



**GOVERNMENT OF KHYBER PAKHTUNKHA
PROJECT MANAGEMENT UNIT
MUNCIPAL SERVICES PROGRAM**

Tender Documents

For

**TURN-KEY SOLUTION FOR THE SUPPLY, INSTALLATION,
ESTABLISHMENT AND COMMISSIONING OF HITECH
SERVERS & STORAGE SETUP ALONG WITH IT
INFRASTRUCTURE FOR WSSP OFFICE**

September, 2019

House No 43 B/1 Sahibzada Abdul Qayyum Road University Town
Peshawar
Preface

Part One - Section I.

Instructions to Bidders

Instructions to Bidders

A. Introduction

1. Source of Funds

- 1.1 The Procuring agency has received/applied for loan/grant/federal/provincial/local government funds from the source(s) indicated in the bidding data in various currencies towards the cost of the project /schemes specified in the bidding data and it is intended that part of the proceeds of this loan/grant/funds/ will be applied to eligible payments under the contract for which these bidding documents are issued.
- 1.2 The funds referred to above in addition shall be “Public Fund” which according to 2 (l) of KPP Rules 2014 means (i) Provincial Consolidated Fund; (ii) foreign assistance; (iii) all moneys standing in the Public Account; and (iv) Funds of enterprises wholly or partly owned or managed or controlled by Government.
- 1.3 Payment by the Fund will be made only at the request of the Procuring agency and upon approval by the Government of Khyber Pakhtunkhwa., and in case of a project will be subject in all respect to the terms and conditions of the agreement. The Project Agreement prohibits a withdrawal from the allocated fund account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Federal Government/ Khyber Pakhtunkhwa Government, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Procuring agency shall derive any rights from the Project Agreement or have any claim to the allocated fund proceeds.

2. Eligible Bidders

- 2.1 This Invitation for Bids is open to all suppliers from eligible source as defined in the KPP Rules, 2014 and its Bidding Documents except as provided hereinafter.
- 2.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Procuring agency to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation for Bids.
- 2.3 Government-owned enterprises in the Province of Khyber Pakhtunkhwa may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Government of Khyber Pakhtunkhwa.

2.4 Bidders shall not be eligible to bid if they are under a declaration of ineligibility for corrupt and fraudulent practices issued by any government organization in accordance with the Section 44(1) KPP Rules 2014.

3. Eligible Goods and Services

3.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries of the world with whom the Islamic Republic of Pakistan has commercial relations and its Bidding Documents and all expenditures made under the contract will be limited to such goods and services.

3.2 For purposes of this clause, “origin” means the place where the goods are mined, grown, or produced, or the place from which the related services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially-recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.3 **The origin of goods and services is distinct from the nationality of the Bidder.**

4. Cost of Bidding

4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring agency named in the Bid Data Sheet, hereinafter referred to as “the Procuring agency,” will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. The Bidding Documents

5. Content of Bidding Documents

- 5.1 The bidding documents include:
- a) Instructions to Bidders (ITB)
 - b) Bid Data Sheet
 - c) General Conditions of Contract (GCC)
 - d) Special Conditions of Contract (SCC)
 - e) Schedule of Requirements
 - f) Technical Specifications
 - g) Bid Form and Price Schedules
 - h) Bid Security Form
 - i) Contract Form
 - j) Performance Security Form
 - k) Manufacturer's Authorization Form
- 5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the rejection of its bid.

6. Clarification of Bidding Documents

- 6.1 A interested Bidder requiring any clarification of the bidding documents may notify the Procuring agency in writing. The Bidding Procuring agency will respond in writing to any request for Documents clarification of the bidding documents which it receives no later than three working days prior to the deadline for the submission of bids prescribed in the Bid Data Sheet. Written copies of the Procuring agency's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all interested bidders that have received the bidding documents.

7. Amendment of Bidding Documents

- 7.1 At any time prior to the deadline for submission of bids, the Procuring agency, for any reason, whether at its own initiative or in response to a clarification requested by a interested Bidder, may modify the bidding documents by amendment.
- 7.2 All interested bidders that have received the bidding documents will be notified of the amendment in writing, and will be binding on them.
- 7.3 In order to allow interested bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring agency, at its discretion, may extend the deadline for the submission of bids.

C. Preparation of Bids

8. Language of Bid

- 8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring agency shall be written in the language specified in the Bid Data Sheet. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the Bid Data Sheet, in which case, for purposes of interpretation of the Bid, the translation shall govern.

- 9. Documents Comprising the Bid**
- 9.1 The bid prepared by the Bidder shall comprise the following components:
- a) a Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11, and 12
 - b) documentary evidence established in accordance with ITB Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;
 - c) documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bidding documents; and
 - d) bid security furnished in accordance with ITB Clause 15.
- 10. Bid Form**
- 10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.
- 11. Bid Prices**
- 11.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.
- 11.2 Prices indicated on the Price Schedule shall be delivered duty paid (DDP) prices. The price of other (incidental) services, if any, listed in the Bid Data Sheet will be entered separately.
- 11.3 The Bidder's separation of price components in accordance with ITB Clause 11.2 above will be solely for the purpose of facilitating the comparison of bids by the Procuring agency and will not in any way limit the Procuring agency's right to contract on any of the terms offered.
- 11.4 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet. A bid submitted with an adjustable price quotation will be treated as nonresponsive and will be rejected, pursuant to ITB Clause 24. If, however, in accordance with the Bid Data Sheet, prices quoted by the Bidder shall be subject to adjustment during the performance of the contract, a bid submitted with a fixed price quotation will not be rejected, but the price adjustment would be treated as zero.
- 12. Bid Currencies**
- 12.1 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet.
- 13. Documents Establishing Bidder's Eligibility and Qualification**
- 13.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.
- 13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Procuring agency's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 3.
- 13.3 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Procuring agency's satisfaction:

- a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' Manufacturer or producer to supply the goods in the Procuring agency's country;
- b) that the Bidder has the financial, technical, and production capability necessary to perform the contract;
- c) that, in the case of a Bidder not doing business within the Procuring agency's country, the Bidder is or will be (if awarded the contract) represented by an Agent in that country equipped, and able to carry out the Supplier's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
- d) that the Bidder meets the qualification criteria listed in the Bid Data Sheet.

**14. Documents
Establishing Goods'
Eligibility and
Conformity to
Bidding Documents**

- 14.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding documents of all goods and services which the Bidder proposes to supply under the contract.
- 14.2 The documentary evidence of the eligibility of the goods and services shall consist of a statement in the Price Schedule of the country of origin of the goods and services offered which shall be confirmed by a certificate of origin issued at the time of shipment.
- 14.3 The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and data, and shall consist of:
 - a) a detailed description of the essential technical and performance characteristics of the goods;
 - b) a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period to be specified in the Bid Data Sheet, following commencement of the use of the goods by the Procuring agency; and
 - c) an item-by-item commentary on the Procuring agency's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- 14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procuring agency in its Technical Specifications, are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand

names, and/or catalogue numbers in its bid, provided that it demonstrates to the Procuring agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

15. Bid Security

- 15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount specified in the Bid Data Sheet.
- 15.2 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7.
- 15.3 The bid security shall be in Pak. Rupees and shall be in one of the following forms:
- a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding documents or another form acceptable to the Procuring agency and valid for thirty (30) days beyond the validity of the bid; or
 - b) irrevocable encashable on-demand Bank call-deposit.
- 15.4 Any bid not secured in accordance with ITB Clauses 15.1 and 15.3 will be rejected by the Procuring agency as non-responsive, pursuant to ITB Clause 24.
- 15.5 Unsuccessful bidders' bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity prescribed by the Procuring agency pursuant to ITB Clause 16.
- 15.6 The successful Bidder's bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 32, and furnishing the performance security, pursuant to ITB Clause 33.
- 15.7 The bid security may be forfeited:
- a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or
 - b) in the case of a successful Bidder, if the Bidder fails:
 - i. to sign the contract in accordance with ITB Clause 32;
 - or
 - ii. to furnish performance security in accordance with ITB Clause 33.

16. Period of Validity of Bids

- 16.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Procuring agency, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Procuring agency as non-responsive.
- 16.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided under ITB Clause 15 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A

Bidder granting the request will not be required nor permitted to modify its bid, except as provided in the bidding document.

17. Format and Signing of Bid

- 17.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each “ORIGINAL BID” and “COPY OF BID,” as appropriate. In the event of any discrepancy between them, the original shall govern.
- 17.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 17.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.
- 17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

18. Sealing and Marking of Bids

- 18.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as “ORIGINAL” and “COPY.” The envelopes shall then be sealed in an outer envelope.
- 18.2 The inner and outer envelopes shall:
 - a. be addressed to the Procuring agency at the address given in the Bid Data Sheet; and
 - b. bear the Project name indicated in the Bid Data Sheet, the Invitation for Bids (IFB) title and number indicated in the Bid Data Sheet, and a statement: “DO NOT OPEN BEFORE,” to be completed with the time and the date specified in the Bid Data Sheet, pursuant to ITB Clause 2.2.
- 18.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared “late”.
- 18.4 If the outer envelope is not sealed and marked as required by ITB Clause 18.2, the Procuring agency will assume no responsibility for the bid’s misplacement or premature opening.

19. Deadline for Submission of Bids

- 19.1 Bids must be received by the Procuring agency at the address specified under ITB Clause 18.2 no later than the time and date specified in the Bid Data Sheet.
- 9.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in accordance with ITB Clause 7, in which case all rights and obligations of the Procuring agency and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

- 20. Late Bids** 20.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribed by the Procuring agency pursuant to ITB Clause 19 will be rejected and returned unopened to the Bidder.
- 21. Modification And Withdrawal of Bids**
- 21.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the deadline prescribed for submission of bids.
- 21.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of ITB Clause 18. by a signed confirmation copy, postmarked not later than the deadline for submission of bids.
- 21.3 No bid may be modified after the deadline for submission of bids.
- 21.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to the ITB Clause 15.7.

E. Opening and Evaluation of Bids

- 22. Opening of Bids by the Procuring agency**
- 22.1 The Procuring agency will open all bids in the presence of bidders' representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register evidencing their attendance.
- 22.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Procuring agency, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the Bidder pursuant to ITB Clause 20.
- 22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Withdrawn bids will be returned unopened to the bidders.
- 22.4 The Procuring agency will prepare minutes of the bid opening.
- 23. Clarification of Bids**
- 23.1 During evaluation of the bids, the Procuring agency may, at its discretion, ask the Bidder for a clarification of its bid. The Bids request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.
- 24. Preliminary Examination**
- 24.1 The Procuring agency will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- 24.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Supplier does not accept

the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.

- 24.3 The Procuring agency may waive any minor informality, nonconformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.
- 24.4 Prior to the detailed evaluation, pursuant to ITB Clause 25 the Procuring agency will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions, such as those concerning Bid Security (ITB Clause 15), Applicable Law (GCC Clause 30), and Taxes and Duties (GCC Clause 32), will be deemed to be a material deviation. The Procuring agency's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 24.5 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

25. Evaluation and Comparison of Bids

- 25.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24.
- 25.2 The Procuring agency's evaluation of a bid will be on delivered duty paid (DDP) price inclusive of prevailing duties and will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 25.3 The Procuring agency's evaluation of a bid will take into account, in addition to the bid price quoted in accordance with ITB Clause 11.2, one or more of the following factors as specified in the Bid Data Sheet, and quantified in ITB Clause 25.4:
 - a. incidental costs
 - b. delivery schedule offered in the bid;
 - c. deviations in payment schedule from that specified in the Special Conditions of Contract;
 - d. the cost of components, mandatory spare parts, and service;
 - e. the availability Procuring agency of spare parts and after-sales services for the equipment offered in the bid;
 - f. the projected operating and maintenance costs during the life of the equipment; the performance and productivity of the equipment offered; and/or
 - g. other specific criteria indicated in the Bid Data Sheet and/or
 - h. in the Technical Specifications.
- 25.4 For factors retained in the Bid Data Sheet pursuant to ITB 25.3, one or more of the following quantification methods will be applied, as detailed in the Bid Data Sheet:

- a. Incidental costs provided by the bidder will be added by Procuring agency to the delivered duty paid (DDP) price at the final destination.
- b. Delivery schedule.
 - i. The Procuring agency requires that the goods under the Invitation for Bids shall be delivered at the time specified in the Schedule of Requirements which will be treated as the base, a delivery “adjustment” will be calculated for bids by applying a percentage, specified in the Bid Data Sheet, of the DDP price for each week of delay beyond the base, and this will be added to the bid price for evaluation. No credit shall be given to early delivery.

or
 - ii. The goods covered under this invitation are required to be delivered (shipped) within an acceptable range of weeks specified in the Schedule of Requirement. No credit will be given to earlier deliveries, and bids offering delivery beyond this range will be treated as non-responsive. Within this acceptable range, an adjustment per week, as specified in the Bid Data Sheet, will be added for evaluation to the bid price of bids offering deliveries later than the earliest delivery period specified in the Schedule of Requirements.

or
 - iii. The goods covered under this invitation are required to be delivered in partial shipments, as specified in the Schedule of Requirements. Bids offering deliveries earlier or later than the specified deliveries will be adjusted in the evaluation by adding to the bid price a factor equal to a percentage, specified in the Bid Data Sheet, of DDP price per week of variation from the specified delivery schedule.
- c. Deviation in payment schedule:
 - i. Bidders shall state their bid price for the payment schedule outlined in the SCC. Bids will be evaluated on the basis of this base price. Bidders are, however, permitted to state an alternative payment schedule and indicate the reduction in bid price they wish to offer for such alternative payment schedule. The Procuring agency may consider the alternative payment schedule offered by the selected Bidder.

or
 - ii. The SCC stipulates the payment schedule offered by the Procuring agency. If a bid deviates from the schedule and if such deviation is considered acceptable to the Procuring agency, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared with those stipulated in this invitation, at the rate per annum specified in the Bid Data Sheet.
- d. Cost of spare parts.

i. The list of items and quantities of major assemblies, components, and selected spare parts, likely to be required during the initial period of operation specified in the Bid Data Sheet, is annexed to the Technical Specifications. The total cost of these items, at the unit prices quoted in each bid, will be added to the bid price.

or

ii. The Procuring agency will draw up a list of high-usage and high-value items of components and spare parts, along with estimated quantities of usage in the initial period of operation specified in the Bid Data Sheet. The total cost of these items and quantities will be computed from spare parts unit prices submitted by the Bidder and added to the bid price.

or

iii. The Procuring agency will estimate the cost of spare parts usage in the initial period of operation specified in the Bid Data Sheet, based on information furnished by each Bidder, as well as on past experience of the Procuring agency or other procuring agencies in similar situations. Such costs shall be added to the bid price for evaluation.

e. Spare parts and after sales service facilities in the Procuring agency's country.

The cost to the Procuring agency of establishing the minimum service facilities and parts inventories, as outlined in the Bid Data Sheet or elsewhere in the bidding documents, if quoted separately, shall be added to the bid price.

f. Operating and maintenance costs.

Since the operating and maintenance costs of the goods under procurement form a major part of the life cycle cost of the equipment, these costs will be evaluated in accordance with the criteria specified in the Bid Data Sheet or in the Technical Specifications.

g. Performance and productivity of the equipment.

i. Bidders shall state the guaranteed performance or efficiency in response to the Technical Specification. For each drop in the performance or efficiency below the norm of 100, an adjustment for an amount specified in the Bid Data Sheet will be added to the bid price, representing the capitalized cost of additional operating costs over the life of the plant, using the methodology specified in the Bid Data Sheet or in the Technical Specifications.

or

ii. Goods offered shall have a minimum productivity specified under the relevant provision in the Technical Specifications to be considered responsive. Evaluation shall be based on the cost per unit of the actual productivity of goods offered in the bid, and adjustment

will be added to the bid price using the methodology specified in the Bid Data Sheet or in the Technical Specifications.

- h. Specific additional criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.

The relevant evaluation method shall be detailed in the Bid Data Sheet and/or in the Technical Specifications.

Alternative

25.4 25.4 Merit Point System:

The following merit point system for weighing evaluation factors can be applied if none of the evaluation methods listed in 25.4 above has been retained in the Bid Data Sheet. The number of points allocated to each factor shall be specified in the Bid Data Sheet.

[In the Bid Data Sheet, choose from the range of]

Evaluated price of the goods	60 to 90
Cost of common list spare parts	0 to 20
Technical features, and maintenance and operating costs	0 to 20
Availability of service and spare parts	0 to 20
Standardization	0 to 20
Total	100

The bid scoring the highest number of points will be deemed to be the lowest evaluated bid.

26. Contacting the Procuring agency

- 26.1 Subject to ITB Clause 23, no Bidder shall contact the Procuring agency on any matter relating to its bid, from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Procuring agency, it should do so in writing.
- 26.2 Any effort by a Bidder to influence the Procuring agency in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

F. Award of Contract

27. Post-qualification

- 27.1 **In the absence of prequalification, the Procuring agency will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.3.**
- 27.2 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13.3, as well as such other information as the Procuring agency deems necessary and appropriate.

- 27.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.
- 28. Award Criteria**
- 28.1 Subject to ITB Clause 30, the Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.
- 29. Procuring agency's Right to Vary Quantities at Time of Award**
- 29.1 The Procuring agency reserves the right at the time of contract award to increase or decrease, by the percentage indicated in the Bid Data Sheet, the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.
- 30. Procuring agency's Right to Accept any Bid and to Reject any or All Bids**
- 30.1 The Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Procuring agency's action.
- 31. Notification of Award**
- 31.1 Prior to the expiration of the period of bid validity, the Procuring agency will notify the successful Bidder in writing by registered letter or by cable, to be confirmed in writing by registered letter, that its bid has been accepted.
- 31.2 The notification of award will constitute the formation of the Contract.
- 31.3 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 33, the Procuring agency will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 15.
- 32. Signing of Contract**
- 32.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 32.2 Within thirty (30) days of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.
- 33 Performance Security**
- 33.1 Within twenty (20) days of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.
- 33.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 32 or ITB Clause 33.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.

**34. Corrupt or
Fraudulent
Practices**

34.1 The Government of Khyber Pakhtunkhwa requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the KPPRA, in accordance with the KPP Act, 2009 and Rules made thereunder:

- a. defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - ii. "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring agency, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Procuring agency of the benefits of free and open competition;
- b. will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- c. will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Government-financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government-financed contract.

34.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 5.4 and sub-clause 24.1 of the General Conditions of Contract.

- 1. Integrity Pact**
- 35.1 The Bidder shall sign and stamp the Integrity Pact provided at Form - 7 to Bid in the Bidding Document for all Provincial Government procurement contracts exceeding Rupees ten million. Failure to such Integrity Pact shall make the bidder non-responsive.

Part One - Section II.

General Conditions of Contract

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General Conditions of Contract

1. Definitions

- 1.1 In this Contract, the following terms shall be interpreted as indicated:
- a. "The Contract" means the agreement entered into between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
 - b. "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
 - c. "The Goods" means all of the equipment, machinery, and/or other materials which the Supplier is required to supply to the Procuring agency under the Contract.
 - d. "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
 - e. "GCC" means the General Conditions of Contract contained in this section.
 - f. "SCC" means the Special Conditions of Contract.
 - g. "The Procuring agency" means the organization purchasing the Goods, as named in SCC.
 - h. "The Procuring agency's country" is the country named in SCC.
 - i. "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
 - j. "The Project Site," where applicable, means the place or places named in SCC.
 - k. "Day" means calendar day.

2. Application

- 2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

3. Country of Origin

- 3.1 All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules and further elaborated in the SCC.
- 3.2 For purposes of this Clause, "origin" means the place where the Goods were mined, grown, or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product results that is substantially

different in basic characteristics or in purpose or utility from its components.

3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.

4. Standards

4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.

5. Use of Contract Documents and Information; Inspection and Audit by the Government

5.1 The Supplier shall not, without the Procuring agency's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring agency in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The Supplier shall not, without the Procuring agency's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.

5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring agency and shall be returned (all copies) to the Procuring agency on completion of the Supplier's performance under the Contract if so required by the Procuring agency.

5.4 The Supplier shall permit the Procuring agency to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the procuring agency, if so required.

6. Patent Rights

6.1 The Supplier shall indemnify the Procuring agency against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring agency's country.

7. Performance Security

7.1 Within twenty (20) days of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.

7.2 The proceeds of the performance security shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

7.3 The performance security shall be denominated in the currency of the Contract acceptable to the Procuring agency and shall be in one of the following forms:

- a. a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding documents or another form acceptable to the Procuring agency; or

b. a cashier's or certified check.

7.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

8. Inspections and Tests

8.1 The Procuring agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring agency. SCC and the Technical Specifications shall specify what inspections and tests the Procuring agency requires and where they are to be conducted. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at the Goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring agency.

8.3 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring agency.

8.4 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring agency's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring agency or its representative prior to the Goods' shipment from the country of origin.

8.5 Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

9. Packing

9.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Procuring agency.

- 10. Delivery and Documents**
- 10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are specified in SCC.
- 10.2 Documents to be submitted by the Supplier are specified in SCC.
- 11. Insurance**
- 11.1 The Goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after having been delivered, hence insurance coverage is sellers responsibility.
- 12. Transportation**
- 12.1 The Supplier is required under the Contract to transport the Goods to a specified place of destination within the Procuring agency's country, transport to such place of destination in the Procuring agency's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.
- 13. Incidental Services**
- 13.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
- a. performance or supervision of on-site assembly and/or start-up of the supplied Goods;
 - b. furnishing of tools required for assembly and / or maintenance of the supplied Goods;
 - c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
 - d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
 - e. training of the Procuring agency's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
- 13.2 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged for other parties by the Supplier for similar services.
- 14. Spare Parts**
- 14.1 As specified in SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- a. such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
 - b. in the event of termination of production of the spare parts:
 - i. advance notification to the Procuring agency of the pending termination, in sufficient time to permit the Procuring agency

to procure needed requirements;

- ii. following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

- 15.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.
- 15.3 The Procuring agency shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring agency.
- 15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Procuring agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.

16. Payment

- 16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 16.2 The Supplier's request(s) for payment shall be made to the Procuring agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Procuring agency, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.
- 16.4 The currency of payment is Pak. Rupees.

17. Prices

- 17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments

authorized in SCC or in the Procuring agency's request for bid validity extension, as the case may be.

- 18. Change Orders**
- 18.1 The Procuring agency may at any time, by a written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:
- a. drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring agency;
 - b. the method of shipment or packing;
 - c. the place of delivery; and/or
 - d. the Services to be provided by the Supplier.
- 18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Procuring agency's change order.
- 19. Contract Amendments**
- 19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
- 20. Assignment**
- 20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under this Contract, except with the Procuring agency's prior written consent.
- 21. Subcontracts**
- 21.1 The Supplier shall notify the Procuring agency in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.
- 21.2 Subcontracts must comply with the provisions of GCC Clause 3.
- 22. Delays in the Supplier's Performance**
- 22.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring agency in the Schedule of Requirements.
- 22.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.
- 22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause

23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

23. Liquidated Damages

2.31 Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring agency may consider termination of the Contract pursuant to GCC Clause 24.

24. Termination for Default

24.1 The Procuring agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- a. if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring agency pursuant to GCC Clause 22; or
- b. if the Supplier fails to perform any other obligation(s) under the Contract.
- c. if the Supplier, in the judgment of the Procuring agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

“corrupt practice” means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.

“fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition.

24.2 In the event the Procuring agency terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Procuring agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Procuring agency for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22, 23, and 24, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

- 25.2 For purposes of this clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 25.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 26. Termination for Insolvency**
- 26.1 The Procuring agency may at any time terminate the Contract by giving written notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring agency.
- 27. Termination for Convenience**
- 27.1 The Procuring agency, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring agency’s convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 27.2 The Goods that are complete and ready for shipment within thirty (30) days after the Supplier’s receipt of notice of termination shall be accepted by the Procuring agency at the Contract terms and prices. For the remaining Goods, the Procuring agency may elect:
- a. to have any portion completed and delivered at the Contract terms and prices; and/or
 - b. to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.
- 28. Resolution of Disputes**
- 28.1 The Procuring agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 28.2 If, after thirty (30) days from the commencement of such informal negotiations, the Procuring agency and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanisms may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed manner and/or arbitration.
- 29. Governing Language**
- 29.1 The Contract shall be written in the language specified in SCC. Subject to GCC Clause 30, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

30. Applicable Law

30.1 The Contract shall be interpreted in accordance with the laws of the Procuring agency's country, unless otherwise specified in SCC.

31. Notices

31.1 Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.

31.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

32. Taxes and Duties

32.1 Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Procuring agency.

Khyber Pakhtunkhwa Public Procurement Regulatory Authority

Bidding Documents

For

Procurement of Goods

PART TWO (PROCUREMENT SPECIFIC PROVISIONS)

- Invitation for Bids (IFB)
- Bid Data Sheet (BDS)
- Special Conditions of Contract (SCC)
- Schedule of Requirements
- Technical Specifications
- Sample Forms
- Eligibility

Preface

These Bidding Documents have been prepared for use by procuring agencies in the procurement of goods through National Competitive Bidding (NCB).

In order to simplify the preparation of bidding documents for each procurement, the Bidding Documents are grouped in two parts based on provisions which are fixed and that which are specific for each procurement. Provisions which are intended to be used unchanged are in Part one, which includes Section I, Instructions to Bidders, and Section II, General Conditions of Contract. Data and provisions specific to each procurement and contract are included in Part Two which includes Section II, Bid Data Sheet; Section III, Special Conditions of Contract; Section IV, Schedule of Requirements; Section V, Technical Specifications; and the forms to be used in Section I, Invitation for Bids, and Section VI, Sample Forms.

This is Part Two and contains data and provisions specific to each procurement. Care should be taken to check the relevance of the provisions of the Bidding Documents against the requirements of the specific goods to be procured. The following general directions should be observed when using the documents. In addition, each section is prepared with notes intended only as information for the Procuring agency or the person drafting the bidding documents. They shall not be included in the final documents, except for the notes introducing Section VI, Forms, where the information is useful for the Bidder.

- a. Specific details, such as the “name of the Procuring agency” and “address for bid submission,” should be furnished in the Invitation for Bids, in the Bid Data Sheet, and in the Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- b. Amendments, if any, to the Instructions to Bidders and to the General Conditions of Contract should be made through the Bid Data Sheet and the Special Conditions of Contract, respectively.
- c. Footnotes or notes in italics included in the Invitation for Bids, Bid Data Sheet, Special Conditions of Contract, and in the Schedule of Requirements are not part of the text of the document, although they contain instructions that the Procuring agency should strictly follow. The final document should contain no footnotes.

- d. The criteria for bid evaluation and the various methods of evaluation in the Instructions to Bidders (Clauses 25.3 and 25.4, respectively) should be carefully reviewed. Only those that are selected to be used for the procurement in question should be retained and expanded, as required, in the Bid Data Sheet or in the Technical Specifications, as appropriate. The criteria that are not applicable should be deleted from the Bid Data Sheet.
- e. Clauses included in the Special Conditions of Contract are illustrative of the provisions that should be drafted specifically by the Procuring agency for each procurement.
- f. The forms provided in Section VI should be completed by the Bidder or the Supplier; the footnotes in these forms should remain, since they contain instructions which the Bidder or the Supplier should follow.

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Invitation for Bids

The USAID has provided funds to finance the cost of turn-key solution for the supply, installation, and establishment & commissioning of high tech servers & storage setup along with IT Infrastructure for WSSP Head Office in Peshawar, under Municipal Services Program (MSP) through Project Management Unit (PMU), Government of Khyber Pakhtunkhwa, to make eligible payment under the Contract for which this Invitation of Bids is issued.

Project Management Unit (PMU) invites sealed bids for Municipal Management information System Unit (MMIU) under “**Single Stage Two Envelopes**” bidding process, under KPPRA Rules, from all the eligible interested Companies / Firms having relevant experience of carrying-out similar supply of goods and services and registered with Income Tax and Sales Tax Departments. Bidder must be registered entity as IT solution provider.

Blank Bidding / Bid documents for said works can be obtained from the office of the Project Director, PMU, 43-B/1 Sahibzada Abdul Qayyum Khan Road, University Town, Peshawar from 5th September 2019 to 23rd September 2019 (both days inclusive) between 9:00 A.M to 2.00 PM on submission of written request on bidder’s letterhead and payment of prescribed bidding Documents fee (non-refundable) of **Rs.1,500** per set in favor of PD, PMU, Municipal Services Program, Town-1, Peshawar. The pre-bid meeting will be held on 17th September 2019 at **11.30 AM** PMU MSP office.

Bids, comprising Technical & Financial Bids, must be submitted in separate sealed envelopes with clear marking of “**TECHNICAL BID**” & “**FINANCIAL BID**” which will be received back on or **before** 24th September 2019 in the office of PD, PMU. Technical Bids of the participating bidders will be opened **on the same day at 12:30 P.M.**, by the Bid Opening Committee in presence of participating bidders or their authorized representatives who wish to be present. In case bids submission / opening day declared a holiday the same will be submitted / opened on the next working day.

Each bidder shall furnish a Bid Security amounting to Rs-30,00,000 favor of PD MSP, valid for a period of 120 days, in shape of CDR from a Commercial Bank in Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan in favor of Employer. The Bid Security shall be submitted with the Bid. The Bids submitted without Bid Security will not be entertained and will be declared non-responsive.

Bids should be carefully & neatly filled and signed by the bidders. Incomplete Bids and overwritten or conditional Bids shall not be entertained.

USAID/Pakistan has, in cooperation with the USAID Office of Inspector General, established the Anti-Fraud Hotline to provide an avenue for the reporting of fraud, waste, and abuse which may be associated with USAID funded projects in Pakistan. Complaints are handled with complete confidentiality and individuals are encouraged to report when corruption, fraud, waste or abuse may exist in the USAID/Pakistan projects. Reports can be files anonymously visa easy-to-use Hotline (toll free number 0800 84700); email at complaints@anti-fraudhotline.com; fax at 021-35390410; postal address at 5-C, 2nd floor Khayaban-e-Ittehad, Phase VII, DHA, Karachi, Pakistan; and on the website www.anti-fraudhotline.com

Incomplete Bids and overwritten or conditional Bids shall not be entertained. This advertisement can also be down loaded from KPPRA website.
PMU MSP may reject all or any Bids subject to relevant provision of KPPRA Rules.

Project Director

**Project Management Unit, MSP, 43-B/1, Sahibzada Abdul Qayyum Khan Road University
Town, Peshawar. 091-5850523**

Section II. Bid Data Sheet

Bid Data Sheet

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) Part One. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

[Instructions for completing the Bid Data Sheet are provided, as needed, in the notes in italics mentioned for the relevant ITB Clauses.]

Introduction	
ITB 1.1	Municipal Services Delivery Program (MSDP) Local Govt Election and Rural Development Department Government of Khyber Pakhtunkhwa.
ITB 1.1	USAID Under ADP 2011-12 837(110326)
ITB 1.1	Municipal Management Information Unit (MMIU) at WSSP.
ITB 1.1	Name of Contract. <i>QCBS, 70% for technical bid and 30 % for Financial Bid.</i>
ITB 4.1	Municipal Services Delivery Program (MSDP) Local Govt Election and Rural Development Department Government of Khyber Pakhtunkhwa.
ITB 6.1	House No 43 B/1 Sahibzada Abdul Qayyum Road University Town Peshawar.
ITB 8.1	Language of the bid. <i>English</i>
Bid Price and Currency	
ITB 11.2	The price quoted shall be Delivered duty Paid(DDP)
ITB 11.5	The Price shall be fixed;
Preparation and Submission of Bids	
ITB 13.3 (d)	Qualification requirements. <i>As per criteria</i>
ITB 14.3 (b)	Spare parts required forof years of operation. As per specification
ITB 15.1	Amount of bid security. <i>Rs= 30,00,000</i>
ITB 16.1	Bid validity period. 120 Days

ITB 17.1	Number of copies. Two copies
ITB 18.2 (a)	Address for bid submission. House No 43 B/1 Sahibzada Abdul Qayyum Road University Town Peshawar
ITB 18.2 (b)	IFB title and number.
ITB 19.1	Deadline for bid submission. 12-06-2018
ITB 22.1	Time, date, and place for bid opening. 12:30 PM, 12-06-2018, MSP office House No 43 B/1 Sahibzada Abdul Qayyum Road University Town Peshawar.
Bid Evaluation	
ITB 25.3	Criteria for bid evaluation. <i>All bid shall be evaluated as per criteria attached.(70 % for technical bid and 30 % for financial bid).</i>
ITB 25.4 (a)	One option only.
ITB 25.4 (b)	Delivery schedule. Four Months (04).
ITB 25.4 (c) (ii)	Deviation in payment schedule. Nil
ITB 25.4 (d)	Cost of spare parts. <i>As per technical specification</i>
ITB 25.4 (e)	Spare parts and after sales service facilities in the Procuring Agency's country. <i>As per technical specification</i>
ITB 25.4 (f)	Operating and maintenance costs. <i>As per technical specification</i>
ITB 25.4 (g)	Performance and productivity of equipment. <i>Performance security 10 % of the contractual price.</i>
ITB 25.4 (h)	Details on the evaluation method or reference to the Technical Specifications. QCBS (70 % for technical bid and 30 % for financial bid).
Contract Award	
ITB 29.1	Percentage for quantity increase or decrease. <i>Not more than 15 %.</i>

Section III. Special Conditions of Contract

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Special Conditions of Contract

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

[Instructions for completing the Special Conditions of Contract are provided, as needed, in the notes in italics mentioned for the relevant SCC. Where sample provisions are furnished, they are only illustrative of the provisions that the Procuring agency should draft specifically for each procurement.]

1. Definitions (GCC Clause 1)

GCC 1.1 (g)—The Procuring agency is:

GCC 1.1 (h)—The Procuring agency's country is:

GCC 1.1 (i)—The Supplier is:

Sample Provision

GCC 1.1 (j)—The Project Site is: *[if applicable]*

2. Country of Origin (GCC Clause 3)

All countries and territories as indicated in Part Two Section VI of the bidding documents, "Eligibility for the Provisions of Goods, Works, and Services in Government-Financed Procurement".

3. Performance Security (GCC Clause 7)

GCC 7.1—The amount of performance security, as a percentage of the Contract Price, shall be: *10 % of performance security from schedule bank of Pakistan.*

4. Inspections and Tests (GCC Clause 8)

GCC 8.6—Inspection and tests prior to shipment of Goods and at final acceptance are as follows:

5. Packing (GCC Clause 9)

Sample provision

GCC 9.3—The following SCC shall supplement GCC Clause 9.2:

6. Delivery and Documents (GCC Clause 10)

Sample provision (DDP terms)

GCC 10.3—Upon shipment, the Supplier shall notify the Procuring agency the full details of

the shipment, including Contract number, description of Goods, quantity and usual transport document. The Supplier shall mail the following documents to the Procuring agency:

- i. copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- ii. original and two copies of the usual transport document (for example, a negotiable bill of lading, a non-negotiable sea waybill, an inland waterway document, an air waybill, a railway consignment note, a road consignment note, or a multimodal transport document) which the buyer may require to take the goods;
- iii. copies of the packing list identifying contents of each package;
- iv. insurance certificate;
- v. Manufacturer's or Supplier's warranty certificate;
- vi. inspection certificate, issued by the nominated inspection agency, and the Supplier's factory inspection report; and
- vii. certificate of origin.

7. Insurance (GCC Clause 11)

GCC 11.1— The Goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after having been delivered, hence insurance coverage is seller's responsibility. Since the Insurance is seller's responsibility they may arrange appropriate coverage.

8. Incidental Services (GCC Clause 13)

GCC 13.1—Incidental services to be provided are:

[Selected services covered under GCC Clause 13 and/or other should be specified with the desired features. The price quoted in the bid price or agreed with the selected Supplier shall be included in the Contract Price.]

9. Spare Parts (GCC Clause 14)

GCC 14.1—Additional spare parts requirements are:

Sample provision

GCC 14.1—Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods. Other spare parts and components shall be supplied as promptly as possible, but in any case within six (6) months of placing the order and opening the letter of credit.

10. Warranty (GCC Clause 15)

Sample provision

GCC 15.2—In partial modification of the provisions, the warranty period shall be _____ hours of operation or _____ months from date of acceptance of the Goods or (_____) months from the date of shipment, whichever occurs earlier. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract. If, for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall, at its discretion, either:

- a. make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4,

or

- b. pay liquidated damages to the Procuring agency with respect to the failure to meet the contractual guarantees. The rate of these liquidated damages shall be (_____).

[The rate should be higher than the adjustment rate used in the bid evaluation under ITB 25.4 (f) or (g).]

GCC 15.4 & 15.5—The period for correction of defects in the warranty period is:

11. Payment (GCC Clause 16)

Sample provision

GCC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:

Payment for Goods supplied:

Payment shall be made in Pak. Rupees in the following manner:

Milestone	Payment trigger	Payment Due	Remaining Payment
Delivery Of Equipment	GRN (Goods Receipt Note issued upon completion of delivery)	50%	50%
Installation, Commissioning & Training	PAC (Provisional Acceptance Certificate issued upon acceptance of Installation, commissioning & training)	30%	20%
Final Acceptance Certificate	FAC (Final Acceptance Certificate issued after 3 months of PAC)	20%	0%

12. Prices (GCC Clause 17)

Sample provision

GCC 17.1—Prices shall be adjusted in accordance with provisions in the Attachment to SCC.
[To be inserted only if price is subject to adjustment.]

13. Liquidated Damages (GCC Clause 23)

GCC 23.1—Applicable rate:

Maximum deduction:

Rs-100,000 per day will be charged for liquidated damages, and the maximum shall not exceed ten (10) percent of the Contract Price.

14. Resolution of Disputes (GCC Clause 28)

GCC 28.3—the dispute resolution mechanism to be applied pursuant to GCC Clause 28.2 shall be as follows:

In the case of a dispute between the Procuring agency and the Supplier, the dispute shall be referred to adjudication or arbitration in accordance with the laws of the Procuring agency’s country.

15. Governing Language (GCC Clause 29)

GCC 29.1—The Governing Language shall be: English

16. Applicable Law (GCC Clause 30)

GCC 30.1-The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan which includes the following legislation:

The Employment of Children (ECA) Act 1991
The Bonded Labour System (Abolition) Act of 1992
The Factories Act 1934

17. Notices (GCC Clause 31)

GCC 31.1—procuring agency’s address for notice purposes:
—Supplier’s address for notice purposes:

Section IV. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery required.

Number	Description	Quantity	Delivery schedule (shipment) In 04 months from date of supply order/ Contract Agreement.
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Section V. Technical Specifications

Introduction

WSSP/MSP intends to invite bids from established bidders for the turn-key solution for the supply, installation, establishment & commissioning of high tech servers & storage setup along with IT Infrastructure for WSSP Head Office in Peshawar.

Detail of Scope of work required for Hardware, Software and Services is available in Terms Of Reference (ToR).

1) Bidding Process:

Equipment & Service Providers/System Integrators/Vendors will be selected after an open and transparent bidding process in accordance with Khyber Pakhtunkhwa Procurement Regulatory Authority (KPPRA) guideline. However, the decision for the selection of the successful vendor will be taken on the basis best solution provider based on its technical and financial suitability.

The firm will be selected under Quality and Cost Based Selection (QCBS) System and procedures described in this RFP, in accordance with the Khyber Pakhtunkhwa Public Procurement Regulatory Authority (KPPRA) Rules

Evaluation of Technical Proposals: The evaluation committee shall evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria, sub-criteria, and point system specified in the "Evaluation Criteria" Section of this RFP. Each responsive Proposal will be given a technical score (St). A Proposal shall be rejected at this stage if it fails to achieve the minimum qualifying technical score of sixty (60).

Evaluation of Financial Proposals: Financial proposals of those consultants who failed to secure minimum qualifying marks in the technical evaluation shall be returned un-opened. The lowest evaluated Financial Proposal will be given the maximum financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as follows:-

Value quoted by lowest bidder = A

Value quoted by second lowest bidder = B

Value quoted by third lowest bidder = C; and so on.

Financial scoring of the lowest bidder will be = 100

Financial scoring of the second lowest bidder will be = $(A/B)*100$ Financial scoring of the third lowest bidder will be = $(A/C)*100$; and so on.

Award of Contract to Best Evaluated Bid: After Technical and Financial Evaluation, the contract shall be awarded to the consultant with the best evaluated bid, that is, the bid with highest accumulative technical and financial score, wherein, proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T = 70%, the weight given to the Technical Proposal; F = 30%, the weight given to the Financial Proposal; T + F = 1) indicated in the Data Sheet: $S = St \times$

$T\% + Sf \times F\%$. The bidder achieving the highest combined technical and financial score shall be declared as winning bidder and shall be awarded contract.

Salient features of the bidding process are:

- a) The bidding process shall be a SINGLE STAGE, TWO ENVELOPES.
- b) The requirement is as follows:
 - Establishment of High-Tech Server Room Facility along with supply, installation & commissioning of Blade Solution, Storage, Rack Mount Server, VMware Licenses, Network Switches, Router, Wireless Solution, Firewalls, IP PBX, Microsoft Licenses, UPS with Battery Bank on turn-key basis;
- c) **Bidder has to bid on overall project on turn-key basis to qualify. Line items bidding is not allowed.**
- d) Applicants will be required to submit their technical and financial proposals in two separate sealed envelopes. The envelopes shall be clearly marked as "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL" in bold and legible letters.
- e) Earnest Money equivalent to 2% of the total bid value, only in the shape of call deposit/pay order is required to be submitted at the time of Technical Bid submission. Company Cheques are not valid for submission. Vendors without Earnest Money will be rejected straight away.
- f) Financial Proposals of only the technically qualified applicants will be opened in the presence of the representatives of the qualified firms.
- g) Financial proposals of the applicants not qualifying the technical evaluation will be returned unopened.
- h) WSSP/MSP reserves the right to accept or reject any or all the offers in this regard, without assigning any reason. WSSP/MSP has the discrete right to take the decision in this regard, it will not be liable in this regard.

2) Eligibility Criteria:

Bidders must give compliance to the below mentioned clauses as these are mandatory to being eligible for the bidding process.

- a. Bidders having minimum 5 years of working experience from the date of

- incorporation of the company / registration of the firm shall be eligible to participate. Manufacturer must have minimum 5 years manufacturing experience of relevant hardware.
- b. The vendor will ensure that the equipment is acquired from the original manufacturer and is procured through proper channel as advised by the original manufacturer.
 - c. The bidder should propose items only for the principal, which has registered office/s in Pakistan.
 - d. OEM should have more than 3 datacenter cases in Pakistan from last 5 years.
 - e. OEM should have official local office in Pakistan.
 - f. OEM should be capable to provide direct support from within Pakistan, other than the partner support.
 - g. The equipment must be offered with required warranty, explicitly mentioned in ToR for each product offered. The bidder has to bid for all "Equipment / Services" on turnkey basis as mentioned in the ToR. Please note that partial bids shall not be entertained.
 - h. Only the OEM or its Authorized Resellers/Dealers may participate in the tender. (General order suppliers will not be entertained).
 - i. NTN and Sales Tax registration certificates, as per the applicable government regulation, shall be provided in the proposal.
 - j. Proof of applicant's relationship with OEM's (Gold, silver, platinum partners etc)
 - k. The bidder shall provide an undertaking that the bidder has not been declared black listed by any Governmental/ Semi-Governmental institutions.

3) General Conditions:

- a. The bidder will be selected after an open and transparent bidding process.
- b. Proposals shall be submitted in English language.
- c. All prices mentioned in the Financial Proposal shall be in Pak Rupees (PKR) and inclusive of applicable taxes.
- d. Each page of the Technical and Financial Proposal shall be signed by an authorized representative of the bidder.
- e. **A pre-bid meeting for the interested vendors has been arranged on June 04, 2018 at 11:30 am in MSP Office for any clarifications required. The queries shall be submitted to WSSP/MSP at least 2 days prior to the pre-bid meeting. The same will be discussed with the respective vendors during the pre-bid meeting. The response to all the queries will be shared with all the bidders within 36 hours of the conclusion of the pre-bid meeting.**
- f. The company may increase or decrease quantities of items as per KPPRA rules.
- g. The costs of preparing the proposal and of negotiating the contract, including visits for discussion with WSSP/MSP are not reimbursable.
- h. The bidder shall quote only a single item against each category/line-item.
- i. The equipment shall be supplied in packed form and shall only be opened in the presence of the WSSP/MSP Officials. Working manuals and other related literature shall accompany the equipment in original at the time of delivery.
- j. In case of non-conformity with the desired specification, the item(s) shall be

- replaced by the Supplier free of cost. No additional time shall be permitted, and any delay may result in imposition of liquidity damages.
- k. Successful Supplier shall ensure to complete the supply of complete equipment(s) at the earliest but not later than 16 weeks from the date of issuance of purchase/supply order.
 - l. The contracted services shall be completed within 08 weeks after the delivery of equipment.
 - m. In case of delivery delays beyond stipulated time, a penalty at the rate of 0.5% of total purchase price per week for each day beyond final delivery date, for delays exceeding 3 weeks from the final delivery date WSSP/MSP may cancel the purchase order and forfeit the bid security.
 - n. In case of delays in performance of services beyond stipulated time, a penalty at the rate of Rs-100,000 per day for each day beyond stipulated time and for delays exceeding 3 weeks from the stipulated time WSSP/MSP may cancel the purchase order and forfeit the bid security.
 - o. Bidders must quote high quality equipment from well-established Brands, with registered offices, support offices (depots) in Pakistan for earliest resolution of the equipment in case of warranty.
 - p. WSSP will carry out relevant test and will inspect the equipment for successful acceptance. *If the supplied equipment is Counterfeit, refurbished, or below the required specification etc. it shall be rejected at bidder's cost.*

4) Bid Security / Performance Guarantee:

- a. A bid security in the form of a Pay CDR in the name of " PD Municipal Services Program" amounting Rs=30,00,000 must be attached with the technical proposal.
- b. The bid security shall be submitted in a separate envelope along with the technical proposal.
- c. Payment of bid security in the form of Cash or Cheque shall not be entertained and such bids shall be returned unopened.
- d. Bid Security of Unsuccessful bidders will be released within 10 days of the issuance of purchase order to the successful bidder.
- e. Bid security of the successful bidder will be released after submission of Performance Guarantee equivalent to 10 % of purchase order.
- f. Bid Security of bidders who do not technically qualify shall be returned with the unopened financial bid.

5) Technical Proposal:

Technical Proposals to be submitted by the applicants shall be in compliance with the requirements laid down in the Bid document and ToRs.

The Technical proposal shall be clearly marked with the following: -

TECHNICAL PROPOSAL

The technical proposal shall include:

- a. A bid security in the form of a CDR in the name of "PD Municipal Services Program" amounting Rs=30,00,000 must be attached with the technical bid. It should be submitted in a separate sealed envelope.
- b. The following documentation will be provided as part of the technical proposal:
 - a. Brief description of the company
 - b. Major areas of expertise
 - c. Outline of work experience with references to work on similar projects, name of the client along with their references / completion certificates, assignment duration and project costs
 - d. Audited Financial Statements for the past 3 years of the company
- c. Details of local technical support of equipment / service.
- d. Warranty details of all hardware, software and services should be clearly mentioned in the bid as mentioned in the TORs.
- e. Compliance against each clause and sub-clause of bid document and ToRs must be attached. Following conventions shall be used in the compliance checklist;

Item	Description	Full Compliance	Partial Compliance	Non Compliance	Remarks
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Financial Proposal:

The bidder shall submit Financial Proposals specified in the ToRs in separate sealed envelope. Envelop shall be clearly marked with the following: -

"FINANCIAL PROPOSAL"
DO NOT OPEN WITH THE TECHNICAL PROPOSAL

The financial proposal shall include:

- a. A lump sum cost along-with the complete item wise cost breakup inclusive of all applicable taxes shall be provided.
- b. All prices shall be in Pak Rupees
- c. The proposal must remain valid for a period of 90 days after the submission date.
- d. Taxes will be deducted at the time of the payment as per government rules and regulations.

6) Submission, Opening and Receipt of Proposals:

- a. The original proposal (Technical and Financial Proposal) shall be prepared without any interlineations or overwriting. Please note;
- b. Two printed copies, for each Technical and Financial proposal, shall be submitted in separate envelopes. Each Technical and Financial Proposal shall be marked "ORIGINAL" and/or "COPY" as appropriate.
- c. The envelopes shall be marked separately as "Technical Proposal" and the "Financial Proposal" in bold and legible letters to avoid confusion.
- d. Technical and Financial bids must be delivered at the address given below on or before 12.00 pm, **24th September 2019**.

Project Director, PMU MSP.
House No 43-B1,
Sahibzada Abdul Qayyum Road,
University Town, Peshawar.

- e. Technical Proposals shall be opened the same day i.e. 12.30 pm, **24th September 2019**, in presence of all the Bidders who choose to be present.
- f. The evaluation of Technical Proposals will be carried out first as per the evaluation criteria given in section 2. The results of the technical evaluation will be communicated to all the applicants. The financial proposals of the bidders who do not technically qualify will be returned unopened.
- g. Financial proposals of the technically qualified applicants will be opened publicly, for which the time and date will be communicated to the qualified applicants later on.
- h. Bidders are allowed to bid for the project as **Joint Venture**. Single vendor will be responsible for the successful execution of the project as per the required SOW. The tenderer applying under Joint venture / consortium should provide consortium deed signed for this project, in which Primary and secondary roles should be properly addressed. However, preference will be given to the vendor offering the whole solution without JV, to eliminate any transactional ambiguities.

7) Evaluation Criteria:

MSP /WSSP will evaluate the bids on the basis of their compliance with the, ToRs, evaluation criteria, and the point system as specified below.

A proposal shall be rejected during technical evaluation if it does not comply with the Bid document and ToRs or if it fails to achieve the minimum qualifying score of

70% in the technical evaluation according to the technical evaluation criteria given below:

a. Company's Profile & Experience:

Organizational profile will be measured on the basis of following factors:

Sr. #	Criteria	Marking Criteria	Marks	Max. Marks
1	Years of Incorporation	(One Mark for each year of incorporation/Registration of Firm after 05 years)	1	5
2	Number of Offices and Support Facilities in Pakistan.	Marks per Office	1	5
		Additional Marks shall be awarded for a fully functional office in Khyber Pakhtunkhwa)	1.5	
3	Number of Regular employees in the Bidder's firm/company	Less than 50	1.5	5
		51 – 75	3.5	
		Above 75	5	
4	Experience of providing hardware for complete DC implementation projects in Public/ Private Sector organizations of comparable size.	Marks per Project	4	20
5	Timeline for completion of the Project	1.5 months	5	5
		1.5 – 2.5 months	3	
		2.5 – 3 months	2	
		Total Maximum Points		40

b. Technical Specification of the Equipment and Solution offered as per TORs:

Compliance to the Mandatory Requirement for the whole BOQ in the Compliance Sheet will carry most marks. Total weightage can be calculated on pro-rata basis for each BOQ according to the following table.

Technical Specification of the Equipment and Solution offered		Marks
DC Power & Cooling System	IT Facility Infrastructure	1
	Layout and Design parameters	1
	Power, Electrical and Civil works	1
	50-60KVA rating, synchronous alternator, wired for 230/480 VAC 3 Phase, 50Hz.	1
	Switchboards outside Modular ITDC Specifications:	1
	Equipment Racks Cabinets	1
	Aisle Containment System	1
	UPS	1
	In- Rack Precision Cooling (Solution)	2
	Monitoring System	1
	Fire Detection HSSD & Suppression System	1
	Civil Works, Earthing System and Data Cabling Scheme	1
	Access Control Hardware	1
Indoor IP Cameras System	1	
Servers Solution	Enterprise Blade Chassis	5
	Blade Servers	
	Rack Mount Server	
Storage Solution	Storage with 2 SAN Switches	5
	Router for Data Centre	

Network Solution	Core Switch	6
	Access Switches	
	Instant Access Points with WLAN Controller	
	Passive Component	
Security Solution	Enterprise Firewall	4
VOIP Solution	IP PBX Unified Communication Server	5
	Unified Gateway	
	IP Video Phone	
	IP Phone	
Total Marks		40

c. Certified Support of Technical Resources as per TORs:

The bidder should have OEM/Relevant Certified resources to cater to the implementation & support for the warranty period. The certified resource is required for each product as per below table being proposed, with specific focus on main items. Tabular form for the partnership marks:

Category	No. of Certified Engineers Required (1 mark each)
DC Facility	3
Servers	1
Storage	1
Network	1
Security	1
Unified Communication	1
VMware	1
Microsoft	1
Total (max. marks 10)	10

Furthermore, each certified resource will be evaluated according to the criteria given in the following table.

S. No	Criteria	Marking Criteria	Scores		
1	Relevant Degree with at least 16 years of education	Individual having 16 years of relevant education will be given 20 marks, otherwise 0	20		
2	Relevant Degree with at least 17 to 18 years of education	Individual having 17 or 18 years of relevant education will be given 5 additional marks, otherwise 0	5		
3	Relevant OEM certification of the product	If the individual has a relevant professional certification by a recognized body that is relevant to his/her role in the assignment, full score (25%) will be given	25		
4	Number of similar assignments (in past 10 yrs.)	The number of similar assignments, (N) listed on the individual's CV for the past 10 years will be compared with a base value (Ts=5) Subcomponent score = $(N / Ts) \times 25\%$ Max score awarded for this sub component is 25%.	25		
5	Value of largest similar assignment (in past 10 yrs)	≥ 200 million	100%	10	
		≥ 150 million	75%		
		≥ 100 million	50%		
		< 50 million	30%		
6	Role in similar assignments (2 or more)	Range		10	
		Exactly similar	100%		65%
		Support role to similar	65%		42.25%
		Slightly similar	30%		19.50%
7	Time with Firm	If an individual has been working with the bidding firm for 12 or more months, he/she will be given 5 marks, otherwise 0.	5		
Total			100		

d. Financial Strength of each bidder will be evaluated on the basis of the following two factors:

a. Liquidity

Liquidity measures a bidder's ability to utilize its resources available to meet its short term commitments. If a bidder cannot meet its short term commitments on time, it eventually may become insolvent. The financial ratio that measures liquidity is the current ratio. The current ratio measures the size of a bidder's current assets to the size of its current liabilities.

b. Profitability:

Profitability measures a bidder's ability to generate profit or positive net income. If a bidder is not profitable it eventually may become insolvent. It is required for last 03 years:

Item	Score	Criteria	Documentary Evidence
Current Ratio of the last one year	4	Current Ratio of the bid in consideration / Maximum Current Ratio amongst all the bidder * 4	Audited Financial Statements of the last 01 year
Net Income (Profit) during the last 03 years on an annual basis	6	Net Income (Profit) of the bidder in consideration each year / Maximum Net Income (Profit) amongst all the bidders * 6	Audited Financial Statements of the last 03 years
Total	10		

Part II

Terms of Reference

1) Scope of Work:

Municipal Services Program invites proposals from companies/firms having legal presence in Pakistan for the supply, installation, and establishment & commissioning of High-Tech Server & Storage Setup and IT Infrastructure along with Civil Works on turn-key basis for WSSP Head Office in Peshawar as per the detailed specifications of Bid Document.

The scope of work includes:

- a) Delivery of Hardware & Software as required in technical specifications.
- b) Installation, configuration & commissioning of Hardware and Software of delivered equipment.
- c) OEM certified training for 03 resources.
- d) Principal OEM supplier must have 24 x 7 technical repair, replacement & support in the country of purchase.
- e) 3-year Comprehensive services shall be proposed by the bidder for each item.

2) Warranties:

Bidders shall provide complete details of hardware, software and services warranties for each item.

Hardware Warranty

- a) 3 Years warranty of all hardware with parts and services is required. For battery bank of the UPS, standard 01-year warranty is required. However, bidder should quote the unit price of the battery bank as an option, in case it is to be purchased by WSSP/MSP.

- b) The bidder must provide Hardware Maintenance Service throughout the Hardware Warranty Period. All charges and costs associated with providing the Hardware Maintenance Service during the said period are included in the price of the Hardware.
- c) If during Installation of the hardware any supplied hardware is found defective or gets damaged, the same shall be replaced by the Bidder free of cost.
- d) If during the period of warranty any component of the supplied hardware is found defective, or failed in test or in operation, the same shall be replaced by the Bidder free of cost.

Software Warranty & Support

- a) Bidder warrants that the Software (CD-ROMs, diskettes, other media or any other related equipment) upon which the Software is delivered are free from defects in materials and workmanship under normal use.
- b) Bidder warrants that the Software will perform in accordance with the Documentation.
- c) The Bidder is required to provide support service on implementation, fault diagnosis and resolution, consultation, and updating services on the supplied Hardware Server, associated System Software (Server Operating System & VMware wherever applicable).

Section A

Technical Specifications

ITEM 1: ESTABLISHMENT OF HIGH TECH SERVER ROOM FACILITY:

1) Modular IT Infrastructure POD - Scope of Work and Deliverables

Scope of work includes but not limited to following major components of ITDC Facility Catering Network Critical Physical Infrastructure, along with hands-on operational training for 03 resources on-site, as follows: -

a) IT Facility Infrastructure

- Modular Datacenter facilities
- Data Center Power System including UPS and PDUs, etc.
- In-rack Precision Cooling System
- External Power system including 1-Generator, Tap-off and Switchboards, ATS Etc will be provided by Customer) while 2nd Generator will be offered by bidder as primary input source.
- IT Racks with Dual PDUs and Accessories
- Biometric Access controls
- Video Surveillance System
- Data Center Power Cabling System (up to Room Tap off Panel) on three (3) phase power supply.
- Fire Detection (HSSD) and Suppression (Novec or equivalent) System
- Environment Monitoring System
- Full Functional DCIM for Facility Operation for all critical Power/Cooling Components for Modular UPS.

The Modular Data Center will be built to Rating 3 (Tier 3) specifications and all facilities will be created accordingly. Initially 5 IT Racks with each having 3.2kW to 4kW Thermal/Compute Load. The space will be optimized as much as possible and UPS and cooling will be used reflecting converged infrastructure approach.

b) Layout and Design parameters

- Room Dimension : 12 feet x 18 feet Area (will be for Overall fit out) by Vendor as per best proposed modular Data Center Design approach.
- Main Power Supply : Three (3) phase.
- IT Power Density : 3.20 kW to 4kW per Rack.
- Equipment Racks : 5 IT Racks
- Total IT Power Load : 20kVA
- Power Redundancy : 2N
- Cooling Type : Precision In-rack cooling

- Cooling Redundancy : N+1
- DCIM : All critical Power and Cooling components
- Main Tap-Off Capacity : 100-125A Splitter Panel Type
- Usage : One main supply and one DG for distributing them between two mains power Supplies
- Upstream Surge Protection : Usage Surge protection: class C SPD
- Bypass : Manual maintenance bypass configured for the PDU(s)

General Requirements

The following general requirements and conditions that apply to some or all of the following sections are defined below in this section:

1. The Data Center must be in conformity with the stipulated requirements of the local and regulatory authorities - if any. The site preparation should follow the current norms prevalent in the industry. All equipment and material used should have relevant ISO certification.
2. The bidder must include a schematic drawing for all installed systems for approval.
3. **The bidder is advised to inspect the site/drawings and assess the requirements needed for establishing the Modular Data Centers.** In case of any errors or omissions, bidder will be held responsible;
4. The Physical infrastructure of the Data Centre should be followed “ANSI-TIA/EIA-942-B Standard” in full conformance to Rating 3 (Tier 3) **(concurrent Maintainable design is must)**. Detailed checklist can be provided to the bidders. The bidder by doing a site visit to help them understand the SOW and the costs involved. Detailed description of services and the itemized costs to be given for this portion to account to any changes in the area of work.
5. During the detailed design and installation, the bidder should consider the implementation of a high-level of security over the components integrated into the installed environment.
6. Bidder has to quote and install all installation materials including ducts, pipes, cable trays, ladder cables, patch cords etc. as per site requirements.
7. The vendor must also provide schematic in the form of a single line diagram for all electrical, mechanical, air-conditioning etc. and CAD drawings for the proposed Data Center.

The bid should include prices for any:

1. Systems, components and appliances implemented, and its associated works executed
2. Material used

Any requirement stated in this needs to be taken into account in the pricing of individual systems and works described in these sections.

c) Power, Electrical and Civil works

Generator Specifications:

Bidder will provide one 100KVA as Source-A Generator three phase ratings **Generator and Raw Utility Power source upto ITDC/Server room's main tap-off panel.**

Customer will also provide as Source-B for 50-60KVA three phase rated window spared from its existing **Generator for parallel to Source-A Generator and Raw Utility Power source upto ITDC/Server room's main tap-off panel.**

d) 100KVA rating, synchronous alternator, wired for 230/480 VAC 3 Phase, 50Hz.

- Perkins/Cummins or equivalent engine (Perkins OR Equivalent)
- Minimum operating temperature range -20 to 50 degrees Celsius Digital microprocessor display showing full system status.
- 3-phase sensing digital voltage regulation.
- RS-232, RS-485, and Can bus remote ports.
- All connections waterproofed (Generator with Canopy).
- 2-20ma engine sensors for minimal interference.
- Built-in PLC for special applications.
- Engine function monitoring and control.
- Full-range standby operation (programmable auto crank).
- emergency stop, auto-off-manual switch.
- Mechanical governor.
- Full system status on all AC output and engine function.
- Service reminders, trending, fault history.
- I2T functionality for full generator protection.
- HTS transfer switch function monitoring and control.
- Wire start controls for any 2-wire transfer switch.
- Mainline circuit breaker with shunt trips and auxiliary contacts.
- Sound attenuated, weather protective enclosure with industrial grey powder paint Finish and integral critical grade muffler.
- Vibration isolators between engine/alternator and base frame

- Fuel Tank (Day tank).
- Warranty coverage of at least one (1) years at no additional costs.
- Generator will be mounted to an existing concrete pad with four (4) ground rods and bare copper ground conductor installed and connected to ground lugs.
- Electrical receptacle, conductors, and ground wire will be installed with new conduit and wiring. New conduit and wiring will be installed to connect the generator and transfer switch, receptacle panel.
- All labor, materials, electrical work, shipping, and cost of crane system for generator installation to be included in the bid.

e) Switchboards outside Modular ITDC Specifications:

Supply & installation of ASTA Certified/type tested LV switchboard as per specifications mentioned in Bill of Quantity. Switchboard should be of one manufacturer. Upstream to downstream side using Type Tested/ASTA-certified From II level, Imported only.

f) Equipment Racks Cabinets

Supply and installation of floor standing server/network cabinets complete with horizontal & vertical cable management. The cabinets with the width of 19 inch and 42U installation space (standard size), the depth of cabinet may be or equal to 1070/1090/1100/1200mm.

- Front vented single door (70%+ perforation level) with swivel handle lock (universal key);
- Rear vented double door (70%+ perforation level) with swivel handle lock (universal key);
- Removable four sheet steel side panels with lock (universal key);
- Blanking panels per U for all vacant equipment mounting locations in cabinet;
- Overall Weight Carrying Capacity not less than 1100kg;
- Anti-Static wrist socket and grounding wire;
- Basic Power Distribution Units, 2 Nos. per rack, Vertically Mounted, single phase with having 24 Power Outputs (C19, C13). The Racks should be of same manufacturer as of In-rack cooling Equipment. If not then the cooling, DCIM and UPS must of same manufacturer with letter of confirmation should be attached with ITDC POD racks as bundle is must.

g) Aisle Containment System

Supply, Installation of aisle containment system with their accessories to separate hot air and cold air, improve cooling efficiency. The layout should co-ordinate at site with other services for exact location and position of the aisle containment.

- The confined aisle should consist of perforated door and other necessary sealing; to ensure the cold air and hot air are effectively separated.
- The depth of a contained aisle should not exceed 250mm
- The smoke sensor, temperature humidity sensor, should be installed inside the data center aisle, and connected to data center management system.
- Aisle containment doors shall have translucent viewing panel.

h) UPS

Supply installation of three phase on-line double conversion uninterruptible power system (UPS), capacity to support initially IT load of 20kVA or higher.

- Two UPS feed separate power path till the Data Centre. In case of failure of any UPS, the other UPS should take over the full load. Each UPS support 15min backup time@20kVA or higher for full IT Load.
- UPS Should have sealed type VRLA housed within external battery cabinet / Built-in for all the batteries.
- The UPS shall operate as an active power control system; connect with the main electrical system to provide on-line power protection for the critical Compute loads.
- Normally the inverter and the rectifier operate in an on-line manner to continuously regulate the power to the critical load. The rectifier obtains power from the AC input source and supply DC power to simultaneously recharge the battery. Upon failure of the AC input source, the critical load shall continue being supplied by the main inverter without any switching. The inverter shall obtain its power from the battery. There shall be no interruption in power to the critical load upon failure or restoration of the AC input source.
- The static bypass switch shall have the function of transferring the critical load to input supply without interruption.
- The UPS shall be compatible with data center, data room and facilities.

i) System Input

- Nominal Input voltage rating: 3×380V (compatible for 3×400V or 3×415V)
- Input Voltage range: 190-485V,
- Input frequency: 40-70 Hz
- Input power factor: 0.99
- Total harmonic distortion of input current: <3% (linear load, rated load)

j) System Output

- Nominal Output voltage rating: 3×380/400/415V.
- Output power factor: .8 or better.

- Output voltage harmonic distortion:
- <3% THD for linear load
- <5% THD non-linear load
- Overload capability:
 - 150% above, 100 ms in normal operation
 - 125% to 150% for 1 min in normal operation
 - 105 to 125% for 5min in normal operation

k) Monitoring

The UPS shall be provided with RS-232 and WEB/SNMP/MODBUS for communication, and provides communication cables and various alarm signal output terminal supporting the use of interfaces. The following minimum set of alarm conditions shall be available:

- Real-time monitoring system working status:
- output short-circuit protection
- output overload protection
- over temperature protection
- low battery protection
- output over voltage/low voltage protection
- pre-alarm of fan failure
- pre-alarm of bus capacitor failure
- pre-alarm of battery failure

l) UPS output Distribution Panel

Modular rack mountable or Compact parallel switch panel (as per manufacturer standard), for distribution and maintenance bypass set up for user to a parallel system without restructuring existing main distribution system. Ready-made circuit in an output distribution unit built into a parallel switch panel,

- Compatible with proposed UPS
- Nominal input voltage/frequency
- 230 Vac, 50 / 60 Hz
- 400 / 230 Vac, 50 / 60 Hz
- Nominal current
- Up to 125 A or above

m) In- Rack Precision Cooling (Solution)

Supply and installation for total 20KW or Higher In-rack precision air conditioners with N+1 redundancy i.e. to meet net 20KW or higher capacity all the time. Each cooling unit’s electrical supply should be on separate path. The main technical data of the precision air conditioner is listed in the below table:

Items	Specification
Cooling Mode	Air Cooled with (Horizontal/Vertical air flow)
Cooling capacity	Upto 20kW or higher
Refrigerant	As per manufacturer standard
Compressor	As per manufacturer standard
Indoor fan	EC (electronic commutation) fan
Total airflow	Overall 4000 m ³ /h or greater
Power supply	220 V AC, 50/60Hz, 1Ph+N+PE OR 380V~415V 50/60Hz 3Ph
Air filter	High performance filter
Reheat	Yes
Humidify	Yes
Reheating capacity	The electric reheat coils shall be capable of Maintaining room dry bulb conditions when the system is called for dehumidification.
Condensate pump	Yes 10-20%
Operating ambient temperature:	-15°C to +45°C
Environmental certification	RoHS, REACH

General requirements:

- DC variable-frequency compressors with high energy efficiency can achieve 20%–100% stepless speed adjustment; Four DC fans in the indoor unit use the horizontal air supply mode for racks.

- Optimal system configurations and efficient refrigeration coil pipes ensure efficient heat exchange.
- The variable-frequency temperature control algorithm enables quick response to load changes and precise temperature control to conserve energy.
- Fans support variable-frequency start, which lowers the start current and prevents shock on the power grid and other electrified equipment.
- A wet film humidifier consumes more than 90% less energy than a conventional humidifier because energy consumption of a wet film humidifier comes only from the water pump.
- The air conditioners are connected over FE ports and networked through the MAC protocol bus to achieve teamwork control, which effectively saves energy.
- The Positive Temperature Coefficient (PTC) electric heater provides dual protection functions: automatic reset and auto-recovery disabling.
- The air conditioner is designed for non-condensation at low loads to maintain the humidity in cold aisles below 80% at low loads (10% load at least) in a high-humidity environment.
- The air conditioner features 6 kV surge protection design, providing high surge protection reliability.
- Users can monitor and configure parameters for the cooling system on the monitoring unit.

n) **Monitoring System**

Data center management system provides a unified platform for monitoring and control, with the functions for management of security, assets, reports, views, and resources, capacity and so on. The software designed to collect and manage data of assets, resource and operation status throughout the data center lifecycle.

i) **Alarm**

Alarms associated with system, allows equipment to generate acquisition task, collect data and report alarms based on a monitoring data template. Event alarms shall have the following capabilities:

Severity: According to the seriousness of the alarm, the alarm level is divided into critical, major, minor and tips, event is managed at different levels, and the events are divided into normal, warning and abnormal, can discover a variety of potential and emerged fault.

ii) **Alarm View and storage:**

- Support alarm statistics, alarms cumulative number, alarm histogram;
- Support alarm confirmation and anti-confirmation function.
- Support alarm shielding function.
- Support redefining the level of alarms according to the actual using status.

- Support directly locating the position of alarm source on the alarm interface.
- Support directly creating the fault work-order on the alarm interface, realizes process treatment.
- Support dynamic modifying alarm condition and recovery condition, and support reporting alarms when meet those conditions.

iii) Monitoring Data analyze

- Monitoring database analyze management allows execute, query, maintain report by create a task. Saves the report generated in the storage zone and sends the report by email for operation based on configuration.
- Support display the data by excel, graph, bar chart, pie chart.
- Customizes reports based on user and service requirements.
- Support Logo customization of reports.
- Support different report templates such as electricity consumption, temperature, performance and capacity.
- Support classification show of dynamic data and static data.

**Vendor has to propose solution to cater all the Facility equipment which will be installed in Data Center*

o) Fire Detection HSSD & Suppression System

The fire suppression systems shall include the following:

- HSSD & Fire Detectors
- NOVEC or equivalent Gas Cylinder with NOVEC or equivalent gas
- Fire Control Panel
- Alarm Bells
- Detection and Actuation Equipment's
- Operation Alarms and Indicators
- Distribution System Piping
- Valves, Gauges etc.
- Discharge Nozzles

i) Manual Operation

- When the Manual Release Station is activated, the complete operation sequence of Activation stage 1 & stage 2 are executed simultaneously.

- Discharge of the clean agent may be prevented by pressing the 'Stop gas' pushbutton at the control panel. However, alarm status shall be remained.
- If the 'Stop Gas' pushbutton is being pressed before the LED timer reaches '0', timer shall re-start countdown immediately upon release of the pushbutton.

ii) Storage Container

- The Cylinders shall be manufactured in accordance to European Directive for Transportable Pressure Equipment 99/36/EC (TPED).
- Each container must be equipped with a discharge valve to discharge the agent at required rate.
- Over pressurization of the container shall be prevented by a safety disc incorporated with the container valve.

iii) Automatic Detectors and Alarm Bells

- The automatic detectors should be combination Ionization smoke and optical smoke type
- The alarm bells should produce an alarm at least 90 dB noise level above the type surrounding.
- The bells shall be installed beside the Control Panels.
- Piping and Fittings as per Manufacturer's Approved design.
- Discharge nozzles shall be manufactured in corrosion resistant material and shall be positioned in a manner to effect a uniform concentration at the shortest time after discharge.
- Fire and Smoke Detection System
- Fire Extinguishing System (Novec)

p) Civil Works, Earthing System and Data Cabling Scheme

The Customer will handle all associated civil works i.e. Utility and Existing Generator Earthing and Data Cabling connectivity up to ITDC SOW and these are out of bidders SOW.

The following civil work is included but not limited and will depend on site requirements:

- Dismantling, Shifting/reinstalling wooden partitions and all Related Civil Work.
- Anti-Static flooring in the Data Center & Electrical Panel Room, Skirting, Floor Laying, False Ceiling, Fitting & Fixing, complete in all respect.
- 90 Minutes Fire rated doors Local 16 SWG.
- Fire Rated Paint and Tiles work etc.
- Emergency exit door.
- LED Lights.
- Motion Sensors OEM.
- Emergency Lights.

- Exit Lights.

Physical Security

q) Access Control Hardware

- EM 125KHz supported PIN/Biometric/RFID device with user capacity of 1000
- 1:1 verification and 1:N identification
- Dual function for Access Control and Time & Attendance
- ID only function for fingerprint unregistrable person
- Standalone / Network Communication via RS 232/RS422/RS485
- Log record capacity of 26,000 events minimum
- GPI / O based door controller with keypad / LCD including lock
- Anti-Passback Function
- Arm/Disarm Function
- Alerts when Door Opening Time Exceeds and Forced Door Open
- Dual Tamper Switches
- 3-Status Input Check (On/Off/Cut)
- Exit reader RFID only
- High Quality Optical Sensor
- Emergency push button.

Minor Deviation in specifications is acceptable provided no Compromise on technical functions of solution is must by each bidder.

i) Access Control Application

Enterprise physical security application which should provide integration support with Active Directory and Fire Alarm System. Fully customizable, Built in Reports along Report Builder, tightly integrate able with standard CCTV / video management. Should have portal to manage the teams, attendance and access requests. Should have email alerts.

Bidder will have to provide the user registration, access control and reporting in Access Control application.

The application should have the following features

- User Management & Enrolment
- Biometric Enrolment
- Groups Management
- Department Management
- Team Management
- Role Management
- Report Management

- Visitor Management
- Leave Management
- RFID Card Printing Module
- System Access Management and Policies
- Individual Access Rights Management
- Application Access Rights Management
- Integration with Active directory for Employee information transfer
- Integration of Personal Access Control, & Video Surveillance System
- Programmable Events (Emergency alerts, unauthorized alerts, Email alert, custom triggers etc.)
- Built-in Reports & Customized Reports Builder

ii) Reports

- Personal reports
- Supervisor reports
- Daily, weekly, and monthly reports
- Late Arrival reports
- Team reports
- Team work hour statistics
- Absent users
- Present users
- Emergency evacuation Reports

r) Indoor IP Cameras System

- 3 Megapixel or higher
- 6.08 mm (1/3 type) CMOS
- IR LED: 20m,19ea
- 2.8 “10mm varifocal lens
- 20-30FPS @ 1280x1024
- Minimum Illumination – 0 Lux (IR LED on), 0.3 Lux (IR LED off)
- H.264, MJPEG dual codec
- 80dB of Wide Dynamic Range
- ICR day & night, 2D+ 3D DNR
- Dynamic Profiles (up to 7)
- Micro SD Slot
- Alarm In/out, Audio In/out Support Power on Ethernet
- Storage of alarm sequences for at least 30 days
- Automatic backup and storage on data backup media: DVD, Tape, Disk, Other
- Minimum 25 pictures/sec with several non-synchronized cameras
- Manipulation detection and alarm handling for all cameras
- Video Analytics Embedded

These cameras should be coupled with motion sensors so that cameras can start recording only when they detect movement in the defined areas. The surveillance

system should be connected to a central monitoring room (NOC). Monitoring via the internet (IP monitoring) should also be available. Remote monitoring should be offered as an option.

Minor Deviation in specifications is acceptable provided no Compromise on technical functions of solution is must by each bidder.

Bill of Quantity –

S.#	Item Description	Solution	Qty	Amount	Rate
1	Electrical Work				
	Power Tap-off From MDB- Splitter panel point onward end to end covering wiring up to (UPS/Raw Power within ITDC POD)	<i>As per SOW defined</i>	1 <i>Solution</i>		
	(As per requirement)				
2	Switch Boards				
	MDB-Splitter Panel with, It includes,1 Main Breaker, 2 x 125 Amp OR higher incoming breakers, electrically and mechanically 2N design with 2 32Amps Type Tested sub distribution panels for Non Critical compute/Mechanical/General Lighting load	TYPE TESTED DB	2-4 DB		
	OR				
	Equivalent from each manufacturer as per its own design.				
	SMDB/PDU consisting of 63-80 Amp, TP incoming breakers, and supporting downstream Single/Three Phase breakers for Compute and Cooling Load separately Path and Component level redundancy both with in Data Center POD Design	TYPE TESTED DB	2 DB		
	OR				
	Equivalent from each manufacturer as per its own design				
3	Cable Tray / Trunking / Ladders (with in Server room)		1 <i>Solution</i>		

	Supply & installation of 14 / 16 SWG G.I. perforated cable tray / solid trucking cable ladder with solid cover including bends, tees, reducers, supports, brackets etc. of the following sizes, complete with all mounting accessories, as per drawings & specifications. (Perforated or solid as required). It should be powder coated painted in Black color including Cable trunking/ ladder 200 mm x 100 mm - 16 SWG bottom with cover.	<i>As per requirement and specifications attached</i>			
4	Power Cables				
	Supply and installation of XLPE/PVC Cables as per requirement and site survey to provide clean power to equipment (Pakistan / New – Age / Fast Cables)				
	Supply and installation of power cables as per requirement and site survey				
5	IP based Access Control System				
	Supply & installation of following Biometric Access Control Systems as per drawings & specification, complete in all respect including push button, door locks, exit reader	<i>As per requirement and specifications attached</i>			
	RFID cards				
6	IP Cameras				
	IP Cameras for monitoring	<i>As per requirement and specifications attached</i>	4		
	Recording upto 30 days		1		
	Fire Detection and Suppression System				
7	HSSD System	OEM			
	Supply, installation & commissioning of HSSD System to be installed only in the server room for early smoke detection of the fire. The system should monitor, configure and control	Europe/USA	1 Solution		

	the detectors from a central location.				
	Fire Suppression System- NOVEC 1230 (or equivalent) Cylinder of Stackable Solenoid Actuator, Discharge Nozzles and complete with Gas with complete pipes and installation				
	Electronic sounder, Sounder with flasher with complete wiring				
	Fire Extinguishers (Co2 Type) with bracket 05 KG Each.				
8	Modular ITDC with DCIM INTEGRATION AND HANDOVER				
	a) Data Center Access Control integration with Video Surveillance.	Local Integrator	1 Solution		
	b) Data Center IP CCTV integration with DCIM System				
	Modular Data Center Core				
	(Racks, Containment, UPS, Cooling, DCIM)				
9	Data Center Core				
	With Bypass Cabinet having TVSS installed, UPS modular 20 kVA installed capacity with 2N configuration.	To be locally installed, OEM brands	1 Solution		
	PDU Inclusive of IT Power Distribution Module for 3phase and 1phase (32amp)				
	OR				
	Equivalent from each manufacturer as per its own design				
	Ceiling assembly, door and frame assembly etc. for cold-aisle containment for racks, cooling unit and UPS/Battery frame. (Job)				
	In-Rack cooling Upto 20kW units with N+1 redundancy including installation including				

	fitting/fixture, refrigerant filling, copper piping, U-trap, P-Trap, Outdoor unit placement/foundation, fencing around outer unit, DB/cables, cable trays and others required for the turnkey installation. Complete in all respect (one job)				
	Rack & Racks Accessories				
	Rack 42U 600mm Wide x 1070/1090/1100/1200mm +/- 10% Deep Enclosure, Rack PDU, Metered, 32A, 230V, C13 & C19 connectors to meet IT load requirement, Temperature & Humidity Sensor, Tool less blanking panels.				
	Data Center - Infrastructure Monitoring Solution				
	As per RFP detailed Specifications				
10	Generator				
	100KVA rating, synchronous alternator, wired for 230/480 VAC 3 Phase, 50Hz.	As per detailed specifications attached	1		
11	Civil Works	As per site requirements	As per actual		
SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF IT INFRASTRUCTURE FOR PRODUCTION SITE:					
Blade Solution, Storage, Rack Mount Server, Vmware Licenses, Network Switches, Router, Wireless Solution, Firewalls, IP PBX, Microsoft Licenses, Router & other allied items					
1	Enterprise Blade Chassis	Blade Servers Solution	2		
2	Blade Servers		6		
3	Storage with 2 SAN Switches	Storage & SAN Solution	1		
4	vSphere with Operations Management Enterprise Plus	VMware Solution	16		
5	VMware vCenter Server Standard for vSphere		1		
8	Core Switch (Layer 3 Switch)	Active Network Solution	1		

9	Access Switches (Layer 2 switch)		10		
10	Instant Access Points with WLAN Controller (Access Point)		10		
11	Router for Data Centre		1		
12	Firewall (1 Enterprise & 1 Client based Small Firewall)	As per the Specifications attached	2		
13					
13	IP PBX Unified Communication Server	IP Telephony Solution	1		
14	Unified Gateway		1		
15	IP Video Phone		15		
16	IP Phone		105		
17	Microsoft Server Standard License	Microsoft Licenses	4		
18	Microsoft Exchange Server Enterprise License		1		
19	Floor Standing 27U Racks		4		
20	Installation & Commissioning Services		At Actual		
21	Passive Component		At Actual		
	Total				

a) Detailed Specifications

Equipment with below minimum specs or higher.

1. Blade Enclosure	
Item	Description of Requirement
Blade Chassis	Solution to house the required number of blade servers in smallest number of enclosures. Industry standard suitable for housing in Standard Server Racks - The blade enclosure should support at least 50% higher server density per square-foot when compared to the dense 1U Rack servers. Should have support for full height and half height blades in the same enclosure, occupying a max of 12U rack height.
	Should support Hot Pluggable & Redundant Management Modules with onboard KVM functionality.
	Should provide a highly reliable and high-performance mid-plane/back-plane design in the blade enclosure. Should provide detailed technical information.
	Should be able to accommodate the blade servers of specifications mentioned in the proposed blade enclosures. The proposals must offer the densest packaging possible for the blade servers in the enclosure and maximum headroom for future expansion in the offered enclosures.
	Support simultaneous remote access for different servers in the enclosure.
Interconnect	Should provide 10GE interconnection and should provide redundancy. Preferably support simultaneous housing of FCoE, Ethernet, FC, SAS and InfiniBand interconnect fabrics offering Hot Pluggable
Blade Server Interconnect to LAN/ Network	The enclosure should support network switches with at least 16 or more 10GE uplink ports, with 8 Ports Activated in each Switch, up-linkable to the data center switch.
Blade Server Interconnect to Fiber Channel SAN	The enclosure should support Fiber Channel SAN switches with at least 16 Gb auto-negotiating FC uplinks and also at least 16Gb auto-negotiating downlinks to all server bays.

Power Supply	The enclosure should be populated fully with power supplies of the highest capacity available with the vendor. Power supplies should be N+N redundancy configuration, where N is greater than 1. Should offer a single phase power subsystem enabled with technologies for lower power consumption and offering high energy efficiency levels .Vendors should provide documents certifying the claims.
Cooling	Each blade enclosure should have a cooling subsystem consisting of redundant hot pluggable fans or blowers enabled with technologies for improved power consumption and acoustics
Warranty	3 years comprehensive (24 x 7) warranty,4Hour response time
System Software	Management/controlling softwares have to be from the OEM.
Remote Management	Must provide a remote management functionality to operate the server in both in-band and out-of-band. Must be part of the server without the need to install any additional hardware or software.
	Must have a real time Virtual KVM functionality and be able to perform a remote Power sequence. Must provide both Java & Java-free browsing options.
	Must have the ability to map the remote media to the server and ability to transfer files from the user's desktop/laptop folders to the remote server with only the network connectivity.
	Must have the ability to capture the video sequence of the last failure and the boot sequence and also playback the video capture or equivalent technology.
	Must have the ability for multiple administrators across remote locations to collaborate on the remote session in a server with multiple sessions even in server powered OFF mode.
Power Management	Must be able to show the actual power usage and actual thermal measurement data of the servers.
Compliance	Vendors must submit supporting documents stating RoHS compliance.
Rack Mount kit	Vendor should supply all accessories and rack mount kits

2. Blade Server (Latest Generation)

Item	Description of Requirement
Processor	Latest generation x86-64 processor, 2 Nos of Intel Xeon latest version/generation 12 cores with at least; processing speed of 2.1GHz, 16 MB L3 cache, 130W TDP and FIO 2-processor Kit, based on Intel C610 series chipset or higher in same series. Server should provide an intelligent socket that would ease the installation of CPU to avoid errors caused by miss-inserting processors during install or upgrade.
Memory	256 GB (8 x 32GB Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit) DIMMS scalable to at least up to 2TB, using DDR4 Load Reduced DIMM (LRDIMM) memory modules. Should be capable of identifying and reporting whether genuine OEM memory is installed for system reliability. Each LRDIMM should work at 2400MHz, 1.2V even after populating all the DIMMs in the channel.
Memory Protection	Advanced ECC Memory Online Spare Mode (Rank Spare Mode)
Hard disk drive with carrier	2 x 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Warranty Digitally Signed Firmware SSD drives.
Storage Controller	Integrated PCIe 3.0 SAS Raid Controller with RAID 0, 1 with 2GB of Flash backed write cache onboard.
Networking features	2 * 10GE port per Server for Core connectivity.
Interfaces	Minimum of 2 x internal USB 3.0 port
Blade Server Connectivity to SAN	Should provide a 16Gbps Dual port Fiber Channel HBA internal to the Server Blade.

<p>Industry Standard Compliance</p>	<p>ACPI 2.0 Microsoft® Logo certifications USB 3.0 Support IPMI 2.0 Secure Digital 2.0 TPM 1.2 Support IEEE (specific IEEE standards depending on Ethernet adapter card(s) installed) Advanced Encryption Standard (AES) Triple Data Encryption Standard (3DES) SNMP SSL 2.0 DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP) Active Directory v1.0 PCIe 3.0 ASHRAE A3</p>
<p>OS Support</p>	<p>Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) VMware</p>
<p>Warranty</p>	<p>3-year 24x7 4Hour response comprehensive warranty</p>
<p>Provisioning</p>	<p>Essential tools, drivers, agents to setup, deploy and maintain the server should be embedded inside the server. There should be a built -in Update manager that can update firmware of system by connecting online.</p>
<p>Remote Management</p>	<p>System remote management should support browser based graphical remote console along with Virtual Power button, remote boot using USB/CD/DVD Drive. It should be capable of offering upgrade of software and patches from a remote client using Media/image/folder; It should support server power capping and historical reporting and should have support for multifactor authentication.</p> <p>Out of band remote management port should be provided and it should have at least 4GB of NAND Flash to download the firmware from the website directly or from internal system or similar functions. Server should support automated firmware update.</p> <p>Server should support agentless management using the out-of-band remote</p>

	<p>management port or similar functions.</p> <p>The server should support Active Health System which monitors and records changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur.</p> <p>Applications to access the server remotely using popular handheld devices based on Android or Apple IOS should be available or similar functions.</p> <p>Should support remote console sharing up to 6 users simultaneously during pre-OS and OS runtime operation, Console Replay that captures and stores and supports replay of the console video during a server's last major fault or boot sequence, Microsoft Terminal Services Integration, 128 bit SSL encryption and Secure Shell Version 2 support. Similar functions are also acceptable.</p> <p>Should provide support for AES and 3DES on browser. Should provide remote firmware update functionality. Should provide support for Java free graphical remote console. Similar functions are also acceptable.</p>
Server Management	<p>The Systems Management software should provide Role-based security</p> <p>Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. Should support automatic event handling that allows configuring policies to notify failures via e-mail, pager, or SMS gateway or automatic execution of scripts.</p> <p>Should provide an online portal that can be accessible from anywhere. The portal should provide one stop, online access to the product, support information and provide information to track warranties, support contracts and status. The Portal should also provide a Personalized dashboard to monitor device health, hardware events, contract and warranty status. Should provide a visual status of individual devices and device groups. The Portal should be accessible on premise (at customer location - console based) or off premise (using internet).</p> <p>Should support scheduled execution of OS commands, batch files, scripts, and command line apps on remote nodes</p> <p>Should be able to perform comprehensive system data collection and enable users to quickly produce detailed inventory reports for managed devices. Should support the reports to be saved in HTML, CSV or XML format.</p>

	Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.
	The Server Management Software should be of the same brand as of the server supplier.
Training	OEM Certified training in OEM accredited training center for 03 resources on Blade Solution Administration by certified instructors. The cost of the training is implicit in the product/service cost.
3. SAN Storage	
Item	Description of Requirement
Operating System & Clustering Support	<ol style="list-style-type: none"> 1. The storage array should support industry-leading Operating System platforms including: <i>Windows 2012 / 2016, HPE-UX, VMware and Linux</i> or equivalent. 2. Offered Storage Shall support all above operating systems in Clustering.
Controllers	<p>A multi-controller architecture and expansion to a maximum of eight controllers.</p> <p>Two controllers actually configured.</p>
Capacity & Scalability	<ol style="list-style-type: none"> 1. The Storage Array shall be offered with 33-35TB Raw Capacity (50/50 ratio of HDDs) using high capacity 12G SAS Mixed Use SFF (2.5in) 3yr Warranty Solid State Drive + high capacity 12G SAS 15K SFF (2.5in) Enterprise 3yr Warranty Hard Drives. The vendor shall be capable to provide minimum 2 x 800GB SSD drives for SSD based read cache by default. 2. For effective power saving, Storage subsystem shall be supplied with 2.5" Small form factor SFF drives however storage subsystem shall also support LFF drives with the addition of required disk enclosures. 3. Storage shall be scalable to minimum of 180 number of drives or greater than 325TB using 1.8TB SFF SAS drives.
Front-end Ports	<ol style="list-style-type: none"> 1. Offered Storage system shall be supplied with minimum of Dual 16Gbps FC ports and Dual 10Gbps iSCSI ports per controller. 2. Offered storage shall have flexibility to use all above ports either as FC or iSCSI by replacing the requisite SFP. Vendors shall provide the additional SFP accordingly. In case, vendor doesn't support this feature, then every controller shall be populated upfront with 4 x 16Gbps FC ports and 4 x 10Gbps iSCSI ports.

Architecture	The storage array should support dual, redundant, hot-pluggable, active-active array controllers for high performance and reliability
No Single point of Failure	Offered Storage Array shall be configurable in a No Single Point of configuration including RAID Controller, Array Controller card, Cache memory, FAN, Power supply etc.
Disk Drive Support	<p>1. For SFF drives, Offered Storage Array shall support minimum 300/600/900/1200/1800 GB hot-pluggable Enterprise SFF SAS hard drives, 400/800/1600/3200GB SSD along with SAS MDL 1TB / 2TB drives.</p> <p>2. For LFF drives, offered Storage Array shall support minimum of 4TB / 6TB / 8TB SAS MDL drives.</p>
Cache	<p>1. Offered Storage Array shall be given with Minimum of 32GB cache per controller in a single unit</p> <p>2. Cache shall be backed up in case of power failure for indefinite time either using batteries or capacitors or any other equivalent technology.</p> <p>3. Offered storage shall have support for SSD / Flash based Cache and shall be supplied with minimum 2 x 800GB SSD drive for caching. Offered Storage shall support at-least 8TB of Flash cache.</p>
Raid Support	Offered Storage Subsystem shall support Raid 0, 1 , 1+0 , 5 and Raid 6
Point in time and clone copy	Offered Storage array shall be configured with array based Snapshot and clone functionality and shall be configured for minimum of 512 snapshot licenses.
Replication	<p>1. Offered storage subsystem shall support storage-based replication to DR location. License for same shall be given on day 1.</p> <p>2. Offered storage subsystem shall support replication to multiple storage array of the same family in fan-out mode. At least 1:4 mode shall be supported.</p>
Virtualization and Thin provisioning	<p>1. Offered storage shall be offered and configured with virtualization capability so that a given volume can be striped across all spindles of given drive type within a given pool</p> <p>2. Offered Storage shall be offered and configured with Thin Provisioning capability.</p>

Data Tiering	Offered Storage shall support Sub-Lun Data tiering in real time fashion across different type of drives within a given pool like SSD, SAS, NL-SAS etc.
Global and dedicated Hot Spare	<ol style="list-style-type: none"> 1. Offered Storage Array shall support Global hot Spare for offered Disk drives. 2. At least 2 Global hot spare drive shall be configured for every 30 drives. 3. Storage subsystem shall also have the flexibility to assign dedicated spare for raid sets.
Logical Volume & Performance	<ol style="list-style-type: none"> 1. Storage Subsystem shall support minimum of 512 Logical Units. Storage Array shall also support creation of more than 100TB volume at controller level. 2. Offered Storage shall have inbuilt performance management software. Configuration Dashboard shall show overall IOPS and MB/sec performance.
Load Balancing & Muti-path	1. Multi-path and load balancing software shall be provided, if vendor does not support MPIO functionality of Operating system.
Warranty	3 years 24x7 4Hour response comprehensive warranty
Training	OEM Certified training in OEM accredited training center for 03 resources on Storage solution (SAN Storage & SAN Switches) by certified instructors. Having training facility established with no less than 03 years. The cost of the training is implicit in the product/service cost.
SAN Switch	
Base Configuration	High Performance 24-port(12 port activated, 12 for expansion) 16Gb 1U Channel Switch with maximum 768 Gb/s, Aggregate switch bandwidth; Advanced Encryption Standard (AES) 256-bit.
Jumper Cables	2.4m Jumper (IEC320 C13/C14 M/F CEE 22)
FC Cables	LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable
Warranty	3 years 24x7 4Hour response comprehensive warranty
4. Virtualization Software Licenses	

vSphere with Operations Management Enterprise Plus + Basic Support/Subscription for 3 years	
VMware vCenter Server Standard for vSphere (Per Instance) + Basic Support for 3 Years	
5. Core Switch	
Switch Type	<p>SDN applications with OpenFlow support.</p> <p>Hardware should have hot swappable supervisor engines, hot swappable line cards and hot swappable Power supplies and FANs</p> <p>The equipment must support strict front-to-rear ventilation channel.</p> <p>Advanced Layer 2 and 3 features including OSPF, IPv6, IPv4 BGP, and policy-based routing.</p>
Chassis	Modular chassis with redundant supervisor/management modules and redundant power supplies populated.
Line Card Slots	<p>Line card slots – at least 6</p> <p>Line card slots should support 1G (Copper/Fiber) ports, 10G (Copper/Fiber), 40G and 100G for future expansion</p> <p>48 x 10/100/1000 BASE-T GE RJ-45 line card</p> <p>24 x 10G SFP+ line card (Should have at least 14 x SFP+ Optical transceivers, 850nm, Multimode, 0.5km)</p> <p>Line card slots should support 40G QSFP+ ports- All ports should be line rate</p>
Management Module	Redundant Management Module (Quad core @ 1.5 GHz, 4 GB flash, 8 GB DDR3)
Power supplies	Redundant Power Supply
Cables	16 x 10G SFP+ to SFP+ 3m Direct Attach Copper Cable
Console Cable	1 x RJ45 to DB9 Console Cable
Bandwidth shaping	<ul style="list-style-type: none"> -Port-based rate limiting: provides per-port ingress-/egress-enforced increased bandwidth - Classifier-based rate limiting: uses an access control list (ACL) to enforce increased bandwidth for ingress traffic on each port - Reduced bandwidth: provides per-port, per-queue egress-based reduced

	bandwidth
Fan tray	Redundant Fan
Switching Fabric Speed	1 Tbps Min.
Forwarding Performance	Atleast 571.4 Mpps
VLANS	At least 4000
Routing table size	10000 entries (IPv4), 5000 entries (IPv6)
Availability	<p>The switch should support In-Service Software Upgrade (ISSU), for hitless upgrade without service interruption.</p> <p>It will be an added advantage that the switch support more than 3 fan trays. Any one fan tray failure should not cause the system reboot.</p> <p>The switch should support state-full switchover between resilient control-plane module for all protocols i.e. Non-Stop Routing.</p>
Advance Features	<p>Line rate and wirespeed performance on all ports</p> <p>Mac address table size - 240K</p> <p>Support for SDN/Openflow 1.3</p> <p>Support for VxLAN</p> <p>Support for packet storm protection</p> <p>Support for advance QoS, rate limiting, 802.1p, port-based rate limiting, support at least 8 output queues, Support congestion management, Support flexible flow classification (ACL, DSCP, IPv6 Traffic Class, 802.1p and a combination of these).</p> <p>Should support Multi Chassis LAG(M-LAG) with dual active control plane.</p> <p>The Ethernet physical interfaces should be configurable as routed interface</p> <p>The switch should support GRE tunnel</p> <p>The equipment must support at least 512K FIBv4 entries.</p> <p>Indicate the size of ARP, At least 6K ARP will be an added advantage</p> <p>Support for Radius/TACACS+</p>

Support for 802.1ab - LLDP

Support for sFlow/Netflow

Support for UDLD / DLDP or equivalent

Support for Dual stack - IPv4 and IPv6

Support for SNMPv1/2/3

Support for 802.3x

Support for 802.3az

Support for STP/RSTP/MSTP

Support for DHCP Server

Support for Static IP Routing + RIP + OSPFv2 + BGP

Support for Static IPv6 Routing + RIPng + OSPFv3

Should support MPLS

Support for ERPS

Support for access control lists

Support for 802.1x - Per user ACL and dynamic VLAN assignment

Support for Multiple IEEE 802.1x users per port

Support for MAC Based authentication

Support for Port Security

Support for Port mirroring

Support for Source port filtering

Support for GVRP / MVRP

Support for IP Source guard

Support for dynamic ARP inspection

Support DHCP Relay (RFC 3046).

Support DHCP Relay option 82.

Support DHCP Snooping feature

Support at least 256K ACL.

	Support for 802.3az Support for Telnet / SSHv2
Multicast	Indicate the size of Multicast FIB, Max 50K Multicast FIB will be an added advantage The switch should support IGMP snooping The switch should support Quality-of-Service (QoS).
MAC address table size	240,000 entries
Warranty	3 years' principal warranty of HW/SW including Power Supplies, Fan trays and transceivers. Additional warranty will be preferred.
Training	OEM Certified training in accredited training center for 03 resources on Core Switches by certified instructors. Having training facility established with no less than 03 years. The cost of the training is implicit in the product/service cost.
6. Access Switch	
48 Ports x 5 Switches	<ul style="list-style-type: none"> 5 * 48 x 10/100/1000 PoE+ Base-T Ports
24 Ports x 5 Switches	<ul style="list-style-type: none"> 5 * 24 x 10/100/1000 PoE+ Base-T Ports
SFP Ports	10G SFP+ ports - 4 atleast (should have at least 2 x 850nm, SFP+ Multimode transceivers)
Stacking	Should support stacking of at least nine member switches
Performance	Forwarding performance > 50 Mpps
PoE Enable	Should support PoE+ (802.3at) 30W should be provided simultaneously on all 24 ports
802.3 Compliant	All ports should be 802.3 at compliant (PoE+)
Advanced Features	Line rate performance on all ports Mac address table size -16,000 Static, dynamic, and blackhole MAC address entries

ARP Entries: 2,000 or more

Support for advance QoS, rate limiting, 802.1p

Support for Radius/TACACS+

Support for 802.1ab - LLDP

Support for sFlow/Netflow

Support for UDLD / DLDP or equivalent

Support for Dual stack - IPv4 and IPv6

Support for SNMPv1/2/3

Support for STP/RSTP/MSTP

Support for ERPS

Support for DHCP Server

Support for Static IP Routing + RIP + OSPFv2

Support for Static IPv6 Routing + RIPng + OSPFv3

Support for access control lists

Support for 802.1x - Per user ACL and dynamic VLAN assignment

Support for MAC Based authentication

Support for Port Security

Support for Port mirroring

Support for Source port filtering

Support for GVRP / MVRP

Jumbo Frames size: At least 9,800 bytes or more

Dying Gasp

Support for IP Source guard

Support for dynamic ARP inspection

Support for Voice Vlan

Support for 802.3az

Support for Telnet / SSHv2

Configuration & Reporting	Full configuration and reporting using SNMP 1/2/3 to facilitate third party NMS integration
Static Routing	Support for static routing for IPv4 and IPv6
RIP	Support for RIP v1,v2 and RIPng
IPv4	At least 4,000 or more
Switching Capacity	Switching Capacity 330 Gbps or more
Forwarding rate	Forwarding Rate 95 Mbps at least
VLANs	4000 or more
Manageability	Fully managed with CLI and GUI
Warranty	At least 3 years' 24 x 7 principal warranty of HW/SW including Power Supply. Additional warranty will be preferred.
Training	OEM Certified training in accredited training center for 03 resources on Access Switches by certified instructors. Having training facility established with no less than 03 years. The cost of the training is implicit in the product/service cost.

7. Access Points with WLAN Controller

WLAN Controller	<p>Centralized WLAN architecture with controller-based Access Point and centralized switch/controllers, and integrated network management</p> <p>802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, 802.11e, supporting transmission rate selection, channel selection, and maximum power setting</p> <p>Centralized encryption is mandatory, all packets should be decrypted on the controller only.</p> <p>Support the following:</p> <ol style="list-style-type: none"> I. MAC based authentication. II. 802.1X based authentication. III. WPA2/AES link layer encryption. IV. WEP link layer encryption. (WEP64/WEP128) V. WPA/TKIP link layer encryption.
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VI. PEAP, EAP-TLS, EAP-TTLS, authentication.

VII. Portal authentication

VIII. MAC+Portal authentication

IX. Built-in Portal Server; Hotspot 2.0

X. preventing address exhaustion in a single VLAN.

Integrated RADIUS termination for increased security and cryptographic offload. Must support EAP-PEAP and EAP-TLS using EAP-MSCHAPv3 or EAP-GTC.

Smart roaming based on 802.11k and 802.11v. Provide the of third-party test report.

Static route, RIP-1/RIP-2, OSPF, BGP, IS-IS, routing policy, and policy-based route

WIDS and WIPS to detect rogue APs and STAs and attacks; whitelist and blacklist for STAs and APs

Spectrum analysis to identify interference sources such as Bluetooth devices, microwave ovens, cordless phones, ZigBee devices, game controllers, 2.4 GHz/5 GHz wireless video and audio devices, and baby monitors

DHCP snooping, DAI, and IPSG to prevent attacks of bogus DHCP servers, ARP spoofing attacks, and IP spoofing attacks

Radio management, supporting automatic power and channel adjustment as well as coverage hole compensation

User-based and traffic-based load balancing

User-based and traffic-based load balancing 1+1 or N+1 device backup

Layer 4-7 application identification, identifying over 800 applications and delivering different policies. The identification database can be updated. Provide the third-party test report.

Web network management system, supporting local graphical configurations.

Performance monitoring for the entire WLAN, ACs, APs, radios, and STAs. Provide the performance trend analysis and the third-party certification

	<p>report.</p> <p>End-to-end visualized fault diagnosis, topology display showing the network type, and display of the fault cause and handling suggestions step by step (user-AP-AC). Provide the third-party certification report.</p> <p>MIIT check pass. Provide the check report. PCI DSS data security standard certification. Provide the assessment report of authentication authorities.</p> <p>Web-Based Authentication (e.g. WebAuth/Captive Portal):</p> <ol style="list-style-type: none"> I. Integrated into the controller/switch. II. User name and password authentication. III. Option for simple logging of user name used for entry. <p>Support at least 25AP.</p> <p>Support at least 2000 number of concurrent connected wireless clients.</p> <p>6*GE RJ45 electrical port + 2*GE combo port, supporting 8-port PoE power supply (802.3af), The AC provides a USB port for deployment as well as transferring configuration files and upgrade files.</p> <p>Supports Principal warranty of at least 3 years</p>
<p>Access Points</p>	<p>Support dual radio 4x4:3 Spatial streams MU-MIMO</p> <p>IEEE 802.11a/b/g/n/ac, 2.4 GHz and 5 GHz</p> <p>Total forwarding rate should be more than 2.5 Gbps</p> <p>2 x 10/100/1000M interface (RJ45)</p> <p>802.11ac wave 2 access point.</p> <p>advance technology to identify and prioritizes applications on the network.</p> <p>Support.2.4GHz and 5Ghz with a maximum concurrent data rate of 1733 Mbps in the 5GHz band and 400 Mbps in the 2.4GHz band.</p> <p>Support for up to 255 associated client devices and up to32 SSID and SSID hiding</p> <p>Support 3 spatial stream MU-MIMO for up to 2.1 Gbps wireless data rate.</p> <p>Access control and bandwidth management based on SSIDs and user groups,</p>

4K or more ACLs

Network Address Translation (NAT)

Support dynamic frequency selection (DFS) optimizes the use of available RF spectrum.

Operating temperature: -10 degree Celsius to +50 degrees Celsius

Operating humidity: 5% to 95% non-condensing

Support 802.11ac beamforming

Support airtime fairness

Support DFS channel support to use all available RF spectrum

Support channel width configure flexibility (20/40/80Mhz)

Packet-based Power Control (PPC) to reduce AP power consumption and interference to surrounding devices when the device determines that packets can be successfully transmitted

Console port for the ease of installation and management

Wi-Fi alliance certified

Support wall Mount

Ability to use the same AP in a controller based or controller-less deployment

Support Bluetooth Low-Energy (BLE) radio

Support enforces QoS by honoring the QoS tags for incoming traffic

Enables fast roaming using PMK caching and OKC

Support limit multicast mDNS traffic on the network

Continuously performs background scans to self-optimize channel and power assignment

Adapts to noise and third party interference dynamically to avoid network

	<p>disruptions due to interference</p> <p>Defers scanning when servicing sensitive traffic like voice/video to ensure real time applications are not impacted</p> <p>Offers support for 802.11h for informing client on channel/power changes by APs</p> <p>Offers support for 802.11k for better handoff during roaming</p> <p>Offers support for 802.11r for fast roaming when using voice or real time applications</p> <p>Offers support for 802.11v for informing client on WLAN infrastructure</p> <p>Support continuously steers clients to 5Ghz radio, even post association to move capable clients to a cleaner RF spectrum</p> <p>Support continuously balances clients across the available number of APs and channels for increased system throughput</p> <p>Support moving sticky clients to a better AP, factoring in AP load and client traffic, to optimize overall system throughput</p> <p>Support fair distribution of air time in a mixed environment (11ac, 11n, 11a, 11g and 11b clients)</p> <p>Be able to detects and classifies non 802.11 based interference</p> <p>Be able to performs spectrum analysis and serves clients using the same radio</p> <p>Offers real time graphs integrated within the controller/NMS</p> <p>Adapter PoE</p> <p>Supports Principal warranty of at least 3 years</p>
Training	<p>OEM Certified training in accredited training center for 03 resources on WiFi Solution (WLAN Controller & Access Points) by certified instructors. Having training facility established with no less than 03 years. The cost of the training is implicit in the product/service cost.</p>
<p>8. Firewall a) Enterprise Firewall (Head Office)</p>	
Interfaces and Modules	<p>4 x 10 GE SFP+ Slots</p>

	<p>8 x GE RJ45 Interfaces</p> <p>8 x GE SFP Slots</p> <p>1 x GE RJ45 Management Ports</p> <p>2 x USB Ports</p> <p>RJ45 Console Port</p> <p>Expansion interface slot 4 or greater</p> <p>Included Transceivers: 2x SFP+(850mm 0.5KM)</p>
<p>System Performance and Capacity</p>	<p>IPv4 Firewall Throughput</p> <p>(1518 / 512 / 64 byte, UDP): 36 / 36 / 32 Gbps</p> <p>IPv6 Firewall Throughput</p> <p>(1518 / 512 / 64 byte, UDP): 36 / 36 / 32 Gbps</p> <p>Firewall Throughput (Packet per Second): 33 Mbps</p> <p>Concurrent Sessions (TCP): 12 Million or more</p> <p>New Sessions/Second (TCP): 300,000 400,000 or more</p> <p>Firewall Policies: 40,000 or more</p> <p>IPsec VPN Throughput (512 byte): 20 Gbps or more</p> <p>Gateway-to-Gateway IPsec VPN Tunnels: 15,000 or more</p> <p>Client-to-Gateway IPsec VPN Tunnels 15,000 or more</p> <p>SSL-VPN Throughput: 5 Gbps</p> <p>Concurrent SSL-VPN Users (Recommended Maximum): 5,000 (100 should be included by default in firewall)</p> <p>Virtual Domains (Default / Maximum): 10 / 1,000</p> <p>High Availability Configurations: Active-Active, Active-Passive,</p>
<p>Feature</p>	<p>Stateful packet inspection. Based on Source IP, Source Port, Destination IP, Destination Port, Protocol, Application, Content, Time, User, Location.</p>

	<p>Network Address Translation, Port Address Translation, NAT ALG.</p> <p>Supports Cloud-Based URL Library. At least 80 million URL must be identified.</p> <p>Divides URLs into ≥ 40 categories and ≥ 130 subcategories. Allow administrator to set response mode by forbidden or permit based on categories and subcategories.</p> <p>Provides URL blacklist and whitelist functions.</p> <p>At least 6000+ application protocols must be identified and managed.</p> <p>Static routing, Policy-Based routing, RIP, OSFP, BGP and ISIS.</p> <p>Attack identification over 3000 signature.</p> <p>Supports abnormal protocol behaviors, identification.</p> <p>Supports user-defined IPS signatures.</p> <p>Supports L2TP over IPsec VPN, DMVPN or equivalent.</p> <p>Supports DES(56-bit),3DES(168-bit) and AES(256-bit/384-bit/512-bit) encryption/decryption.</p> <p>Supports MD5, SHA1, SHA2 authentication.</p> <p>Should defend against SYN Flood, SYN ACK Flood, TCP Flood, UDP Flood.</p> <p>Should defend against application-layer attacks, such as HTTP, HTTPS, DNS, and SIP flood attacks.</p> <p>Virtualization of security features, forwarding statistics, users, management operations, views, and resources (such as bandwidths and sessions)</p> <p>Support 10 virtual firewall, can be licensed expanded to 1,000.</p>
<p>System Performance — Optimal Traffic Mix</p>	<p>IPS Throughput:-15 Gbps or more</p>
<p>System Performance — Enterprise Traffic Mix</p>	<p>IPS Throughput:-15 Gbps or more</p> <p>NGFW Throughput:40 Gbps</p>

Power Supply	Redundant
Operating Environment and Certifications	<p>Operating Temperature: 32–104°F (0–40°C)</p> <p>Storage Temperature: -31–158°F (-35–70°C)</p> <p>Humidity: 10–90% non-condensing</p> <p>Compliance: CB, CE-SDOC, ROHS, REACH&WEEE(EU), RCM, ETL, FCC&IC, VCCI, BSMI</p> <p>Certifications: ICSA Labs: Firewall, IPsec, IPS, SSL VPN, CC: EAL4+, NSS Labs: Recommended</p> <p>Antivirus, SSL-VPN;</p>
Log Analyzer	Base license for stackable Analyzer VM; 1 GB/day of logs and 500 GB storage capacity. Unlimited GB/day when used in collector mode only. Designed for VMware vSphere, Xen, KVM and Hyper-V platforms.
License	License subscription or bundle for 3 years.
Warranty	03 year 24x7 Enterprise Protection Support
Training	OEM Certified training in accredited training center for 03 resources by certified instructors. Having training facility established with no less than 03 years. The cost of the training is implicit in the product/service cost.

b) Small Client Based Firewall (4 Zonal Offices)

Description	Specifications
Ethernet WAN	1 RJ-45 SFP Gigabit Ethernet combination port
Ethernet LAN	4 RJ-45 Gigabit Ethernet ports
Console port	1 RJ-45 port
Switch	Power on/off
Cabling type	Category 5 or better
LEDs	Power, VPN, WAN, LAN
Operating system	Linux
LAN	

VLANs	16
Port security	Yes, 802.1X
IPv6	Dual stack, 6rd, 6in4
WAN	Dynamic Host Configuration Protocol (DHCP) client, static IP, Point-to-Point Protocol over Ethernet (PPPoE), PPTP, Layer 2 Tunneling Protocol (L2TP)
WLAN	2x2 wireless 802.11ac (RV160W)
Security	
Firewall	SPI firewall
	Port forwarding and triggering
	Denial-of-Service prevention (DoS)
Access control	IP access control lists
Secure management	HTTPS, username/password complexity
User privileges	Two levels of access: Admin and guest
Network	
Network protocols	<ul style="list-style-type: none"> ● Dynamic Host Configuration Protocol (DHCP) server ● Point-to-Point Protocol over Ethernet (PPPoE) ● Point-to-Point Tunneling Protocol (PPTP) ● Layer 2 Tunneling Protocol (L2TP) ● DNS proxy ● DHCP relay agent ● Internet Group Management Protocol (IGMP) proxy and multicast forwarding ● Rapid Spanning Tree Protocol (RSTP) ● Dynamic DNS (TZO, DynDNS, 3322.org, No-IP) ● Network Address Translation (NAT), Port Address Translation (PAT) ● One-to-one NAT ● Port management ● Port mirroring ● Software-configurable DMZ to any LAN IP address ● Session Initiation Protocol (SIP) Application-Layer Gateways (ALG)
Routing	<ul style="list-style-type: none"> ● Static routing, IGMP proxy

protocols	<ul style="list-style-type: none"> • Dynamic routing • Dynamic DNS (Changelp, DynDNS, No-IP) • Routing Information Protocol (RIP) v1 and v2 • RIP for IPv6 (RIPng) • Inter-VLAN routing
NAT protocol	<p>Port Address Translation (PAT), Network Address Port Translation (NAPT)</p> <p>Policy NAT</p> <p>Port forwarding, one-to-one NAT, VPN NAT Traversal, Session Initiation Protocol (SIP), ALG, FTP ALG</p>
VPN	
Gateway-to-gateway IPsec VPN	10 IPsec tunnels
Client-to-gateway IPsec VPN	10 IPsec tunnels
IPsec VPN	Internet Key Exchange (IKE) v2, Generic Routing Encapsulation (GRE), hub and spoke supported
PPTP VPN	10 PPTP VPN tunnels
OpenVPN	Support for the OpenVPN server
Encryption	Triple Data Encryption Standard (3DES), Advanced Encryption Standard (AES) with 128, 192, and 256-bit keys encryption
VPN pass-through	IPsec, PPTP, and L2TP pass-through
Quality of Service	
QoS	<ul style="list-style-type: none"> • 802.1p port-based priority on LAN port, application-based priority on WAN port • 4 queues • Differentiated Services Code Point (DSCP) support • Class of service (CoS) • Bandwidth management for service prioritization
Jumbo frame support	Supports jumbo frames on Gigabit ports – at least 1536B
Performance	
NAT throughput	600 Mbps
Concurrent sessions	15,000

IPsec VPN throughput	50 Mbps
Configuration	
Web-based user interface	Browser-based configuration (HTTP/HTTPS)
Management	Web-based user interface, Simple Network Management Protocol (SNMP) v3, Bonjour, Universal Plug and Play (PnP)
	FindIT support for monitoring and management
Event logging	Local, syslog, email alerts
Network diagnostics	Ping, traceroute, DNS lookup
Upgradability	Firmware upgradable via browser UI, imported/exported file, USB, Cisco FindIT
System time	Network Time Protocol (NTP), Daylight Savings, manual entry
Language support	User interface support: English
9. IP PBX	
Gateway	Unified Gateway
User capacity per Gateway	200 (a maximum of 25 FXS ports for analog users and 200 SIP users)
Terminals supported	Analog phones, IP phones, video phones and soft clients
Trunk ports	A maximum of 20 FXO ports, 28 E1/T1 ports or 24 BRI ports
Trunk protocols	SS7, R2, PRI, QSIG, SIP, BRI
Codec	G.711a/μ, G.729a/b/ab, iLBC, and G.722/G.722.1/G.722.2、Opus etc.
Conference capacity	A maximum of 360 conference participants which can be allocated to 120 conference halls (each hall can support up to 60 participants)
Built-in voice mail	30 channels concurrently Built-in 16G SD storage card
Power supply	AC: 100 V to 240 V, 50 Hz/60 Hz DC: -38.4 V to -60 V (typical value: -48 V)
System Reliability	≥ 99.995%

Maintainability	Centralized/remote equipment management, log management, resource management, and alarm management
Communication Server	Communication Server (Rackmount) for Software along with relevant licenses
IP Video Phones	IP Video Phones for Executives
Operating System	Android or equivalent
Display	8-inch, 1280 x 800 resolution, IPS multiple-touch or equivalent
Buttons	<ul style="list-style-type: none"> - Fixed function buttons with LEDs: Speaker, Lock, Mute - Fixed function buttons without LEDs: Volume
Camera	HD camera with 2 million pixels
Audio Codec	G.711a/G.711μ/G.729ab/G.722/iLBC/Opus, compatible with G.729/G.729a/G.729b etc.
Video Codec	H.264 MP/BP etc.
Network Ports	Two GE ports support PoE, 10 Mbit/s, 100 Mbit/s, 1,000 Mbit/s adaptive, configurable VLAN
Wi-Fi	IEEE 802.11a/b/g/n
HDMI Port	One HDMI port, in compliance with HDMI 1.4
USB Port/Bluetooth	<p>Two USB ports can connect to USB flash drive, headset, keyboard, and mouse</p> <p>BT3.0-compliant Bluetooth</p>
Local Audio Conference	<p>Around 6-party audio conference</p> <p>Operations include adding, muting, and removing participants</p>
Power adapter	<p>Input: 100 V to 240 V AC</p> <p>Output: 12 V DC, 2 A</p>
IP Phones	IP Phones Standard
Display	2.83-inch, 320 x 240 pixels
LEDs	<p>Line button, Message Waiting Indicator (MWI), Mute, Speaker, Call History, Headset, and programmable button LEDs</p>

Buttons	<ul style="list-style-type: none"> - Two line buttons - Five navigation buttons: Up/Down/Left/Right/OK - Ten programmable buttons - Four soft keys - Four fixed function buttons with LEDs: Speaker, Headset, Mute, and Call History - Seven fixed function buttons without LEDs: Home, Message, Volume, Contact, Hold, Conference, and Call Transfer
Ports	Two GE ports: 10/100/1000 Mbps adaptive and support for VLAN Configuration; One handset port: RJ-9
Foot Stand	One foot stand with two adjustable angles
Power adapter	Input: 100 to 240 V AC Output: 5 V DC, 2 A
Operator Console	IP Operator Console Phone with Expansion Module
Display	
LEDs	
Buttons	20 programmable buttons and 2-page buttons
Maximum Number of Pages	2
Maximum Number of Programmable Buttons	40
Maximum Number of Expansion Modules for Each Console	3
Functions	Speed dial BLF Contact group XML application Phone lock

	<p>Phone sleep, call forward, pickup, group pickup, and call park</p> <p>DND</p> <p>Paging broadcasting</p> <p>Hunt group</p>
Power Adapter	<p>Input: 100V to 240V AC</p> <p>Output: 5V DC, 2A</p>
Call Accounting Software	<p>Call Accounting/Management Software with at least following features:</p> <ul style="list-style-type: none"> - Web based Attendant Console for receptionists - Queue Manager can also act as call welcome system - Billing application reporting and documenting details on costs of CDR calls - Rec digital call recording and archiving system that provides the possibility to enable passive (SPAN port based) or active call recordings (by means of conferences), call logging, storage and replay of stored calls. - Recording storage requirements with provision of recording G.711 Audio files for 300 hours
Warranty	3 years standard (24 x 7) warranty
Training	OEM Certified training in accredited training center for 03 resources by certified instructors. Having training facility established with no less than 03 years. The cost of the training is implicit in the product/service cost.
10. Microsoft Licenses	
Server Standard License	<p>Windows Server Standard 2016 or Latest Version</p> <p>Compatible with Server's processor Cores</p>
Exchange Server	<p>Windows Exchange Enterprise Server 2016 or Latest Version</p> <p>250 CaLs/Users</p> <p>Training on Microsoft Exchange Deployment for 03 resources</p>
11. Router	
Performance	<p>WAN speed with services at least 800Mbps.</p> <p>NAT + ACL + QoS forwarding bandwidth (bps, IMIX, bidirectional forwarding) >= 800Mbps.</p> <p>IPSec forwarding bandwidth (bps, IMIX, unidirectional</p>

	forwarding) >= 800Mbps.
Architecture	Support non-blocking switching structure. Support Multi-core CPU; At least support 4 cores. Switching capacity of the system >= 32 Gbit/s.
Interface	Fix Interface: Support 3GE (1 Combo) wan interface. Must support WAN Interface: ADSL A/M, ADLS B/J, EPON, G.SHDSL, GPON, ISDN, CE1/CT1, E1/T1, POS/CPOS, VDSL, E1-IMA. Must support Voice Interfaces: PRI, FXS, FXO, ISDN S/T Voice interface. Support 2G frequency band: GSM/GPRS/EDGE 850/900/1800/1900 MHz; 3G frequency band: HSPA+/HSPA/UMTS 2100/900 MHz. FDD LTE: Uplink: 50Mbit/s Downlink: 100Mbit/s
Slots	6 or higher
memory	1GB
Default flash memory	512MB
Maximum flash memory	4GB
External USB slots	1
Power-supply options	Internal: AC
AC input voltage	100 to 240 VAC auto-ranging
LAN Access	Support IEEE 802.1P, 802.1Q standard. Support IEEE 802.1d (STP), 802.1w (RSTP),802.1s (MSTP) standard. Support static MAC address and dynamic MAC address. Support MAC address limit, LLDP, Transparent bridge. Number of VLANs >= 128.Number of MACs >=2048.
WAN Access	Support PPP, MP, PPoE Client, PPPoE Server.

	<p>Support route backup and circular DCC.</p> <p>Support ISDN PRI/BRI interface.</p> <p>Support IPv4 and IPv6 PPP, MLPPP.</p>
IP Application	<p>Support NAT, NAT ALG, Netstream.</p> <p>Support DNS Client, DNS proxy/relay, DDNS, DNS6 Client, DNS6 Proxy/Relay.</p> <p>Support IPv4 VRRP, VRRP6.</p> <p>Support NQA ICMP/UDP/TCP/SNMP/FTP/HTTP UDP jitter test/DHCP/Trace/DNS test.</p> <p>Support DHCP Client, DHCP relay, DHCP Server, DHCPv6 Client, DHCPv6 relay and DHCPv6 Server.</p>
Routing	<p>Support RIPv1/v2, RIPng, OSPFv2, OSPFv3, ISIS, ISISv6, BGP4, BGP4+, MBGP.</p> <p>Support Smart Policy Route.</p> <p>Support IGMPv1/v2/v3, IGMP Proxy.</p> <p>Support PIM-DM, PIM-SM and PIM SSM.</p> <p>Support IPv4 LDP and LDP FRR.</p>
MPLS	<p>Support IPv4 LDP and LDP FRR.</p> <p>Support Hub-Spoke VPN, HoVPN;</p> <p>Support MCE;</p> <p>Support manual VPN FRR and VPN Auto FRR.</p> <p>Support local CCC, SVC VLL, Martini VLL, and inter-domain Martini VLL.</p> <p>Support MPLS TE.</p>
VPN	<p>Support GRE, L2TP VPN.</p> <p>Support IPsec tunnels >= 4000.</p> <p>Support efficient VPN.</p> <p>Support DMVPN or equivalent.</p>
Security	<p>Support packet filtering firewall, ASPF, Attack defense, Active/Standby firewall.</p> <p>Support Web authentication, User access management.</p> <p>Support ARP packet suppression, ARP spoofing, DAI.</p> <p>Support ICMP attack defense, uRPF, IPSG,</p>

QoS	<p>Support basic IPv4 ACLs, extended IPv4 ACLs, and Ethernet frame header-based Layer 2 ACLs and name ACLs.</p> <p>Support 3-Level scheduling and shaping for flows, services (sub-interfaces), and interfaces.</p> <p>Support Smart Application Control (SAC)</p> <p>Support FR QoS,IPv6 QoS, ATM QoS.</p>
Reliability	<p>All interface cards Support hot-swappable</p> <p>Redundancy backup mechanism for IP services, including IPv4/IPv6 VRRP</p> <p>Support RPS power</p> <p>Single-hop and multi-hop BFD, BFD for VRRP, BFD for a routing protocol.</p>
Voice	<p>Support SIP AG function, PBX function,H323 Gateway. Support to access the PSTN network/traditional TDM PBX by using AT0 and PRA trunks.</p> <p>Support to accessing the IMS network by using a SIP IP trunk (SIP PRA or SIP AT0).</p> <p>Support fax/modem service in TDM/VOIP mode.</p> <p>Support multi-party conferencing.</p> <p>Support blacklist and Whitelist.</p>
OAM	<p>Support netstream or other similar features</p> <p>Support FTP/TFTP, SSH, Telnet.</p> <p>Support SYSLOG,SNMP V1/V2/V3,RMON,Web Management, CWMP</p> <p>Support USB drive to configure devices for plug-and-play.</p> <p>Support the mini-USB port to configure the devices using a GUI.</p>
Certification	CB/UL/GS/FCC-VERI, TL9000/ISO9001, WEEE
Warranty	At least 3 years' 24 x 7 principal warranty of HW/SW including Power Supply. Additional warranty will be

	preferred.
Training	OEM Certified training in accredited training center for 03 resources by certified instructors. The cost of the training is implicit in the product/service cost.
12. Floor Standing 27U Rack	
Form Factor	Floor Standing 27U Rack with side panels and lockable doors.
13. Installation & Commissioning	
Services	Complete installation, commissioning and testing of complete solution till FAC.
14. Passive Component (Panduit/Clipsal or equivalent Brands only)	
Back Boxes	240
Face Plate with 1 Cat-6 RJ-45 UTP I/O, with Shutter	240
Cat-6 UTP Cable, Box of 1000ft Box (As per actual)	48
48 Port Patch Panel Frame, equipped with 48nos Cat-6 UTP I/O's	12
Front Cable Organizer	12
Cat-6 UTP Patch Cords, 1m for Data	480
Cat-6 UTP Patch Cords, 3m for Data (Drop Cord)	240
Cat-6 UTP Patch Cords, 5m for Data (Drop Cord)	150
Installation/Laying of UTP, Cabinet, Patch Panel, Duct, Pvt , Labeling per Running Meter	1400

Note: All relevant trainings can be merged into one where required.

Part III

Annexures Check List

Sr No	Annexure Document	Attached (Yes / No)
1	Company Profile	
2	NTN Certificate	
3	GST Certificate	
4	Acknowledgement Slip of Income Tax Return (Latest)	
5	Audit Reports for Last 03 Years (Latest)	
6	Earnest Money	
7	OEM Partnership Certificates	
8	Certificates of OEM Certified Resources	
9	Experience of Similar Projects (PO/Contract Copies)	
10	Compliance Sheet (along with soft copy in Excel Format)	

Section VI. Sample Forms

Notes on the Sample Forms

The Bidder shall complete and submit with its bid the Bid Form and Price Schedules pursuant to ITB Clause 9 and in accordance with the requirements included in the bidding documents.

When requested in the Bid Data Sheet, the Bidder should provide the Bid Security, either in the form included hereafter or in another form acceptable to the Procuring agency, pursuant to ITB Clause 15.3.

The Contract Form, when it is finalized at the time of contract award, should incorporate any corrections or modifications to the accepted bid resulting from price corrections pursuant to ITB Clause 16.3 and GCC Clause 17, acceptable deviations (e.g., payment schedule pursuant to ITB Clause 25.4 (c), spare parts pursuant to ITB Clause 25.4 (d), or quantity variations pursuant to ITB Clause 29. The Price Schedule and Schedule of Requirements deemed to form part of the contract should be modified accordingly.

The Performance Security and Bank Guarantee for Advance Payment forms should not be completed by the bidders at the time of their bid preparation. Only the successful Bidder will be required to provide performance security and bank guarantee for advance payment in accordance with one of the forms indicated herein or in another form acceptable to the Procuring agency and pursuant to GCC Clause 7.3 and SCC 11, respectively.

The Manufacturer's Authorization form should be completed by the Manufacturer, as appropriate, pursuant to ITB Clause 13.3 (a).

Sample Forms

1.	BID FORM AND PRICE SCHEDULES	123
2.	BID SECURITY FORM	125
3.	CONTRACT FORM	126
4.	PERFORMANCE SECURITY FORM	127
5.	MANUFACTURER'S AUTHORIZATION FORM	128
6.	INTEGRITY PACT	129

1. **Bid Form and Price Schedules**

Date: _____
IFB No: _____

To: *[name and address of Procuring Agency]*

Gentlemen and/or Ladies:

Having examined the bidding documents including Addenda Nos. *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver *[description of goods and services]* in conformity with the said bidding documents for the sum of *[total bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to _____ percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Procuring agency.

We agree to abide by this Bid for a period of *[number]* days from the date fixed for Bid opening under Clause 22 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and address of agent	Amount and Currency	Purpose of Commission or gratuity

(if none, state "none")

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____ 20_____.

signature]

[in the capacity of]

Price Schedule in Pak. Rupees

Name of Bidder _____ IFB Number _____ Page of _____

1	2	3	4	5	6	7
Item	Description	Country of Origin	Quantity	Unit price DDP named place	Total DDP per item	Unit price of Delivered duty paid (DDP) to final destination plus price of other incidental services if requireds

Signature of Bidder _____

Note: In case of discrepancy between unit price and total, the unit price shall prevail.

2. Bid Security Form

Whereas [name of the Bidder] (hereinafter called “the Bidder”) has submitted its bid dated [date of submission of bid] for the supply of [name and/or description of the goods] (hereinafter called “the Bid”).

KNOW ALL PEOPLE by these presents that WE [name of bank] of [name of country], having our registered office at [address of bank] (hereinafter called “the Bank”), are bound unto [name of Procuring agency] (hereinafter called “the Procuring agency”) in the sum of for which payment well and truly to be made to the said Procuring agency, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ____ day of _____ 20____.

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its Bid by the Procuring agency during the period of bid validity:
 - a. fails or refuses to execute the Contract Form, if required; or
 - b. fails or refuses to furnish the performance security, in accordance with the Instructions to Bidders;

We undertake to pay to the Procuring agency up to the above amount upon receipt of its first written demand, without the Procuring agency having to substantiate its demand, provided that in its demand the Procuring agency will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including twenty eight (28) days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

[signature of the bank]

3. Contract Form

THIS AGREEMENT made the _____ day of _____ 19____ between *[name of Procuring Agency]* of *[country of Procuring agency]* (hereinafter called “the Procuring agency”) of the one part and *[name of Supplier]* of *[city and country of Supplier]* (hereinafter called “the Supplier”) of the other part:

WHEREAS the Procuring agency invited bids for certain goods and ancillary services, viz., *[brief description of goods and services]* and has accepted a bid by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

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

2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:

- (a) the Bid Form and the Price Schedule submitted by the Bidder;
- (b) the Schedule of Requirements;
- (c) the Technical Specifications;
- (d) the General Conditions of Contract;
- (e) the Special Conditions of Contract; and
- (f) the Procuring agency’s Notification of Award.

3. In consideration of the payments to be made by the Procuring agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring agency to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract

4. The Procuring agency hereby covenants to pay the Supplier in consideration of the provision of the goods and services 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 their respective laws the day and year first above written.

Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Signed, sealed, delivered by _____ the _____ (for the Supplier)

4. Performance Security Form

To: *[name of Procuring agency]*

WHEREAS *[name of Supplier]* (hereinafter called "the Supplier") has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated _____ 20____ to supply *[description of goods and services]* (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____ 20_____.

Signature and seal of the Guarantors

[name of bank or financial institution]

[Address]

[date]

5. Manufacturer's Authorization Form

[See Clause 13.3 (a) of the Instructions to Bidders.]

To: *[name of the Procuring agency]*

WHEREAS *[name of the Manufacturer]* who are established and reputable manufacturers of *[name and/or description of the goods]* having factories at *[address of factory]*

do hereby authorize *[name and address of Agent]* to submit a bid, and subsequently negotiate and sign the Contract with you against IFB No. *[reference of the Invitation to Bid]* for the above goods manufactured by us.

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract for the goods offered for supply by the above firm against this Invitation for Bids.

[signature for and on behalf of Manufacturer]

Note: This letter of authority should be on the letterhead of the Manufacturer and should be signed by a person competent and having the power of attorney to bind the Manufacturer. It should be included by the Bidder in its bid.

6. INTEGRITY PACT

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS. 10.00 MILLION OR MORE

Contract No. _____ Dated _____ Contract Value: *[To be filled in at the time of signing of Contract]*
Contract Title: _____

[name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Khyber Pakhtunkhwa (GoKP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoKP through any corrupt business practice.

Without limiting the generality of the foregoing, [name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder’s fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoKP, except that which has been expressly declared pursuant hereto.

[name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoKP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Supplier] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoKP under any law, contract or other instrument, be voidable at the option of GoKP.

Notwithstanding any rights and remedies exercised by GoKP in this regard, [name of Supplier] agrees to indemnify GoKP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoKP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder’s fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoKP.

Name of Buyer: Name of Seller/Supplier:
Signature:[Seal] Signature:{Seal}