

# **ARC – OVI SUPPLY, DELIVERY AND INSTALLATION OF CONCRETE PALISADE FENCE TECHNICAL SPECIFICATION**

## **CONTENTS**

### **1. PART ONE**

- 1.1 General conditions
- 1.2 Site Inspection
- 1.3 Guarantees
- 1.4 Occupational Health and Safety Act, 1993 as amended
- 1.5 Use of water and electricity
- 1.6 Unauthorized persons
- 1.7 Disturbance
- 1.8 Site meetings and procedures
- 1.9 Progress schedule
- 1.10 Alterations and old material
- 1.11 Temporary use of material
- 1.12 Rubble
- 1.13 Implements, etc.
- 1.14 Loss
- 1.15 Protection of buildings
- 1.16 Injury to persons
- 1.17 Quality of paint

### **2. PART TWO**

- 2.1 Technical specification
- 2.2 Specific conditions

# PART ONE

## 1.1 GENERAL CONDITIONS

A professional service provider in construction industry is required in ARC – OVI campus at Kaalplaas for the supply, delivery and installation of concrete palisade fence.

## 1.2 SITE INSPECTIONS

The service provider shall inspect and examine the sites and its surroundings and satisfy himself/herself before submitting his/her quotation as to the nature of the site and soil conditions so far as is practicable, the form and nature of the site, the quantities and nature of the work, the means of access to the site and in general shall himself/herself obtain all necessary information as to the risks, contingencies and other circumstances which may influence or affect his/her work.

It remains the service provider's responsibility to arrange for labour, transport, off loading, storage and safe keeping of the material, workshop provisioning, scaffolding, equipment and tools required for the execution of the work in general. No claims arising (money wise or time) from a lack of knowledge in this regard will be considered.

The service provider shall be deemed to have satisfied himself/herself before submitting the quotation as to the correctness and sufficiency of his/her quotation for the works, rates and prices he/she has stated in the quotation shall cover all his/her obligations under the work to be done for the proper completion of the work/project.

## 1.3 GUARANTEES

The service provider shall guarantee the installation, workmanship and materials being used under this building project for a period of six (6) months and for the mechanical equipment, installations and workmanship for twelve months. The guarantee will

commence on the date of receipt of the total and complete installation.

#### **1.4 OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 AS AMENDED**

The refurbishment and installation of the work must be in accordance with the conditions as set out in the Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.

#### **1.5 USE OF WATER AND ELECTRICITY**

##### **A. WATER**

The service provider should note that one of the following sub clauses shall apply to this project:

(a) On serviced sites, the service provider may use water free of charge, subject to the following:

- (1) All the necessary temporary plumbing, connections, etc. shall be done by the service provider at his/her own expense and removed on completion. The site shall be left in the same condition as it was when originally handed over to him/her.
- (2) Before submitting his quotation, the service provider shall acquaint himself/herself with the extent and availability of the water supply on the site. If the existing supply is found insufficient, the service provider will at his/her own expense supplement any shortage.

- (3) Water supplied free of charge to the service provider, shall only be used for execution of the work and under no circumstances for any other of the work for any other purpose. Strict precautions shall be maintained at all times to prevent any waste.
- (4) The campus shall at all times be given preference with regard to the water supply and the service provider shall be held responsible for the unimpeded supply to existing buildings.
- (5) No monetary claim and/or claim in respect of the prolongation of time shall be conceded if the water supply does not at all times meet the service provider's requirements.

## **B. LIGHT AND POWER**

Service provider must note that one or more of the following sub clauses shall apply to the project:

- (a) On serviced sites, the service provider may use the electricity free of charge, subject to the following:
  - (1) All the essential connections, supply and installation of connection and safety apparatus, wiring, etc. shall be done by the service provider at his/her own expense and removed on completion. The site shall be left in the same condition as it was when originally handed over to him/her.
  - (2) The above-mentioned temporary work shall be performed by a qualified electrician according to the requirements and to the total satisfaction of the campus. The service provider shall at all times comply with all statutory requirements, safety measures, etc. that may apply to the distribution and consumption of electricity, as well as the requirements and obligations that may apply to the campus and shall exempt the campus from any claims that may arise from the consumption of electricity from existing supplies.

- (3) Before submitting his quotation, the service provider shall acquaint himself with the extent and availability of the electricity supply to/on the site. If the existing supply is found insufficient, any shortage shall be supplemented by the service provider at his own expense.
- (4) Electricity supplied free of charge to the service provider, shall only be used for execution of the work and under no circumstances for any other of the work for any other purpose. Strict precautions shall be maintained at all times to prevent any waste.
- (5) The campus shall at all times be given preference with regard to the electricity supply and the service provider shall be held responsible for the unimpeded supply to existing buildings.
- (6) No monetary claim and/or claim in respect of the prolongation of time shall be conceded if the electricity supply does not at all times meet the service provider's requirements.

## **1.6 UNAUTHORISED PERSONS**

The service provider shall at all times keep un-authorized persons strictly away from work. Under no circumstances may any person be allowed to sleep or keep any possessions (material) on the building site during the project period or thereafter unless prior arrangement is made.

## **1.7 DISTURBANCE**

The service provider shall perform all work with as little noise and mess as possible and with the minimum disturbance for adjacent and existing buildings and their occupants. He/she shall keep the site, structure, etc. sufficiently wet at his/her own expense during the operations to prevent dust to the existing buildings, all to the satisfaction of the campus.

The service provider shall take all the precautions to protect adjacent buildings / camps

from damage and he/she alone shall be held liable for any damage to persons or property because of insufficient precautions.

The service provider shall take the necessary steps to ensure that the workers do not walk around in existing buildings or camps unless necessary for the activities.

The service provider shall comply with the requirements of any laws or regulations relating to the use of explosives and air-pressure drills.

**NOTE:**

After the issuing of the order, it shall be the service provider's duty to arrange for an inspection of the site, etc. and the adjacent sites in the presence of the campus 's representative to identify any defects such as rainwater canals, kerb stones, etc. that may possibly be damaged during execution of this project.

Such defects shall be recorded to refute any allegations that they have been caused by the project operations under this project. If such defects are in fact present, the service provider shall record them and submit, this in writing to the representative before work commences.

If the service provider fails to inform the representative in writing, it shall be assumed that there are no such defects.

## **1.8 SITE MEETINGS AND PROCEDURES**

The Campus shall reserve the right to convene a site meeting at any time required. The service provider and site manager shall promptly attend all site meetings and shall also ensure that all interested persons under his/her jurisdiction, etc. are notified timely of site meetings.

## **1.9 PROGRESS SCHEDULE**

A provisional project plan is required as part of the bid that clearly indicates major deliverables and their associated dates. Within one (01) week after the site has been handed over, the service provider shall submit the representative with a full detailed project plan in which all aspects of the works have been taken into consideration. Strict adherence to the provisions of this plan shall be required and the service provider shall report any deviations and/or future deviations to the Project Manager and submit a new programme indicating the variations.

If the service provider wishes to deviate from the contract period specified, he/she shall obtain the written permission of the Campus and a penalty clause of 5% of the total value of the contract will be initiated for each additional two weeks.

## **1.10 ALTERATIONS AND OLD MATERIAL**

With the demolition and removal of existing work, the utmost care shall be taken to avoid any structural and/or other damage to the remaining parts of the existing infrastructure or equipment. The contractor shall repair any damage that may occur during the undertaking of the work at his/her own expense, to the full satisfaction of the Campus.

Old materials of the alterations or demolition's, except if specifically described to be re-used or to remain the property of the Institute, may not be used in the new construction, except with the specific written permission of the representative, with the concomitant adjustment of prices. The rest of the old material shall remain the property of the Institute and the service provider shall store it on the site. The Campus representative will point out the storage place to the contractor.

## **1.11 TEMPORARY USE OF MATERIAL**

No material of whatever nature delivered to the site for the project shall be temporarily used for scaffolding or any other purpose. Likewise, no material on site that is only intended for temporary use shall be used.

### **1.12 RUBBLE**

The service provider shall make provision for the clearing of rubble from the work and, on completion, the cleaning of all machine rooms and the scrubbing of all floors and paving and shall leave the site in a clean and perfect condition for immediate use and occupation. Care should be taken not to use any cleaning agents or material that could damage the surfaces being cleaned.

### **1.13 IMPLEMENTS, ETC.**

The service provider shall supply, maintain and remove on completion or if so requested all implements, scaffolding, tools, labour, etc. that may be required for the proper and timely execution of the work.

On completion of the project, the service provider shall remove at his/her own expense all construction implements belonging to him/her or his/her subcontractor, and leave the building site and adjacent grounds in a clean and orderly condition.

### **1.14 LOSS**

The contractor shall be liable for any loss through theft, damage, etc. of materials for the project as well as the contents of the buildings from the time the site is handed over. Therefore the service provider shall take the necessary precautions for protection against such losses.

### **1.15 PROTECTION OF PROJECT**

The service provider shall make provision for the protection of the work against bad weather and frost, as well as for temporary screens, canvas, dust sheets, gutters, outlet pipes, drainage ditches, storm water canals, etc. and for the baling out or pumping of water where necessary to keep all parts of the building free of water.

He/she shall also make provision for the temporary protection of all completed work



that may possibly be damaged by the construction work or by other contractors or the weather, to the satisfaction of the representative.

Especially in the existing buildings, service provider shall take sufficient precautions, **to the satisfaction of the Campus** representative/agent, to **prevent damage to the existing apparatus**, buildings and other installations during the project period.

The service provider shall be held solely responsible for any damage to the work because of insufficient precautions.

#### **1.16 INJURY TO PERSONS**

The service provider will be responsible for injuries to persons and indemnify the Campus against any liability, loss, claim or law-suit of any nature in accordance with the **Common Law or Acts of the Republic**, on an account of an injury, death of anybody, due to the acts of the person undertaking the service except where the injury arises on account of actions undertaken by personnel of the campus.

#### **1.17 QUALITY OF PAINT**

Paints used must be at least of the industrial standard as prescribed by the relevant SANS-specifications and must be approved by the representative while empty containers must be disposed according to the Safety legislation. Campus (ARC-OVR) corporate colours must be used by the service provider as described in the technical specification.

## PART TWO

### 1. TECHNICAL SPECIFICATION FOR THE CONCRETE FENCE

#### 1.1 SCOPE

To Supply, deliver and install a new concrete Palisade fence with razor wire on top at ARC – Kaalplaas. This will be implemented in three phases. The bidders are required to quote for all the three phases. However, the ARC reserves the right to select the relevant phase/phases.

Minimum concrete poles height above ground: 1, 8 m

Minimum total height of fence including the razor wire above ground: 2 m

The bidder must submit a project plan and a plan of action; for example, indicate the method/s to solve situations on the ground such as rocky (granite rocks), sandy, clayey formation etc.

#### 1.2 SITE SURVEY

- The bidder is to determine the site conditions before providing the ARC with a quotation.
- The bidder is to determine, prior to commencing work, the location of all underground services such as water, electricity and communication pipes or lines by engaging an authorized service locator, the cost of which is to be borne by the contractor.

#### 1.3 AREA CLEANING

- The bidder must provide for cutting down of trees and shrubs on both sides of the proposed fence. This must be done 5 m on both sides of the fence (Total = 10 m). Maximum height of remaining stump should be 100 mm above ground level.
- The bidder should provide for site cleaning such as removal of rubbles.

## 1.4 CONCRETE PALISADE SPECIFICATIONS



**Figure 1: Photo of proposed fence**

- This is a typical concrete palisade fence.

### 1.4.1 POST

- 3600 x 225 x 140 mm, tapering to 80 mm at the front.
- Two holes to take load bearing rails.
- Reinforcement: Pre-stressed steel 6x4 mm Crimp wires grade 1550/1700 MPa, Stressed to 75% of U.T.S. end cut ground level and sealed with an Epoxy.

### 1.4.2 PALES

- 2370 x 75 x 100 mm, tapering to 80 mm at the front.
- Two holes to take bolted connection.
- Reinforcement: Pre-stressed steel 4x2.65 mm Crimp wires grade 1550/1700 MPa, Stressed to 75% of U.T.S. end cut ground level and sealed with an Epoxy.
- Top edge angle: 45 degrees from back to front.

### 1.4.3 RAILS

- 4000 x 80 x 150 mm with 18 x 10 mm holes to take 8 mm carriage type galvanised bolts.

- Reinforcement: Pre-stressed steel 4x4 mm Crimp wires grade 1550/1700 MPa, Stressed to 75% of U.T.S. end cut ground level and sealed with an Epoxy.
- Fixing of pales to rails: M8x140 electro galvanised carriage bolts.

#### **1.4.4 CONCRETE GENERAL**

- All components are off shutter finished with back wood floated.
- All reinforcement bars should be located to ensure a concrete cover of 20 mm.
- The concrete strength of all pre-stressed components is a minimum of 40 MPa and Foundations 15 MPa, both at 28 days.

#### **1.4.5 RAZOR WIRE**

- Barbed wire shall have a barb spacing of maximum 12,5 mm, and shall comply with CKS164. The wire shall be single strand 2.5 mm spring steel with class A galvanizing.
- All the coils must be securely tied to the extension arms with 1.6mm galvanised steel wire at each post.
- Each 700 mm circle of razor wire must be securely tied to the steel strand using 1.6 mm galvanised wire.

#### **1.5 SITE CLEANING AND SAFETY**

- The bidder must provide for the safety of workers and work conditions according to the OHS legislation.
- The bidder should provide for security of all site equipment.

#### **1.6 STANDARDS AND DIMENSIONS**

- All work to comply with the National Building Regulations & Building Standards Act SANS 0400 1990 (or latest).
- Local council requirements and all relevant specifications and codes to be adhered to.

## **2 DURATION OF PROJECT AND PENALTY**

### **2.1 CONTRACT PERIOD**



- The successful bidder will be contracted to ARC until the completion of the delivery of all building materials as per specification, which must be completed within the period of 120 days upon the receipt of appointment letter, official order and site handover.

### 3 COMPULSORY REQUIREMENTS FOR THE TENDER

The bidders shall provide to the ARC (accompanying the bid document on the closing date/time) with the following information:

- (i) Company profile.
- (ii) Company Registration Certificates or ownership documents
- (iii) A letter from the bank for proof of banking details of the bidder.
- (iv) A valid and original Tax Clearance Certificate
- (v) Construction Industry Development Board (CIDB) 3SQ or higher
- (vi) Certified copy of Identification documents of members / directors/ partners.
- (vii) Site briefing

**Note: Bidders who will fail to submit all the mentioned requirements will be disqualified.**

### 4 PRICING CONDITION

- Transportation or any other additional expenses should be inclusive in the tender price.
- Tender price should be VAT inclusive where applicable.
- Phases. Payment can be made in three phases at the successful completion of every 2KM distance.

### 5 EVALUATION CRITERIA

All bidders will be evaluated according to compliance to the specification, functionality, price and BBBEE level.

#### 5.1 Functionality

<b>Functionality</b>	
Project Plan	40
Minimum of five years' experience in erection of concrete fence	30
Attach at least three contactable references and recommendation letters /certificates of completion from previous clients.	30
<b>TOTAL POINTS</b>	<b>100</b>

**Bids that do not obtain a minimum score of 60% for functionality will be disqualified and will not be evaluated further on price and BBEE.**

## **5.2 Pricing and BBEE**

- The 80/20 principle will apply in terms of the Preferential Procurement Policy Framework Act 5 of 2000.
- 80 Points will be allocated to price and 20 Points will be allocated to the BBEE contribution level.
- BBEE points in terms of the Preferential Procurement Policy Framework Act Regulations will be allocated as follows:

<b>B-BBEE Status Level of Contributor</b>	<b>Number of points (90/10 system)</b>
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

## **6 COMPULSORY SITE BRIEFING**

- There will be a compulsory briefing session that will take place at ARC-Kaalplaas.
- The service providers who will fail to attend the briefing session will be disqualified from bidding.