their sub-contractors as to what documents are required for them to prepare a safety file that must be issues to PRASA Cres Regional Departments or Head Office for evaluation before a site access is issued.

This checklist was revised to cater for **COVID 19** requirements as per RSA Government Disaster Management Act as amended and its Regulations.

Human Coronaviruses are common throughout the world. There are many different coronaviruses identified in animals but only a small number of these can cause disease in humans.

On 7 January 2020, 'Severe Acute Respiratory Syndrome Coronavirus 2' (SARS-CoV-2) was confirmed as the causative agent of 'Coronavirus Disease 2019' or COVID-19. The majority of the case-patients initially identified were dealers and vendors at a seafood, poultry and live wildlife market in China. Since then, the virus has spread to more than 100 countries, including South Africa.

The spread of the disease is thought to happen mainly via respiratory droplets produced when an infected person coughs or sneezes, similar to how influenza and other respiratory pathogens spread. Thus far, the majority of cases have occurred in people with close physical contact to cases and healthcare workers caring for patients with COVID-19.

Current symptoms reported for patients with COVID-19 have included mild to severe respiratory illness with cough, sore throat, shortness of breath or fever.

The complete clinical picture with regard to COVID-19 is still not fully clear. Reported illnesses have ranged from infected people with little to no symptoms to people being severely ill and dying.

**Name of the Contractor:**

**Project:**

**Safety File Assessor and Date:**

#	Requirement(s)	Compliance Status (Yes / No)	Comment(s)
1	Scope of works and Project Duration		

#	Requirement(s)	Compliance Status (Yes / No)	Comment(s)
2	Notification to DOL (If applicable and as defined in the 2014 Construction Regulations)		
3	Registration of the project with DOL for the construction permit if the total project value is more than R45 Million  (If applicable and as defined in the 2014 Construction Regulations)		
4	Valid Letter of Good Standing		
5	Employee List and Certified Copies of their Identity Documents (RSA Citizens) or Passports or Work Permits for foreign Nationals (Employee register); Home address; Contact Numbers; Residential Address; Name of Next of kin with Contacts  (Very critical issue for contact tracing)		
6	Approved Organizational Structure		
7	Approved S/HE Policy		
8	Approved COVID 19 Policy / Declaration		
9	Approved S/HE Plan		
10	Risk Assessments for the projects as per project scope approved by the Risk Assessor and they should cover COVID 19 related risk and mitigation measures.		
11	Proof of medical fitness of employees who will be working on the project and they should be from the Occupational Health Practitioner not a General Practitioner. <ul style="list-style-type: none"> <li>• Protocols for dealing with COVID 19 positive cases.</li> <li>• Screening of contractors employees including sub-contractor</li> <li>• The type of thermometer that will be utilised and its calibration status.</li> </ul>		
12	Statutory Appointments including competency certificates and CVs e.g. COVID 19 Compliance Officer; First Aider and etc		

#	Requirement(s)	Compliance Status (Yes / No)	Comment(s)
	(Signed by the appointer and accepted by appointee's include CV's and competency certificates)		
13	Tool inspections Checklists and Register		
14	PPE Matrix and Records include COVID 19 PPE Requirements and list of the PPE to be provided.		
15	<p>Safe Working Procedures or Method Statements Including COVID-19 control measures. A list of the documents required here is identified as a minimum</p> <ul style="list-style-type: none"> <li>- Waste management protocol on how COVID 19 related waste will be managed.</li> <li>- Incident reporting procedure.</li> <li>- Emergency procedure.</li> <li>- COVID 19 case handling.</li> </ul>		
16	Tool box Talks Templates to include COVID 19 information for awareness purposes. Include induction material covering COVID 19		
17	Equipment Maintenance (Calibrations, Safe Working load certificates and Decontamination or Sanitation Records etc) if applicable		
18	Chemicals substances list; MSDSs for chemicals to be used (14 point format) including Proof of training on MSDS if applicable.		
19	Excavation plan (when applicable)		
20	Scaffolding plan (when applicable)		
21	Declaration of Sub-contractors (when applicable)		
22	Proof of Third Party Liability Cover		
	<b>Conclusion / Statement of Compliance</b>		

