BIDDING DOCUMENT

Two envelop Competitive Bidding

STUPA HEALTH CARE CENTRE COOPERATIVE BUILDING

Air-conditioning System and Ventilation system

At

Chuchhepati,Chabahil, Kathmandu

Issued on: **October 18, 2021**

Issued to: All responsive national Bidders

Invitation for Bids No.: SHCC/03/078/079

Invitation for Bids

Stupa Health Care Centre Co-operative Limited (SHCC)

Invitation for Bids for the **Air-conditioning System and Ventilation system**

Date of publication: **18 October 2021**

1. **SHCC** invites sealed bids or electronic bids from Nepalese eligible bidders for the construction of Electrical works under National Competitive Bidding procedures.
2. Eligible Bidders may obtain further information and inspect the Bidding Documents at the office of SHCC Gokarnashwor -5 , Jorpati Kathmandu
3. A complete set of Bidding Documents may be purchased from the office SHCC and the office Gokarnashwor -5 , Kathmandu by eligible Bidders on the submission of a written application, along with the copy of company/firm registration certificate, and upon payment of a non-refundable fee of 5,000 till **31 October *2021*** during office hours.
4. Sealed bids must be submitted to the office SHCC, Jorpati hand on or before 12:00 on 16 November 2021. Bids received after this deadline will be rejected.
5. The bids will be opened in the presence of Bidders' representatives who choose to attend at 16 November, 2021 14:00 Hours at the office of SHCC Jorpati . Bids must be valid for a period of 90 days after bid opening and must be accompanied by a bid security, amounting to a minimum of 2.5 %, which shall be valid for 30 days beyond the validity period of the bid.
6. If the last date of purchasing and /or submission falls on a government holiday, then the next working day shall be considered as the last date. In such case the validity period of the bid security shall remain the same as specified for the original last date of bid submission.
7. Non submission of the required documents and non-compliance of mandatory requirements as mentioned above may lead to the disqualification of the proposals.
8. The Employer reserves the right to accept or reject, completely or partially any or all the bids without assigning any reasons, whatsoever.

Bid Data Sheet

A. General	
ITB 1.1	The number of the Invitation for Bids is SHCC/03/078/079
ITB 1.1	The Employer is: **Stupa Health Care Centre Co-operative Limited (SHCC)**
ITB 1.1	The number and identification of lots comprising this bidding process is: ***N/A*** ……..
ITB 2.1	The name of the Project is Air-conditioning System and Ventilation system **For Stupa Health Care Centre Co-operative Limited Building.** The implementing agency is: SHCC herself.
ITB 4.1 (a)	Maximum number of partner in a joint venture shall be : ***N/A***
ITB 4.2	Eligible countries: ***Nepal***
B. Bidding Document	
ITB 7.1	For clarification purposes only, the Employer's address is: Attention: Address: Jorpati, Kathmandu Telephone: : 01-4917557/558 Facsimile number: 9851211751 Electronic mail address: info@stupahealth.org.np
ITB 7.4	A Pre-Bid meeting **shall be** held. Presence of bidders in Pre-Bid Meeting is desirable. Take place at the following date, time and place: N/A Date: Time: Place: A site visit ***shall not be*** organized by the Employer but bidders can visit the site any time providing information.
C. Preparation of Bids	
ITB 10.1	The language of the bid is: English / Nepali
ITB 11.1 (b)	In accordance with ITB 12 and ITB 14, the following schedules shall be submitted with the bid, including the priced **Bill of Quantities for Unit Rate Contracts**
ITB 11.1 (i)	The Bidder shall submit with its bid the following additional documents: - Firm /Company Registration - Business Registration license

	- VAT/PAN registration certificate - Tax clearance certificate up to 2076/2077 tax clearance of 2077/78 is desirable. - Power of attorney
ITB 13.6	The prices quoted by the Bidder ***[insert "shall be" or "shall not be"]*** subject to adjustment during the performance of the Contract. **Not Applicable**
ITB 15.1	The bid validity period shall be: ***Ninety (90) days***
ITB 16.1	The Bidder shall furnish a bid security, from Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law with a minimum of 2.5 %, which shall be valid for 30 days beyond the validity period of the bid.
ITB 16.2 (b)	Account Name: Stupa Health Care Center Cooperative Ltd. Bank Name: ICFC Finance Ltd. Bank Address: Boudha Account Number: 00200100061563000001
ITB 17.1	In addition to the original of the bid, the number of copy/ies is/are: Not applicable
ITB 17.2	The written confirmation of authorization to sign on behalf of the Bidder shall indicate: (a) The name and description of the documentation required to demonstrate the authority of the signatory to sign the Bid such as a Power of Attorney;
D. Submission and Opening of Bids	
ITB 18.1	Bidders shall have the option of submitting their bids **by hand**
ITB 19.1	**For bid submission purposes only, the Employer's address is :** Attention: Reception Address: SHCC Office, Gokarnashwor -5 Jorpati . **The deadline for bid submission is :** **Date : 16 November 2021 Time : 12:00 Hours**
ITB 22.1	The bid opening shall take place at : Address : Gokarnashwor -5 **Date : 16 November 2021** **Time : *14:00 hours*(*Time will be allocated in difference of 30 minutes for bidders in different packages)***
E. Evaluation and Comparison of Bids	
ITB 29.5	The amount of the performance security be increased by Eight (8) percent of the quoted bid price.

Evaluation and Eligibility Criteria

This Section contains all the criteria that the Employer shall use to evaluate bids and eligible Bidders.

1. Eligibility

Criteria Requirement	Compliance Requirements	Submission Requirements
Firm Registration Certificate	must meet requirement	Document attachment
Business Registration Certificate (License)	must meet requirement	Document attachment
VAT and PAN Registration certificate	must meet requirement	Document attachment
Tax clearances certificate for the F/Y 2076/77 desirable 2077/78 or Tax return submission evidence or evidence of tax time extension for 2077/78	must meet requirement	Document attachment

2. Evaluation Criteria

Qualification Requirement for completion of Similar works in last 5 years		
• The eligible bidders can be a private entity, government entity or a joint venture of not more than two firms. • The eligible bidder's Minimum Average Annual Construction Turnover of the best 3 years within the last 5 years shall be not less than ***20 million.*** • The eligible bidder's Minimum Work experience of minimum two numbers of similar size and nature (one is at least more than 100 beds Hospital Project) shall not be less than **15 *million,*** at least one project as prime contractor.	must meet requirement	Document attachment. Must include employers certificate with built up area disclosed. Additionally, as built drawing of the completed building with employer/Consultant approval.

A. Specific Construction Experience in Key Activities

Fill up one (1) form per contract.

Contract of Similar Size and Nature			
Contract No…… of……..	**Contract Identification**		
Award Date		**Completion Date**	
Role in Contract	🗀 **Contractor**	🗀 **Management Contractor**	🗀 **Subcontractor**
Total Contract Amount	🗀 **NRS ……..**		
If Partner in a JV or subcontractor, specify participation of total contract amount	**Percent of Total**	**Amount**	
Employer's Name **Address** **Telephone/Fax** **Number** **E-mail**			

Key Personnel

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

SN.	Position	Required No.	Academic Qualification	Total Work Experience [Years]	Experience in Similar Works [years]
1.	**Team Leader Senior Electrical /Mechanical Engineer**	**1**	**Masters in relevant subject**	**10**	**5**

2.	**Site In charge**	**1**	**I.E (Electrical/ Mechanical or experienced of at least 2 similar nature projects)**	**3**	**3**

Resume of Proposed Personnel

The Bidder shall provide all the information requested below. Fields with asterisk (*) shall be used for evaluation.

Position*		
Personal Information	Name	Date of Birth
	Professional qualifications	
Present employment	Name of employer	
	Address of employer	
	Telephone	Contact (manager/personnel officer)
	Fax	E-mail
	Job title	Years with present employer

Summarize professional experience over the last twenty years in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From*	**To***	**Company, Project, Position and Relevant Technical and Management Experience***

Letter of Bid

The Bidder must accomplish the Letter of Bid in its letterhead clearly showing the Bidder's complete name and address.

Date: .....

Name of the contract: .....

Invitation for Bid No.: .....

To:
……
…....

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Documents, including Addenda
issued in accordance with Instructions to Bidders (ITB) Clause 8;
(b) We offer to execute in conformity with the Bidding Documents the following Works:

(c) The total price of our Bid, excluding any discounts offered in item (d) below is: NRs. ……..; or when left blank is the Bid Price indicated in the Bill of Quantities.

(d) The discounts offered and the methodology for their application are:……

(e) Our bid shall be valid for a period of ……..***[insert validity period as specified in ITB 15.1]*** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(f) If our bid is accepted, we commit to obtain a performance security in accordance with the
Bidding Document;

(g) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries or any countries [insert the nationality of the Bidder, including that of all parties that comprise the Bidder if the Bidder is a consortium or

association, and the nationality of each Subcontractor and Supplier];

(h) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3;

(i) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.3;

(j) Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible, under the Employer's country laws or official regulations or by an act of compliance with a decision of the United Nations Security Council;

(k) We are not a government owned entity/We are a government owned entity but meet the requirements of ITB 4.5;[1]

(l) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;

(m) We declare that, we have not been black listed as per ITB 3.4 and no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or business.

(n) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive; and

(o) If awarded the contract, the person named below shall act as Contractor's Representative:

(p) We agree to permit the Employer/DP or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Employer.

Name: .....

In the capacity of .....

Signed ……...

Duly authorized to sign the Bid for and on behalf of ……

Date ……....

Bid Security

Bank Guarantee

Bank's Name, and Address of Issuing Branch or Office
(On Letter head of the Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law)

Beneficiary: ..... name and address of Employer
…….
Date:
……
...
Bid Security No.:
.....

We have been informed that . ……. .[insert name of the Bidder] (hereinafter called "the Bidder")
intends to submit its bid (hereinafter called "the Bid") to you for the execution of ……... name of
Contract . …… under Invitation for Bids No. …… ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we……. . name of Bank. …….. hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of . . ……...amount in figures ……. (. …….. .amount in words …….) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

(a) has withdrawn or modifies its Bid:

(i) during the period of bid validity specified by the Bidder on the Letter Bid, in case of electronic submission

(ii) from the period twenty-four hours prior to bid submission deadline up to the period of bid validity specified by the Bidder on the Letter of Bid, in case of hard copy submission; or

(b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or

(c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the performance security, in accordance with the ITB.

(d) is involved in fraud and corruption in accordance with the ITB

This guarantee will remain in force up to and including the date ……number……days after the deadline for submission of Bids as such deadline is stated in the instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not letter than the above date.

This Bank guarantee shall not be withdrawn or released merely upon return of the original guarantee by the Bidder unless notified by you for the release of the guarantee.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

. . .Bank's seal and authorized signature(s) . . .

Note:

The bid security of ……..……. has been counter guaranteed by the Bank ……..……... ...…… on ……... ...……..……. (Applicable for Bid Security of Foreign Banks).

Bidder's Information Format

Site Organization

Method Statement

Mobilization Schedule

Construction Schedule

Others

Bidder’s Information

Form ELI - 1: Bidder’s Information Sheet

Bidder's Information	
Bidder's legal name	
Bidder's country of constitution	
Bidder's year of constitution	
Bidder's legal address in country of constitution	
Bidder's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	
Attached are copies of the following original documents.	

Specifications

ARTICLE-I: TYPES AND SCOPE OF CONTRACT.

1. This bid is an item rate contract, i.e. the total Contract Amount is subjected to increase or decrease as ascertained after final measurement of works quantities at unit rates given in the Bill of Quantities.

2. This bid shall be inclusive of all SCH reed additions/ modifications thereto as may be incorporated into additional/ modified drawings during Contract Period.

ARTICLE- II: CONTRACT PERIOD

The works to be performed under this Contract shall be completed within **100 days** from the date of signing of the contract including the mobilization period of **15 days.** However, piping work shall be completed within **45 days** from the date of signing of the contract. As timely completion of project is crucial, the contractor must agree to complete the project within stipulated time without any excuses.

ARTICLE- III: LIQUIDATED DAMSCHES.

For each calendar day in excess of the established date (end of project period) that the work remains incomplete, the Contractor agrees to pay to the SCH an amount equal to **Rs.60, 000**/- per day as liquidated damages and which shall be deducted by the SCH from the Final Bill.
Total payments under liquidated damages shall not exceed **20 %** of the Contract Amount.
Neither party shall be liable for damages in case of delays due to Force Majure, it being understood that both parties shall try to solve problems related to force majure jointly & amicably.

ARTICLE- IV: TERMINATION OF CONTRACT

a. The SCH may without prejudice to any other remedy for, breach of Contract, by written notice of default sent to the Contractor, terminate the Contract in whole or in part.

i. If the Contractor fails to execute any or all the works within the time period specified in the Contract, or any extension thereof granted by the SCH.

ii. If the Contractor fails to perform services or any obligation under the contract:

iii In the event SCH terminates the contract in whole or in part, the SCH may procure, upon such terms & in such manner as its deems appropriate, goods undelivered and services not performed, and the contractor shall be liable

to the SCH for any excess costs, however, the contractor shall continue performance of the contract to the extent or terminated.

ARTICLE- V: CONTRACT PRICE & PAYMENT

1. The total estimated Contract Amount including all applicable taxes and contractors overhead exclusive of VAT under this Contract agreement is

Rs……

(In word:……)

To be filled by the bidder.

Subjected to addition or deduction as provided for herein. The detail bill of quantity is attached here with.

2 Security Deposit

The Contractor shall furnish SCH guarantee in form and substance satisfactory to the SCH **5 %** of the bid amount along with the bid document. The validity of which shall be 100 days.

3 Performance bond

The successful bidder shall furnish the performance bond of 10 **%** of the bid amount after signing of contract but before release of mobilization advance, validity of which shall be 100 days.

4 Mode of payment

Prices charged by the contractor for goods delivered services & works performed under the Contract shall not vary from the price quoted by the Contractor in its bid.

i) 10 % of the Contract Amount will be payable in advance against the advance payment guarantee issued by the Financial institution acceptable to the SCH.

ii) 30 % of the Contract Amount will be payable against the equipment/material delivery at site and duly certified by the Consultant.

iii) 30 % of the Contract Amount will be payable based on running bill the submitted by the contractor and duly certified by Consultant.

iii) Remaining 30 % of the Contract Amount will be payable within **30 days** of submission of the Final bill and duly certified by the Consultant.

5 Retention Money

5 % of all bills so recommended for payment shall be retained by the SCH. The retention money shall be released after expiry of 2 year Guarantee Period.

6 Insurance

The works executed from the Contractor under this Contract shall be fully insured, if necessary, against loss or damages incident to manufacture or acquisition, transportation, storage & delivery, at the cost of the Contractor. Furthermore, all technical and non-technical personnel involved in this project should be insured and the SCH will not take any liabilities whatsoever.

7 Defects Liability

7.1 Defects Liability Period

In these conditions the expression "Defects Liability Period" shall mean the defects liability period of **2 years**, calculated from the date of completion of the contract works certified by the SCH.

7.2 Completion of Outstanding work & remedying Defects

To the intent that the Contract works shall, at or as soon as the practicable after the Defects Liability period, be delivered to the SCH in the condition required by the Contractor, fair wear & tear excepted, to the satisfaction of the SCH, the Contractor shall execute all such work of amendment, reconstruction & remedying defects, Shrinkage or other fault as the Consultant may, during the Defects Liability period or within **24 hours** , as a result of an inspection made by the SCH prior to its expiration.

7.3 Cost of Remedying Defects

All the work referred to in sub clause 5.2 shall be executed by the Contractor at his own cost.

ARTICLE-VI: GENERALTERMS &CONDITIONS OF CONTRACT SCHREEMENT.

1. **Inspection & acceptance**

a. The SCH and the Consultant appointed by the SCH shall inspect and examine the works and accessories delivered the services and works performed by the Contractor- under this Contract.

b. All expenses involved in the executing the works shall be at the expenses of the Contractor.

c. If the work performed under the Contract fail to meet the requirements of the Contract, the cost of the unsuccessful works and the confirming repetition work shall all be at the cost of the Contractor. Should there be any defect in material or workmanship the contractor will correct or cause to correct such defects or deviations from the Contract requirements at his expense.

2. Staff

Staff assigned to the project by virtue of this Contract, or of any sub Contract agreed on in accordance with paragraph hereof (Hereinafter referred as Staff), shall in no case be assimilated to SCH officials nor will they be subject to the SCH staff regulation. Accordingly, the Contractor will be responsible for all employment & payment of all kind due to them &all travel required for the implementation of the project.

The contractors shall indicate in advance the numbers & status of different staffs to be employed on different occasion during the implementation stage.

The contractor will hold the SCH harmless from all claims by its Staff specially Connection with the following risk:

a. illness or death
b. Incapacitation from accidents or misadventure either during normal working hour or outside working hours.

3. Report

3.1 The contractor shall immediately report to the SCH abnormal circumstances that might endanger the safety of the works being carried out or the completed works.

4. General

4.1 The contractor will take care that his staff takes no action, which will reflect, adversely on the SCH or in its relation with government and other institutions concerned.

ARTICLE-VII: CONTRACTOR'S OBLIGATION & RIGHT

The contractor shall:

1. Perform everything listed in the B.O.Q. & provide & furnish all labor, materials (where indicated so on the B.O.Q.), necessary tools, survey equipment, machines/plants, all utility (water, power from the source given by the SCH) within construction site, transportation services with sound engineering practice.
2. Perform extra work up to **30%** of each individual items quantified on the same conditions in all respect in which he has agreed to do the main work item.
3. Supply sample of materials proposed to be used in the Contract as may be required by the SCH /Consultant for approval without extra change or delay.
4. Take all precautions necessary for the protection, security, lighting/watching of the site, the work, materials/plants & be responsible for all damages to the works, themselves, or to the lives or property of other during contract period or approved extension thereof.
5. Stand by his contract rates regardless of market prices fluctuation during Contract Period of approved extension thereof, and be responsible for all related expense including waste on materials, carriage to side, return of empties, stacking & removal of rejected materials, pulling down & reinstatement of substandard or rejected work not in accordance with the purpose and intent of the Contract.
6. Be fully responsible for the works of his subcontractors or workman & ensure that on major part of interest therein is directly or indirectly transferred, assigned or underlet to third parties without the SCH's consent.
7. Provide free access for the SCH /Consultant at all reasonable times for regular inspection/examination.
8. Provide all necessary personal superintendent and employee a competent representative to attend to the work full time & to receive any direction explanation, instruction or notice given by the SCH or his agents & consultant.
9. Ensure that contractor's activities do not hinder or obstruct free movement of people or traffics in the staircase and corridors.
10. The contract shall be interpreted in accordance with the laws of Nepal.
11. Any notices given by one party to the other pursuant to this contract shall be sent in writing.
12. Value added tax (VAT) will be payable as per actual requirement. The price quoted by the Contractor shall include all other taxes, e.g. import duties, custom duties, local taxes, business taxes, income tax, etc. that may be levied in accordance to the laws and regulation in being in Nepal. The contractor shall be entirely responsible for the payment of all such taxes, duties and license fees, etc. Any withholding tax applicable as per the law shall be deducted from the amount payable to the Contractor

ARTICLE – VIII: SCH'S OBLIGATION AND RIGHT

Without prejudice to any terms of the Contract, the SCH shall have the right to:

1. Increase or decrease Contract quantities up to 30% of the value of the contract.

2. Change the dimension, level, line of any part of the work or omit any such work. Written notification of such modification shall be given to the Contractor prior to its scheduled implementation.
3. Change the character or quality or kind of such work, ascertain its effect on the Contract rates and add to or deduct from such rates shall see fit and adjust after negotiation for the Contractor, in consultation with the Consultant.
4. Order removal of and withhold measurement/payment for sub-standard materials of work & other reinstatement of replacement to satisfaction without extra charge.
5. Order removal of person from the works if such people are found incompetent, negligent or guilty of improper conduct.
6. Settle all ambiguities or discrepancies between drawing and the schedule and issues final instruction directing in what manner the work to be carried out without in anyway violation the Contract.
7. Order opening up of work for examination/ re-examination in case of doubt, without being liable for consequent damage or making good, except in case where such examination reveal that workmanship or materials are actually in compliance with constructions.
8. Settle all disputes amicably in consultation with the Consultant for a fair and equitable adjustable or any claims arising out of any condition problem unexpected, unforeseen or otherwise not provided in the Contract.
9. Order suspension of works, terminate the Contract in event of continuous or irremediable default on the contractor's part and re-execute through third parties entirely at risk and expenses of the contractor.

   In case of continuous delay in the works due to no fault of the Contractor, the contractor may give notice of withdrawal and in case the SCH cannot remedy the situation within a reasonable time frame, the Contractor shall be entitled to such compensation for costs as shall have been incurred due to such delays, including due payment for works satisfactory completed to such date of withdrawn.
10. Issue the virtual completion certificate only after satisfactory completion on testing, removal of all scaffolding, equipment, surplus materials or rubbish related to Contractor' works, such certificates may be issued for part of the works completed as aforesaid if the SCH wished to use or occupy such parts.
11. Declare the Contract as incomplete until Final Inspection and Final Acceptance at the end of the warranty period 6 months after issuance of virtual completion certificates.

ARTICLE – IX: Instructions to Bidders

1) Prospective bidders must visit and study the nature and status of working site, local conditions, buildings drawings, materials and labour conditions as applicable to work. The bidder shall be familiar with the nature of the building and the nature of the air-conditioning and ventilation project.

2) The bidder shall study the bid documents thoroughly and understand the scope and quality of work expected. If they have any queries, they may seek additional information from the consultant. However, such enquires shall be in written format

only (letter/email/fax), Telephonic enquiries are strictly prohibited. Such enquires shall be c/c to the SCH and consultant as well.

3) Prior to submitting the bid, the bidder shall thoroughly examine the site and the contract documents and seek clarifications from the consultant before submission of bid, if there are any.

4) No claim for extra compensation will be recognized nor entertained if difficulties are encountered with which would an examination of site conditions and contract documents prior to executing contract have revealed.

5) The bidder shall be disqualified, if the bidder tries to influence the decision of SCH/consultant in their favor.

6) The bidder shall submit the bid in two separate envelopes mentioning "Envelope – 1 : Technical Information" and "Envelope – 2 : Financial Information".

7) The bidder shall not include any financial information in Envelope – 1, in such cases the bidder will be automatically disqualified. If the bidder wishes to offer any special discount, the bidder shall include such discount in the envelope – 2.

8) The bidders are not allowed to make any alteration or amendments in the scope of work, specifications and in descriptions as incorporated in the tender documents.

9) The bidder shall submit original detail technical catalogues of all quoted equipment and materials.

10) The bidder must submit the authorized certificate of exclusive representation of the principal company for Nepal to supply, installation and maintenance of proposed system.

11) The bidder shall submit the successful completion of similar type of installation in Nepal in last 3 years with the name and address of the organization, total capacity of the installed equipment, manpower involved and total project cost. The bidder shall submit the details of maximum 6 projects that best describe the ability of the bidder. If the bidder submits more than 5 projects, it will be the evaluation team discretion to choose 6 project for evaluation.

12) The bidder shall submit company profile with the list of personnel designated for this particular project including their signed brief bio-data (not more than two pages for each person) attached with letter of commitment. The proposed technical team must pose substantial work experience in VRF multi split air-conditioning system. Alteration of the project manager/engineers and site supervisors are strictly prohibited.

13) The bidder shall submit the realistic work schedule. The work plan shall mention the nature of work, nature and quantity of require man power, man days require for each work. Project completion on stipulated time is very crucial. A Proof of completion of previous projects on stipulated time period shall be attached.

14) On the written acceptance of the tender by the SCH, the successful bidder requires to enter into a formal agreement. The bid bond will be forfeited and contract awarded to another bidder in case the successful bidder fail to sign the agreement within 5 days from the date of award.

15) Record Drawings:

The cost of furnishing above prints and preparing these drawing shall be borne by the contractor themselves.

The bidder The successful bidder shall provide and keep on the job at all times, one (1) complete and separate set of black line prints of the HVAC system on which shall be clearly, neatly and accurately noted, promptly as the work progresses, all architectural and HVAC system changes, revisions and additions to the work.

No approval of requisition for payment for work installed will be given unless supported by record prints as required above. At the conclusion of work, “as built” drawings shall be prepared and submitted to the consultant.

16) The Contractor shall become familiar with other trades of building works and coordinate his works accordingly.

17) Prior approval of the equipment and related accessories from the consultant is necessary before the procurement and delivery.

18) Country of origin and country of manufacturing of quoted equipment and accessories must be mentioned in the bid and the successful bidder must submit the authorized certificate of country of origin from principal company along with the arrival of said equipment and accessories. The bidder shall also mention the country of manufacture of the individual product and port of dispatch in the technical proposal.

19) It is the bidder's responsibility to ensure that the selected equipment are of enough capacity and will fit into the spaces provided. Site visit is recommended to ensure that the HVAC work can be completed on stipulated time and Special consideration must be given to provide sufficient clearance around equipment for access and maintenance.

20) The successful bidder must supply and install all equipment of same brand, model and capacity mentioned in bid document, other equipment will not be accepted in any circumstances.

21) The Consultant shall at all times have free access to work on site to examine measure or give necessary instructions to the successful bidder. Any alternation in design or drawing as per site conditions will be given to the successful bidder in written form by the consultant.

22) The quantity mentioned in the Bill of Quantity is estimated only. The payments for all items shall be made as per actual.

23) The bidders shall work out and submit along with bid document, the detail calculations of the quantity and cost breakdown of insulated refrigerant quality copper pipe based on the location of IDUs and ODUs in bid drawings. While sizing the pipes and selection of branch kit, the bidder shall closely follow the manufacturer's instructions and recommendations. The bidder shall also submit the supporting document for pipe sizing. The piping drawings submitted shall be approved by the manufacturer's certified engineer.

24) Any item which is not covered in the B.O.Q. but that is required for successfully operate and commissioned of the installed HVAC system shall be quoted with substantial details. If the contractor fails to quote these items, additional cost will not be paid in any circumstances.

25) After completion of the project the bidder should submit the three hard copies of approved as built drawing prepared using Auto CAD and three electronic copies saved on thumb drive.

26) The work shall not be considered completed until the consultant has certified in writing.

27) SCH has full right to award the job the any bidder without giving any explanation to any bidders.

28) SCH has full right to implement the installation either fully or partially depending on the technical segregation.

29) After the successful completion of the system the bidder will schedule an operation and maintenance training to the operator/technicians deputed by the SCH for continuous six days.

30) The bidder shall return duly filled up the BOQ (hand written rates/amount). Rate and amount of each item shall be quoted. *Retyped BOQ will be rejected.*

The bidder shall furnish the following along with the tender document:

a) The entire original tender documents and drawings duly endorsed.
b) Certification of firm registration certificate with renewal

c) Certification of PAN/VAT registration with renewal
d) Certification of income tax clearance with renewal
e) ISO 9000 series certification of equipment
f) Authorization letter from the manufacturer
g) Price list of major spare parts valid during Annual Maintenance Contract (AMC)
h) List of similar works completed during the past 3 years (nature of work, project cost and manpower involved) maximum 6 best projects
i) List of tools and equipment
j) Detailed work schedule for the project
k) Details of proposed technical team for the project
l) Signed Bio-data with letter of commitment of Engineers and supervisors
m) Catalogues of all equipment and materials quoted.
n) Sizing of refrigerant piping with sizes mentioned in drawings
o) Sample of insulated refrigerant piping of all sizes, insulated cPVC drain pipe of all sizes (each 100 mm long) and pipe hangers for horizontal and vertical hangings. The unsuccessful bidder must collect the submitted samples within 5 days of notification. Uncollected sample will be disposed after 5 days.

p) Failure to provide any of the above information may disqualify the bidder.

q) It is mandatory to highlight the proposed model and related data and mention BOQ no. in the submitted catalogues.

TECHNICAL SPECIFICATION OF EQUIPMENT AND WORKMANSHIP OF

AIR-CONDITIONING & VENTILAION SYSTEM

1 General

1.1 Scope of Work

The scope of work of proposed Air-conditioning and ventilation system shall be the following but not limited to:

Supply, site delivery, installation, testing and commissioning of proposed system including skilled manpower/ labours, testing instruments, tools, installation materials, service equipment, consumables and making the entire system ready for continuous operation of the air-conditioning system as per design and drawing, specifications, instruction and site conditions:

- Heat pump type VRF multi split air-conditioning systems with ducatble, compact 4 way ceiling cassette and 4 way ceiling cassette type indoor units and remote controllers
- Double skin air handling units with VRF type outdoor units and remote controllers
- Inline fresh air supply fans
- Inline exhaust air fans
- Refrigerant quality copper pipe and factory made branch kits suitable for VRF system covered with closed cell insulation
- C PVC drainpipes covered with closed cell insulation
- Power coated aluminium diffusers and grills with VCD
- SS perforated laminar flow supply air diffuser with HEPA filter
- GI network of duct covered with closed cell nitrile insulation
- SS network of duct covered with closed cell nitrile insulation
- Acoustic insulation with open cell nitrile insulation
- Related electrical work
- Related civil work
- Comprehensive 2 year Guarantee with defective part replacement
- Maintenance plan during 2 year guarantee period
- Proposal for AMC contract for 3 years after expiry of guarantee period with Annual Maintenance plan
- Price list of major spare parts valid for 3 years AMC
- Additional works, applicable during installation period.

1.2 Basis of Design

Outdoor Conditions

	DBT [^{0}C]	RH [%]
i) Summer	33	70
i) Winter	0	65

Indoor Conditions

	DBT [^{0}C]	RH [%]
i) Summer	24	55 %
ii) Winter	20	55 %

Fresh air Supply: 10 cfm per person

Lighting Load: 0.5 W/Sq.m.

Occupant Load: 73 W/person (Latent Heat)

: 58 W/person (Sensible Heat)

Toilet Exhaust: 50 cfm /WC/Urinal

1.3 Operating Tests

After all mechanical work has been completed, tested, adjusted and approved, the system shall be tested for six continuous days, or longer when so directed, to demonstrate that they fulfil all requirements and that they operate satisfactorily in full load in presence of representative of SCH and consultant.

The bidder shall furnish three copies of test data, computations and results in reports in report form to the consultant.

1.4 Instruments:

All instruments required for testing and commissioning shall be provided by the contractor at his cost. Cost for those items shall be included in item rate of equipment.

1.5 2 Years Comprehensive Guarantee with parts replacement

Testing, trial usage or use of equipment for temporary provision of services shall not shorten or modify the terms of this guarantee. Manufacturers shall provide their standard guarantees for work under this division. However, such guarantees shall be in addition to and not in lieu of all other liabilities, which the manufacturer and bidder may have by law or by other provisions of the contract documents.

All materials, items of equipment and workmanship furnished under this division shall carry the standard warranty against all defects in material and workmanship. Any fault due to defective or improper material, equipment, workmanship which may develop shall be made

good, forthwith, by and at the expense of the bidder, including all other damage done to areas, materials and other systems resulting from this failure.

The bidder shall guarantee that all elements of the systems are of sufficient capacity to meet the specified performance requirements as set forth herein or as indicated for 2 years with part replacement of defective parts.

The bidder shall guarantee that all components used in installed air-conditioning system are in stock at all the time with them and assures to replace within stipulated time.

Upon receipt of notice from the SCH of failure of any part of the systems or equipment during the guarantee period, the bidder at his own expense shall replace the affected part or parts within 24 hours of written notification.

All mechanical equipment, pipe works, control system and installed accessories shall have a guarantee for a period of one year. Any part that fails or proves defective during this guarantee period except force majuere shall be replaced or repaired without any extra cost. If the defects are not rectified within stipulated time frame the SCH may arrange to do so at the contractor's risk and cost, without prejudice to any other rights. The contractor failing to fulfil their duty will be black listed and will be automatically disqualified to participated in any future projects of the SCH.

1.6 Operation and Maintenance Instructions:

During operating tests, the contractor shall arrange and pay for the services of qualified and authorized representatives of manufacturers of air-conditioning equipment to instruct the ***SCH***'s operating personnel in operating and maintaining the systems and equipment. The period of this instruction shall be 6 days.

During operating tests, the bidder shall arrange to keep one experienced mechanical engineer on the job for a continuous period of 6 days.

1.7 Workmanship:

The entire work provided in this specification shall be constructed and finished in every respect and substantial manner. It is not intended that the drawings shall show every pipe, fitting and appliance, but the bidder shall furnish and install all such parts as may be necessary to complete the systems in accordance with the best trade practice and to the satisfaction of the consultant.

The successful bidder shall obtain detailed information from the manufacturers of apparatus as to the proper method of installing and interconnections.

All pipes shall be thoroughly cleaned and blown out by dry nitrogen to prevent any debris from accumulation of debris in the indoor unit's coil when systems are placed in operation. All temporary connections required for blowing out the network of piping and any other equipment or labour for cleaning shall be provided by the contractor.

2 Equipment

2.1 Heat pump type VRF multi split air-conditioning units

2.1.1 4 way compact/ceiling cassette type indoor units

a) **Cabinet Section:** Cabinet of 4 way ceiling cassette type indoor units shall be fabricated of heavy gauge electro-galvanized mild steel with structural rigidity. Supply and return air grill shall be made of high quality plastic. Return air grill shall be located at center, while four way supply air grill with automatic louver shall swing in order to maintain proper air distribution. The flap shall be designed to prevent soiling on false ceiling near supply grills. The flap shall be easily removed if require. Access panel should be constructed as to easy removable. The indoor unit shall be equipped with powerful inbuilt drain pump to avoid the collection of water in drain pans and over flow inside the room. The unit shall equipped with drain pan inspection port for cleaning of drain pan and drain pump easily. The mounting height should be able to adjust through the panel corner cover.

b) **Fan**: Fan shall be energy efficient turbo axial type for noiseless operation suitable for the electric characteristic of 220 volts 1ph. 50 hz. Thermal & electrical protectors shall protect fan. Fan shaft shall be of stainless steel and supported in self aligning precision for balancing.

c) **Coil Section:** Refrigerant coil shall be of copper tube mechanically bonded to aluminium fins assembled within heavy gauge aluminium framework.

d) Filter Section: Filter shall be easily accessible and designed for easy withdrawal of filter cells. Filter. Filters shall be of dry (cleanable) type having efficiency rating of 90 %. Filters must possess a high flow rate, high dust retention with low differential pressure.

e) **Refrigerant:** Refrigerant used in the equipment shall be environmental friendly with a zero Ozone Depleting Potential rating R-410A. R-410A has better heat transfer properties than other common refrigerant and higher density which allows reducing pipe sizes in heat exchangers and interring connecting pipes. Thus reduces amount of refrigerant to be charged.

f) **Capacity:** Nominal cooling and heating capacity of each 4 way ceiling cassette type indoor unit shall be not be less than data given in B.O.Q.

g) Power consumptions: Nominal power consumption of each 4 way ceiling cassette type indoor unit shall be not be more than data given in B.O.Q.

2.1.2 VRF type Outdoor unit

a) Cabinet Section: Cabinet of outdoor units shall be fabricated of heavy gauge electro-galvanized mild steel with structural rigidity.

b) Compressor shall be scroll type DC inverter hermetic with suction and discharge valves, gas cooled motor, vertical crank shaft balanced and mounted on vibration isolators to provide free floating operation. It should have the over load protection.

Whereas, condenser fan shall be propeller type made of glass reinforced acryl styrene resin and direct driven with DC motor for improved energy efficiency.

c) The outdoor shall be suitable for 3 phases, 380 V, 50 Hz. Condenser fan and compressor shall be protected by separate thermal & electrical protectors. Furthermore HPC/LPC switch shall be installed to protect the compressor.
d) Power cables and control cables shall be installed as per equipment manufacturer's requirement.
e) Coil Section: Refrigerant coil shall be of copper tube mechanically bonded to Aluminium blue fins assembled within heavy gauge aluminium framework. Headers shall be in copper coil and header shall be electro-tinned after manufacturers.
f) Refrigerant flow control: The outdoor unit shall have electronic expansion valves to meet exact cooling/heating demand.
g) Accumulator: The outdoor unit shall have over sized accumulator to store unused refrigerant during low demand and optimises the flow of gaseous refrigerant and oil to the compressor.
h) Noise level: The outdoor unit shall have low noise level. While operating at highest speed the noise level of each outdoor unit shall not exceed data given in B.O.Q.
i) Capacity: Nominal cooling and heating capacity of each VRF type outdoor unit shall be not be less than data given in B.O.Q.
j) Power consumption: Nominal power consumption of each VRF type outdoor unit shall be not be more than data given in B.O.Q.

3.0 Accessories:

3.1 Refrigerant Pipe, Drain Pipe and Fresh Air Duct/Pipe:

3.1.1 Refrigerant pipe:

Refrigerant pipe interconnecting indoor units and outdoor units shall be of refrigeration quality copper pipe; soft drawn seamless high grade copper pipe. Refrigerant line shall be covered properly to avoid any mechanical injuries. All pipe joints shall be properly braced with oxy-acetylene (if required). For the refrigerant pipes larger than 19mm diameter hard copper pipe should be used with elbows wherever required. For the smaller pipes pipe bender should be used for bending the pipe.

Indoor units shall be connected to main refrigerant pipe with factory made branch kit having facility to joint various sizes of pipes as required in each branch kit. Model number of branch kit shall be mentioned in the bid document. Pipe sizing shall be carried out as per manufacturer's instructions.

All insulated refrigerant pipes exposed to outdoor shall be covered with 24 gauge G.I. ducting and properly secured on walls/floors. The bidder shall include the cost for this purpose in rate of refrigerant pipes and not entitled to claim separately.

The bidder must submit the detail refrigerant piping layout with respective pipe sizes, location of branch kit along the bid document.

3.1.2 Drain pipe:

Drain pipe shall be made of c PVC. The bidder shall maintain adequate slope to avoid the collection and leakage of condensate drain. Condensate drain pipe shall be covered with closed cell insulation.

It is bidder's responsibility that the refrigerant and drain pipe sizes are as per the manufacturer's recommendation and are of correct sizes to ensure the optimum operation of entire installed HVAC system.

3.2 Testing of Refrigerant Pipe, Drain Pipe & Fresh Air Duct/Pipe:

The contractor shall test the refrigerant piping with nitrogen at a pressure 2 times greater than nominal operating discharge pressure and keep the pressure record every 2 hours during day and every 12 hours during night for 24 hours. All inactive refrigerant piping shall keep pressurized all the time till connection of indoor units and outdoor unit are ready. It is the Contractor's responsibility to ensure that the installed pipes are free of debris and moisture to ensure smooth and trouble free operation of the entire HVAC system.

Testing of drain pipe shall be carried out by filling the drain pan of indoor units by water and allowing flowing the water to drain and make sure that there is no leakage and accumulation of water inside the pipe.

Testing of fresh air duct/pipe shall be carried out with smoke testing to make sure that there is no leakage and proper distribution of fresh air supply to each indoor unit by adjusting balancing dampers.

3.3 Refrigerant:

Refrigerant used in the equipment shall be R-410A. Additional R-410A shall be charged into the system if required. The additional amount of refrigerant required shall be calculated based on the length and size of installed liquid refrigerant pipe and manufacturer's data book. The bidder is not entitled to claim for extra refrigerant required. Cost of extra quantity of refrigerant, if required shall be included in unit cost of equipment.

3.4 Remote Controller

Each indoor unit shall have individual wired remote controller with LED display having provision of weekly operation schedule to be registered. It shall also have provision of self-diagnosis system, temperature settings and cooling, heating and fan modes operation setting. It shall have three speed fan controller. It shall have provision of setting upper and lower room temperature to precisely control the room temperature and energy conservation. It shall also have run hours meter to registered cumulative operation hours of the unit since commissioning.

3.5 Pipe Insulation

All refrigerant pipes shall be insulated with closed cell insulation tubes of respective sizes with at least 19 mm thickness for pipes exposed to outdoor and 13 mm thickness for pipes installed indoor. All piping to be insulated shall be cleaned thoroughly before applying insulation. Care shall be taken to ensure that there are no damages to piping insulation. All joints shall be sealed with adhesive compounds.

Insulation material should be of expanded closed cell electrometric nitrile rubber material having a thermal conductivity of not more than 0.034 w/ mK at 24 °C. The density of the material shall not be more than 0.75 g/cu.cm. Material shall be self-extinguishing and CFC free so as not to emit toxic gases in case of fire.

3.6 Supports/hangers for Piping

Vertical piping: Vertical piping shall be secured at sufficiently close intervals to keep the pipe in alignment and carry the weight of the pipe and contents.

Horizontal piping: Horizontal piping shall be secured at sufficiently close intervals to keep the pipe in alignment and prevent sagging. Pipe support shall be adjustable for height.

All pipe support shall be painted with two coats of red oxide and two coats of enamel paints of approved colour. Spacing of pipe support shall not be more than 3 m. Extra support shall be provided at the bends and tees, if required. Insulated piping shall be supported in such a way so as not to damage the insulation. None of the pipe hanger shall be secured to the support made for false ceiling. The hangers shall be secured with help of at least 6 mm diameter anchor bolt.

Where pipes pass through floors and walls provide PVC pipe sleeves 30 mm larger than outside diameter of the pipe inclusive of insulation. The centre of the pipes shall be at the centre of the sleeves and sleeves shall be flushed with the finished surface. The bidder is not entitled to claim for extra cost for supports/hangers for pipes, cost for these items shall be included in unit cost of pipe.

3.7 Support for indoor units and outdoor units

4 way ceiling cassette type indoor unit shall be hanged on ceiling by 4 numbers of 8 mm diameter threaded rod with expansion bolt having provision of adjustment of height. The units shall be properly levelled so as not to spill the condensate drain.

Supports for each outdoor shall be strong enough to hold the weight of the unit and locally fabricated using MS angles. Such support shall be secured with 4 numbers of 10 mm diameter expansion bolt on floor. The support shall be painted with two layers of red oxide and two layers of enamel paint of specified colour. The outdoor unit shall be installed on vibration isolator as recommended by the manufacturer.

4.0 Testing of control system and performance testing of heat pump type VRF multi split AC units

After installation of the entire heat pump type VRF multi split air-conditioning systems, a testing and commissioning must be conducted to check the performance of the AC systems, control system and drain piping system. The test report shall include but not limited to designation of AC units, location, voltage, current, indoor and out door temperature, humidity, air flow rate, suction and discharge pressures etc. The contractor shall get prior approval of the format of test report and conduct the test in presence of consultant and SCH. Then the contractor shall submit test report to the consultant for approval. The bidder is not entitled to claim for extra cost for supports/hangers for indoor and outdoor equipment, cost for these items shall be included in unit cost of equipment.

5.0 Related Electrical works:

Electrical power supply for all indoor units and VRF type inverter outdoor units, DC inverter Outdoor unit and outdoor units of precision type AC unit shall be provided by Electrical contractor. The Electrical contractor shall provide control panel with MCB, MCCB, contractors, high/low voltage protector, phase protectors, earth leakage circuit breaker (ELCB) and indicator lamps. However, it is the HVAC contractor's responsibility to provide the control (data) cable required between indoor units and outdoor units and control (data) cable for each remote controller shall be also be provided by the HVAC contractor themselves. The control (data) cable shall be shield twisted pair (STP) type. The bidder is not entitled to claim for extra cost for control/data cable, cost for these items shall be included in unit cost of equipment.

6.0 Related Civil works:

The air-conditioning contractor shall submit the shop drawing showing the locations of the cut out / hole to be made on existing wall/floor/ceiling and get written approval from the consultant prior to make holes / cut the groves. The holes / cut outs shall be made by using drilling machine / cutters, not by chisel and hammer. Utmost care must be taken not to make existing wall/floor/ceiling dirty/damage. All holes made shall be filled with cement plaster / plaster of Paris of same quality as existing by Civil Contractor. Installation of the indoor units shall be carried out in close coordination with false ceiling contractor. The VRF type out door units shall be installed on structurally rigid MS frame and secured by at least 4 numbers of diameter 12 anchor bolts with vibration isolators. Repairing of walls, RCC slab, plastering and painting are not scope on the HVAC contractor.

Bill of Quantities

Notes for Unit Rate Contracts:

Objectives

The objectives of the Bill of Quantities are

(a) to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and

(b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

Content

The Bill of Quantities should be divided generally into the following sections:

(a) Preamble;

(b) Work Items (grouped into parts);

(c) Day works Schedule;

d) Provisional Sums; and

(d) Summary.

Preamble

The Preamble should indicate the inclusiveness of the unit prices, and should state the methods of measurement which have been adopted in the preparation of the Bill of Quantities and which are to be used for the measurement of any part of the works.

Work Items

The items in the Bill of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. General items common to all parts of the works may be grouped as a separate section in the Bill of Quantities.

PROJECT: Air-conditioning System and Ventilation system of STUPA HOSPITAL at Kathmandu

BILL OF QUANTITY OF AIR-CONDITIONING & VENTILATION SYSTEM

S.N.	Particulars	Qty	units	Rate [NRS.]		Amount [Nrs.]
				In Figure	In Words	
1	**Heat pump type VRF multi split air-conditioning systems: Approved Makes: Hitachi, Toshiba and Mitsubishi**					
	Supply, installation, testing and commissioning of heat pump type VRF multi split air-conditioning system with refrigerant (R-410A) with 1 **years guarantee** as per specifications, drawings and instruction at site.					
	Indoor units of heat pump type VRF multi split air-conditioning system					
1.1	**4 way compact ceiling cassette type indoor units**	6	nos.			
	Nominal cooling capacity: 2.8 kW					
	Nominal heating capacity: 3.2 kW					
	Sound Pressure Level at high speed : 38 dBA					
	Air flow rate at high speed: 12CMM					
	Electrical power source: 1 Ph, 220V, 50 Hz					
	Liquid line pipe diameter: 6.35 mm					
	Gas line pipe diameter: 12.7 mm					
	Cabinet Size: 570 mm x 570 mm x 285mm					
	Proposed Model No/Make:-					
1.2	**4 way compact ceiling cassette type indoor units**	25	nos.			
	Nominal cooling capacity: 4 kW					
	Nominal heating capacity: 4.8 kW					
	Sound Pressure Level at high speed : 41 dBA					

	Air flow rate at high speed: 13 CMM					
	Electrical power source: 1 Ph, 220V, 50 Hz					
	Liquid line pipe diameter: 6.35mm					
	Gas line pipe diameter: 12.7 mm					
	Cabinet Size: 570 mm x 570 mm x 285mm					
	Proposed Model No/Make:-					
1.3	**4 way ceiling cassette type indoor units**	8	nos.			
	Nominal cooling capacity: 5.6 kW					
	Nominal heating capacity: 6.3 kW					
	Refrigerant: R410A					
	Sound Pressure Level at high speed : 32 dBA					
	Air flow rate at high speed: 15 CMM					
	Electrical power source: 1 Ph, 220V, 50 Hz					
	Liquid line pipe diameter: 6.3 mm					
	Gas line pipe diameter: 12.7 mm					
	Cabinet Size: 850 mm x 850 mm x 260 mm					
	Proposed Model No/Make:-					
1.4	**4 way ceiling cassette type indoor units**	6	nos.			
	Nominal cooling capacity: 7.1 kW					
	Nominal heating capacity: 8.5 kW					
	Refrigerant: R410A					
	Sound Pressure Level at high speed : 32 dBA					
	Air flow rate at high speed: 17 CMM					
	Electrical power source: 1 Ph, 220V, 50 Hz					
	Liquid line pipe diameter: 9.5 mm					
	Gas line pipe diameter: 15.9 mm					
	Cabinet Size: 850 mm x 850 mm x 260 mm					

	Proposed Model No/Make:-					
1.5	**4 way ceiling cassette type indoor units** Nominal cooling capacity: 11.2 kW Nominal heating capacity: 12.5 kW Refrigerant: R410A Sound Pressure Level at high speed : 42 dBA Air flow rate at high speed: 28 CMM Electrical power source: 1 Ph, 220V, 50 Hz Liquid line pipe diameter: 9.5 mm Gas line pipe diameter: 15.9 mm Cabinet Size: 850 mm x 850 mm x 260 mm	1	nos.			
	Proposed Model No/Make:-					
1.6	**Ductable type indoor units** Nominal cooling capacity: 8.4 kW Nominal heating capacity: 9.6 kW Refrigerant: R410A Sound Pressure Level at high speed : 48 dBA Air flow rate at high speed: 30 CMM External static Pressure: Pa Electrical power source: 1 Ph, 220V, 50 Hz Liquid line pipe diameter: 9.5 mm Gas line pipe diameter: 15.9 mm Cabinet Size: 300mm x 1150 mm x 810 mm	1	nos.			
	Proposed Model No/Make:-					
1.7	**High static pressure Ductable type indoor units**	3	nos.			

	Nominal cooling capacity: 11.2kW					
	Nominal heating capacity: 13 kW					
	Refrigerant: R410A					
	Sound Pressure Level at high speed : 48 dBA					
	Air flow rate at high speed: 30 CMM					
	External static Pressure: Pa					
	Electrical power source: 1 Ph, 220V, 50 Hz					
	Liquid line pipe diameter: 9.5 mm					
	Gas line pipe diameter: 15.9 mm					
	Cabinet Size: 300mm x 1150 mm x 810 mm					
	Proposed Model No/Make:-					
1.8	**High static pressure Ductable type indoor units**	3	nos.			
	Nominal cooling capacity: 14.2 kW					
	Nominal heating capacity: 16.3 kW					
	Refrigerant: R410A					
	Sound Pressure Level at high speed : 48 dBA					
	Air flow rate at high speed: 34 CMM					
	External static Pressure: Pa					
	Electrical power source: 1 Ph, 220V, 50 Hz					
	Liquid line pipe diameter: 9.5 mm					
	Gas line pipe diameter: 15.9 mm					
	Cabinet Size: 300mm x 1450 mm x 810 mm					
	Proposed Model No/Make:-					
1.9	**High static pressure Ductable type indoor units**	2	nos.			
	Nominal cooling capacity: 16.0 kW					
	Nominal heating capacity: 18.0 kW					
	Refrigerant: R410A					

	Sound Pressure Level at high speed : 48 dBA					
	Air flow rate at high speed: 40 CMM					
	External static Pressure: Pa					
	Electrical power source: 1 Ph, 220V, 50 Hz					
	Liquid line pipe diameter: 9.5 mm					
	Gas line pipe diameter: 15.9 mm					
	Cabinet Size: 300mm x 1450 mm x 810 mm					
	Model No/Make:-					
2	**Outdoor units of heat pump type VRF multi split air-conditioning system**					
2.1	**Outdoor units with scroll compressor**	2	nos.			
	Nominal cooling capacity: 40 kW					
	Nominal heating capacity: 45kW					
	Refrigerant: R410A					
	Maximum Sound Pressure Level: 67 dBA					
	Condenser fan Air flow rate: 490 CMM					
	Electrical power source: 3 Ph, 380V, 50 Hz					
	Power input on cooling mode:11.45 kW					
	Power input on heating mode: 11.30 kW					
	COP in cooling mode: 3.5					
	COP in heating mode: 4					
	Flow control: Micro computer control expansion valve					
	Compressor: Inverter scroll type hermetic compressor					
	Liquid line pipe diameter:12.7 mm					
	Gas line pipe diameter: 25.4mm					
	Proposed Model No/Make:-					

2.2	**Outdoor units with scroll compressor** Nominal cooling capacity: 45 kW Nominal heating capacity: 50 kW Refrigerant: R410A Maximum Sound Pressure Level: 62 dBA Condenser fan Air flow rate: 250 CMM Electrical power source: 3 Ph, 380V, 50 Hz Power input on cooling mode: 13.5 kW Power input on heating mode: 13 kW COP in cooling mode: 3.4 COP in heating mode: 4 Flow control: Micro computer control expansion valve Compressor: Inverter scroll type hermetic compressor Liquid line pipe diameter: 12.7 mm Gas line pipe diameter: 28.58 mm	2	nos.			
	Proposed Model No/Make:-					
2.2	**Outdoor units with scroll compressor** Nominal cooling capacity: 65 kW Nominal heating capacity: 70 kW Refrigerant: R410A Maximum Sound Pressure Level: 62 dBA Condenser fan Air flow rate: 350 CMM Electrical power source: 3 Ph, 380V, 50 Hz Power input on cooling mode: 21.5 kW Power input on heating mode: 21 kW COP in cooling mode: 3.4 COP in heating mode: 4	1	nos.			

	Flow control: Micro computer control expansion valve					
	Compressor: Inverter scroll type hermetic compressor					
	Liquid line pipe diameter: 12.7 mm					
	Gas line pipe diameter: 28.58 mm					
	Proposed Model No/Make:-					
2.3	**Outdoor units with scroll compressor**	2	nos.			
	Nominal cooling capacity: 85 kW					
	Nominal heating capacity: 95kW					
	Refrigerant: R410A					
	Maximum Sound Pressure Level: 67 dBA					
	Condenser fan Air flow rate: 490 CMM					
	Electrical power source: 3 Ph, 380V, 50 Hz					
	Power input on cooling mode: 26.5 kW					
	Power input on heating mode: 24 kW					
	COP in cooling mode: 3.4					
	COP in heating mode: 4					
	Flow control: Micro computer control expansion valve					
	Compressor: Inverter scroll type hermetic compressor					
	Liquid line pipe diameter: 19.1 mm					
	Gas line pipe diameter: 41.3 mm					
	Proposed Model No/Make:-					
3	Supply, installation, testing and commissioning of individual wired remote controllers compatible as per specifications, drawings and instruction at site.	45	nos.			

4	Supply, installation, testing and commissioning of individual wireless remote controllers compatible as per specifications, drawings and instruction at site.	35	nos.			
5	Supply installation, testing and commissioning of branch kits of various sizes covered with **19 mm** thick closed cell insulation as per specifications, drawings and instruction at site	47	sets			
6	Supply, installation, testing and commissioning of AHU kit with 1 year's comprehensive guarantee with part replacement as per specifications, drawings and instruction at site.	4	Sets			
7	Supply, installation, testing and commissioning of individual Wired remote controllers for ODU connected with AHU as per specifications, drawings and instruction at site.	4	Sets			
	VENTILATION EQUIPMENT					
	Fresh air supply and Exhaust air fans, Approved Makes: Wolter, Pineair, Airflow					
8	Supply, installation, testing and commissioning of inline ductable exhaust air fans for toilets inclusive of flexible joint and all kinds of fittings, accessories and hangers per specifications, drawings and instruction at site					
8.1	Air Flow Rate: 100 cfm @ 50 Pa Power source: 1P, 230 V, 50 Hz Power consumption: 0.25kW Noise level 3 m: 35 dBA Protection Rating: IP X4	5	nos.			
	Proposed Model No/Make:-					
8.1	Air Flow Rate: 100 cfm @ 250 Pa	5	nos.			

	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.2	Air Flow Rate: 150 cfm @ 50 Pa	1	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.3	Air Flow Rate: 100 cfm @ 100 Pa	2	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.3	Air Flow Rate: 100 cfm @ 300 Pa	5	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.4	Air Flow Rate: 200 cfm @ 100 Pa	3	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					

	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.5	Air Flow Rate: 250 cfm @ 100 Pa	3	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.6	Air Flow Rate: 300 cfm @ 100 Pa	1	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.6	Air Flow Rate: 300 cfm @ 300 Pa	4	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
8.7	Air Flow Rate: 150 cfm @ 150 Pa	5	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					

	Proposed Model No/Make:-					
8.8	Air Flow Rate: 200 cfm @ 150 Pa Power source: 1P, 230 V, 50 Hz Power consumption: 0.25kW Noise level 3 m: 35 dBA Protection Rating: IP X4	1	nos.			
	Proposed Model No/Make:-					
8.9	Air Flow Rate: 300 cfm @ 150 Pa Power source: 1P, 230 V, 50 Hz Power consumption: 0.25kW Noise level 3 m: 35 dBA Protection Rating: IP X4	1	nos.			
	Proposed Model No/Make:-					
8.9	Air Flow Rate: 300 cfm @ 300 Pa Power source: 1P, 230 V, 50 Hz Power consumption: 0.25kW Noise level 3 m: 35 dBA Protection Rating: IP X4	4	nos.			
	Proposed Model No/Make:-					
8.10	Air Flow Rate: 450 cfm @ 150 Pa Power source: 1P, 230 V, 50 Hz Power consumption: 0.25kW Noise level 3 m: 35 dBA Protection Rating: IP X4	4	nos.			
	Proposed Model No/Make:-					

9	Supply, installation, testing and commissioning of wall mounted exhaust air fans with auto louver inclusive of flexible joint and all kinds of fittings, accessories and hangers per specifications, drawings and instruction at site.					
	Dai: 150 mm/100mm	11	nos.			
	Power source: 1P, 230 V, 50 Hz					
	Power consumption: 0.25 kW					
	Noise level 3 m: 35 dBA					
	Protection Rating: IP X4					
	Proposed Model No/Make:-					
10	**DX Air handling Units with Inverter type outdoor units, Approved Makes: Waves, carryaire, Systemair**					
	Supply, installation, testing and commissioning of heat pump type inverter single split AC system with high static air handling units (AHU) of following capacities fully charged with Refrigerant (R-410A) inclusive of interconnecting power and control cables, individual remote controllers as per specifications and drawings and instruction at site in coordination with modular OT contractor.					
	Air Handling Unit (AHU): Floor/Ceiling mounted 50 mm thick PUF double skin panel with thermal break, pre filter (MER V-8),bag filter (MER V-14), mixing boxes ,electric reheater and DX cooling coil of 6 row copper tube with low noise energy efficient Plug fan with vfd (danfoss) as per site condition.					
10.1	Nominal cooling capacity : 14 kW	2	Sets			
	Nominal heating capacity : 16 kW					

	Air flow rate: 1250 cfm					
	ESP: 125 mm Wg or higher as per site condition					
	Model No/Make:-					
10.2	Nominal cooling capacity : 22 kW	2	Sets			
	Nominal heating capacity : 25 kW					
	Air flow rate: 1560 cfm					
	ESP: 125 mm Wg or higher as per site condition					
	Proposed Model No/Make:-					
10.3	**Outdoor units with scroll compressor , Approved Makes: Hitachi, Toshiba and Mitsubishi**	2	nos.			
	Nominal cooling capacity:14 kW					
	Nominal heating capacity: 16kW					
	Refrigerant: R410A					
	Maximum Sound Pressure Level: 54 dBA					
	Condenser fan Air flow rate: 85 CMM					
	Electrical power source: 3 Ph, 380V, 50 Hz					
	Power input on cooling mode:4.5 kW					
	Power input on heating mode: 4.0 kW					
	COP in cooling mode: 3.5					
	COP in heating mode: 3.8					
	Flow control: Micro computer control expansion valve					
	Compressor: Inverter scroll type hermetic compressor					
	Liquid line pipe diameter: 9.5 mm					
	Gas line pipe diameter: 15.9 mm					
	Proposed Model No/Make:-					

10.4	**Outdoor units with scroll compressor , Approved Makes: Hitachi, Toshiba and Mitsubishi** Nominal cooling capacity: 22 kW Nominal heating capacity: 25kW Refrigerant: R410A Maximum Sound Pressure Level: 54 dBA Condenser fan Air flow rate: 100 CMM Electrical power source: 3 Ph, 380V, 50 Hz Power input on cooling mode: 7.5 kW Power input on heating mode: 7 kW COP in cooling mode: 3.2 COP in heating mode: 3.8 Flow control: Micro computer control expansion valve Compressor: Inverter scroll type hermetic compressor Liquid line pipe diameter: 9.5 mm Gas line pipe diameter: 19.1 mm	2	nos.			
	Proposed Model No/Make:-					
	LOW SITE WORKS					
11	Supply, installation, testing and commissioning of enamel painted MS supports for outdoor units as per specifications and drawings	9	sets			
12	Supply, installation testing and commissioning of SS perforated Laminar flow supply air and return air diffusers with HEPA filter housing with HEPA filter (0.3 micron, 99.97 % Efficiency) of size 2400mmx1200mmx350mm with inbuilt clean room light.	4	lots			

13	Supply, installation, testing and commissioning of enamel painted MS supports for AHUs units as per specifications and drawings	4	Sets			
14	Pipes, Duct and Accessories					
	Supply, installation, testing and commissioning of refrigerant quality copper pipes of different sizes covered with **19 mm** thick closed cell insulation (indoor & outdoor) as required inclusive of supports made of MS angle/ rods as per specifications, drawings and instruction at site					
14.1	**Soft:**					
14.1.1	Dia: 6.35 mm	290	RM			
14.1.2	Dia: 9.52 mm	375	RM			
14.1.3	Dia: 12.7 mm	420	RM			
14.1.4	Dia: 15.88 mm	365	RM			
15.2	**Hard:**					
15.2.1	Dia: 19.02 mm	65	RM			
15.2.2	Dia: 22.2 mm	50	RM			
15.2.3	Dia: 25.4 mm	75	RM			
15.2.4	Dia: 28.58 mm	125	RM			
15.2.5	Dia: 31.8 mm	20	RM			
15.2.6	Dia: 34.93 mm	80	RM			
15.2.7	Dia: 38.1 mm	45	RM			
15.2.8	Dia: 41.28 mm	100	RM			
15.2.9	Dia: 43.3 mm	60	RM			
16	Supply, installation, testing and commissioning of c PVC Pipe (SDR 13.5 CTS, 22.5 kg/cm2 includes fixing/laying with necessary fittings all complete) drain pipes covered with 9 mm thick closed cell insulation of different sizes as required inclusive of all kinds of fittings, supports made of MS angle/ rods as per specifications, drawings and instruction at site					

16.1	Dia: 25 mm	410	RM			
16.2	Dia: 40 mm	100	RM			
17	Supply, Delivery and Installation of G.I. duct inclusive of balancing dampers, fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
	Thickness: 24 G	850	Sq.m.			
18	Supply, Delivery and Installation of Aluminum duct inclusive of balancing dampers, fittings and accessorizes with 1 years guarantee as per specification, drawings and instruction at site					
	Thickness: 20 G	70	Sq.m.			
19	Supply, Delivery and Installation of one side aluminum foil faced nitrile closed cell insulation on duct inclusive of consumables, fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
20.1	Thickness: 13 mm	256	Sq.m.			
20.2	Thickness: 25 mm	70	Sq.m.			
21	Supply, Delivery and Installation of nitrile open cell insulation on duct inclusive of consumables, fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
	Thickness: 10 mm	20	Sq.m.			
22	Supply, Delivery and Installation of powder coated aluminum fresh air supply diffusers with damper inclusive of all kinds of fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
22.1	Neck Size: 300mm x 300mm	20	nos.			
22.2	Neck Size: 400mm x 400mm	17	nos.			

23	Supply, Delivery and Installation of powder coated aluminum return air grilles inclusive of all kinds of fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
23.1	Neck Size: 500mm x 250mm	1	nos.			
23.2	Neck Size: 800mm x 300mm	1	nos.			
23.3	Neck Size: 800mm x 400mm	10	nos.			
24	Supply, Delivery and Installation of powder coated aluminum fresh air supply diffusers with damper inclusive of all kinds of fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
	Neck Size: 150mm x 150mm	70	nos.			
	Neck Size: 200mm x 200mm	70	nos.			
25	Supply, Delivery and Installation of powder coated aluminum exhaust air diffusers with damper inclusive of all kinds of fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
	Neck Size: 150mm x 150mm	70	nos.			
	Neck Size: 200mm x 200mm	70	nos.			
26	Supply, Delivery and Installation of FA louver with air filter and SS net inclusive of all kinds of fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site					
26.1	Neck Size: 600mm x 200mm	3	nos.			
26.2	Neck Size: 650mm x 250mm	1	nos.			
26.3	Neck Size: 750mm x 300mm	1	nos.			
26.4	Neck Size: 700mm x 500mm	1	nos.			
26.5	Neck Size: 900mm x 800mm	3	nos.			
27	**Supply, Delivery and Installation of Exhaust air Louver with SS net inclusive of all kinds of fittings and accessories with 1 years guarantee as per specification, drawings and instruction at site**					
27.1	Neck Size: 200mm x 150mm	1	nos.			
27.2	Neck Size: 300mm x 150mm	1	nos.			
27.3	Neck Size: 300mm x 200mm	1	nos.			
27.4	Neck Size: 350mm x 200mm	1	nos.			
27.5	Neck Size: 400mm x 200mm	1	nos.			

27.6	Neck Size: 450mm x 250mm	1	nos.			
27.7	Neck Size: 650mm x 450mm	3	nos.			
28	**Supply, Delivery and Installation of balancing Dampers inclusive of all kinds of fittings and accessories with 2 years guarantee as per specification, drawings and instruction at site**					
28.1	Neck Size: 200mm x 150mm	2	nos.			
28.2	Neck Size: 300mm x 150mm	5	nos.			
28.3	Neck Size: 300mm x 200mm	3	nos.			
28.4	Neck Size: 350mm x 200mm	3	nos.			
28.5	Neck Size: 400mm x 200mm	8	nos.			
28.6	Neck Size: 450mm x 250mm	8	nos.			
28.7	Neck Size: 350mm x 200mm	3	nos.			
28.8	Neck Size:550mm x 300mm	4	nos.			
29	Supply, fabrication, installation, testing and balancing of factory fabricated machine made GSS ducting(120/180 GSM zinc coating) control damper, quadrants vanes etc. of 18 gauge with 1 years guarantee as per specification, drawings and instruction at site	45	Sq.m.			
30	Supply, installation, testing and commissioning of additional Refrigerant R-410A	8	Cyl.			
31	Supply, delivery and installation of indoor to outdoor Control & Transmission Cable with all necessary accessories, polythene conduit etc.. 0.75 Sq. mm Shielded 2*Core wire for Indoor to Outdoor Communication wiring with 1 years guarantee as per specification, drawings and instruction at site	625	RM			
32	Flushing and pressure testing of the entire System with dry Nitrogen.	11	lots			
33	Lifting and Placement of VRF Outdoor Unit on the foundation	11	Sets			

34	Supply, installation, testing and commissioning of the flexible duct connections constructed out of fire-resistant double canvas sleeves with 1 years guarantee as per specification, drawings and instruction at site	38	Sets			
35	Supply, installation of 25mmx3mm enamel painted angle frame for the construction of duct	1	lots			
36	Supply, installation testing and commissioning of SS perforated grilles with damper for return air as the approved drawings and site conditions.	6	Sq.m.			
	TOTAL WITHOUT VAT					
	VAT (13%)					
	TOTAL WITH VAT					

Special Conditions of Contract

A. General	
GCC 1.1 (q)	The Employer is SHCC, Gokarnashwor -5 Jorpati
GCC 1.1 (v)	The Intended Completion Date for the whole of the Works shall be 15 **March 2022 (100 Days), details as per specification.**
GCC 1.1(bb) & 10.1	The Project Manager is Chief Executive Officer, SHCC or assigned The Project Manager and Engineer are synonyms.
GCC 1.1 (ee)	The Site is located at KMC ward 6 Chabail, Kathmandu
GCC 1.1 (hh)	The Start Date shall be **December 1, 2021**
GCC 1.1 (ll)	The Works consist of MEP works Communication works in individual packages.
GCC 2.2	Sectional Completions are: **not applicable**
GCC 3.1	The language of the contract is **ENGLISH/NEPALI** The law that applies to the Contract is the law of NEPAL
GCC 11.1	The Project Manager may delegate any of his duties and responsibilities.
GCC 14.1	Schedule of other contractors: ***The civil works are ongoing at site. The contractor needs to coordinate with Site in charge assigned from SHCC and with civil works contractors.***
GCC 19.1	The minimum insurance amounts and deductibles shall be: **as per specification** 1. The minimum cover for loss of or damage to the Works, Plant and Materials is: ***[insert percent]*** of the Contract Amount. 2. The maximum deductible for insurance of the Works and of Plant and Materials is: ***[insert amount]*** 3. The minimum cover for loss or damage to Equipment is : ***[insert amount]*** **4.** The maximum deductible for insurance of Equipment is:***[insert amount]*** 5. The minimum for insurance of other property is: ***[insert amount]*** with unlimited number of occurrences 6. The maximum deductible for insurance of other property is: ***[insert amount]*** 7. The minimum cover for personal injury or death insurance i. for the Contractor's employees is that specified in the Labor act of Nepal and ii. for other people is ***:[insert amount]*** with an unlimited number of occurrences

GCC 20.1	Site Investigation Reports are: ***N/A***
GCC 23.1	The following shall be designed by the Contractor***: N/A***
GCC 26.1	The Site Possession Date(s) shall be: **1 December 2021**
GCC 30.1	The place of arbitration shall be: Kathmandu
C. Time Control	
GCC 34.1	The Contractor shall submit for approval a Program for the Works within 7 Days from the date of the Letter of Acceptance.
GCC 34.3	The period between Program updates is 7 days. The amount to be withheld for late submission of an updated Program is **NPR 100,000**
D. Quality Control	
GCC 42.1	The Defects Liability Period is: 12months for works and 24 months for materials supplied.
E. Cost Control	
GCC 49.1	***10 %per Annum***
GCC 53.1	The Contract ***is not*** subject to price adjustment, and the following information regarding coefficients ***does not*** apply. The coefficients and indices for adjustment of prices in Nepalese Rupees shall be as specified in the Table of Adjustment Data submitted by bidder together with the Letter of Price Bid which is approved by the Project manager.
GCC 53.6	Base Price of Construction Materials applicable for price adjustment shall be as per the Table of Adjustment Data submitted by Bidder together with the Letter of Price Bid which is approved by the Project manager. N/A
GCC 53.7	The Price Adjustment amount shall be limited to a maximum of: 25 % Percentage of the initial Contract Amount.
GCC 54.1	The proportion of payments retained is: 5 (five) percent
GCC 55.1	The liquidated damages for the whole of the Works are 0.05 Percent of the final Contract Price per day. The maximum amount of liquidated damages for the whole of the Works is 10 Percent of the final Contract Price.
GCC 56.1	The Bonus for the whole of the Works is 0.05 Percent per day. The maximum amount of Bonus for the whole of the Works is NPR ***1, 00,000*** of the final Contract Price.

GCC 57.1	The Advance Payments shall be: 1***5%*** and shall be paid in two equal installments and to the Contractor. First 5% shall be paid within 7 days of contract agreement date after submitting responsive work schedule. Another 10% after approval of materials by engineer of major construction material and contractor materials procurement process is started; and submission of insurance policies and certificates as per GCC 19.1 of SCC.
GCC 57.3	Deductions from Payment Certificates will commence in the first certificate in which the value of works executed exceeds 30% of the Contract Price. Deduction will be at the rate of 40 % the respective Monthly Interim Payment Certificate until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the end of 80 % of the approved contract period.
GCC 58.1	The Performance Security amount is: 5 %
G. Finishing the Contract	
GCC 71.1	The date by which operating and maintenance manuals are required is; **Before submission of final Running Bill**
GCC 71.2	The date by which "as built" drawings are required is: **Together with final Running Bill** The amount to be withheld for failing to produce "as built" drawings and/or Operating and maintenance manuals is: **NPR 1,00,000**
GCC 72.3 (i)	The maximum number of days is: **100 Days** **(The bidders need to submit the realistic time line required for the proposed works in the section below; Bidder's Information Format. The methods, timeline and work process need to be included.**
GCC 80	The Project Manager has to obtain the specific approval of the Employer for taking any of the following actions : a. Approving subcontracting of any part of the works under General Conditions of Contract Clause 13; b. Certifying additional costs determined under General Conditions of Contract Clause 50; c. Determining start date under General Conditions of Contract Clause 1; d. Determining the extension of the intended Completion Date under General Conditions of Contract Clause 35; e. Issuing a Variation under General Conditions of Contract Clause 1 and 46, except in an emergency situation, as reasonably determined by the Project Manager; emergency situation may be defined as the situation when protective measures must be taken for the safety of life or of the works or of adjoining property. f. Adjustment of rates under General Conditions of Contract Clause 45;

Letter of Intent

Date: ... ……

To: .....*Name and address of the Contractor*.....

Subject: …… Issuance of letter of intent to award the contract.....

This is to notify you that, it is our intention to award the contract ... . ***[insert date]*** .....for execution of the ... . ***[insert name of the contract and identification number, as given in the Contract Data/SCC]*** to you as your bid price ..... ***[insert amount in figures and words in Nepalese Rupees]*** as corrected and modified in accordance with the Instructions to Bidders is hereby selected as substantially responsive lowest evaluated bid.

Authorized Signature: ……

Name: ... …….

Title: …….

CC:
[Insert name and address of all other Bidders, who submitted the bid]

Letter of Acceptance

Date: ……..

To: ……*Name and address of the Contractor*……...

Subject: ……*Notification of Award*

This is to notify that your Bid dated .....***date*** ……..for execution of the……..***name of the contract and identification number, as given in the Contract Data/SCC*** ……... for the Contract price of Nepalese Rupees ***[insert amount in figures and words in Nepalese Rupees],*** as corrected in accordance with the Instructions to Bidders is hereby accepted in accordance with the Instruction to Bidders.

You are hereby instructed to contact this office to sign the formal contract agreement within 15 days with Performance Security of **NRs**. ……. in accordance with the Conditions of Contract, using for that purpose the Performance security Form included in Section X (Contract Forms) of this Bidding Document.

Authorized Signature: ……...

Name and Title of Signatory: ……

Contract Agreement

THIS AGREEMENT made the .....day of……between……
…… name of the Employer **……..*(hereinafter "the Employer"),*** of the one part, and ……
…….name of the Contractor …….(hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as …….... name of the Contract .....should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects in the sum of NRs ***….....……...[insert amount of contract price in words and figures including taxes]***(hereinafter "the Contract Price").

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
   (a) the Letter of Acceptance;
   (b) the Letters of Bid;
   (c) the Addenda Nos ..... **Insert addenda numbers if any** ……
   (d) the Special Conditions of Contract;
   (e) the List of Eligible Countries that was specified in Section V of the bidding document,
   (f) the General Conditions of Contract;
   (g) the Specification;
   (h) the Drawings;
   (i) Bill of Quantities (or Schedules of Prices for lump sum contracts), and

3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Nepal on the day, month and year indicated above.

Signed by …….
for and on behalf the Contractor in the presence of

Performance Security

(On letterhead paper of the Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law)

..... ***Bank's Name, and Address of Issuing Branch or Office*** .....
Beneficiary: ..... Name and Address of Employer …….....
Date: .....

Performance Guarantee No.:…….

We have been informed that ... ... ***[insert name of the Contractor]*** (hereinafter called "the Contractor") has been notified by you to sign the Contract No. …….. ***[insert reference number of the Contract]*** for the execution of …….. ***[insert name of contract and brief description of Works]*** (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we... ..... . ***[insert name of the Bank]*** hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of .....***[insert name of the currency and amount in figures*] (... .. insert amount in words)*** such sum being payable in Nepalese Rupees, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the……..Day of …… **, and any demand for payment under it must be received by us at this office on or before that date.

……

Seal of Bank and Signature(s)

Advance Payment Security

(On letterhead paper of the Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law)

…….. Bank's Name, and Address of Issuing Branch or Office.....

Beneficiary: ……***Name and address of employer***

Date : ……

Advance Payment Guarantee No……..

We have been informed that ……has entered into Contract No. ..... ***Name and Address of Employer***……***name of the Contractor***……(hereinafter called "the Contractor")..reference number of the Contract……dated …… with you, for the execution of ...contract and brief description of Works ……. (herein after called "the Contract").

Furthermore, we understand that, according to the Conditions of the Contract, an advance payment in the sum……. name of the currency and amount in figures****…(.... amount in words .....)*** is to be made against an advance payment guarantee.

At the request of the Contractor, we... ..... . ***Name of the Bank*** ……. hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of…….name of the currency and amount in figures****.....(…… amount in words ... .)*** upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than the costs of mobilization in respect of the Works.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that eighty (80) percent of the Contract Price has been certified for payment, or on the ..... day of .....**, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

……

Seal of Bank and Signature(s)