

## PA 32: INVITATION TO BID PART A

<b>YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/PUBLIC ENTITY)</b>			
BID NUMBER:	ID 3169539	CLOSING DATE:	27/02/2024
		CLOSING TIME:	11:00
DESCRIPTION	SERVICE, REPAIRS AND MAINTENANCE OF FIRE FIGHTING EQUIPMENTS FOR PERIOD OF 12 MONTHS AT LYTTLETON CENTURION: GROUP 14		
<b>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (DPW04.1 GS or DPW04.2 GS).</b>			
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)			
251 NANA SITA STREET			
CNR NANA SITA & THABO SEHUME STREET			
PRETORIA,			
<b>OR POSTED TO:</b>			
PRIVATE BAG X229			
PRETORIA, 0001			
<b>SUPPLIER INFORMATION</b>			
NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE NUMBER	CODE	NUMBER	
CELLPHONE NUMBER			
FACSIMILE NUMBER	CODE	NUMBER	
E-MAIL ADDRESS			
VAT REGISTRATION NUMBER			
	TCS PIN:	OR	CSD No:
SIGNATURE OF BIDDER	.....	DATE	
CAPACITY UNDER WHICH THIS BID IS SIGNED (Attach proof of authority to sign this bid; e.g. resolution of directors, etc.)			

TOTAL NUMBER OF ITEMS OFFERED		TOTAL BID PRICE ('ALL APPLICABLE TAXES)	R
<b>BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:</b>		<b>TECHNICAL INFORMATION MAY BE DIRECTED TO:</b>	
DEPARTMENT/ PUBLIC ENTITY	PUBLIC WORKS & INFRASTRUCTURE	CONTACT PERSON	LESIBA MABITSELA
CONTACT PERSON	MS. M. MANALA	TELEPHONE NUMBER	082 802 9072
TELEPHONE NUMBER	012 492 3020	FACSIMILE NUMBER	N/A
FACSIMILE NUMBER	N/A	E-MAIL ADDRESS	LESIBA.MABITSELA@DPW.GOV.ZA
E-MAIL ADDRESS	MMABORE.MANALA@DPW.GOV.ZA		

## PART B TERMS AND CONDITIONS FOR BIDDING

### 1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR ONLINE
- 1.3. BIDDERS MUST REGISTER ON THE CENTRAL SUPPLIER DATABASE (CSD) TO UPLOAD MANDATORY INFORMATION NAMELY: ( BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS; AND BANKING INFORMATION FOR VERIFICATION PURPOSES).
- 1.4. WHERE A BIDDER IS NOT REGISTERED ON THE CSD, MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS MAY NOT BE SUBMITTED WITH THE BID DOCUMENTATION.
- 1.5. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 2000 AND THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER LEGISLATION OR SPECIAL CONDITIONS OF CONTRACT.

**2. TAX COMPLIANCE REQUIREMENTS**

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
- 2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS TOGETHER WITH THE BID.
- 2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE PROOF OF TCS / PIN / CSD NUMBER.
- 2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

**3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS**

- 3.1. IS THE BIDDER A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?  YES  NO
  - 3.2. DOES THE BIDDER HAVE A BRANCH IN THE RSA?  YES  NO
  - 3.3. DOES THE BIDDER HAVE A PERMANENT ESTABLISHMENT IN THE RSA?  YES  NO
  - 3.4. DOES THE BIDDER HAVE ANY SOURCE OF INCOME IN THE RSA?  YES  NO
- IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN, IT IS NOT A REQUIREMENT TO OBTAIN A TAX COMPLIANCE STATUS / TAX COMPLIANCE SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.**

**NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.**

**Note Well:**

- a) In respect of non VAT vendors the bidders may not increase the bid price under Section 67(1) of the Value Added Tax Act of 1991 where the relevant transaction would become subject to VAT by reason of the turnover threshold being exceeded and the bidder becomes liable for VAT.
- b) **All delivery costs must be included in the bid price, for delivery at the prescribed destination.**
- c) The price that appears on this form is the one that will be considered for acceptance as **a firm and final offer.**
- d) The grand total in the pricing schedule(s), inclusive of VAT, attached to the bid offer must correlate and be transferred to this form (PA32).
- e) Where there are inconsistencies between the grand total price offer in the pricing schedule(s) and the PA32 price offer, the price offer on the PA32 shall prevail and deemed to be firm and final. No further correspondence shall be entered into in this regard.

<sup>1</sup> All applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies

## PA-03 (EC): NOTICE AND INVITATION FOR QUOTATION

THE DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE INVITES QUOTATIONS FOR:

<b>Project title:</b>	SERVICE, REPAIRS AND MAINTENANCE OF FIRE FIGHTING EQUIPMENTS FOR PERIOD OF 12 MONTHS AT LYTTLETON CENTURION: GROUP 14
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<b>Quotation no:</b>	ID 3169539	<b>Reference no:</b>	ID 3169539
<b>Advertising date:</b>	2702/2024	<b>Closing date:</b>	21/02/2024
<b>Closing time:</b>	11:00	<b>Validity period:</b>	84 Calendar days

### 1. REQUIRED CIDB GRADING

It is estimated that tenderers should have a CIDB contractor grading designation of **1 SF or higher, or select tender value range select class of construction works\*** or higher.

*\*Select tender value range and select class of construction works" or select "Not applicable" where only one class of construction works is applicable.*

It is estimated that potentially emerging enterprises should have a CIDB contractor grading designation of **Not applicable Not applicable PE** or higher, or **Not applicable Not applicable PE\*** or higher.

*\*Select tender value range and select class of construction works" or select "Not applicable" where no or only one class of construction works is applicable.*

### 2. FUNCTIONALITY CRITERIA APPLICABLE YES NO

**Note 1:** Failure to meet minimum functionality score will result in the tenderer being disqualified.

Functionality criteria <sup>1</sup> :	Weighting factor:
<b>Total</b>	<b>100 Points</b>

### 3. METHOD TO BE USED TO CALCULATE POINTS FOR SPECIFIC GOALS

<sup>1</sup>The points allocated to each functionality criterion should not be generic but should be determined separately for each tender on a case by case basis.

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

**3.1. For procurement transaction with rand value greater than R2 000, 00 and up to R1 Million (Inclusive of all applicable taxes) the specific goals listed in table 1 below are applicable.**

**Table 1**

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE which is at least 51% owned by black people (Mandatory)	10	<ul style="list-style-type: none"> <li>SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.</li> </ul>
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	<ul style="list-style-type: none"> <li>Official Municipal Rates Statement which is in the name of the bidder.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>Any account or statement which is in the name of the bidder.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>Lease Agreement which is in the name of the bidder.</li> </ul>
3.	An EME or QSE which is at least 51% owned by black women (Mandatory)	4	<ul style="list-style-type: none"> <li>SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.</li> </ul>
4.	An EME or QSE which is at least 51% owned by black people with disability (Mandatory)	2	<ul style="list-style-type: none"> <li>SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.</li> </ul> <p>and</p> <ul style="list-style-type: none"> <li>Medical Certificate indicating that the disability is permanent.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>South African Social Security Agency (SASSA) Registration indicating that the disability is permanent.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>National Council for Persons with Physical Disability in South Africa registration (NCPDASA).</li> </ul>
5.	An EME or QSE which is at least 51% owned by black youth (Mandatory)	2	<ul style="list-style-type: none"> <li>ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.</li> </ul>

#### 4. RESPONSIVENESS CRITERIA

##### 4.1. Indicate substantive responsiveness criteria applicable for this tender. Failure to comply with the criteria stated hereunder shall result in the tender offer being disqualified from further consideration:

1	<input checked="" type="checkbox"/>	Only those tenderers who satisfy the eligibility criteria stated in the Tender Data may submit tenders.
2	<input checked="" type="checkbox"/>	Tender offer must be properly received on the tender closing date and time specified on the invitation, completed either electronically (if issued in electronic format), or by writing legibly in non-erasable ink. (All as per Standard Conditions of Tender).
3	<input checked="" type="checkbox"/>	Use of correction fluid is prohibited. Corrections to be crossed out and initialled.
4	<input checked="" type="checkbox"/>	Submission of a signed bid offer as per the DPW-07 (EC).
5	<input checked="" type="checkbox"/>	Submission of DPW-09 (EC): Particulars of Tenderer's Projects.
6	<input type="checkbox"/>	Bidders must comply with DPW-21 (EC): Record of Addenda to tender documents, if any.
7	<input checked="" type="checkbox"/>	The tenderer shall submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts) together with his tender.
8	<input type="checkbox"/>	Submission of DPW-16.1 signed by the authorised official and completion of bid briefing attendance register. <b>insert motivation why the tender clarification meeting is declared compulsory</b>
9	<input type="checkbox"/>	The tenderer shall submit his fully priced and completed sectional summary- and final summary pages with the tender.
10	<input checked="" type="checkbox"/>	Submission of Active CIDB grading of 1SF
11	<input type="checkbox"/>	
12	<input type="checkbox"/>	

##### 4.2. Indicate administrative responsiveness requirements applicable for this tender.

The Employer reserves the right to request further information regarding the undermentioned criteria. Failing to submit further clarification and/or documentation within seven (7) calendar days from request will disqualify the tender offer from further consideration.

1	<input checked="" type="checkbox"/>	Any correction to be initialled by the person authorised to sign the tender documentation as per PA 15.1 or PA 15.2 resolution of board/s of directors / or PA15.3 Special Resolution of Consortia or JV's.
2	<input checked="" type="checkbox"/>	Submission of applicable (PA-15.1, PA-15.2, PA-15.3): Resolution by the legal entity, or consortium / joint venture, authorising a dedicated person(s) to sign documents on behalf of the firm / consortium / joint venture.
3	<input checked="" type="checkbox"/>	Submission of (PA-11): Bidder's disclosure
4	<input checked="" type="checkbox"/>	Submission of PA-16.1 (EC): Ownership Particulars
5	<input type="checkbox"/>	Submission of documentation relating to <b>risk assessment criteria</b> as contained in C 2.1 of T1.2 Tender Data.
6	<input type="checkbox"/>	Data provided by the Service Provider (C1.2.3) completed.
7	<input checked="" type="checkbox"/>	Submission of proof of Registration on National Treasury's Central Supplier Database (CSD). Insert the Supplier Registration Number on the form of offer, including proposed sub-contractors if any
8	<input checked="" type="checkbox"/>	All parts of tender documents submitted must be fully completed in ink and signed where required.
9	<input type="checkbox"/>	Upon request, submission of fingerprints obtainable from local SAPS including any other additional documentation and information required for vetting purposes.

10	<input type="checkbox"/>	Upon request, submission of a fully completed security clearance application form with supporting documentation and information as required. The security clearance form will be provided by the Employer for projects requiring a security clearance.
11	<input type="checkbox"/>	<b>Specify other responsiveness criteria</b>
12	<input type="checkbox"/>	<b>Specify other responsiveness criteria</b>
13	<input type="checkbox"/>	<b>Specify other responsiveness criteria</b>
14	<input type="checkbox"/>	<b>Specify other responsiveness criteria</b>
15	<input type="checkbox"/>	<b>Specify other responsiveness criteria</b>

**4.3. Indicate administrative requirements applicable for specific goals, Tenderers will not be required to submit the below documents if not provided in the original tender proposals, Failure to comply with the criteria stated hereunder shall result in the tenderer not allocated points for specific goals**

1	<input checked="" type="checkbox"/>	Submission of (PA-16): Preference Points Claim Form in terms of the Preferential Procurement Regulations 2022
2	<input checked="" type="checkbox"/>	A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Certificate issued by a SANAS accredited service provider

**5. THE FOLLOWING EVALUATION METHOD FOR RESPONSIVE BIDS WILL BE APPLICABLE:**

<input type="checkbox"/> Method 1 (Financial offer)	<input checked="" type="checkbox"/> Method 2 (Financial and Preference offer)
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**5.1. This bid will be evaluated according to the 80/20 Preference points scoring system:**

**6. ELIGIBILITY IN RESPECT OF RISK TO THE EMPLOYER:**

**Standard risk management assessment criteria in respect of tenders received for routine projects in the engineering and construction works environments:**

Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Bid Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Bid Evaluation Committee, failing which the tender offer will *mutatis mutandis* be declared non-responsive.

**6.1 Technical risks:**

**Criterion 1: Experience on comparable projects during the past specify between 5 and 10 years.**

The tendering Service Provider's experience on comparable projects during the past specify between 5 and 10 years. The number of current and previous comparable projects performed by the Tenderer as per the

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer will be *mutatis mutandis* declared non-responsive.

Aspects to be regarded as "comparable" includes (but may be extended according to circumstances): size of projects (measured against monetary value or other project quantifying parameters), nature of projects (building, engineering, high/low rise, etc.), locality/area of execution (site-specific influences, knowledge of local conditions, etc.), complexity of project, projects for similar client department irrespective of end purpose of buildings/facilities created or in progress of being created and time scales of projects (normal, fast track, etc.) and stage of its/their development.

**Criterion 2: Contractual commitment and quality of performance on comparable projects during the past specify between 5 and 10 years.**

Adherence to contractual commitments and quality of performance of comparable current and previous projects performed by the Tenderer during the past specify between 5 and 10 years as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer.

Aspects to be considered include, but are not limited to the following:

1. The level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
2. The degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto, and the extend of penalties imposed;
3. Project performance: time management & programming of works, timeous ordering of materials and appointment of subcontractors;
4. Financial management: payment to suppliers and cash flow problems;
5. Quality of workmanship: extent of reworks and timeous attention to remedial works;
6. Personnel resources: suitably qualified and experienced, turnover in site staff and labour force, specifically site manager and foreman;
7. Personnel management: extent of labour disputes and ability to resolving labour disputes amicably;
8. Sub-contractors: extent of turnover in subcontractors, general liaison and payment problems experienced;
9. Contract administration: contractual aspects such as complying to laws and regulations, insurances, security, submission of required documentation timeously, reaction to written contract instructions, appointments of subcontractors, etc. as can generally be expected in standard/normal conditions of contract.
10. Health & Safety: adherence to regulations and compliance, and number of transgressions & serious incidents.
11. Plant & equipment: sufficient resources on site and in time.
12. Delays: extent of causing delays, submission of claims timeously, and abuse of or exaggerated delay claims.
13. Final account: extent to which the contractor assisted in finalising the final account.

**Criterion 3: Suitably qualified and appropriately experienced human resources**

Allocation of suitably qualified and appropriately experienced human resources, both in respect of principals and/or other staff (contract manager, site agent, site foreman including other professional, technical and/or administrative) of the tendering Service Provider to the project, as proof that the tendering Service Provider will be able to react/respond appropriately to the Services required herein. The Company Organogram with CV's and certified ID's of all principals and employed workforce as well as proof of Professional Registration will be verified. Current and future workload of the tenderer in relation to capacity and capability will also be considered. The tenderer should demonstrate that he or she possesses the necessary professional and technical qualifications and -competence in relation to the scope of work and work to be undertaken.

**Criterion 4: Attendance of compulsory bid clarification meeting, if applicable**

If applicable, submission of confirmation of DPW-16.1 (PSB) attendance of compulsory bid clarification meeting or proof of attending the compulsory virtual meeting by a suitably qualified and experienced representative of the tenderer in terms of PA-04 (EC): Notice and Invitation to Tender.

## 6.2 Commercial risks:

The financial viability assessment evaluates the risk over the life of the construction period, as to whether the tenderer will be able to deliver the goods and services which are specified in the contract and / or be able to fulfil guarantees or warranties provided for in the contract in order to complete the project successfully for the amount tendered.

Aspects to be considered include but are not limited to, the respective rates tendered, bank rating, financial capability and capacity whether the tenderer has or has access to sufficient financial resources to deliver the goods or services described in the tender documentation (including fulfilling any guarantees or warranty claims), whether the tenderer is not subject to any current or impending legal action (either formal proceedings or notification of legal action) which could impact on the financial standing of the tenderer or the delivery of the goods or services, financial report from auditors as proof of current liquidity, and company or any parent company or investor guarantee/s and financial statements.

## 7. COLLECTION OF QUOTATION DOCUMENTS

- Quotation documents are available for collection during working hours
- Alternatively; quotation documents may be collected during working hours at the following address **insert physical address**. A non-refundable bid deposit of **R insert amount** payable (cash only) on collection of the bid documents.

## 8. SITE INSPECTION MEETING

Compulsory briefing session will be held in respect of this quotation.

The particulars for compulsory briefing session or virtual briefing session are:

Venue:	(type in here the place or "N/A")		
Virtual meeting Link:	(type in here the place or "N/A")		
Date:	(type in here the date or "N/A")	Starting time:	(type in here the time or "N/A")

## 9. ENQUIRIES

9.1. Technical enquiries may be addressed to:

<b>DPWI Project Manager</b>	LESIBA MABITSELA	<b>Telephone no:</b>	
<b>Cellular phone no</b>	082 802 9072	<b>Fax no:</b>	NA
<b>E-mail</b>	LESIBA.MABITSELA@dpw.gov.za		



9.2. SCM enquiries may be addressed to:

<b>SCM Official</b>	Ms. M. Manala	<b>Telephone no:</b>	012 492 3020
<b>Cellular phone no</b>	N/A	<b>Fax no:</b>	
<b>E-mail</b>	mmabore.manala@dpw.gov.za		

## 10. DEPOSIT / RETURN OF QUOTATION DOCUMENTS

Telegraphic, telephonic, telex, facsimile, electronic and / or late tenders will not be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

All tenders must be completed in non-erasable ink and submitted on the official forms – (forms not to be re-typed).

<p><b>Tender documents may be posted to:</b></p> <p>The Director-General Department of Public Works and Infrastructure Private Bag X x229 pretoria 0001</p> <p><b>Attention:</b> <b>Procurement section: Room G03</b></p>	<p><b>OR</b></p>	<p><b>Deposited in the tender box at:</b></p> <p>cnr Nana Sita &amp; Thabo Sehume AVN building Pretoria 0001</p>
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REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF PUBLIC WORKS  
AND INFRASTRUCTURE



SERVICE, REPAIR AND MAINTENANCE OF FIRE FIGHTING EQUIPMENT FOR A PERIOD OF 12  
MONTHS FOR GROUP 14

ID-3169539



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## Acronyms & Abbreviations

CO <sub>2</sub>	Carbon Dioxide
DCP	Dry Chemical Powder
EVC	Emergency Voice Communication
SANS	South African National Standards
SABS	South African Bureau of Standards
SAQCC	South African Qualification & Certification Committee
STP	Stored Pressure
DC	Direct Current
CSD	Central Supplier Database
COC	Certificate Of Compliance
ASIB	Automatic Sprinkler Inspection Bureau



### 1.1 General Requirements (see also SANS 10400-T and SANS 10400-W):

On instructions from The Department of Labour the SAQCC-Fire has regulated the fire industry by certifying the competence of fire technicians. The South African Qualification & Certification Committee (SAQCC) Fire is an industry-elected body established to ensure that individuals working within this sector of the fire industry have the appropriate competence through training, qualifications, and experience in compliance with:

- The specifications laid out in SANS 1475 for portable fire extinguishers,
- The requirements of SANS 14520 and/or SANS 306 where individuals and companies designing, installing, commissioning, and servicing gaseous fire extinguishing systems
- The specifications laid out in SANS 10287 for Automatic sprinkler systems for fire firefighting purposes,
- The specifications laid out in SANS 10139 for fire detection and alarm systems for buildings,
- The specifications laid out in SANS 1709 for water spray fixed systems for fire protection purposes.

Automatic pumps shall be driven direct, either by an electric motor or by a diesel engine, provided that where a single pump supplies the water to the sprinkler installation, the unit shall be diesel engine driven.

The Contractor shall start each diesel engine in the presence of the Inspector. The Contractor shall service and check the batteries with each service. Prices for servicing and inspection as stipulated and also as specified by SABS, labour, transport, consumables, minor and incidental repairs and all other overheads included.

All fire pump and sprinkler installations in buildings as stated in the list of installations in the Pretoria area form part of this contract and shall be serviced, maintained and repaired. The quantities in the list of installations are provisional and may change during the course of the contract and shall not alter the contractor's prices for servicing.

Therefore all service providers working with the Department of Public Works and Infrastructure (DPWI) on the abovementioned works, require valid and relevant registration with SAQCC fire before maintenance works of Fire protection equipment/systems belonging to the department.



## 1.1. Responsive Criteria

RESPONSIVE CRITERIA REQUIRED IS TABULATED BELOW

**NB:** FAILURE TO COMPLY WITH THE CRITERIA STATED HEREUNDER SHALL RESULT IN THE QUOTATION OFFER BEING DISQUALIFIED FOR FURTHER CONSIDERATION.

DESCRIPTION	RESPONSIVE CRITERIA REQUIREMENT
CIDB CONTRACTOR GRADING DESIGNATION REQUIRED	GRADE 1SF or higher
QUALIFICATION REQUIRED	COMPANY/TECHNICIAN MUST BE REGISTERED WITH SAQCC FIRE. ATTACH CERTIFIED COPY OF THE SABS PERMIT CERTIFICATION FOR FIRE FIGHTING EQUIPMENT AS PER SANS. ATTACH CERTIFIED COPY OF THE CONTRACTOR SAQCC CARD OR CERTIFIED COPY OF ACCREDITED TECHNICIAN WITH SAQCC FIRE CARD & ID CERTIFIED COPIES OF TECHNICIANS
LABOUR COMPLIANCE	LETTER OF GOOD STANDING
VALUE FOR MONEY	ALL PRICES MUST BE MARKET RELATED. IN CASE OF PRICES WHICH ARE NOT MARKET RELATED THE DEPARTMENT RESERVES THE RIGHT TO ADJUST THE BILL OF QUANTITY PRICES OR TO DISQUALIFY THE BIDDER

## 2. Fire Extinguishers, Hose Reels and Hydrants

### 2.1. Fire Extinguishers:

- Extinguishers shall be maintained in a fully charged and operable condition, and shall be kept in their designated places at all times when they are not being used.
- Extinguishers shall be conspicuously located where they will be readily accessible and immediately available in the event of fire. They shall preferably be located along normal paths of travel, including exits from areas, and their positions shall be identified by means of signs complying with the provisions of SANS 1186-1.
- Extinguishers shall not be obscured from view, except where their positions are clearly marked, and they shall be kept in a readily accessible, unobstructed, and where necessary, demarcated position.
- When mounted or placed in their intended location, the operating instructions shall face outwards or towards the most likely direction of access.





- Wherever possible, extinguishers shall not be placed in dead-end areas (where access could present a risk to the potential operator), behind doors, in cupboards (except purpose-made cabinets or cupboards) or in deep recesses, or in positions where they might cause obstruction to exit routes or be damaged by trolleys or other vehicles. Extinguishers shall not be placed over or close to heating appliances.

## 2.2. Hose Reels & Hydrants:

- Fire hose reels and hydrants for installation shall comply with the requirements of SANS 543 and SANS 1128-1.
- Fire hose reels and hydrants shall be conspicuously located where they will be readily accessible and immediately available in the event of fire. They shall preferably be located along normal paths of travel, including near exits from areas, but in such a way that they shall not cause obstruction. Their positions shall be identified by means of signs complying with the provisions of SANS 1186-1.
- Fire hose reels and hydrants shall not be obscured from view, except where their positions are clearly marked.
- The responsible person shall ensure that the hose reels and hydrants are used only for purposes that they are intended for.
- Wherever possible fire hose reels shall be installed so that the center point of the hose reel drum is not lower than 1,5 m from the floor and not higher than 1,7 m from the floor. Where this is not possible, hose reels shall be installed at a height that allows for easy access and operation during maintenance or in the event of a fire.
- A hose reel shall be installed with the inlet stop valve as close as possible to the hose reel in a position that allows for easy access and operation during maintenance or in the event of a fire. A union shall be positioned between the hose reel and the inlet stop valve to allow for easy removal and replacement of the hose reel when necessary.

## 2.3. Service instructions (Guideline of procedure to be followed):

All firefighting equipment must be serviced in accordance with the SABS code of practice as indicated below. Tenderers must allow for servicing of all equipment, although there is faulty, redundant or vandalized equipment on site.

- Any Portable fire extinguisher shall comply with requirements in SANS 1475-1 and SANS 10105-1, and any mobile fire extinguishers shall comply with the requirements of SANS 11601 and capacities prescribed in SANS 1151 or SANS 1910.
- Any Fire Hydrant shall comply with the requirements of SANS 1128-1 and SANS 1128-2.
- Any hose reel installed in such a building shall comply with the requirements in SANS 543, shall be installed in accordance with SANS 10105-1 and SANS 10400-W and shall be maintained in accordance with the requirements in SANS 1475-2.
- Such fire equipment shall bear a certification mark from an accredited certification body.



No service or repair invoice will be processed for payment unless a service record sheet, pressure test certificate (where applicable), and job card form is fully completed and stamped by the user Department.

#### 2.3.1. Servicing of CO<sub>2</sub> Extinguishers:

- Check date of last pressure test, if period exceeded notify the Department in writing.
- Check extinguisher for rust, dents or other visible damage.
- Remove discharge hose and horn assembly, check for blockages.
- Check operation of head assembly.
- Weigh extinguisher (If underweight – Refill).
- Refit discharge hose and horn assembly.
- Seal extinguisher and make ready for use.
- Wipe extinguisher and affix signed and dated service label and lead seal.

#### **NB: Recharge and Hydro-test all CO<sub>2</sub> extinguishers (If period is exceeded).**

##### 2.3.2. Servicing of Stored-Pressure Dry Powder extinguisher:

Depressurized extinguisher. Open the extinguisher and pour the powder into a clean receptacle.

Remove the discharge hose (if fitted) from the discharge hose adapter. Using dry compressed air (or dry gas); remove all traces of powder from the inside and the outside of the container, discharge hose, nozzle, control valve assembly, filler cap and actuating mechanism.

- Sift the powder through a sift of nominal aperture size 2.0mm and examine the powder. Unless it is free from lumps, caking and foreign matter, discard the powder and replace it with a new charge in accordance with the manufacturer's recommendations.
- Refit the discharged hose.
- Before fitting the filler cap, examine and if necessary, replace the sealing washer or "O" – ring, as relevant.
- Pressurize the extinguisher to the correct working pressure, using either dry nitrogen or dry CO<sub>2</sub>, as recommended by the manufacturer.
- Note whether the pressure – gauge reading corresponds to the working pressure and if it does not, replace the gauge and re-pressurize the extinguisher. Check the operation and calibration of the pressure gauge.
- Carry out a leakage test.
- Seal unit.
- Clean extinguisher and put a service label on with name and date.

##### 2.3.3. Servicing of Hydrant:

- Open hydrant and allow water pressure to be released.
- Check main washer sealing at normal hand tension.
- Check gland for leaks.



- Check that the hose clip is in correct working order.
- Check condition of lip washer.
- Affix signed service label.

#### 2.3.4. Servicing of Hose Reels:

- Check the hose reel mounting bolts for corrosion and physical damage, check whether the frame is mounted in a secure manner and whether the reel operates freely.
- Unwind reel completely and check condition of hose and physical damage.
- Check waterway and the waterway components for corrosion.
- Check operation of hose nozzle.
- Check condition of hose reel frame.
- Close hose nozzle and switch on water supply at stopcock and check whether the hose is in an acceptable condition and is fitted in an acceptable manner and whether it can with stand the pressure in the supply main.
- While hose is under pressure, check for leaks especially at gland.
- Ensure that waterway of the hose reel and the hose reel hose can with stand a test pressure of 2 000kpa for 3 minutes.
- Close stopcock, empty hose and rewind onto reel and ensure all operating parts operate with ease.
- Check operation of draw-off shackle and general condition of pipe work.
- Wipe hose reel and affix signed and dated service label.
- Affix anti tamper seal next to waterway with date on.

#### 2.3.5. Maintenance:

- A combination of prescribed actions and measures that are taken by a competent person (see SANS 1475-1), intended to retain a fire extinguisher in, or restore it to, a state in which it can perform a required function.
- A combination of prescribed actions and measures that are taken by a competent person (see SANS 1475-2), intended to retain a fire hose reel or hydrant in, or restore it to, a state in which it can perform a required function.

### 3. Automatic Sprinkler Systems for Fire Fighting Purposes

#### 3.1. Diesel Fire Engines

- 3.1.1. A diesel engine shall be capable of operating continuously on full load at the site elevation for 6 h with a rated output in accordance with BS 5514-3 and at least that specified in 5.5.1.2.(SANS 10287).
- 3.1.2. The engine shall:
- 3.1.3. Be of the compression ignition mechanical injection type that starts without the use of wicks, cartridges, heater plugs or ether, at an engine-room temperature of 4 °C,
- 3.1.4. Accept full load within 15 s from initiation of the start signal,



- 3.1.5. Be naturally aspirated, super charged or turbo-charged, and
  - 3.1.6. Be either air-cooled or water-cooled.
  - 3.1.7. Have a governor to control the engine speed to within 4,5 % of the rated speed under any load condition and up to the full load rating,
  - 3.1.8. Be fitted with a device to measure running time, a tachometer, and a temperature gauge to indicate normal operating temperature,
  - 3.1.9. Have a manually operated shutdown mechanism, and
  - 3.1.10. run at or below the following maximum speeds:
    - 3.1.10.1. Two-cylinder or three-cylinder engine: 2 600 r/min;
    - 3.1.10.2. Four-cylinder naturally aspirated engine: 2 400 r/min;
    - 3.1.10.3. Four cylinder turbo-charged engine: 2 200 r/min;
    - 3.1.10.4. Six-cylinder naturally aspirated engine: 2 400 r/min;
    - 3.1.10.5. Six-cylinder turbo-charged engine: 2 200 r/min; and
    - 3.1.10.6. Any eight-cylinder engine: 1 800 r/min.
  - 3.1.11. Any manual device that is fitted to the engine and that could prevent the engine from starting shall return automatically to the normal position after it has been manually applied.
- Should replacement of diesel engines be necessary sufficient motivation should be provided along with the necessary documentation for approval by the relevant DPWI Official. The quote for replacement should include travel costs and commissioning of the unit.

### 3.2. Fire Pump House/room

- 3.2. Refer to SANS 10287: The guarantee will encompass servicing and maintenance of pump houses according to the latest SABS/SANS specifications.

### 3.3. Electric Motors

- 3.3.1. Electric motors shall:
  - Be of squirrel-cage rotor design,
  - Be continuously maximum rated in accordance with BS 5000-99, as in A1, wound class E insulation, and have a temperature rise not exceeding 75 °C above a maximum ambient temperature of 40 °C, when measured by the resistance method given in BS 5000-99,
  - Conform to the dimensions given in SABS 1804-2, and
  - Have three-phase windings suitable for a 50 Hz electrical supply.
- 3.3.2. The motor shall be accommodated in a totally enclosed fan-cooled enclosure.
- 3.3.3. Methods used for the cooling of electric motors shall comply with the requirements of SABS 1804-2.
- 3.3.4. Motors of power exceeding 3 kW shall have the ends of each winding brought out to six terminals in the terminal box, in accordance with SABS 1804-2, so that the motor can be star/delta started if desired. Motors of power less than 3 kW shall have the ends of three windings brought out to three terminals.
- 3.3.5. Starting of electric motors = SABS 1222.

Should replacement of electric motor be necessary, sufficient motivation should be provided along with the necessary documentation for approval by the relevant DPWI Official.



#### LOAD CURRENT MEASUREMENT AND EARTH CONTINUITY:

- This work will be done according to the rules as laid down in the Machinery and Occupational Safety Act.
  - Compare measured full load current with the nameplate value.
  - Measure earth continuity: A500 Volt merger must be used for this test and results recorded on the service sheet.
  - Batch certificates must be forwarded to the Department, attached to the relevant invoice.
- Removal of electric motors for testing shall comply with the guidelines.

### 3.4. Electrical Installation & Repeater Panels

- 3.4.1. Separately switched power sub circuits shall be used to supply power:
- For alarm devices connected to pump(s) and for any mains failure alarm system, and
  - For any pump that would be the first to come into operation because of a drop in the sprinkler installation pressure and any mains-powered low water pressure alarm system.
  - The indicating equipment shall be mains-powered by an uninterruptible power system that complies with the requirements of SABS 1474.
- 3.4.2. Power supplies:
- Control and monitoring panels shall be designed for an electrical fault level of 31 mVA at 400 V, three-phase 50 Hz
  - In the case of diesel engine drive controllers, the following shall apply:
    - All DC electrical components shall be capable of functioning effectively at the reduced voltage levels that occur during engine cranking; and
    - Relays shall not chatter on drop-out and solid state circuits shall not "switch" under reduced voltage conditions.
  - The battery power supply for indicator panels or alarm systems shall not be supplied from the batteries provided to start the diesel engine(s).
- 3.4.3. Annunciator/repeater panels, indicator panels and associated components
- Annunciator/repeater panels and indicator panels shall be suitable for sprinkler use and shall be completely assembled, wired and tested by their manufacturers before being despatched from the factory.
  - Each component of an annunciator/repeater panel or an indicator panel shall be clearly marked, in a position that will be permanently visible after installation, to indicate the identifying letter or number given to it in the wiring diagram.
  - Labels for fuses shall indicate the function and the fuse rating.
- 3.4.4. Signalling devices
- Audible and visual signalling devices, such as sirens, bells, hooters, beacons and lamps, shall be suitable for sprinkler use.
  - The signalling devices shall be suitable for operation from the battery that powers the annunciator/repeater panels.
  - The audible range of audible signalling devices shall be adequate for the distance to be covered and for the noise environment of the location.
  - Any device fitted to the installation with the purpose of reducing the frequency of false or intermittent alarms shall be suitable for sprinkler use.
- 3.4.5. Linking to general alarm systems



- If a sprinkler installation has a device or devices that will automatically operate electric-powered audible alarms for the purpose of communicating a general alert or the evacuation of the building, the device(s), the alarm, the linking control and the indicating equipment shall comply with the requirements of SABS 0400 and SABS 0139.

### 3.5. SERVICING OF ELECTRICAL COMPONENTS & PANELS.

Should replacement of electrical components be necessary, sufficient motivation should be provided along with the necessary documentation for approval by the relevant DPWI Official.

#### 3.5.1. Electrical components Inspection

This work will be done according to the rules as laid down in the Machinery and Occupational Safety Act.

- Check if the "FIRE ALARMS" and "PUMP RUNNING" alarms are registered at the control panel.
  - Test the trunk main jockey pump by lowering the pressure on the pressure switch. Check if the "CUT IN" pressure is above the "CUT IN" pressure of the main pumps.
  - Repeat the above test on the electric and diesel pumps.
  - The electric pump must be isolated to test the diesel pump.
  - Engage engine stop valve and isolate the electric pump. Lower the pressure to start the engine.
  - The engine must crank for 15 seconds and dwell for a period of not more than 6 seconds.
  - The above cycle must repeat automatically for 6 seconds. If the engine has not started after the pre-set number of seconds, the cranking must stop and the "PUMP FAIL" indicator and alarm must be initiated.
  - Remove all dust and carbon from the panels.
  - Check if all indicators lamps and sirens are in a working condition.
  - Check if the phase failure indicators operate according to specifications. Isolate the panel and remove on fuse from the motor supply line. Restore the power and ensure that the power lamp does not illuminate and the pump does not start. Isolate the panel, replace the fuse and restore the power.
  - Check if repeater panels receive the same signals from the main panel.
- Check repeater panel lamps and switches for correct operation.

### 3.6. Pump sets

- 3.6.1. The performance characteristics of pump sets shall be such that the pressure drops progressively with the rate of demand, so that while being capable of providing the rate of flow and pressure required at the highest and most remote parts of the sprinkler installation, the output will be such as to provide for the excessive rate of discharge at the lowest level in the areas closest to the installation valves.
- 3.6.2. A duplicate pressure switch and starter device shall be provided for diesel engine-driven pumps.
- 3.6.3. The closed outlet valve pressure (under installed conditions) of a suction pump with the water supply at normal maximum level shall not exceed 1 000 kPa except in the case of high-rise installations.
- 3.6.4. In selecting pump characteristics, allowance shall be made for the following:



- 3.6.5. An increase in pressure at zero flow due to an increase in the shaft speed of the prime mover; and
- 3.6.6. An increase or a decrease in pressure due to variations in the water supply level at the pump suction flange.

#### **Jockey pumps**

The jockey pump shall:

- Be of capacity not exceeding 40 l/min,
- Have a discharge pressure and flow that are sufficient to maintain the desired pressure in the sprinkler installation pressure, and
- Have steep head capacity characteristics to prevent excessive flow when pumping within the pressure operating range.
- The jockey pump shall start automatically when the pressure in the sprinkler installation has dropped to not less than 85 % of the normal pressure in the installation and shall shut off automatically when the sprinkler installation pressure has reached either the jockey pump churning pressure, or 1 000 kPa, whichever is lower.

#### **PUMP INSPECTION:**

This work will be done according to the rules as laid down in the Machinery and Occupational Safety Act.

- Check if pumps are generating the correct pressure.
- Check if there is a steady drip of water from the glands and adjust.
- Check if the gland bowl drains are clear of obstructions.
- Check for any corrosion, remove and repaint corroded parts.
- Check if the "FIRE ALARM" and "PUMP RUNNING" alarms are registered at the control panels.
- Ensure that the trunk main pressure is as required to allow controls to reset.

#### **Booster pumps:**

- Start the booster pumps.
- Check if there is a steady drip of water from the glands, and adjust.
- Check for any corrosion, remove and repaint corroded parts.
- Batch certificates must be forwarded to the Department, attached to the relevant invoice.
- Removal of diesel engines for testing shall comply with the guidelines.

Should replacement of pumps be necessary sufficient motivation should be provided along with the necessary documentation for approval by the relevant DPWI Official.



### 3.7. Sprinklers

#### 3.7.1. Sprinkler pipework

- Steel pipes that comply with the requirements of SANS 62-1 or SANS 62-2 (subject to a minimum wall thickness of 3,25 mm), provided that:
  - i. They are at least equivalent to medium grade steel tube, or
  - ii. when downstream of the installation control valve, they are at least equivalent to medium grade black steel tube;
- Fabricated flanged steel pipes and fittings used upstream of the alarm valve above ground and that comply with the requirements of SABS 1476;
- Shouldered-end pipes, fittings and couplings that comply with the requirements of SABS 815;
- Black polyethylene pipes installed below ground and that comply with the requirements of SABS 533-1 or SABS 533-2 (or both);
- Malleable cast iron pipe fittings that comply with the requirements of SABS 509;
- Cast iron fittings for fibre-cement pressure pipes that comply with the requirements of SABS 546;
- Cast iron fittings and couplings for shouldered-end pipes that comply with the requirements of SABS 815
- Fibre-cement pressure pipes that comply with the requirements of SABS 1223;
- Polypropylene pressure pipes and fittings installed below ground and that comply with the requirements of SABS 1315; pressurised concrete pressure pipes that comply with the requirements of SABS 975;

**Note:** All flanges and bolts shall be suitable for fire sprinkler use.

### 3.8. Batteries & Chargers

#### 3.8.1. Batteries

- Batteries shall be suitable maintenance-free lead-calcium batteries.
- Batteries not used for the automatic starting of diesel engine-driven pumps, when fully charged and disconnected from the charger, shall be of sufficient capacity to monitor all specified circuits for at least 48 h, followed by 1 h in fully operational alarm condition.
- Any battery used for an automatic power failure alarm shall not be used for the automatic starting of a diesel engine-driven pump or for any purpose other than protection against fire.
- The battery shall accommodate the method of charging, have an expected life of approximately four years but at least three years, and be capable of providing 3 min of continuous cranking, or 12 cycles of cranking of a cold engine at 4 °C, depending on the method of starting.

#### BATTERY TESTING

- This work will be done according to the rules as laid down in the Machinery and Occupational Safety Act.
- The level of electrolyte in each cell is to be checked and replenished with distilled water or battery acid with a specific gravity of not more than 1260. Battery acid must be used when





specified gravity is below 1200. The specific gravity for each cell to be checked and all readings recorded on the sheet. If there is a wide variation in the recordings, an equalizing charge must be carried out on site. Batteries may not be removed for charging purposes.

- Dirt and corrosion to be cleaned from batteries and terminals. Recode and connect terminal with copper compound.
- Ensure battery charger delivers a proper charging current.
- Batch certificates must be forwarded to the Department, attached to the relevant invoice.

### 3.8.2. Battery chargers

- Automatically adjust the charging rate to suit the state of the battery,
- Operate on short-circuit,
- Operate even when the battery is totally flat,
- Be of constant voltage, and limited current,
- Float a fully charged battery continuously,
- Be protected against damage when an attempt is made to charge a reverse connected battery, and
- Initiate an alarm when the charger output has failed.

**Note:** – Battery chargers that comply with the requirements of SABS IEC 60335-2-29 are deemed suitable for sprinkler use (please comply with this requirement).

### 3.8.3. Maintenance:

**Note:** All components that make up the sprinkler system are to follow the below mentioned requirements (MAINTENANCE GUIDELINES):

#### a) Servicing and full maintenance guarantee.

Test the component completely. The guarantee will encompass the servicing and maintenance of various types of the component in question (Diesel engine, electric motor, etc) according to the latest SABS/SANS specifications.

#### b) Removal of components from the building to service provider's yard for maintenance or repairs.

No components shall be removed or returned to site by the Contractor unless the necessary removal and return from site form has been completed, signed and stamped by the User Department.

Failure to comply with this requirement should a discrepancy arise of valves not being returned to site, the Contractor will be held responsible for the replacement of the valve in question, at his/her cost.



**c) Damaged units.**

Should any components be found damaged on site, this is to be recorded on the removal from site and the Department notified by email with cost implication, so that the necessary repair order can be issued.

**d) Invoicing.**

NO service, maintenance/repair invoice will be processed for payment unless the following documents are fully completed and attached:

- Service record sheet. (Compulsory)
- Pressure test certificate. (where required/applicable).
- Certificate of Compliance (where required/applicable).
- Inventory list (Compulsory)

NO repair / service invoice will be processed for payment unless all the above are complied with.

### **3.9. SERVICING OF VALVES**

This work will be done according to the rules as laid down in the Machinery and Occupational Safety Act.

- Check the isolating control valves.
- Check the alarm gong.
- Check the false alarm prevention pump.
- Check operation and condition of pressure gauges.
- Service the "CLANK".
- Rotate hand-wheel several times to ensure the spindle and wedges is free.
- Grease the spindle and adjust the gland.
- Check operation of indicator apparatus.
- Drain the system and re-fill.

Should replacement of valves be necessary, sufficient motivation (in writing) should be provided along with the costs and pictures depicting the recent state of the valve(s) for approval by the relevant DPWI Official.

## **4. Fire Detection and Alarm Systems**

### **On appointment of a new maintenance organization:**

- A special inspection of the existing EVC system should be commissioned, including the records in order to produce a plan for effective maintenance of the system;
- Areas of non-conformity should be documented and identified to the responsible person and, although the degree of a non-conformity is subjective, the following non-conformities should be regarded as requiring resolution:



- Calls cannot be established from outstations to master station(s);
- Intelligent two-way conversation is not possible between the master station(s) and outstations;
- The system does not fully operate when the primary power supply is removed;
- Secondary power supplies that fail to conform to relevant SANS/SABS
- Cabling with fire resistance that fails to conform to relevant SANS/SABS
- Monitoring for faults of circuits that fail to conform to relevant SABS/SANS
- Standards of electrical safety that fail to conform to relevant SABS/SANS

**NOTE not all non-conformities need to be rectified; this is a matter for the user to determine, based on the advice of the maintenance organization, the enforcing authorities, the insurer and any third-party advisers engaged by the user, as appropriate.**

If no logbook suitable for enabling conformity exists, the maintenance organization should provide a suitable logbook.

#### **4.1. Arranging repair of faults and/or damage:**

- Where maintenance is carried out by a third party there should be an agreement for emergency call out to deal with any fault or damage that occurs to the system and this agreement should be such that, on a 24-hour basis, a technician of the maintenance organization can normally attend the premises within eight hours of a call from the user;
- The user should record all faults or damage in the system logbook, and arrange for repair to be carried out as soon as possible.

**For modification work, regardless of whether it is carried out on site or remotely the following should be noted:**

- The responsibility of modifying an EVC system should rest with a person who is competent in the principles of EVC system design, and is conversant with this standard and the installed system, with access to the as-fitted drawings;
- Before modifying an EVC system, care should be taken to ensure that the proposed modifications do not detrimentally affect the conformity of the system to fire safety legislation;
- The responsible person should be aware of and agree in writing any modifications proposed for the system;
- All components, circuits, system operations and site-specific software functions known to be affected by the modifications should be tested for correct operation following the modifications; in particular:

On completion of the modifications, all as-fitted drawings and other relevant system records should be updated as appropriate;

On commissioning of the work and completion of the tests, a modification certificate should be issued, confirming that the work has been carried out in accordance with the recommendations of this standard, or identifying any variations.



Where responsibility for the conformity, or otherwise, of the modified system to the recommendations of Section 2 of this standard rests with any person other than the organization carrying out the modification, that person should sign the appropriate section of the modification certificate and make it available with the system documentation.

#### **4.2. After a fire**

Every outstation, master station and repeater that might have been affected by the fire should be inspected and tested in accordance with the SANS/SABS Standards.

A visual examination and suitable tests should be carried out on all other parts of the system that lie within the fire area and other areas affected by corrosive smoke from the fire and that might have been damaged by the fire (e.g. power supplies, master stations and cable). Where there is evidence of damage, suitable action should be taken.

Circuits external to the master station(s) that might have been affected by the fire should be tested for correct operation on completion of the work, any defects found should be recorded in the system logbook, and the responsible person notified accordingly.

**After long periods of disconnection of the EVC system, inspection and testing should be carried**

#### **4.3. Logbook**

The following information should be recorded in the logbook:

- The name of the responsible person;
- Details of the maintenance organization;
- Brief details of maintenance arrangements;
- Dates, times and types of all tests;
- Dates, times and types of all faults and defects;
- Dates and types of all maintenance (e.g. maintenance visit or non-routine attention).



## 5. Bill of Quantities

### NOTE:

- ALL ITEMS MUST BE PRICED
- PRICES FOR SERVICING MUST INCLUDE LABOUR, CONSUMABLES (SERVICE LABELS, TAMPER PROOF SEALS, SAFETY PINS) & MINOR REPAIRS
- RATES FOR REPAIR(S)/REPLACEMENT(S) MUST EXCLUDE LABOUR
- MARK-UP NOT EXCEEDING 20% TO BE CHARGED ONLY ON NON-SCHEDULE ITEMS
- SERVICE PROVIDER(S) MUST SUBMIT WRITTEN QUOTATION FOR APPROVAL FOR NON-SCHEDULED ITEMS AND OR THE DEPARTMENT RESERVE THE RIGHT TO SOURCE QUOTATIONS FROM OTHER SERVICE PROVIDERS. NO WORK SHOULD BE EXECUTED BEFORE APPROVAL IS GRANTED
- RATES FOR REPLACEMENT ITEMS MUST ALLOW FOR REMOVAL AND REDUNDANT MATERIAL TO BE OFFICIALLY RECORDED AND TAKEN TO DPWI STORAGE/WORKSHOP AFTER BEING INSPECTED BY DPWI OFFICIAL

### 5.1 THE FOLLOWING INFORMATION / REQUIREMENTS MUST BE ATTACHED TO THE DOCUMENT:

- Attach a certified copy of the SABS Permit Certification for fire-fighting Equipment / as per SANS
- Attach certified copy of the contractor SAQCC card or certified copy of Accredited Technician with SAQCC fire card and ID certified copies of Technicians working on site.
- Works must be done according to SABS, SANS, SAQCC, Bylaws and Public Works Standards.
- The contractor shall not execute any additional work or shall not take instructions from the Client Department or any other person other than the relevant DPWI official.
- All repair work done by the contractor will be guaranteed for a minimum of (03) months and all new parts, components and material used in this contract shall be guaranteed for a period Of (12) months.
- The contractor shall compile and provide inventory list, service sheet or service fire register of any work done on site and must be attached on the quotation and job card.
- The COC shall be requested as and when required.
- Sub-contracting is not allowed.

### NB: CONTRACTOR MUST PROVIDE THE FOLLOWING:

1. VAT No. (if applicable): \_\_\_\_\_
2. CIDB Registration No: \_\_\_\_\_
3. CSD No: \_\_\_\_\_
4. SAQCC No: \_\_\_\_\_
5. SABS No: \_\_\_\_\_
6. Complaint No: \_\_\_\_\_



Bill of Quantities cont...d

1.	Service & Maintenance of Hand Equipment	Provisional Quantity	Unit Rate	Amount
1.1	DCP (STP) Extinguisher 2.5kg	1	R	R
1.2	DCP (STP) Extinguisher 4.5kg	1	R	R
1.3	DCP (STP) Extinguisher 9kg	1	R	R
1.4	CO <sub>2</sub> Extinguisher 6.8kg	1	R	R
1.5	CO <sub>2</sub> Extinguisher 2kg	1	R	R
1.6	CO <sub>2</sub> Extinguisher 5kg	1	R	R
1.7	CO <sub>2</sub> Extinguisher 9kg	1	R	R
1.8	Fire Hose Reels	1	R	R
1.9	Fire Hydrants	1	R	R
1.10	Fire Hydrants hoses (test for leaks)	1	R	R
1.11	Fire Booster connections	1	R	R
1.12	Foam (STP) extinguisher 9kg	1	R	R
1.13	DCP (STP) Extinguisher 50kg	1	R	R
<b>Table 1 Total to be carried over to summary page</b>				<b>R</b>

Table 1: Hand-held Fire Equipment

2.	Service of Sprinkler Systems, Sprinkler Control Valves & Pumps	Provisional Qty	Unit Rate	Amount
2.1	<b>Pump Stations with Fire Pump Sets</b>	-	-	-
	Complete service of pumps and Panels			
2.1.1	Jockey Pump	1	R	R
2.1.2	Domestic Pump	1	R	R
2.1.3	Diesel Pump	1	R	R
2.1.4	Electrical Pump	1	R	R
2.1.5	Pump House cleaning and repainting	1	R	R
2.1.6	Electrical Control panel	1	R	R
2.2	<b>Sprinkler System &amp; Control Valves</b>			
	Includes complete repair and maintenance of SCV's with an ASIB tag, gauges and instrumentation			
2.2.1	Sprinkler Control Valve	1	R	R
2.2.2	Alarm Gong	1	R	R
2.2.3	Pressure Gauge(s)	1	R	R
2.2.4	Drain system & Refill	1	R	R
2.2.5	Service "Clack"	1	R	R
2.2.6	Isolating Control Valve(s)	1	R	R
2.2.7	Sprinkler Head(s)	1	R	R
2.2.8	Paint (Enamel) per litre	1	R	R
<b>Table 2 Total to be carried over to summary page</b>				<b>R</b>



Table 2: Sprinkler Systems, Sprinkler Control Valves & Pumps

3.	Service & Maintenance of Fire detection Systems, Control Panels & Power Supplies	Provisional Quantity	Unit Rate	Amount
	Includes complete repair and maintenance of all panels and power supplies. All panels and PSU's that can't be repaired due to lack of spare parts are to be replaced with similar units with available spare parts. Specifications and pricing of new units to be approved before commissioning.			
3.1	<b>Control Panels &amp; Power Supplies</b>			
3.1.1	Control Panels & Power Supplies	1	R	R
3.1.2	Repeater Panel	1	R	R
3.1.3	PSU including Blue Ginger	1	R	R
3.1.4	Smoke and Heat Detectors	1	R	R
3.1.5	Control Room Equipment and Software update	1	R	R
<b>Table 3 Total to be carried over to summary page</b>				<b>R</b>

Table 3: Fire Detection Systems, Control Panels & Power Supplies

4.	Service & Maintenance of CO2 & Foam Fire Systems	Provisional Quantity	Unit Rate	Amount
4.1	<b>CO<sub>2</sub> Fire Systems</b>			
	Includes complete repair and maintenance of all panels and power supplies. All panels and PSU's that can't be repaired due to lack of spare parts are to be replaced with similar units with available spare parts. Specifications and pricing of new units to be approved before commissioning.			
4.1.1	Gas Control Unit	1	R	R
4.1.2	CO <sub>2</sub> Cylinders/kg	1	R	R
4.1.3	Trigger Mechanism	1	R	R
4.1.4	CO <sub>2</sub> Heads	1	R	R
4.1.5	CO <sub>2</sub> Alarm Lights with Bell	1	R	R
4.1.6	Commissioning and Testing	1	R	R
<b>Sub-Total 1 to be carried over to Table 4 Total</b>				<b>R</b>
4.2	<b>Foam Systems</b>			
	Includes complete repair and maintenance of all panels and power supplies. All panels and PSU's that can't be repaired due to lack of spare parts are to be replaced with similar units with available spare parts. Specifications and pricing of new units to be approved before commissioning.			
4.2.1	Gas Control Unit	1	R	R
4.2.2	Foam Cylinder	1	R	R
4.2.3	Trigger Mechanism	1	R	R
4.2.4	Foam Head	1	R	R
4.2.5	Alarm Lights with Bell	1	R	R
4.2.6	Commissioning and Testing	1	R	R
<b>Sub-Total 2 to be carried over to Table 4 Total</b>				<b>R</b>



Table 4: CO<sub>2</sub> & Foam Fire Systems

5	Spares (Must be of Good Quality)	Provisional Quantity	Unit Rate	Amount
5.1	<b>Hydrant &amp; Hose Spares</b>			
5.1.1	Hydrant Temper proof valve	1	R	R
5.1.2	Hydrant Spindle	1	R	R
5.1.3	Hydrant Fire Hose	1	R	R
5.1.4	Clack Washer	1	R	R
5.1.5	l/R Washer	1	R	R
5.1.6	Hand Wheel	1	R	R
5.1.7	Hydrant Key	1	R	R
5.1.8	LA Branch	1	R	R
5.1.9	Morris Male Hose Coupling (65mm)	1	R	R
5.1.10	Morris Female Hose Coupling (65mm)	1	R	R
5.2	<b>Hose Reel Spares</b>			
5.2.1	Fire Hose Reel Frame	1	R	R
5.2.2	Fire Hose Nozzle (LA)	1	R	R
5.2.3	30m x 20mm PVC Fire Hose	1	R	R
5.2.4	Hose Guide	1	R	R
5.2.5	Hose Clamp (30mm)	1	R	R
5.2.6	Gland Packing	1	R	R
5.2.7	Waterway	1	R	R
5.2.8	CP Valve Complete	1	R	R
5.2.9	CP Valve Handle	1	R	R
5.2.10	CP Valve Washer	1	R	R
5.3	<b>DCP Extinguishers and Spares</b>			
5.3.1	DCP (STP) 2.5kg	1	R	R
5.3.2	DCP (STP) 4.5kg	1	R	R
5.3.3	DCP (STP) 9kg	1	R	R
5.3.4	CPF Valve	1	R	R
5.3.5	CPF Gauge	1	R	R
5.3.6	DCP (STP) Discharge Nozzle	1	R	R
5.3.7	DCP (STP) 50kg			
5.4	<b>CO<sub>2</sub> Extinguishers &amp; Spares</b>			
5.4.1	CO <sub>2</sub> Extinguishers 2kg	1	R	R
5.4.2	CO <sub>2</sub> Extinguishers 5kg	1	R	R





5.4.3	CO <sub>2</sub> Head	1	R	R
5.4.4	CO <sub>2</sub> Safety Pin	1	R	R
5.4.5	CO <sub>2</sub> Discharge Hose	1	R	R
5.4.6	CO <sub>2</sub> Discharge Horn	1	R	R
5.4.7	CO <sub>2</sub> Plastic Horn Handle	1	R	R
5.4.8	CO <sub>2</sub> Horn Nipple	1	R	R
5.4.9	CO <sub>2</sub> Extinguishers 9kg	1	R	R
<b>5.5 Booster Connections &amp; Spares</b>				
5.5.1	Booster Connection	1	R	R
5.5.2	100mm Booster Gauge	1	R	R
5.5.3	Booster Sign	1	R	R
<b>5.6 Fire Equipment And Box Spares</b>				
5.6.1	Single Extinguisher Box ( Steel)	1	R	R
5.6.2	Hose Boxes- Wall Mounted (Steel)	1	R	R
5.6.3	Hose Boxes on leg (Steel)	1	R	R
5.6.4	Key Box(Steel)	1	R	R
5.6.6	CP Valve Box(Steel)	1	R	R
5.6.7	00039 Lock	1	R	R
5.6.8	00039 Key	1	R	R
5.6.9	Extinguisher Box (Fibreglass)	1	R	R
5.6.9	Hose Box (Fibreglass)	1	R	R
5.6.10	Hose Reel Box (Fibreglass)	1	R	R
<b>5.7 General Spares</b>				
5.7.1	Tamper Proof Seal	1	R	R
5.7.2	PWD Backboard	1	R	R
5.7.3	Service Label	1	R	R
5.7.4	12mm PVC Discharge Hose	1	R	R
5.7.5	U-Pat	1	R	R
5.7.6	Coach Screw	1	R	R
5.7.7	O-ring (all types)	1	R	R
5.7.8	Symbolic Sign (190 x 190)	1	R	R
5.7.9	Symbolic Sign (290 x 290)	1	R	R
5.7.10	Lift Sign	1	R	R
5.7.11	Uni-bracket	1	R	R
5.7.12	J-bracket	1	R	R
5.7.13	Seal Wires and Lead Seal	1	R	R
5.7.14	Instruction Labels (All Types)	1	R	R
5.7.15	Pressure with Nitrogen	1	R	R
5.7.16	Pressure Test	1	R	R
5.7.17	Hydrostatic Test	1	R	R



5.7.18	Fire blanket	1	R	R
<b>5.8 Recharge</b>				
5.8.1	CO <sub>2</sub> Recharge (per kg)	1	R	R
5.8.2	ABC Powder 35 MAP (per kg)	1	R	R
5.8.3	Water per 9 Litres	1	R	R
5.8.4	Supply and Recharge of foam concentrate (per kg)	1	R	R
5.8.5	Supply and Recharge of FM200 Gas Cylinders (per kg)	1	R	R
<b>5.9 Fire Doors</b>				
5.9.1	Replace the Fire Door Closer	1	R	R
5.9.2	Replace the Fire Door Lock	1	R	R
5.9.3	Replace standard Fire Door	1	R	R
<b>5.10 Detection System Spares</b>				
5.10.1	Control Panel 1 Loop	1	R	R
5.10.2	Control Panel 2 Loop	1	R	R
5.10.3	Control Panel 4 Loop	1	R	R
5.10.4	Repeater Panel	1	R	R
5.10.5	Control Room (Including computer hardware & Software)	1	R	R
5.10.6	Smoke Detectors including Mounting base	1	R	R
5.10.7	Heat Detectors including Mounting base	1	R	R
5.10.8	Line Relay Unit	1	R	R
5.10.9	Line Isolator unit including mounting base	1	R	R
5.10.10	Control and Repeater panel software	1	R	R
5.10.11	Blue Ginger PSU 27V/3 Amps	1	R	R
5.10.12	Addressable Panel	1	R	R
5.10.13	Convectional Panel	1	R	R
5.10.14	12V Fire panel Lithium Battery	1	R	R
<b>5.11 Sprinklers &amp; Piping Spares</b>				
5.11.1	Sprinkler heads including ceiling, In-rack. OH 5.0 and EHH 7.5	1	R	R
5.11.2	Valve Sets	1	R	R
5.11.3	Pressure Gauges	1	R	R
5.11.4	19mm diameter per meter	1	R	R
5.11.5	25 - 38mm diameter per meter	1	R	R
5.11.6	48 - 50mm diameter per meter	1	R	R
5.11.7	60 - 63mm diameter per meter	1	R	R
5.11.8	76mm diameter per metre	1	R	R



5.11.9	100mm diameter per meter	1	R	R
5.11.10	110 - 115mm diameter per metre	1	R	R
5.11.12	120mm – 150mm diameter per metre	1	R	R
5.11.13	170mm – 180mm diameter per metre	1	R	R
5.11.14	200mm – 250mm diameter per metre	1	R	R
5.11.15	300mm diameter per metre	1	R	R
5.12	<b>Fixed CO<sub>2</sub> and Foam System Spares</b>			
5.12.1	CO <sub>2</sub> and Foam Heads	1	R	R
5.12.2	Gas Control Unit	1	R	R
<b>Total For Table 5 to be carried to summary page</b>				<b>R</b>

Table 5: Servicing, Repairing & Replacement Spares

6	MISCELLANEOUS ITEMS	Provisional Quantity	Unit Rate	Amount
6.1.	Log Book	1	R	R
6.2	Slimline Fire log book document Holder With key lock	1	R	R
6.3	Transport	1	R /km	R
6.4	Artisan Labour	1	R /hr	R
6.5	Assistant Labour	1	R /hr	R
<b>Total for Table 6 carried to summary page</b>				<b>R</b>

Table 6: Miscellaneous Items



## 6. Costing Summary Page

	Amount
Table 1 Total :Hand Fire Equipment	R
Table 2 Total: Sprinkler Systems, Sprinkler Control Valves & Pumps	R
Table 3 Total: Fire Detection Systems, Control Panels & Power Supplies	R
Table 4 Total: CO <sub>2</sub> and Foam Fire Systems	R
Table 5 Total: Service, Maintenance & Replacement Spares	R
Table 6 Total : Miscellaneous Items	R
Total (Excluding VAT)	R
VAT (15%)	R
Total (Including VAT)	R

Table 6: Total Costing