

एसजेवीएन अरुण-३  
पावर डेवलपमेण्ट कम्पनी (प्रा.) लि.  
(भारत सरकार र हिमाचल सरकारको संयुक्त कम्पनी,  
एसजेवीएन लिमिटेड बाट स्थापित कम्पनी)



**SJVN Arun-3**  
**Power Development Company (P.) Ltd.**  
(A company promoted by SJVN limited,  
joint venture of Govt. of India and Govt. of H.P.)

Ref.No.: SAPDC/CE (P&C)/PPR-104 /2020-527

Dated: 30.06.2020

**NOTICE INVITING QUOTATIONS (NIQ)**

Sealed quotations are herewith invited by SJVN Arun-3 Power Development Company Pvt. Ltd. (SAPDC/Employer) from the eligible bidder/suppliers of Nepal for “**Design, Manufacturing, Supply, Transportation, loading & unloading, Installation, Testing and Commissioning (complete as per Scope of Work) of 01 No. Passenger Elevator Gearless-MRL (Machine Room less) with Accessories at Everest Bhawan (G+3) of SAPDC Arun-3 HEP, Tumlingtar Distt. Sankhuwasabha, Nepal (PPR-104)**” as per the details provided here-in-below:-

Sr. No.	Description	Remarks
1.	Bill of Quantities (BOQ)	Refer <i>Annexure 'A'</i>
2.	Scope of work & Technical Specifications	Refer <i>Annexure 'B'</i>
3.	Integrity Pact	Refer <i>Annexure 'C'</i>
4.	Form of declaration	Refer <i>Annexure 'D'</i>

**TERMS & CONDITIONS (T&C):**

**1. Minimum Qualifying Requirements**

- The firm/bidder should be manufacturer/authorized distributor/authorized supplier/authorized reseller for item (s) for which Bidder is submitting bid. In addition to above, other suppliers can also participate in bidding subject to furnishing of a certificate from authorized supplier/reseller/manufacturer for this particular consignment.
- The firm/bidder should have experience of supply, erection & commissioning of minimum one number electric traction gearless, machine room-less, passenger type elevators of equivalent or higher capacity (544 Kg) in last five years reckoned from the last day of month from issuance of NIQ.
- The technical specification of the offered Make/Brand/model of item (s) / equipment/instruments shall be equivalent or higher than the specifications mentioned under Technical Specifications (**Annexure-B**).

- The bidder must submit the bid in the following two separate sealed envelopes clearly indicating the contents therein duly super scribed as under and these two envelopes should be enclosed in a single sealed envelope/cover super scribed as “Design, Manufacturing, Supply, Transportation, loading & unloading , Installation, Testing and Commissioning (complete as per Scope of Work) of 01 No. Passenger Elevator Gearless-MRL (Machine Room less) with

Accessories at Everest Bhawan (G+3) of SAPDC Arun-3 HEP, Tumlingtar Distt. Sankhuwasabha, Nepal (PPR-104)” and submitted at the address of the undersigned and must reach this office through courier or by post or by hand on or before **29.07.2020** by 15:00 Hrs. and same shall be opened on **30.07.2020** at 16:00 Hrs. in presence of authorized representative of firms who choose to attend.

**PART-I (Envelope-1):-**

- i. Earnest Money Deposit (EMD) (as per Sr. No 9).
- ii. The firm shall submit PAN/VAT/company registration certificate.
- iii. Authorization certificate supporting with requisite Documents for meeting out criteria laid down at Sr. No. 1. a. above.
- iv. The bidder shall submit copies of completion certificate issued by client meeting out criteria laid down at Sr. No. 1. b. above.
- v. User Manual/Catalogues/Technical Specification of the items for which rates have been quoted by the Bidder for meeting out criteria laid down at Sr. No. 1. c. above.
- vi. Integrity Pact duly signed by Authorized Signatory as per **Annexure-‘C’** alongwith ‘Form of Declaration of Eligibility’
- vii. Form of declaration as per **Annexure-D**.
- viii. Bank Account Details as per **Annexure-E**

**PART-II (Envelope-2):-**

**Price bid: -**

Comprising of Price Bid at **Annexure-A** i.e., duly filled, signed and stamped in Bill of Quantities (BOQ).

**The bid shall be opened in the following sequence:**

- i. First, the envelope Part-I shall be opened.
  - ii. Part –II (Price Bid) shall be opened on same day if no clarification is required from the Bidder(s). In case clarification is sought from any Bidder(s), separate intimation shall be given for opening of Price Bids. The bid shall be treated as non-responsive in case bidder fails to provide supporting document in respect of conditions as detailed above & the bid of bidder rejected by the Employer and their Part-II (Price Bid) bid shall not be opened.
3. **Material and T&P will be issued by SAPDC (As per obligations of SAPDC).**
4. **Completion Period:-**
- (a) The bidder shall submit the Complete layout of the elevator equipment detailing dimensions, clearances and location of motor, control panel etc. shall be shown in the drawings, manufacturers detailed technical data, specification, and other necessary documents as desired by SAPDC within 20 days from the issuance of Supply order/Letter of Acceptance.
  - (b) Design Fabrication/manufacturing, supply, installation, testing, commissioning of Elevator shall be done within 120 Days from the date of approval of drawings by SAPDC.

**5. Liquidated Damages (LD):**

- (a) In case of delay in submission of Complete layout of the elevator equipment detailing dimensions, clearances and location of motor, control panel etc. shall be shown in the drawings, manufacturers detailed technical data, specification, and other necessary documents as desired by SAPDC beyond the stipulated period , LD @ 0.15% of contract price per day shall be levied subject to maximum of 1. 5% of the contract price.

(b) In case of delay in Fabrication/manufacturing and supply, installation, testing, commissioning of Elevator after approval of drawings by SAPDC beyond the stipulated period, LD @ 0.15% of contract price per day shall be levied subject to maximum of 5% of the contract price.

Overall LD for whole assignment shall be limited to 5% of the contract price only. In case the supplier fails to supply the material within 120 days from issuance of supply order, SAPDC reserves the right to terminate the supply order and bid security / EMD shall be forfeited.

6. **Bid Validity:** The bid (s) shall be valid for 180 days from opening of bid (s).
7. **Prices:** The supplier/bidder shall offer rates & prices “on Firm Price Basis”. The quoted rates shall be inclusive of VAT, all other taxes & duties, Design, Manufacturing, transportation, transit insurance, loading & unloading, installation, commissioning, testing, training to SAPDC Staff & demonstration etc. and maintenance cost during free service period including consumables/lubricants etc. and SAPDC shall not bear anything extra on this account. Any statutory variation in the rate of taxes after the last date of submission of bid(if any), during the currency of the contract including extension thereof shall be reimbursed /adjusted on production of documentary proof.

Rates should be filled in both figures and words. In case of ambiguity/ies in between the rate in figures and the rate in words, the rate quoted in words shall prevail and the amount shall be corrected accordingly. The SAPDC reserves the right to adjust arithmetical or other errors in any tender/quotation in the way which it considers suitable.

***Only unconditional discount offered in the BOQ shall be considered for evaluation.***

8. **Payment:** The payments will be made in the following manner:

70% Payment will be made after delivery of the item(s), payment shall be made after the receipt of material/goods in good condition to the consignee at SAPDC Office complex Tumlingtar . The payment shall be released against the submission of bill and inspection report issued by Officer-in-Charge (OIC).

20% payment will be released on submission of Bill & certification by OIC/EIC regarding satisfactory installation, commissioning, testing. Payment shall be released within 15 days of receipt of bill complete in all respects.

Ten percent (10%) amount of gross bill shall be release against Bank Guarantee submitted by the Supplier on completion of training to SAPDC Staff. BG shall be released after completion of Maintenance period of three years from the date of commissioning upon recommendation and submission of satisfactory performance certificates by OIC/EIC. No interest shall be paid on the retained amount.

Further, Quarterly visit charges shall be paid after each visit from second year of maintenance.

9. **Earnest Money Deposit (EMD):**

- a. Earnest Money amounting to NPR 63,500/- shall be submitted in the shape of Bank Draft/Manager Cheque/FDR(duly pledged in favour of SJVN Arun-3 Power Development Company Pvt. Ltd.) / Bank Guarantee in favour of SJVN Arun-3 Power Development Company Pvt. Ltd.(SAPDC), payable at Khandbari

**Any bid not accompanied by an acceptable Earnest Money Deposit shall be declared non-responsive and rejected by the Employer and their Part-II (Price Bid) bid shall not be opened.**

- b. EMD of the bidder shall be forfeited, if the bidder withdraws or amends its bid or impairs or derogates from the bid in any respect within the period of validity of the bid.
  - c. The EMD of unsuccessful bidders shall be released within 7 days without interest after award to successful(L-1) bidder. EMD of the successful bidder will be released without interest along with the 90% payment as per Clause 8 of NIQ. However, EMD of successful bidder shall be forfeited in case non-supply/ commissioning as per the terms and conditions of award/supply order.
  - d. The EMD shall be valid for 180 days beyond the last date of submission of bids
  - e. No interest shall be payable by SAPDC on EMD.
10. **Award Criteria:** The bid shall be evaluated on overall basis and the award shall be made based on the lowest rate quoted by the Bidder/Supplier for whole work as per **Annexure-A** in the Bill of Quantities.
11. **Force Majeure:** The term "Force Majeure" shall herein mean riots (other than among the Vendor's employees), Civil Commotion (to the extent not insurable), war (whether declared or not), invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection, military or usurped power, damage from aircraft, nuclear fission, acts of God, such as earthquake (above 7 magnitude on Richter Scale), lightning, unprecedented floods, fires not caused by Vendor's negligence and other such causes over which the Vendor has no control and are accepted as such by the Engineer-in-Charge, whose decision shall be final and binding. In the event of either party being rendered unable by Force Majeure to perform any obligation required to be performed by them under this contract, the relative obligation of the party affected by such Force Majeure shall be treated as suspended for the period during which such Force Majeure cause lasts, provided the party alleging that it has been rendered unable as aforesaid, thereby shall notify within 10 days of the alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of such cause. Extension of time without levy of LD shall be provided during the period of occurrence of Force Majeure event, however no cost compensation shall be provided.
12. **Packing:** The supplier, wherever applicable shall properly pack and stack all materials/goods in such a manner as to protect them from deterioration and damage during transportation. The supplier shall be responsible for all damage due to improper packing.
13. **Replacement:** If the items/ equipments or any portion thereof is damaged or lost during transit, SAPDC shall give notice to the supplier setting forth particulars of such items/ equipments damaged or lost during transit. The replacement of such items/ equipments shall be effected by the supplier within a reasonable time to avoid unnecessary delay in the intended usage of the materials free of cost to the SAPDC.
14. **Rejection:** In the event that any of the items/ equipments supplied by the supplier is found defective in material or workmanship or otherwise not in conformity with the specification, SAPDC shall either reject the items/ equipments or request the supplier in writing to rectify the same. The supplier, on receipt of such notification shall either rectify or replace the defective items/ equipments free of cost to the SAPDC.

15. **Demurrage, Wharfage etc.:** All demurrage, wharfage and other expenses incurred due to delayed clearance of the items/ equipments or any other reason shall be on the account of the supplier.
16. **Guarantee/Warranty:** Guarantee/Warranty shall be minimum for 12 months or as per the Policy of Original Equipment Manufacturer (OEM), whichever is higher. In case of any complaint/repair required during Warranty/Guarantee period, the vendor will respond within two days and ensure rectification within one week's time from the date of lodging of complaint. The supplier shall either rectify or replace the defective items/ equipments free of cost to SAPDC entire Guarantee/Warranty period.
17. **Consignee:** The material/ goods under this Contract, shall be dispatched to the Consignee at the following addresses:-

**Chief Engineer (Store),**  
 Satluj Bhawan, Arun Sadan,  
 SAPDC, Tumlingtar,  
 Distt. Sankhuwasabha, Nepal.  
 (Mobile No.: 9852058517)  
 Email: [store.sapdc@gmail.com](mailto:store.sapdc@gmail.com), [wntstores.sapdc@gmail.com](mailto:wntstores.sapdc@gmail.com)

18. For any enquiry/clarification for submission of bid and any other information, the Bidders may contact to:-

Name	Designation	Contact No.	Address
Er. Vivek Sharma	Chief Engineer (P&C)	Mob.:- 9852058517	Satluj Bhawan, Arun Sadan, SAPDC, Tumlingtar, Distt. Sankhuwasabha, Nepal.

**19. GENERAL INFORMATION:-**

**Access to Project Sites:**

To reach the site of Arun-3 HPP Nepal the nearest broad gauge railway station is Jogbani, Bihar (India) and further by road up to Tumlingtar is about nearly 264 Km. Jogbani in Bihar is a city of India with Nepal border and is just 6.00 Km. from Biratnagar (a major industrial town of Nepal).

**Road conditions in different road segment en-route are as under:-**

- a. Jogbani to Hile:- Hile is located at a distance of 118 Km from Jogbani and the existing road up to Hile is black topped road and in good condition. Hile is at EL 1920 m from sea level.
  - b. Hile to Tumlingtar (Hill road route):- This route is about 111 Km and the road partially is black topped and kuchhaup to Chainpur (EL 1285m) and Chainpur to Tumlingtar is black top.
  - c. Tumlingtar is also connected to Kathmandu and Biratnagar by air by around thirty five minutes journey.
20. **Resolution of Dispute:** In case of any dispute or difference that arises out of the subject cited supply, the same shall be referred to the Sole Arbitrator, who shall be appointed by the CEO,

Arun-3HPP, SAPDC, Tumlingtar. The award of the arbitrator shall be final and binding on both the parties.

Courts of Chainpur (Nepal) shall have exclusive Jurisdiction for adjudication upon the dispute arising out of the subject cited supply between the parties.

21. Corrigendum/Addendum, if any to NIQ shall be uploaded only on <http://sjvn.nic.in/tender.htm> & <http://www.sapdc.com.np/pages/tender>.
22. SAPDC reserves the right to reject any or all the tenders without assigning any reason thereof.
23. **Integrity Pact:** To improve transparency and fairness in the tendering process the Employer is implementing Integrity Pact.

The Integrity Pact, signed by the prospective Bidders and the Employer, shall commit the persons/officials of both the parties, not to exercise any corrupt/fraudulent/collusive/coercive practices in the Tendering process and also during implementation of the Contract. Bidders signing Integrity Pact shall not approach the Courts while representing the matters to IEMs (which have been appointed by CVC, India) and will await their decision in the matter.

**Entering into Integrity Pact as per Performa (enclosed under Annexure-C) is a basic qualifying requirement.**

To oversee the compliance of obligation under the Integrity Pact, two Independent External Monitor(s) (IEMs) have been appointed. The details of IEMs are as under:-

1. **Dr. Jai Pal Singh**
2. **Sh. Shitala Prasad Srivastava**

The address for correspondence with IEMs is as under:

**Independent External Monitors for SJVN,  
C/o Chief Engineer (P&C)  
Arun-3 HEP, SAPDC  
Satluj Bhawan, Arun Sadan, Tumlingtar  
Distt. Sankhuwasabha, Nepal**

The Integrity Pact duly signed on behalf of the Employer has been enclosed at **Annexure-C**. The Integrity Pact shall be signed & stamped by the bidder/supplier and the hard copy shall be submitted in Part-I (Envelope-I) of Bid.

**For & on the behalf of SAPDC**

**Sd/**

**Chief Engineer (P&C)**

**Satluj Bhawan, Arun Sadan,**

**SAPDC, Tumlingtar,**

**Distt. Sankhuwasabha, Nepal**

**Ph. +977-29-575154,**

**E-mail Address: [pnc.sapdc@gmail.com](mailto:pnc.sapdc@gmail.com)**

**BILL OF QUANTITIES (BOQ)**

<b>Design, Manufacturing, Supply, Transportation, loading &amp; unloading, Installation, Testing and Commissioning (complete as per Scope of Work) of 01 No. Passenger Elevator Gearless-MRL (Machine Room less) with Accessories at Everest Bhawan (G+3) of SAPDC Arun-3 HEP, Tumlingtar Distt. Sankhuwasabha, Nepal (PPR-104).</b>								
Item No.	Description of Items	Unit	Qty.	Make/ Brand allowed	Offered make/brand to be mentioned by bidder	Rate (NPR) including VAT		Amount (NPR) including VAT
						In Figures	In Words	
1.	Design, Manufacturing, Supply, Transportation, loading & unloading, Installation, Testing ,Commissioning, training to SAPDC Staff & demonstration etc. and maintenance cost during free service period including consumables/lubricants etc. (complete as per Scope of Work) (complete as per Scope of Work) of Passenger Elevator Gearless-MRL (Machine Room less) with Accessories (As per technical Specification and Scope of Work at Annexure-B)	Nos	1	OTIS/ Kone/ Hitachi				
2.	Charges for Quarterly visit/ Emergency call*.	No.	1	-	-			
<b>Total Amount (NPR) inclusive of VAT, all other taxes &amp; duties, Design, Manufacturing, transportation, transit insurance, loading &amp; unloading, installation, commissioning, testing, training to SAPDC Staff &amp; demonstration etc. and maintenance cost during free service period including consumables/lubricants etc. (complete as per Scope of Work)</b>								

\* Quarterly visit charges shall be payable from second year of maintenance.

Date: -

Bidders Name and Signature along with seal

Place: -

*Note:- Only unconditional discount offered in the BOQ shall be considered for evaluation.*

## **Annexure-B**

### **SCOPE OF WORK**

#### **1. Scope of Works:**

The Contractor shall design, manufacturing, supply, installation, testing and commissioning of electric traction gearless, machine room-less passenger type elevators, G+3, control systems and accessories in accordance with the requirements specified in the Technical Specifications and other related documents complete in all respect. The supply and installation of material shall be at HO of SAPDC Arun-3 HEP, Tumlingtar, Nepal.

#### **(a) Scope of works include:**

- a) One (1) electric traction gearless, machine room-less, passenger type elevators, G+3, anti-vibration supports and accessories.
- b) Control system including control panels, cables/wires, conduit, wire ways, and all accessories.
- c) Arrangement and dismantling of scaffolding and other erection equipment & tools as may be required.
- d) Power cabling, earthing, power points and lightening (In lift shaft and car room) with material.
- e) Accessories like platform, car frame, car enclosure, guide rails including steel brackets and fish plates, counter weight, buffers etc.
- f) Traction media, Governor ropes etc.
- g) Testing, Commissioning and Training at site.
- h) Maintenance including consumables/lubricants etc. for 1st year after installation shall be inclusive in BOQ item No. Further, Quarterly charges for visit shall be payable from second year of maintenance as per BOQ item No. 2. Consumables/lubricants etc. shall be provided by SAPDC from second year onwards.

#### **1.1 Submission of Document**

- (a) Complete layout of the elevator equipment detailing dimensions, clearances and location of motor, control panel etc. shall be shown in the drawings.
- (b) Manufacturers detailed technical data, specification, and other necessary documents.

#### **1.2 Training at Site**

- a) The Contractor shall provide training of operation of elevator to the minimum **five employees of SAPDC for Two Days** at site.
- b) The training program shall be carried out by the experts. They shall be experienced in the work to be taught and in explaining and demonstrating to the trainees.
- c) The training program shall cover about the elevators by use of the operation and maintenance manuals to enable the trainees to become completely familiar with the elevators, and allow the trainees to understand the commercial operation of the elevators.
- d) Full details of proposed training program and the proposed expert training shall be submitted by the Contractor to the EIC for approval.

#### **(b) SAPDC scope:**

- (i) Lift well as per Annexure – C and Minor civil works.
- (ii) Power supply for erection and commissioning purpose will be provided by SAPDC



## **2. Site conditions:**

### **2.1 Ambient Operating Conditions**

The elevators shall be capable of being operated under the following ambient conditions:

- Ambient Temperature : 0° Centigrade to +45° Centigrade
- Relative Humidity : 10 percent to 100 percent

### **2.2 Power Supply Source**

The elevators shall receive power from electrical panel board, providing the following supply:

- Voltage : For power and control 415/230 V AC
- Phase : 3 phase, 4-wire/ 1 phase, 2-wire
- Frequency : 50 Hz

**Note:** Voltage level of NEA supply varies from 360 V to 480 V of 3-phase supply.

- 3.** The bidder shall visit the site to get acquainted with available infrastructure before participation in bid.

## Technical Specification

### 4. Technical Specifications

#### 4.1 Main Parameters

Sr. No.	Description	Requirement
1.	Elevator Type	Machine Room Less, Gearless and Oil Less –Passenger Elevator
2.	Motor Type	Permanent Magnet Gearless, manufacture by the elevator manufacturer itself not bought out from third party
3.	Drive	VVVF Regenerative (Closed Loop)
4.	Controller Type	Microprocessor Based
5.	Rated Load	At least 544 Kgs (08 Passengers)
6.	Speed	1.0 meter per second
7.	Floor Designation	G,1,2,3
8.	Stops & Openings	4 Stops, 4 Openings (all openings on the same side)
9.	Shaft Size available (W X D X H)	1800 mm x 2000 mm x 17125mm
10.	Travel	Ground Floor to Third Floor (upper floor) (approximately 15 meters)
11.	Head room height	4200 mm
12.	Pit depth	1650 mm
13.	Car inside size	Minimum 1100 mm × 1300 mm X 2200 mm
14.	Car Body Finish	i. <b>Rear Side:</b> SS Hairline Finish
		ii. <b>Left and Right-Side Panel:</b> SS Hairline Finish
		iii. <b>Entrance Panel:</b> SS Hairline Finish
		iv. <b>Ceiling Type:</b> SS Mirror Finish
		v. <b>COP Finish:</b> SS Hairline Finish
		vi. <b>Car Door:</b> SS Hairline Finish

		vii <b>Landing Door:</b> SS Hairline Finish
		Viii <b>Handrail:</b> Round Hairline Stainless Steel
15.	Flooring	Standard
16.	Car operating panel	Braille Buttons in SS Hairline Finish
17.	Car position indicator	Latest
18.	Hall operating panel	Flat SS Hairline Finish with LCD/LED display and push buttons (Up, Down Arrow and Floor No.)
19.	Ventilation	Cross Flow Fan
20.	Car and Shaft Lighting	LED
21.	Clear Entrance Door Width	Minimum 800 mm
22.	Clear Entrance Door Height	Minimum 2000 mm
23.	Internal Clear Car Height	Minimum 2200 mm
24.	Door Type	Centre Opening Power Door
25.	Car Group	One Car (Simplex)
26.	Traction Media/Rope Type	Flat coated steel belt or Round Steel Core Ropes
27.	Power Supply	415/230 V AC -3PHASE
28.	Motor Power	Suitably designed
29.	Drive Rating	Suitably designed
30.	Safety Features	Fire Rated Door – 1 Hour (Minimum)
		Automatic Rescue Operation
		Emergency Alarm Button
		Manual Rescue Device (Should operate manually not electrically)
		Automatic Braking System (ABS)
		Intercom Facility in Car
		Car Emergency Lighting
		Accurate Releveling, Automatic, Closed Door
		Overload and Single-Phase Failure Protection
Emergency Firemen's Service		
31.	Energy Saving Features	Full Standby Mode (including Light, Fan and Motor)

		Operation of Car Light – Automatic (OCL)
		Automatic operation of Car Ventilation
32.	O&M Manuals and Circuit Drawings	At least one set

#### 4.2 Machine Parameters:

- i. Required motor must be designed & manufactured by the elevator manufacturer itself, not bought out from third party.
- ii. Electric traction **gearless, oil less, machine room-less type**, consisting of a 3-phase **A.C. Permanent Magnet Synchronous Motor**, traction and deflector sheave(s) and brake disc or brake drum fully aligned on a single shaft and mounted on a common base plate.
- iii. The machine shall be mounted on appropriate anti-vibration supports to minimize noise and vibration.
- iv. The motor shall be suitable for frequent starting/stopping, heavy duty reversible elevator service.
- v. Drive control of the motor shall be A.C. **Variable Voltage Variable Frequency (VVVF)** with speed encoder (close loop) capable of achieving desired speed and smooth running and stopping of elevators. Motor shall be dynamically balanced and shall have high starting torque and low starting current, suitable for elevator duty and equipped with required protection.
- vi. There shall be provision of brake in the driving machine.

#### 4.3 Car Frame

- i. A steel car frame of substantial construction shall be provided with adequate bracing to support the platform and car enclosure.
- ii. It shall be sufficiently rigid to withstand the loads and forces imposed on it.
- iii. The car shall be so mounted on the frame that vibration and noise transmitted to the passengers inside is minimized.
- iv. The car frame shall be provided with suitable and adequate number of guide shoes or sets of guide rollers.

#### 4.4 Car Enclosure

- i. The car shall be completely enclosed.
- ii. The car wall panels shall be constructed from stainless steel sheet in hairline finish in three side of car and Etched Mirror Stainless Steel in Rear Side.
- iii. Hand rail shall be Round Hairline Stainless Steel finish.
- iv. The roof of the car shall be designed to support the weight of maintenance team and also have light fittings. Provision of easy access to the roof of the car shall be made.
- v. Concealed Circular LED lighting fixtures shall be provided in the car to provide adequate lighting in the car.
- vi. The car shall be provided with ventilating fan.
- vii. The car fan and the car light shall have auto switch-off features. When there is no call registered for a predetermined period of time, the car fan and the car light shall be automatically switched-off.
- viii. Car flooring shall be as per offered model.

#### **4.5 Car Operating Panel**

Signaling and operating devices shall be mounted on Stainless Steel face plate in hairline finish comprising:

- i. Push button
- ii. Floor buttons corresponding to landings served, (Floor buttons shall illuminate when a call is registered and shall remain illuminated until the call is answered)
- iii. Door open button
- iv. Door close button
- v. Digital car position indicator combined with digital Up & Down direction indicator,
- vi. Emergency stop switch button
- vii. Alarm button
- viii. Fan and Car light switches
- ix. Intercom
- x. Overload indicator

#### **4.6 Car Top Inspection**

- i. A car top inspection station with an emergency stop switch, inspection switch and constant pressure" UP – DOWN" buttons shall be provided.
- ii. The car top control shall override all other controls. Car shall respond to "UP-DOWN" command at inspection speed.
- iii. A 230 V AC power outlet socket and adequate lighting shall be provided.

#### **4.7 Car and Hoist way Entrance Doors**

- i. Each car entrance (landing) shall be provided with door of stainless-steel construction in hairline finish extending the full height and width of the car opening.
- ii. Each hoist way opening shall be provided with door of stainless-steel construction in hairline finish extending the full height and width of the hoist way opening.
- iii. The car and hoist way doors shall be guided on sills and door tracks for the full travel of the doors. The sills shall be of extruded aluminum with necessary non-slip grooves and shall extend the full width of the car/hoist way entrances.
- iv. Hoist way entrance doors shall have fire resistance of minimum one hour.

#### **4.8 Guide Rails**

- i. The guide rails thickness shall be suitably design.
- ii. The guide rails shall be used for guiding cars and counterweights throughout their entire travel.
- iii. The guide rails, their attachments and fish-plates shall be of sufficient strength to withstand the loads and forces imposed on them in order to ensure a safe operation of the elevator.

#### **4.9 Counterweight**

- i. The counterweight shall be metal filler weights, enclosed and secured in a steel frame and shall be equal to the weight of car plus a suitable percentage value of rated load for enhancing smooth and economic operation.
- ii. The counterweight shall be provided with necessary metal guards of required length at the bottom of the hoist way.
- iii. The counterweight shall be provided with suitable and adequate number of guide shoes or sets of guide rollers.

#### 4.10 Buffers

- i. Terminal Buffers shall be installed as a means of stopping the car and counterweight at the extreme limits of travel and shall be spring buffers.
- ii. Buffers in the pit shall be mounted on steel channels or securely anchored to the pit floor.
- iii. Buffers shall be appropriate to the load and speed of the car.
- iv. Spring buffer shall be helical coil type with a constant spring rate.

#### 4.11 Pit Switch

An emergency stop switch shall be provided in the pit to stop the car regardless of its position in the hoist way. A maintenance switch of suitable capacity shall be provided in the pit.

#### 4.12 Traction Media

Traction media shall be Flat coated steel belt or Round Steel Core Ropes steel core. Traction hoist ropes constructed of stranded steel of proper size, number and strength for this application to ensure proper required traction, system loading and wear qualities shall be provided.

#### 4.13 Trailing Cable

It shall be secured on the underside of the car and shall be clear of all obstructions while the car is in motion.

### 5 Guarding

All dangerous parts of elevator shall be effectively guarded unless they are so constructed and located as to be safe as they would be, if guarded.

### 6 Door Operation

- i. Door operation shall be power operated and automatic. It shall automatically and simultaneously open the car and hoist way doors while the car is levelling at the respective landing. The doors shall be closed automatically and simultaneously after a pre-determined time interval, but the "door open" button on the car operating panel, when pressed, shall reverse the motion and re-open the doors. It shall not be possible to open the car and hoist way doors, while the elevator is in operation. Only the hoist way door where the car is stopping can be opened.
- ii. **Door Protection System:** A microprocessor controlled infrared light curtain 2- dimensional door protection system covering full length shall be provided to detect the presence of a person or object in the door opening. If the door protection system detects a person or object while the door is closing, the door shall stop and immediately re-open. The door shall resume closing after the obstruction has been removed.
- iii. **Interlocks:** Both landing and car door shall have locking system. Electro-mechanical interlocks shall be provided on the hoist way doors to prevent operation of the car away from the landing unless all hoist way doors are locked in closed position and shall prevent opening of the doors at any landing from the landing side unless the car is at rest at that landing or is in the levelling zone and stopping at that landing.

- iv. **Car door contact:** Car doors shall be provided with an electric door contacts which shall prevent the operation of the car unless car doors are locked in closed position.
- v. In the event of passengers trapped inside the car from any cause, provision shall be made such that car doors cannot be opened from inside the car. The car doors shall be opened only from landing side by the trained personnel.
- vi. Provision shall be made for opening of all hoist way doors and car doors in case of emergency by means of special key.

## **7 Safety Features**

### **i) Full Load & Overload Device**

The elevator shall be provided with load weighing device with features like full load by-pass function having an adjustable setting range of 80% to 100% of the rated load and when operated, it shall by-pass all landing calls. When the load in the car is reduced, the car shall stop for landing calls as normal.

The elevator shall be provided with an overload device, which will prevent the elevator from starting in case the car is loaded to 110% of the rated load or more This will ensure that the doors will not close in case the car is loaded as above. Provision of audio and visual warning device shall be made to warn the passengers in case of overload. Upon removal of the excessive load, the elevator shall automatically resume normal operation.

### **ii) Overspeed Protection**

There shall be provision for the protection of overspeed both in ascending and descending movement of the elevator.

### **iii) Emergency Light**

Battery operated emergency light shall be provided in the car. It shall illuminate automatically in case of power failure.

### **iv) Emergency Alarm Bell**

Battery operated emergency alarm bell shall be provided at ground floor landing. Alarm button for the bell shall be provided on the Car Operating Panel.

### **v) Fireman's Switch**

Fireman's switch shall be provided at ground floor landing near entrance of the elevator. In case of operation of Fireman's switch all car and hall calls are cancelled and the car shall return immediately to the ground floor with the doors open. Interfacing of the Fireman's switch with the Fire Detection and Alarm System of the building shall be made such that when the fire detection sensors in the building are activated, all car and hall calls are cancelled and the car shall immediately return to the ground floor with the doors open

### **vi) Auto Rescue Device**

Battery operated Auto Rescue Device shall be provided on the elevator to take the elevator to the nearest possible landing and the doors open in case of power failure.

### **vii) Manual Rescue Device**

Provision shall be made to operate the elevators manually (not electrically) to the nearest landing, in case of power failure by using manual brake lever.

### **viii) Phase Reversal and Phase Failure Device**

Phase reversal and phase failure relays shall be provided to protect the elevator equipment against phase reversal and failure of any phase.

### **ix) Automatic Self Levelling**

Elevators shall be provided with self-levelling features to automatically bring the car to the landings and correct for under or over travel.

Self-levelling shall be automatic within its zone.

It shall maintain the car approximately level with landings regardless of its load.

Levelling accuracy at the landings shall be within +/-5mm or better.

### **x) Control System**

The elevator control system shall be microprocessor-based modular system, Simplex Full Collective (without attendant), A.C. Variable Voltage Variable Frequency (VVVF) with speed encoder (close loop).

Control of the elevator shall be automatic in operation by means of push buttons in the car numbered to correspond to floors served, for registering car stops, and by “up-down” push buttons at each intermediate landings and single direction push buttons at terminal landings.

When all calls have been answered, the car shall park at the last landing served.

The control shall be field programmable with all safety interlocks.

### **xi) Maintainability**

All parts requiring inspection, maintenance or replacement shall be easily accessible without needing dismantling of other parts or equipment. Laying of all electrical cables shall be such that they are not liable to damage and can be easily inspected and maintained. Access for maintenance and removal of all mechanical and electrical parts shall be ensured safe.

### **xii) Over voltage and Under voltage protection:**

All electrical equipment and electronics cards shall be protected from voltage fluctuation.

**xiii) Earthing:** All electrical and electronics equipment shall be properly earthed. There shall be two separate earthing points for the elevator.

## **8. Installation Work**

- a) Prior to commencement of installation works, installation procedures as per manufacturer's instructions shall be submitted by the Contractor for approval by the EIC.
- b) The erection and installation work shall be planned and carried out so as to ensure safe working conditions at all times.
- c) The Contractor shall submit a detailed schedule covering the entire installation and drawings for approval within 20 days from the issuance of Supply order/Letter of Acceptance.
- d) The material will be fabricated/manufactured, supplied, Installation, commissioning and testing of elevator within 120 Days from the date of approval of drawings by SAPDC.



- e) Completion of codal formalities and getting Inspection certificate as per prevailing laws of Nepal, if required, is in the scope of the firm/Supplier. Requisite fee, if any will be paid by SAPDC.

## 9. INSPECTION, TESTING, TRAINING AND COMMISSIONING

### 9.1 Inspection, Testing and Commissioning at Site

9.1.1 After erection and adjustment of the equipment at site, installation check-up shall be carried out by the Contractor. The certificate of installation completion shall be submitted to the EIC prior to the commencement of commissioning. The Contractor shall submit all test procedures as well as test schedules for approval by the Engineer at least **15 Days** prior to commencement of the checks and tests. For all tests the Engineer shall be invited to attend and witness the results, however in any case such witness shall not relieve any responsibility of the Contractor from the obligation for remedial works if such are found necessary at a later stage.

9.1.2 The Contractor shall submit all the records of inspection and testing for the record purposes of the Engineer.

9.1.3 All equipment shall be subject to, the following tests:

- (i) Visual Check
- (ii) Dimensional Check
- (iii) Balance Test
- (iv) Brake Test
- (v) Insulation Resistance Test
- (vi) **Rated Load Run Test:** Elevator shall be tested for a period of 30 minutes continuous operation over full travel with rated load in the car, stopping at each landing and proceeding immediately to the next in both directions of travel.
- (vii) **Speed Test:** The actual speed of the elevator shall be determined in both directions of travel with rated load, balanced load and no load in the elevator.
- (viii) **Car Levelling Test:** Elevator car levelling devices shall be tested for accuracy of levelling at all floors with no load in the car, balanced load in the car and with rated load in the car, in both directions of travel.
- (ix) Setting of Car Door Contacts
- (x) Setting of Interlocks
- (xi) Operating and Signaling Devices Function Test

**FORM OF DECLARATION**

M/s------(name of Bidder/Supplier) having its registered office at ----- (hereinafter referred to as ‘the Bidder/Supplier’) having carefully studied all Terms and conditions, scope of work & Technical specifications, BOQ etc. and all corrigendum(if any) pertaining to the “**Design, Manufacturing, Supply, Transportation, loading & unloading, Installation, Testing and Commissioning (complete as per Scope of Work) of 01 No. Passenger Elevator Gearless-MRL (Machine Room less) with Accessories at Everest Bhawan (G+3) of SAPDC Arun-3 HEP, Tumlingtar Distt. Sankhuwasabha, Nepal.(PPR-104)**” the local and site conditions and having undertaken to execute the said works.

DO HEREBY DECLARE THAT:

1. The Bidder is familiar with all the requirements of the Contract.
2. The Bidder has not been influenced by any statement or promise of any person of the Employer but only the Contract conditions.
3. The Bidder undertakes that the information furnished in the Bid is true and correct in all respects.
4. The Bidder undertakes that all the documents uploaded along with the NIQ have been read and there is no deviation from the terms and conditions of the NIQ including Corrigendum/Addendum (if any).

Date:

**For and on behalf of the bidder /Supplier**

.....

**(Signature of authorized representative of the Bidder/Supplier, along with his name, Seal of Company)**

**BANK ACCOUNT DETAILS**

<b>Sr.No</b>	<b>Particulars</b>	<b>#To be filled by bidder(s)</b>
.		
<b>1.</b>	<b>Name of Bidder as per Bank record</b>	
<b>2.</b>	<b>Bank account number</b>	
<b>3.</b>	<b>Bank name</b>	
<b>4.</b>	<b>Branch address</b>	

*#Copy of cancelled cheque may also be attached*