



Gateway to National Prosperity

**PORT QASIM AUTHORITY
BIN QASIM, KARACHI-75020**

NOTICE INVITING TENDER

1. Port Qasim Authority (PQA) invites sealed bids from the reputed Contractors / Firms registered with (i) Pakistan Engineering Council (PEC) in C-4 Category or above, valid upto June, 2024 (ii) with specialization codes EE-04 and EE-05 (iii) registered with Income Tax Department under FBR (Federal Board of Revenue) on Active Tax Payer list having Tax Payers Registration Certificate (iv) registered with SRB (Sindh Revenue Board) (v) and also registered with e-Pak Acquisition and Disposal System (e-PADS) of PPRA for the works mentioned here under:

Tender No.	Name of work	Earnest Money	Tender fee by pay Order	Contract Period	Tender submission & opening date
179	Supply, Installation, Testing and Commissioning of Aluminum HT Cable from Industrial Sub-Station to A-Building Sub-Station and MSS to PDS-V Sub-Station.	Rs.4,200,000/- in shape of pay order or bank guarantee in favor of PQA. (Refundable)	Rs.5,000/= (In favor of PQA) (Non-Refundable)	08 months	8 th April.

2. Bidding documents containing detailed Terms & Conditions are available for the interested bidders at the office of Director (M&E), PQA, Bin Qasim, Karachi. The documents will be provided upon providing evidence for registration in relevant PEC Category, specialization and upon payment of a non-refundable bid documents price of Rs.5,000/= (Rupees, five thousand only), in the shape of pay order in favour of "Port Qasim Authority" issued by a scheduled Bank of Pakistan located in Karachi having minimum "AA" rating. Bidding documents can also be downloaded from PQA/PPRA websites.


3. Single Stage Two Envelope Procedure, under rule 36(b) of PPRA-2004 shall be adopted. One envelope containing information regarding Qualification of bidder and respective information shall be clearly marked "Technical Proposal" & the second envelope containing the Bid price shall clearly marked "Financial Proposal". Technical proposal must contain the earnest money amounting to Rs.4,200,000/- (Rupees forty two hundred thousand only) in the form of pay order or bank guarantee in favour of Port Qasim Authority, issued by a scheduled Bank of Pakistan located in Karachi having AA rating. Tender submitted without Earnest Money shall be rejected.

4. Technical Proposal and Financial Proposal (Both Envelopes) are to be submitted in the office of Director (M&E) by 1200 hours on date indicated above alongwith earnest money in the shape of Pay order (Refundable) in favour of Port Qasim Authority. Technical proposals only shall be opened on the same date at 1230 hours in the presence of Bidders or their authorized representative who may wish to be present.

5. Financial proposal of technically qualified bidders shall be opened in the presence of bidders or their authorized representatives who may wish to attend. The date, time & venue will be intimated later. The financial proposal of technically non-qualified bidders shall be returned unopened.

6. In case of holiday on the date of submission/opening of tender, the same will be opened on the next working day at the same time.

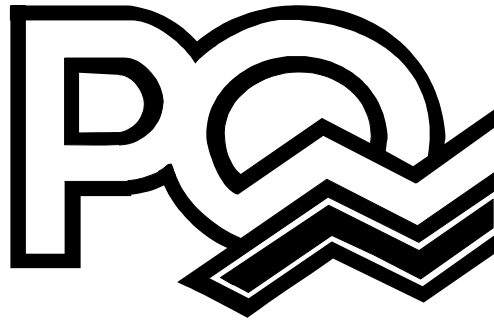
7. Port Qasim Authority reserves the right to accept or reject any or all bids as per PPRA-2004 and no claim whatsoever shall be entertained in this regards. Authority's decision in this respect shall be final and binding upon all bidders.


(SHAHNAWAZ MANGRIO)
SECRETARY PQA

PQA Website www.pqa.gov.pk
Email: secretary@pqa.gov.pk

**PORT QASIM AUTHORITY
MINISTRY OF MARITIME AFFAIRS
GOVERNEMENT OF PAKISTAN**

MECHANICAL & ELECTRICAL DEPARTMENT



Gate way to National Prosperity

TENDER & CONTRACT DOCUMENTS

FOR

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF
ALUMINUM HT CABLE FROM INDUSTRIAL SUB-STATION TO
A-BUILDING SUB-STATION AND MSS TO PDS-V SUB-STATION**

(2024)

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INVITATION FOR BIDDER

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INSTRUCTIONS TO BIDDERS/TENDERER

A. GENERAL

IB.1 Scope of Bid

1.1 The Employer as defined in the Bidding Data hereinafter called "Port Qasim Authority" wishes to receive bids for the " Supply, Installation, Testing And Commissioning Of Aluminum HT Cable From Industrial Sub-Station To A-Building Sub-Station And MSS To PDS-V Sub-Station" as described in these Bidding Documents, and summarized in the Bidding Data hereinafter referred to as the "Works".

1.2 The successful bidder will be expected to complete the Works within the time specified in Appendix-A to Bid.

IB.2 Source of Funds

2.1 The Employer has finances for the cost of the project specified in the Bidding Data and for which these Bidding Documents are issued.

IB.3 Eligible Bidders

3.1 This invitation for Bids is open to local firms / Contractors:-

a. Firms / Contractor shall have to submit with bid the following:-

- i)- Duly licensed by the Pakistan Engineering Council (PEC) in the Category C-4 and above with code EE-04 & EE-05 valid up to June, 2024.
- ii)- Duly licensed by Electric Inspector, Govt of Sindh valid for current year.
- iii)- Relevant experience in HT/LT Sub-station equipment and distribution network and completion certificate with value of work ,documentary proof for last three year.
- iv)- List of tool and equipments (Owned & Hired)
- v)- Registration with Income Tax & Sales Tax Departments of Federal Bureau of Revenue (FBR) and Sindh Revenue Board (SRB) on active tax payer list.
- vi)- Registered with e-Pak Acquisition and Disposal System (e-PADS) of PPRA
- vii)- Current Bank Certificate with Financial Soundness.

3.2 In case the bidders / contractors consist of a Joint Venture of more than one entity then each member of the Joint Venture shall be jointly and severally bound to the Employer for fulfillment of the terms of the tender/contract and the Joint Venture shall designate one member to act as leader of the Joint Venture for purposes of representing the Joint Venture.

IB.4 One Bid per Bidder

4.1 Each bidder shall submit only one bid either by himself, or as a partner in a joint venture.

IB.5 Cost of Bidding

6.1 The bidders shall bear all costs associated with the preparation and submission of their respective bids and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

IB.6 Site Visit

- 6.1 The bidders are advised to visit and examine the Site of Works and its surroundings and obtain for themselves on their own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. All cost in this respect shall be at the bidder's own expense.
- 6.2 The bidders and any of their personnel or agents will be granted permission by the Employer to enter upon his premises and site for the purpose of such inspection, but only upon the express condition that the bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BIDDING DOCUMENTS

IB.7 Contents of Bidding Documents

- 7.1 The Bidding Documents, in addition to invitation for bids, are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB 9.
1. Bidding Documents.
 2. General Conditions of Contract (GCC).
 3. Contract Data.
 4. Specifications.
 5. Form of Bid & Appendices to Bid.
 6. Form of Bid Security.
 7. Form of Contract Agreement.
 8. Forms of Performance Security
 9. Bill of Quantities
- 7.2 The bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the Bidder's own risk. Pursuant to Clause IB.26, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

IB.8 Clarification of Bidding Documents

- 8.1 Any prospective bidder requiring any clarification (s) in respect of the Bidding Documents may notify the Employer in writing at the following address:-
- Director (M&E),
Mechanical & Electrical Department,
Port Qasim Authority, Port Qasim
Karachi, Pakistan
Phone: +92-(21)-99272182,
E-mail: secretary@pqa.gov.pk

The Employer will respond to any request for clarification which he receives earlier than 07 days prior to the deadline for submission of bids.

Copies of the Employer's response will be forwarded to all purchasers of the Bidding Documents, including a description of the enquiry but without identifying its source.

IB.9 Amendment of Bidding Documents

- 9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by issuing addendum.
- 9.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to IB. 7.1 hereof and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer.
- 9.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids in accordance with Clause IB.19

C. PREPARATION OF BIDS

IB.10 Language of Bid

- 10.1 The bid and all correspondence and documents related to the bid exchanged by a bidder and the Employer shall be in the bid language stipulated in the Bidding Data and Particular Conditions of Contract. Supporting documents and printed literature furnished by the bidders may be in any other language provided the same are accompanied by an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

IB.11 Documents Accompanying the Bid

- 11.1 Each bidder shall:
 - (a) Submit a written power of attorney authorizing the signatory of the bid to act for and on behalf of the bidder;
 - (b) The bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualification to perform the contract if its bid is accepted.
 - (c) Bidder must possess and provide evidence of its capability and the experience as stipulated in bidding data and qualification criteria stipulated in the bidding documents.

- (d) The documentary evidence of the works' conformity to the bidding documents may be in form of literature, drawings and data and the bidder shall furnish documentation as set out in bidding data.
 - (e) Furnish a bid taking into account the various Appendices to Bid and other pertinent information such as mobilization programme etc.
- 11.2 Bidders shall also submit bid of work methods and schedule, in sufficient detail to demonstrate the adequacy of the Bidders to meet the technical specifications and the completion time referred to in IB. 1.2 hereof.

IB.12 Bid Prices

- 12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole of the Works as described in IB. 1.1 hereof, based on the unit rates and / or prices submitted by the bidder.
- 12.2 The bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.
- 12.3 All federal, provincial and local duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 14 days prior to the deadline for submission of bids shall be included in the rates and prices and the total Bid Price submitted by a bidder.

IB.13 Currencies of Bid and Payment

- 13.1 The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees only.

IB.14 Bid Validity

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data after the Date of Bid Opening.
- 14.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period which shall in no case be more than the original bid validity period. The request and the responses thereto shall be made in writing. A bidder may refuse the request without forfeiting his Bid Security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.15 in all respects.

IB.15 Bid Security

- 15.1 Each bidder shall furnish, as part of his bid, Rs.4,200,000/- as earnest money in the shape of Pay order or Bank Guarantee issued from "AA" rating Bank situated in Karachi, Pakistan in favour of Port Qasim Authority to be submitted alongwith bid.

- 15.2 The Bid Security shall be, at the option of the bidder, in the form of Pay Order or Bank Guarantee issued by a Scheduled Bank of Pakistan having "AA" rating in favour of the Employer valid for a period 28 days beyond the bid validity date.
- 15.3 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- 15.4 The bid securities of unsuccessful bidders will be returned as promptly as possible, but not later than 28 days after the expiration of the period of bid validity or award of contract whichever is earlier.
- 15.5 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security and signed the Contract Agreement.
- 15.6 The Bid Security may be forfeited:
- (a) if the bidder withdraws his bid except as provided in IB. 21.1;
 - (b) if the bidder does not accept the correction of his Bid Price pursuant to IB. 26.2 hereof; or
 - (c) In the case of successful bidder, if he fails within the specified time limit to:
 - (i) Furnish the required Performance Security; or
 - (ii) Sign the Contract Agreement.

IB.16 Format and Signing of Bid

- 16.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.
- 16.2 All pages of the Tender / Bid and appendices to Bid are to be properly completed, signed and stamped.
- 16.3 No alteration is to be made in the Form of Bid nor in the Appendices thereto except in filling up the blanks as directed. If any such alterations be made or if these instructions be not fully complied with, the bid may be rejected.
- 16.4 Each bidder shall prepare by filling out the forms completely and without alterations one (1) original and (2) one number of copy, specified in the Bidding Data, of the documents comprising the bid as described in Clause IB.7 and clearly mark them "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- 16.5 The original and all copies of the bid shall be typed or written in indelible ink (in the case of copies, Photostats are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder pursuant to IB. 11.1(a) hereof. All pages of the bid shall be initialed and stamped by the person or persons signing the tender / bid.

- 16.6 The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Employer, or as are necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.
- 16.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.
- 16.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS

IB.17 Sealing and Marking of Bids

- 17.1 The completed Tender marked as 'Original' and Two copies are to be inserted in double self-addressed envelope and delivered in person or sent by Registered Air mail / courier so as to reach the:
- Director (M&E)
Port Qasim Authority,
P.O. Port Qasim
Bin Qasim Karachi – 75020
Pakistan
- 17.2 The inner envelope is to bear the name and address of the Tendered and is to be sealed and inscribed as follow:
- “Tender for the " Supply, Installation, Testing and Commissioning of Aluminum HT Cable from Industrial Sub-Station to A-Building Sub-Station and MSS to PDS-V Sub-Station”.
- 17.3 The ORIGINAL and copies of the completed Tender Set including Appendices and supplementary information and the Bid Security must reach the Director (M&E) Port Qasim Authority, Bin Qasim, and Karachi-75020 before the time and date fixed in the Tender Notice for opening of the Tenders. Tenders received after opening of the Tenders will be rejected and returned unopened.
- 17.4 Documents submitted by prospective Tenderness or Contractors in connection with the Tender for above named Works will be treated as confidential and will not be returned.

IB.18 Deadline for Submission of Bids

- 18.1 (a) Bids must be received by the Employer at the address specified not later than the time and date stipulated in the Bidding Data.
- (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of bids. No claims will be entertained for refund of such expenses.

- (c) Where delivery of a bid is by mail and the bidder wishes to receive an acknowledgment of receipt of such bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed bid package.
- (d) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by messenger.

18.2 The Employer may, at his discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.19 Late Bids

- 19.1 (a) Any bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.18 will be returned unopened to such bidder.
- (b) Delays in the mail, delays of person in transit, or delivery of a bid to the wrong office shall not be accepted as an excuse for failure to deliver a bid at the proper place and time. It shall be the bidder's responsibility to determine the manner in which timely delivery of his bid will be accomplished either in person, by messenger or by mail.

IB.20 Modification, Substitution and Withdrawal of Bids

- 20.1 Any bidder may modify, substitute or withdraw his bid after bid submission provided that the modification, substitution or written notice of withdrawal is received by the Employer prior to the deadline for submission of bids.
- 20.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.18 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 20.3 No bid may be modified by a bidder after the deadline for submission of bids except in accordance with Sub-Clauses 21.1 and 26.2.
- 20.4 Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity specified in the Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.15.

E. BID OPENING AND EVALUATION

IB.21 Bid Opening

- 21.1 The Employer will open the bids, including withdrawals, substitution and modifications made pursuant to IB.20, in the presence of bidders' representatives who choose to attend, at the time, date and location stipulated in the Bidding Data. The bidders' representatives who are present shall sign a register evidencing their attendance.

- 21.2 Envelopes marked “MODIFICATION”, “SUBSTITUTION” or “WITHDRAWAL” shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to IB.20 shall be returned unopened.
- 21.3 The bidder’s name, total Bid Price and any discounts, bid modifications, substitution and withdrawals, the presence or absence of Bid Security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening of bids.
- 21.4 Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with the IB. 22.3.

IB.22 Process to be Confidential

- 22.1 Information relating to the examination, clarification, evaluation and comparison of bid and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process before the announcement of bid evaluation report which shall be done at least ten (10) days prior to issue of Letter of Acceptance. The announcement to all Bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated and a report giving justification for acceptance / rejections of the bids. Any effort by a bidder to influence the Employer’s processing of bids or award decisions may result in the rejection of such bidder’s bid. Whereas any bidder feeling aggrieved may lodge a written complaint not later than fifteen (15) days after the announcement of the bid evaluation report; however mere fact of lodging a complaint shall not warrant suspension of the procurement process. PQA Committee shall investigate and decide upon the complaint within fifteen days of the receipt of the complaint.

IB.23 Clarification of Bids

- 23.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any bidder for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause IB.26.

IB.24 Examination of Bids and Determination of Responsiveness

- 24.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.
- 24.2 A substantially responsive bid is one which (i) meets the eligibility criteria; (ii) has been properly signed; (iii) is accompanied by the required Bid Security; and (iv) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer’s rights or the bidder’s obligations

under the Contract; or (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

24.3 If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

IB.25 Correction of Errors

25.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- (a) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
- (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.

25.2 The amount stated in the Form of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid Security shall be forfeited in accordance with IB. 15.6(b) hereof.

IB.26 Evaluation and Comparison of Bids

26.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with IB.24

26.2 In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:

- (a) Making any correction for errors pursuant to Clause IB.25;
- (b) Making an appropriate adjustment for any other acceptable variation or deviation.

26.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.

- 26.4 If the Bid of the successful bidder is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the Contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in Clause IB.30 be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.

F. AWARD OF CONTRACT

IB.27 Award

- 27.1 Subject to Clauses IB.28 and IB.32, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such bidder has been determined to be eligible in accordance with the provisions of IB.3 and qualify pursuant to IB 27.2.

- 27.2 The Employer, at any stage of the bid evaluation, having credible reasons for or prima facie evidence of any defect in supplier's or contractor's capacities, may require the suppliers or contractors to provide information concerning their professional, technical, financial, legal or managerial competence whether already provided or not:

Provided that such qualification shall only be laid down after recording reasons therefore in writing. They shall form part of the records of that bid evaluation report.

IB.28 Employer's Right to Accept any Bid and to Reject any or all Bids

- 28.1 Notwithstanding IB.27, the Employer reserves the right to accept or reject any Bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected

bidders or any obligation except that the grounds for rejection of all bids shall upon request be communicated to any bidder who submitted a bid without justification of grounds. Rejection of all bids shall be notified to all bidders promptly.

IB.29 Notification of Award

- 29.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing ("Letter of Acceptance") that his Bid has been accepted. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Contract Price").

- 29.2 No Negotiation with the bidder having evaluated as lowest responsive or any other bidder shall be permitted, however, Employer may have clarification meetings to get clarify any item in the bid evaluation report.
- 29.3 The notification of award and its acceptance by the bidder will constitute the formation of the Contract, binding the Employer and the bidder till signing of the formal Contract Agreement.
- 29.3 Upon furnishing by the successful bidder of a Performance Security, the Employer will promptly notify the other bidders that their Bids have been unsuccessful and return their bid securities.

IB.30 Performance Security

- 30.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Bidding Data and the Conditions of Contract within a period of 14 days after the receipt of Letter of Acceptance.
- 30.2 Bid Security. Failure of the successful bidder to comply with the requirements of Sub-Clause IB.30.1 or Clauses IB.31 or IB.33 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.
- 30.3 The successful Tendered will be required to furnish a performance Bond in the amount of 10% of the Bid Amount mentioned in the bids at the time of signing the formal Contract Agreement.

IB.31 Signing of Contract Agreement

- 31.1 Within 7 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Contract Agreement in the form provided in the Bidding Documents, incorporating all agreements between the parties.
- 31.2 The formal Agreement between the Employer and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the Employer.
- 31.3 All costs incidental to signing of the contract (inclusive of stamp duty) will be borne by the successful bidder

IB.32 General Performance of the Bidders

The Employer reserves the right to obtain information regarding performance of the bidders on their previously awarded contracts/works. The Employer may in case of consistent poor performance of any Bidder as reported by the employers of the previously awarded contracts, inter alia, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

IB.33 Lowest Evaluated Bid

Lowest Evaluated Bid means:

- i) A Bid most closely conforming to evaluation conditions specified in the Bidding document; and
- ii) Having lowest evaluated cost;

IB.34 Integrity Pact

The Bidder shall sign and stamp the Integrity Pact provided at Appendix-I to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding Rupees ten million. Failure to provide such Integrity Pact shall make the bidder non-responsive.

G. MISCELLANEOUS

IB.36 Misc. Information

36.1 Fraud and Corruption

It is the policy of the PQA to require its staff and its Contractors to observe the highest standard of ethics during the selection and execution of contracts. In pursuance of this policy, PQA:

- (a) Defines, for the purposes of this provision, the terms set forth below:
 - (i) “Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in contract execution; and
 - (ii) “Fraudulent practice” means a misrepresentation or omission of facts in order to influence selection process or the execution of contract;
 - (iii) “Collusive practices” means a scheme or arrangement between two or more contractors with or without the knowledge of PQA, designed to establish prices at artificial, noncompetitive levels and to deprive PQA of the benefits of free and open competition;
 - (iv) “Coercive practices” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.
- (b) will reject a Bid for award if it determines that the contractor recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, elusive or coercive practices in competing for the contract in question;
- (c) will sanction contractor, including declaring the contractor ineligible, either indefinitely or for a stated period of time, to be awarded a PQA contract if it at any time determines that the consultant has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices.

36.2 Procedures of Open Competitive Bidding

The following procedures shall be adopted for open competitive Bidding as provided in Public Procurement Rules-2004, namely:-

Single stage – two envelope procedure, PPRA rule 36(b)

- (i) The Bid shall comprise a single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal;
- (ii) The envelopes shall be marked as “FINANCIAL PROPOSAL” and “TECHNICAL PROPOSAL” in bold and legible letters to avoid confusion;
- (iii) Initially, only the envelope marked “TECHNICAL PROPOSAL” shall be opened;
- (iv) The envelope marked as “FINANCIAL PROPOSAL” shall be retained in the custody of the procuring agency without being opened;
- (v) The procuring agency shall evaluate the technical proposal in a manner prescribed in advance, without reference to the price and reject any proposal which does not conform to the specified requirements;
- (vi) During the technical evaluation no amendments in the technical proposal shall be permitted;
- (vii) The financial proposals of Bids shall be opened of the qualified bidders publicly at a time, date and venue announced and communicated to the Bidders in advance;
- (viii) After the evaluation and approval of the technical proposal the procuring agency, shall at a time within the Bid validity period, publicly open the financial proposals of the technically accepted Bids only. The financial proposal of Bids found technically non-responsive shall be returned unopened to the respective Bidders;
- (ix) The Bid found to be the lowest evaluated Bid shall be accepted.

36.3 Lowest Evaluated Bid

Lowest Evaluated Bid means:

- i) A Bid most closely conforming to evaluation criteria and other conditions specified in the Bidding document; and
- ii) Having lowest evaluated cost;

36.4 EVALUATION CRITERIA

The Tenderer shall submit, design details of the proposed Works, construction method (a narrative work methodology), relevant production assessment figures, and other items required by Employer's Requirements (Refer to Specifications), all of which is considered part of the Contract.

The Evaluation Criteria for Technical qualification of the firm is tabulated below:-

SL.#	Description	Max. Points
1	Mandatory	
a)	Firms shall have to submit with Technical Bid the following:- i) Duly licensed by the Pakistan Engineering Council (PEC) in the Category C-4 and above with code EE-04 & EE-05 valid upto June, 2024. ii) Registration with Federal Board of Revenue (FBR) and Sindh Revenue Board (SRB) on active Tax Payer list (ALT) iii. Registered with e-Pak Acquisition and Disposal System (e-PADS) of PPRA.	
b)	Credentials of the firms/Companies, head office & branch offices addresses, telephone, fax, e-mail address of the firms/companies	
c)	Duly license by Electric Inspector, Govt of Sindh valid for current year.	
d)	Minimum 50% score in each section of Evaluation Criteria is mandatory to qualify and minimum aggregate of 65 points are required for qualifying of the firm / Company.	
2	Qualification of Firm	10
	Constitution of the Firm	
	a. Public Limited Company	10
	b. Private Ltd Company/Partnership/Joint Venture	08
	c. Sole Proprietorship	05
3	Experience of the firm in the relevant field	50
a)	Break-up of Point	20
	05+ years	20
	03+ - 05 years	15
	02+ - 03 years	12
	01 - 02 years	10

b)	List of completed projects/ on-going projects for supply, laying & commissioning of HT distribution cable network and Sub Station equipment.	30
	i. Minimum two (02) relevant projects having cumulative amount of atleast Rs.50.0 Million	15
	ii. Three (03) points for every additional Rs.10.0 Million of above projects collectively (Subject to maximum Rs.50.0 Million or above)	15
4	Financial Soundness:	30
a)	Average Working Capital for last Three (03) years audited.	14
	a. Minimum working Capital Rs.40.0 Million	07
	b. For each additional Rs.10.0 Million=01 point (Subject to Maximum 70.0 Million or above)	07
b)	Average Gross Revenue for last Three (03) years audited	14
	i. Minimum Gross Revenue Rs.40.0 Million	07
	ii. For each additional Rs. 10.0 Million = 01 point (Subject to Maximum Rs.70.0 Million or above)	07
c)	Bank Maintenance Certificate	02
5	Qualification of Key Personal	10
	i)- <u>Qualification</u>	04
	B.E in relevant field	04
	B Tech in relevant field	03
	DAE in relevant field	02
	ii)- <u>Relevant Experience</u>	04
	05+ years	04
	03+ - 05 years	03
	01 - 03 years	02
	iii)- <u>Permanency with the firm</u>	02
	36+ months	02
	24+ - 36 months	1.5
	12 - 24 months	01
	GRAND TOTAL	100

Note:

- i- CV must be provided duly and signed by the Employee himself and authorized officer of the firm/ company.
- ii- Minimum 50% score in each above section (1-5) of Evaluation Criteria is mandatory to qualify.
- iii- Minimum Aggregate of **65 points** are required for qualifying of the firm / Company.

BIDDING DATA

BIDDING DATA

	Instruction to Bidders Clause Reference
1.1	<p>Name of Employer: Port Qasim Authority and represented by Director General (Technical)</p> <p>Brief Description of Works: " Supply, Installation, Testing and Commissioning of Aluminum HT Cable from Industrial Sub-Station to A-Building Sub-Station and MSS to PDS-V Sub-Station".</p>
8.1	<p>(a) Employer's address: Director General (Technical), Head Office Building, Port Qasim Authority, Bin Qasim Karachi-75020 Fax. No. 021-34730107</p> <p>(b) Engineer's address: Director (M&E), Port Qasim Authority, Tel.No.99272182 Fax: No. 021-34730107</p>
10.1	<p>Bid language: English</p>
11.1 (b)	<p>The bidder/manufacturer has the financial, technical and production capability necessary to perform the Contract as follows:</p> <ol style="list-style-type: none"> i. Balance sheet for last three years audited by Chartered Accounts, ii. CV's of key personal signed by individual, iii. List of completed projects and complete technical information as mentioned in clause 11.1(a & b)
11.1 (d)	<p>(a) A detailed description of the Works, essential technical and performance characteristics.</p> <p>(b) Complete set of technical information, description data, literature and drawings. This will include but not be limited to a sufficient number of drawings, photographs, catalogues, illustrations and such other information as is necessary to illustrate clearly the significant characteristics such as general dimensions and other relevant information about the works to be performed.</p>
13.1	<p>Bid shall be quoted entirely in Pak. Rupees. The payment shall be made in Pak. Rupees.</p>
15.1	<p>Amount of Bid Security Earnest money of Rs.4,200,000/- in shape of Pay order or Bank Guarantee from "AA" rating Bank of Pakistan in favour of Port Qasim Authority, to be submitted along with Bid .</p>
14.1	<p>Period of Bid Validity 180 days</p>
17.4	<p>Number of Copies of the Bid to be Submitted One original plus one copy</p>
18.1	<p>Employer's Address for the Purpose of Bid Submission Office of the Director (M&E), Port Qasim Authority, Karachi.</p>

19.1	Deadline for Submission of Bids As notified in NIT.
22.1	Venue, Time, and Date of Bid Opening As notified in NIT.
25	Responsiveness of Bids (i) the Bid is valid till required period, (ii) the Bid prices are firm during currency of contract (if it is a fixed price bid) (iii) completion period offered is within specified limits, (iv) The Bidder/Manufacturer is eligible to Bid and possesses the requisite experience, capability and qualification as per evaluation criteria given with these documents. (v) the Bid does not deviate from basic technical requirements and (vi) the Bids are generally in order, etc.

**FORM OF TENDER
AND
APPENDICES TO TENDER**

FORM OF TENDER

Director (M&E)
Port Qasim Authority,
Bin Qasim

Subject:

Gentleman,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications, Drawings and Bill of Quantities and Addenda Nos. _____ for the execution of the above-named Works, we, the undersigned, offer to execute and complete such Works and remedy any defects therein in conformity with the Conditions of Contract. Specifications, Drawings, Bill of Quantities and Addenda for the sum of Rs. _____ (Rupees _____) or such other sum as may be ascertained in accordance with the said conditions.
2. We understand that all the Appendices attached hereto form part of this Bid.
3. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of Rupees _____ (Rs. _____) drawn in your favour made payable to you and valid for a period of _____ days beginning from the date Bids are opened.
4. We undertake, if our Bid is accepted, to commence the Works and to complete the whole of the Works comprised in the Contract within the time stated in Appendix-A to Bid.
5. We agree to abide by this Bid for the period of 180 days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period or extension thereof.
6. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.
8. 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 _____duly authorized to sign Bids for and on behalf of

(Name of Bidder in Block Capitals)
(Seal)

Address: _____

Witness:

Signature: _____

Name: _____

Address. _____

Occupation _____

SPECIAL STIPULATIONS

CLAUSE CONDITIONS OF CONTRACT			
1.	Amount of Performance Bond	4.4	10% of Bid Amount in shape of Pay order or Bank Guarantee from any Scheduled Bank of Pakistan having "AA" rating situated in Karachi. Performance bond shall be released after completion of maintenance period.
2.	Time for Furnishing Programme	1.7.1	14 days from the date of receipt of Letter of Acceptance.
3.	Minimum amount of Third Party Insurance	14.1	Rs. 300,000/=
4.	Submission of Insurance Policies	14	Insurance policies may be submitted from the following insurance companies acceptable to the Client. a)- Adamjee Insurance Company. b)-EFU General Insurance Ltd. c)- New Jubilee Insurance Company
5.	Period of commencement	1.7.1	14 Days from the Employer's order to commence the work.
6.	Stipulated time of completion. Whole of the works.	1.1.9	Contract period is 08 months from the date of award of contract.
7.	Amount of Liquidated Damages for late completion after due date for completion.	7.4	Delay: 0.1% of Bid Amount/day for late completion of works. Maximum 10% of the bid amount stated in the letter of Acceptance
8.	Defect Liability Period	9.1	Upto completion of maintenance period i.e 12 months from the date of Taking Over Certificate issued under sub clause-9 GCC
9.	Financial Assistance to Contractor	11.6	Applicable
10.	Mode of Payment	11.1	100% in local currency
11.	Percentage of Retention Money	11.4	5% of all payments made to Contractor out of which 50% Retention money will be released after issuance Taking Over Certificate as per sub clause-8.2 GCC and balance 50% will be released after completion of maintenance period.
12.	Time within which payment to be made after submission of certificate from Engineer	11	45 Calendar Days

13.	Maintenance period	9.1	12 calendar months after date of Taking Over Certificate issued under sub clause- 8.2 GCC
-----	--------------------	-----	---

Signature: _____

Name: _____

Date: _____

PROPOSED REPAIR & MAINTENANCE SCHEDULE

Pursuant to Sub-Clause 7.1 of the General Conditions of Contract, the Works shall be completed on or before the date stated in Appendix-A to Bid. The Bidder shall provide the work Schedule in the bar chart showing the sequence of work items and the period of time during which he proposes to complete each work item in such a manner that his proposed programme for completion of the whole of the Works and parts of the Works may meet Employer's completion targets on the date noted below and counted from the date of receipt of Engineer's Notice to Commence.

METHOD STATEMENT OF PERFORMING THE WORK

The Bidder is required to submit a narrative outlining the method of performing the Work. The narrative should indicate in detail and include but not be limited to:

1. Organization Chart indicating head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.
2. The method of executing the Works, the procedures for repair & maintenance work mobilization of equipment and materials to the site.

LIST OF INTENDED SUB-CONTRACTORS

We intend to engage the following firms as sub-contractors experienced in their respective field as mentioned against their names for executing the works specified below:

S. No.	Name and address of Intended Sub-Contractors	Type of work	Reason for sub-letting

Signature: _____

Name: _____

Date: _____

CONTRACTOR'S SUPERVISORY STAFF AND KEY PERSONNEL

1. The following personnel would comprise the supervisory staff to be assigned by us to the construction site for fulfillment of the Contract.
2. The biographical data with relevant testimonials and details of experience of the above key personnel are attached to our Tender.

S. No.	Proposed Assignment	Full Name	Age	Nationality

Signature: _____

Name: _____

Date: _____

Joint Venture Summary (if applicable)

NAME OF ALL PARTNERS OF A Joint Venture (JV)
1. Lead Partner
2. Partner
3. Partner
4. Partner
5. Partner
6. Partner

(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:

Contract Value: _____

Contract Title: **“Supply, Installation, Testing and Commissioning of Aluminum HT Cable from Industrial Sub-Station to A-Building Sub-Station and MSS to PDS-V Sub-Station”.**

..... [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 Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP 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 GoP, 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 GoP 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 GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten time 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 GoP.

Name of Buyer: Name of Seller/Supplier:

Signature: Signature:

[Seal]

[Seal]

STANDARD FORMS

**TENDER BOND / BID SECURITY
PERFORMANCE SECURITY
CONTRACT AGREEMENT
ADVANCE BANK GUARNTEE**

BID SECURITY
(Bank Guarantee)

Security Executed on _____
(Date)

Name of Surety (Bank) with Address: _____
(Scheduled Bank in Pakistan)

Name of Principal (Bidder) with Address _____

Penal Sum of Security Rupees. _____ (Rs. _____)

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal (Bidder) we, the Surety above named, are held and firmly bound unto _____

(hereinafter called the 'Employer') in the sum stated above for the payment of which sum well and truly to be made, we find ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Bidder has submitted the accompanying Bid dated _____ for Bid No. _____ for _____ (Particulars of Bid) to the said Employer;

WHEREAS, the Employer has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum from a Scheduled Bank in Pakistan or from a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan, to the Employer, conditioned as under:

- (1) That the Bid Security shall remain in force up to and including the date 28 days after the deadline for validity of bids as stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived;
- (2) That the Bid Security of unsuccessful Bidders will be returned by the Employer after expiry of its validity or upon signing of the Contract Agreement;
- (3) That in the event of failure of the successful Bidder to execute the proposed Contract Agreement for such work and furnish the required Performance Security, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Employer for the faithful performance and proper fulfilment of the said Contract or in the event of non-withdrawal of the said Bid within the time specified for its validity then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Surety shall forthwith pay the Employer the said sum upon first written demand of the Employer (without cavil or argument) and without requiring the Employer to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Employer by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Bidder) has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Surety shall pay without objection the said sum upon demand from the Employer forthwith and without any reference to the Principal (Bidder) or any other person.

IN WITNESS WHEREOF, the above bounden Surety has executed the instrument under its seal on the date indicated above, the name and seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative

pursuant to authority of its governing body.

SURETY (Bank)

WITNESS:

1. _____

Corporate Secretary (Seal)

2. _____

Name, Title & Address

Signature _____

Name _____

Title _____

Corporate Guarantor (Seal)

**FORM OF PERFORMANCE SECURITY
(Bank Guarantee)**

Guarantee No. _____
Executed on _____
Expiry date _____

[Letter by the Guarantor to the Employer]

Name of Guarantor (Bank) with address: _____
(Scheduled Bank in Pakistan)

Name of Principal (Contractor) with Address _____

Penal Sum of Security (express in words and figures) _____

Letter of Acceptance No. _____ Dated _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly bound unto the _____ (hereinafter called the Employer) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Employer, we find ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Employer's above said Letter of Acceptance _____ for _____ (Name of Contract) for the _____ (Name of Project).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 49, Defects Liability, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, _____ (the Guarantor), waiving all objections and defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

	_____ Guarantor (Bank)
Witness:	
1. _____	Signature _____
_____	Name _____
Corporate Secretary (Seal)	Title _____
2. _____	
_____	_____
Name, Title & Address	Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the _____ day of _____ (month) 20____ between _____ (hereafter called the "Employer") of the one part and _____ (hereafter called the "Contractor") of the other part.

WHEREAS the Employer is desirous that certain Works, viz _____ should be executed by the Contractor and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW this Agreement witnessed 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 hereinafter referred to.
2. The following documents after incorporating addenda, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Agreement, viz:
 - (a) The Contract Agreement;
 - (b) The Letter of Acceptance;
 - (c) The completed Form of Bid;
 - (d) Special Stipulations (Appendix-A to Bid);
 - (e) The General Conditions (GCC)
 - (f) Contract Data
 - (g) The priced Bill of Quantities;
 - (h) The completed Appendices to Bid;
 - (i) The Drawings;
 - (j) The Specifications.
 - (k) Appendix
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, 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 on the day, month and year first before written in accordance with their respective laws.

Signature of the Contactor

Signature of Employer

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

Witness:

(Name, Title and Address)

(Name, Title and Address)

**FORM OF BANK GUARANTEE
FOR ADVANCE PAYMENT**

Guarantee No. _____
Executed on _____

(Letter by the Guarantor to the Employer)

WHEREAS the _____

_____ (hereinafter called the Employer) has entered into a Contract for

_____ (Particulars of Contract), with

_____ (hereinafter called the Contractor).

AND WHEREAS the Employer has agreed to advance to the Contractor, at the Contractor's request, an amount of Rs. _____ Rupees _____) which amount shall be advanced to the Contractor as per provisions of the Contract.

AND WHEREAS the Employer has asked the Contractor to furnish Guarantee to secure the advance payment for the performance of his obligations under the said Contract.

AND WHEREAS _____ (Scheduled Bank) (hereinafter called the Guarantor) at the request of the Contractor and in consideration of the Employer agreeing to make the above advance to the Contractor, has agreed to furnish the said Guarantee.

NOW THEREFORE the Guarantor hereby guarantees that the Contractor shall use the advance for the purpose of above mentioned Contract and if he fails, and commits default in fulfillment of any of his obligations for which the advance payment is made, the Guarantor shall be liable to the Employer for payment not exceeding the aforementioned amount.

Notice in writing of any default, of which the Employer shall be the sole and final judge, as aforesaid, on the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first written demand payment shall be made by the Guarantor of all sums then due under this Guarantee without any reference to the Contractor and without any objection.

This Guarantee shall come into force as soon as the advance payment has been credited to the account of the Contractor.

This Guarantee shall expire not later than _____ by which date we must have received any claims by registered letter, telegram, telex or telex.

It is understood that you will return this Guarantee to us on expiry or after settlement of the total amount to be claimed hereunder.

Guarantor (Scheduled Bank)

Witness:

1. _____

Corporate Secretary (Seal)

2. _____

(Name, Title & Address)

1. Signature _____

2. Name _____

3. Title _____

Corporate Guarantor (Seal)

GENERAL CONDITIONS OF CONTRACT

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CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

In the Contract as defined below, the words and expressions defined shall have the following meanings assigned to them, except where the context requires otherwise:

The Contract

1.1.1 “Contract” means the Contract Agreement and the other documents listed in the Contract Data.

1.1.2 “Specifications” means the document as listed in the Contract Data, including Employer’s requirements in respect of design to be carried out by the Contractor (if any), and any Variation to such document.

1.1.3 “Drawings” means the Employer’s drawings of the Works as listed in the Contract Data, and any Variation to such drawings.

Persons

1.1.4 “Employer” means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Contractor) any assignee.

1.1.5 “Contractor” means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Employer) any assignee.

1.1.6 “Party” means either the Employer or the Contractor.

Dates, Times and Periods

1.1.7 “Commencement Date” means the date fourteen (14) days after the date the Contract comes into effect or any other date named in the Contract Data.

1.1.8 “Day” means a calendar day

1.1.9 “Time for Completion” means the time for completing the Works as stated in the Contract Data (or as extended under Sub-Clause 7.3), calculated from the Commencement Date.

1.1.10 **Money and Payments**

“Cost” means all expenditure properly incurred (or to be incurred) by the Contractor, whether on or off the Site, including overheads and similar charges but does not include any allowance for profit.

Other Definitions

- 1.1.11 “Contractor’s Equipment” means all machinery, apparatus and other things required for the execution of the Works but does not include Materials or Plant intended to form part of the Works.
- 1.1.12 “Country” means the Islamic Republic of Pakistan.
- 1.1.13 “Employer’s Risks” means those matters listed in Sub-Clause 6.1.
- 1.1.14 “Force Majeure” means an event or circumstance which makes performance of a Party’s obligations illegal or impracticable and which is beyond that Party’s reasonable control.
- 1.1.15 “Materials” means things of all kinds (other than Plant) to be supplied and incorporated in the Works by the Contractor.
- 1.1.16 “Plant” means the machinery and apparatus intended to form or forming part of the Works.
- 1.1.17 “Site” means the places provided by the Employer where the Works are to be executed, and any other places specified in the Contract as forming part of the Site.
- 1.1.18 “Variation” means a change which is instructed by the Engineer/Employer under Sub-Clause 10.1.
- 1.1.19 “Works” means any or all the works whether Supply, Installation, Construction etc. and design (if any) to be performed by the Contractor including temporary works and any variation thereof.
- 1.1.20 “Engineer” means the person notified by the Employer to act as Engineer for the purpose of the Contract and named as such in Contract Data.

1.2 Interpretation

Words importing persons or parties shall include firms and organizations. Words importing singular or one gender shall include plural or the other gender where the context requires.

1.3 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found in the documents, the priority of the documents shall be in accordance with the order as listed in the Contract Data.

1.4 **Law**

The law of the Contract is the relevant Law of Islamic Republic of Pakistan.

1.5 **Communications**

All Communications related to the Contract shall be in English language.

1.6 **Statutory Obligations**

The Contractor shall comply with the Laws of Islamic Republic of Pakistan and shall give all notices and pay all fees and other charges in respect of the Works.

2. **THE EMPLOYER**

2.1 **Provision of Site**

The Employer shall provide the Site and right of access thereto at the times stated in the Contract Data.

2.2 **Permits etc.**

The Employer shall, if requested by the Contractor, assist him in applying for permits, licenses or approvals which are required for the Works.

2.3 **Engineer's/Employer's Instructions**

The Contractor shall comply with all instructions given by the Employer or the Engineer, if notified by the Employer, in respect of the Works including the suspension of all or part of the Works.

2.4 **Approvals**

No approval or consent or absence of comment by the Engineer/Employer shall affect the Contractor's obligations.

3. **ENGINEER'S/EMPLOYER'S REPRESENTATIVES**

3.1 **Authorized Person**

The Employer shall appoint a duly authorized person to act for him and on his behalf for the purposes of this Contract. Such authorized person shall be duly identified in the Contract Data or otherwise notified in writing to the Contractor as soon as he is so appointed. In either case the Employer shall notify the Contractor, in writing, the precise scope of the authority of such authorized person at the time of his appointment.

3.2 Engineer's/Employer's Representative

The name and address of Engineer's/Employer's Representative is given in Contract Data. However the Contractor shall be notified by the Engineer/Employer, the delegated duties and authority before the Commencement of Works.

4. THE CONTRACTOR

4.1 General Obligations

The Contractor shall carry out the Works properly and in accordance with the Contract. The Contractor shall provide all supervision, labour, Materials, Plant and Contractor's Equipment which may be required.

4.2 Contractor's Representative

The Contractor shall appoint a representative at site on full time basis to supervise the execution of work and to receive instructions on behalf of the Contractor but only after obtaining the consent of the Employer for such appointment which consent shall not be unreasonable withheld by the Employer. Such authorized representative may be substituted /replaced by the Contractor at any time during the Contract Period but only after obtaining the consent of the Employer as aforesaid.

4.3 Subcontracting

The Contractor shall not subcontract the whole of the Works. The Contractor shall not subcontract any part of the Works without the consent of the Employer.

4.4 Performance Security

The Contractor shall furnish to the Employer within fourteen (14) days after receipt of Letter of Acceptance, a Performance Security shall be in the form of Bank Draft (Pay order) or Bank Guarantee having at least AA rating from PACRA/JCR situated in Karachi for the amount and validity specified in Contract Data.

5. DESIGN BY CONTRACTOR

5.1 Contractor's Design

The Contractor shall carry out design to the extent specified, as referred to in the Contract Data. The Contractor shall promptly submit to the Engineer/Employer all designs prepared by him. Within fourteen (14) days of receipt the Engineer/Employer shall notify any comments or, if the design

submitted is not in accordance with the Contract, shall reject it stating the reasons. The Contractor shall not construct any element of the Works designed by him within fourteen (14) days after the design has been submitted to the Engineer/Employer or which has been rejected. Design that has been rejected shall be promptly amended and resubmitted. The Contractor shall resubmit all designs commented on taking these comments into account as necessary.

5.2 Responsibility for Design

The Contractor shall remain responsible for his bided design and the design under this Clause, both of which shall be fit for the intended purposes defined in the Contract and he shall also remain responsible for any infringement of any patent or copyright in respect of the same. The Engineer/Employer shall be responsible for the Specifications and Drawings.

6. EMPLOYER'S RISKS

6.1 The Employer's Risks

The Employer's Risks are:-

- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, within the Country;
- b) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, within the Country;
- c) Riot, commotion or disorder by persons other than the Contractor's personnel and other employees including the personnel and employees of Sub-Contractors, affecting the Site and/or the Works;
- d) Ionizing radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such an assembly, except to the extent to which the Contractor/Sub-Contractors may be responsible for the use of any radio-active material;
- e) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;
- f) use or occupation by the Employer of any part of the Works, except as may be specified in the Contract;

- g) late handing over of sites, anomalies in drawings, late delivery of designs and drawings of any part of the Works by the Employer's personnel or by others for whom the Employer is responsible;
- h) a suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure; and
- i) Physical obstructions or physical conditions other than climatic conditions, encountered on the Site during the performance of the Works, for which the Contractor immediately notified to the Employer and accepted by the Employer.

7. TIME FOR COMPLETION

7.1 Execution of the Works

The Contractor shall commence the Works on the Commencement Date and shall proceed expeditiously and without delay and shall complete the Works, subject to Sub-Clause 7.3 below, within the Time for Completion.

7.2 Programmed

Within the time stated in the Contract Data, the Contractor shall submit to the Engineer/Employer a programmed for the Works in the form stated in the Contract Data.

7.3 Extension of Time

The Contractor shall, within such time as may be reasonable under the circumstances, notify the Employer/Engineer of any event(s) falling within the scope of Sub-Clause 6.1 or 10.3 of these Conditions of Contract and request the Employer/Engineer for a reasonable extension in the time for the completion of Works. Subject to the aforesaid, the Employer/Engineer shall determine such reasonable extension in the time for the completion of Works as may be justified in the light of the details/particulars supplied by the Contractor in connection with the such determination by the Employer/Engineer within such period as may be prescribed by the Employer/Engineer for the same; and the Employer shall extend the Time for Completion as determined.

7.4 Late Completion

If the Contractor fails to complete the Works within the Time for Completion, the Contractor's only liability to the Employer for such failure shall be to pay the amount stated in the Contract Data for each day for which he fails to complete the Works.

8. TAKING-OVER

8.1 Completion

The Contractor may notify the Engineer/Employer when he considers that the Works are complete.

8.2 Taking-Over Notice

Within fourteen (14) days of the receipt of the said notice of completion from the Contractor the Employer/Engineer shall either takeover the completed Works and issue a Certificate of Completion to that effect or shall notify the Contractor his reasons for not taking-over the Works. While issuing the Certificate of Completion as aforesaid, the Employer/Engineer may identify any outstanding items of work which the Contractor shall undertake during the Maintenance Period.

9. REMEDYING DEFECTS

9.1 Remedying Defects

The Contractor shall for a period stated in the Contract Data from the date of issue of the Certificate of Completion carry out, at no cost to the Employer, repair and rectification work which is necessitated by the earlier execution of poor quality of work or use of below specifications material in the execution of Works and which is so identified by the Employer/Engineer in writing within the said period. Upon expiry of the said period, and subject to the Contractor's faithfully performing his aforesaid obligations, the Employer/Engineer shall issue a Maintenance completion Certificate whereupon all obligations of the Contractor under this Contract shall come to an end.

Failure to remedy any such defects or complete outstanding work within a reasonable time shall entitle the Employer to carry out all necessary works at the Contractor's cost. However, the cost of remedying defects not attributable to the Contractor shall be valued as a Variation.

9.2 Uncovering and Testing

The Engineer/Employer may give instruction as to the uncovering and/or testing of any work. Unless as a result of an uncovering and/or testing it is established that the Contractor's design, Materials, Plant or workmanship are not in accordance with the Contract, the Contractor shall be paid for such uncovering and/or testing as a Variation in accordance with Sub-Clause 10.2.

10. VARIATIONS AND CLAIMS

10.1 Right to Vary

The Employer/Engineer may issue Variation Order(s) in writing. Where for any reason it has not been possible for the Employer/Engineer to issue such Variations Order(s), the Contractor may confirm any verbal orders given by the Employer/Engineer in writing and if the same are not refuted/denied by the Employer/Engineer within seven (7) days of the receipt of such confirmation the same shall be deemed to be a Variation Orders for the purposes of this Sub-Clause.

10.2 **Valuation of Variations**

Variations shall be valued as follows:

- a) At a lump sum price agreed between the Parties, or
- b) Where appropriate, at rates in the Contract, or
- c) In the absence of appropriate rates, the rates in the Contract shall be used as the basis for valuation, or failing which
- d) At appropriate new rates, as may be agreed or which the Engineer/Employer considers appropriate, or
- e) In case of non-schedule items, the quotations & rates analysis will be furnished by the contractor & submit for prior approval / agreed by the Engineer / Engineer representative.
- f) if the Engineer/Employer so instructs, at day work rates set out in the Contract Data for which the Contractor shall keep records of hours of labour and Contractor's Equipment, and of Materials, used.

10.3 **Early Warning**

The Contractor shall notify the Engineer/Employer in writing as soon as he is aware of any circumstance which may delay or disrupt the Works, or which may give rise to a claim for additional payment.

To the extent of the Contractor's failure to notify, which results to the Engineer/Employer being unable to keep all relevant records or not taking steps to minimize any delay, disruption, or Cost, or the value of any Variation, the Contractor's entitlement to extension of the Time for Completion or additional payment shall be reduced/rejected.

10.4. **Valuation of Claims**

If the Contractor incurs Cost as a result of any of the Employer's Risks, the Contractor shall be entitled to the amount of such Cost. If as a result of any Employer's Risk, it is necessary to change the Works, this shall be dealt with as a Variation subject to Contractor's notification for intention of claim to the Engineer/Employer within fourteen (14) days of the occurrence of cause.

10.5 **Variation and Claim Procedure**

The Contractor shall submit to the Engineer/Employer an itemized make-up of the value of variations and claims within twenty eight (28) days of the instruction or of the event giving rise to the claim. The Engineer/Employer shall check and if possible agree the value. In the absence of agreement, the Employer shall determine the value.

10.6 **Variations Exceeding 15 percent**

If, on the issue of the Taking-Over Certificate for the whole of the works, it is found as a result of :

- (a) All work valued under Sub-clauses.
- (b) All adjustments upon measurement of the estimated quantities set out in the Bill of Quantities, excluding Provisional Sums, day works and adjustment of price made under Clauses. But not from any other cause, there have been additions to or deductions from the contract price which taken together are in excess of 15 percent of the “Effective Contract price” (which for the purposes of this Sub-Clause shall mean the contract price, excluding Provisional Sums and Allowance for day works, (if any) then and in such event (subject to any action already taken under any other Sub-Clause of this clause), after due consultation by the Engineer with the Employer and the Contractor, there shall be added to or deducted from the Contract Price such further sum as may be agreed between the Contractor and the Engineer or, failing agreement, determined by the Engineer having regard to the Contractor’s site and general overhead costs of the Contract. The Engineer shall notify the Contractor of any determination made this Sub-Clause, with a copy of the Employer. Such sum shall be based only on the amount by which such additions or deductions shall be in excess of 15 percent of the Effective Contract Price (as per terms of FIDIC conditions of Contract)

11. **CONTRACT PRICE AND PAYMENT**

11.1 (a) **Terms of Payment:**

Terms of conditions shall be in accordance with the Contract Data

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other terms of the Contract, shall be paid by the Employer to the Contractor within 30 days after such Interim Payment Certificate has been jointly verified by Employer and Contractor, or, in the case of the Final Certificate referred to in Sub Clause 8.1&8.2, within 60 days after such Final Payment Certificate has been jointly verified by Employer and Contractor;

(b) **Valuation of the Works**

The Works shall be valued as provided for in the Contract Data, subject to Clause 10.

11.2 **Monthly Statements**

The Contractor shall be entitled to be paid at monthly intervals:

- a) The value of the Works executed; and
- b) The percentage of the value of Materials and Plant reasonably delivered to the Site, as stated in the Contract Data, subject to any additions or deductions which may be due.

The Contractor shall submit each month to the Engineer/Employer a statement showing the amounts to which he considers himself entitled.

11.3 **Interim Payments**

Within a period not exceeding seven (7) days from the date of submission of a statement for interim payment by the Contractor, the Engineer shall verify the same and within a period not exceeding thirty (30) days from the said date of submission by the Contractor, the Employer shall pay to the Contractor the sum verified by the Engineer less retention money at the rate stated in the Contract Data.

11.4 **Retention**

Retention money shall be paid by the Employer to the Contractor within fourteen (14) days after either the expiry of the period stated in the Contract Data, or the remedying of notified defects, or the completion of outstanding work, all as referred to in Sub-Clause 9.1, whichever is the later.

11.5 **Final Payment**

Within twenty one (21) days from the date of issuance of the Maintenance Certificate the Contractor shall submit a final account to the Engineer to verify and the Engineer shall verify the same within fourteen (14) days from the date of submission and forward the same to the Employer together with any documentation reasonably required to enable the Employer to ascertain the final contract value.

Within sixty (60) days from the date of receipt of the verified final account from the Engineer, the Employer shall pay to the Contractor any amount due to the Contractor. While making such payment the Employer may, for reasons to be given to the Contractor in writing, withhold any part or parts of the verified amount.

11.6 Financial Assistance to Contractor

Financial assistance shall be made available to the Contractor by the Employer by adopting any one of the following three Alternatives:

(Appropriate alternative only to be retained)

Alternative One: Mobilization Advance

- (a) An interest-free Mobilization Advance up to 15 % of the Contract Price stated in the Letter of Acceptance shall be paid by the Employer to the Contractor in two equal parts upon submission by the Contractor of a Mobilization Advance Guarantee/Bond for the full amount of the Advance in the specified form from a Scheduled Bank in Pakistan or an insurance company acceptable to the Employer:
- (1) First part within 14 days after signing of the Contract Agreement or date of receipt of Engineer's Notice to Commence, whichever is earlier; and
 - (2) Second part within 42 days from the date of payment of the first part, subject to the satisfaction of the Engineer as to the state of mobilization of the Contractor.
- (b) This Advance shall be recovered in equal instalments; first instalment at the expiry of third month after the date of payment of first part of Advance and the last instalment two months before the date of completion of the Works as per Clause 43 hereof.

Alternative Two: Mobilization/ Demobilization Cost

Mobilization Cost shall be paid to the Contractor as a part of the priced Bill of Quantities. This cost shall not exceed 10 % of the Tender Price and shall be paid to the Contractor as follows:

- (i) 80 % of the Mobilization Cost shall be paid for mobilization at Site. This payment shall be in three stages as follows:
- Stage I: 20 % of Mobilization Cost upon obtaining and furnishing of Performance Security and insurance policies and construction of camp and housing facilities as required under the Contract;
- Stage II: 30 % of Mobilization Cost upon providing & installing preliminary requirements of Contractor's Equipment, materials and temporary structures for the commencement of Works to the satisfaction of the Engineer and achieving 3 % value of the Works (excluding payment under Stage-I);

- Stage III: 30 % of Mobilization Cost upon providing balance Contractor's Equipment to complete full requirement for the entire work and after achievement of progress to the extent of 6 % value of the Works (excluding payments under Stages I and II); and
- (ii) 20 % of Mobilization Cost shall be paid for operation and maintenance of the constructed facilities and for demobilization as per schedule of payment to be submitted by the Contractor in accordance with Clause 57.2 and approved by the Engineer.

Alternative Three: Materials Supplied by Employer

The Employer shall supply to the Contractor materials, like cement, steel, bitumen or any other material whichever deemed necessary to complete the project; and the cost thereof shall be recovered from the Contractor through monthly statements on the basis of actual consumption.

The list of materials, quantities and rates to be charged to the Contractor shall be provided along with Appendix-A to Bid "Special Stipulations".

(Employer may opt either "Secured Advance on Materials" or "Financial Assistance to Contractor")

11.7 Currency

Payment shall be in the currency stated in the Contract Data.

12. DEFAULT

12.1 Defaults by Contractor

If the Contractor abandons the Works, refuses or fails to comply with a valid instruction of the Engineer/Employer or fails to proceed expeditiously and without delay, or is, despite a written complaint, in breach of the Contract, the Employer may give notice referring to this Sub-Clause and stating the default.

If the Contractor has not taken all practicable steps to remedy the default within fourteen (14) days after receipt of the Employer's notice, the Employer may by a second notice given within a further twenty one (21) days, terminate the Contract. The Contractor shall then demobilize from the Site leaving behind any Contractor's Equipment which the Employer instructs, in the second notice, to be used for the completion of the Works at the risk and cost of the Contractor.

12.2 **Insolvency**

If a Party is declared insolvent under any applicable law, the other Party may by notice terminate the Contract immediately. The Contractor shall then demobilize from the Site leaving behind, in the case of the Contractor's insolvency, any Contractor's Equipment which the Employer instructs in the notice is to be used for the completion of the Works.

12.4 **Payment upon Termination**

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and Plant reasonably delivered to the Site, adjusted by the following:

- a) Any sums to which the Contractor is entitled under Sub-Clause 10.4,
- b) Any sums to which the Employer is entitled,
- c) if the Employer has terminated under Sub-Clause 12.1 or 12.3, the Employer shall be entitled to a sum equivalent to twenty percent (20%) of the value of parts of the Works not executed at the date of the termination, and
- d) If the Contractor has terminated under Sub-Clause 12.2 or 12.3, the Contractor shall be entitled to the cost of his demobilization together with a sum equivalent to ten percent (10%) of the value of parts of the Works not executed at the date of termination. The net balance due shall be paid or repaid within twenty eight (28) days of the notice of termination.

13. **RISKS AND RESPONSIBILITIES**

13.1 **Contractor's Care of the Works**

Subject to Sub-Clause 9.1, the Contractor shall take full responsibility for the care of the Works from the Commencement Date until the date of the Employer's/Engineer's issuance of Certificate of Completion under Sub-Clause 8.2. Responsibility shall then pass to the Employer. If any loss or damage happens to the Works during the above period, the Contractor shall rectify such loss or damage so that the Works conform to the Contract.

Unless the loss or damage happens as a result of any of the Employer's Risks, the Contractor shall indemnify the Employer, or his agents against all claims loss, damage and expense arising out of the Works

13.2 **Force Majeure**

If Force Majeure occurs, the Contractor shall notify the Engineer/Employer immediately. If necessary, the Contractor may suspend the execution of the Works and, to the extent agreed with the Employer demobilize the Contractor's Equipment.

If the event continues for a period of eighty four (84) days, either Party may then give notice of termination which shall take effect twenty eight (28) days after the giving of the notice.

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and Plant reasonably delivered to the Site, adjusted by the following:

- a) Any sums to which the Contractor is entitled under Sub-Clause 10.4,
- b) The cost of his demobilization
- c) Less any sums to which the Employer is entitled.

The net balance due shall be paid or repaid within thirty five (35) days of the notice of termination.

14. **INSURANCE**

14.1 **Arrangements**

The Contractor shall, prior to commencing the Works, effect insurances of the types, in the amounts and naming as insured the persons stipulated in the Contract Data and (i) of the Employer's Risks & workman compensation under Sub-Clause 6.1. The policies shall be issued by insurers and in terms approved by the Employer. The Contractor shall provide the Engineer/Employer with evidence that any required policy is in force and that the premiums have been paid.

14.2 **Default**

If the Contractor fails to effect or keep in force any of the insurances referred to in the previous Sub-Clause, or fails to provide satisfactory evidence, policies or receipts, the Employer may, without prejudice to any other right or remedy, effect insurance for the cover relevant to such as a default and pay the premiums due and recover the same plus a sum in percentage given in Contractor Data from any other amounts due to the Contractor.

15. Duties and Taxes

The Contractor shall obtain all information as to any and all taxes including sales Tax, Company Tax and other taxes FBR & SRB, import duties. port handling charges etc and be responsible for include same in the prices stated in his tender. No extra claim in this respect will be entertained. The clearance through customs of the material and other things required for the works is the responsibility of the contractor. The contract price shall include cost of material, installation, insurance, custom duty and taxes/levies payable by the contractor.

16. RESOLUTION OF DISPUTES

16.1 Engineer's Decision

If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with the Works, the matter in dispute shall, in the first place, be referred in writing to the Engineer, with a copy to the other party. Such reference shall state that it is made pursuant to this Clause. No later than the twenty eight (28) days after the day on which he received such reference, the Engineer shall give notice of his decision to the Employer and the Contractor.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the Work with all due diligence, and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided in an arbitral award.

16.2 Notice of Dissatisfaction

If a Party is dissatisfied with the decision of the Engineer or if no decision is given within the time set out in Sub-Clause 15.1 here above, the Party may give notice of dissatisfaction referring to this Sub-Clause within fourteen (14) days of receipt of the decision or the expiry of the time for the decision. If no notice of dissatisfaction is given within the specified time, the decision shall be final and binding on the Parties. If notice of dissatisfaction is given within the specified time, the decision shall be binding on the Parties who shall give effect to it without delay unless and until the decision of the Engineer is revised by an arbitrator.

16.3 Arbitration

A dispute which has been the subject of a notice of dissatisfaction shall be finally settled as per provisions of Arbitration Act 1940 (Act No. X of 1940) and Rules made there under and any statutory modifications thereto. Any hearing shall be held at the place specified in the Contract Data and in the language referred to in Sub-Clause 1.5.

17 INTEGRITY PACT

17.1 If the Contractor or any of his Sub-Contractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Schedule-F to his Bid, then the Employer shall be entitled to:

- (a) Recover from the Contractor an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Contractor or any of his Sub-Contractors, agents or servants;
- (b) Terminate the Contract
- (b) Recover from the Contractor any loss or damage to the Employer as a result of such termination or of any other corrupt business practices of the Contractor or any of his Sub-Contractors, agents or servants.
On termination of the Contract under Sub-Para (b) of this Sub-Clause, the Contractor shall demobilize from the Site leaving behind Contractor's Equipment which the Employer instructs, in the termination notice, to be used for the completion of the Works at the risk and cost of the Contractor. Payment upon such termination shall be made under Sub-Clause 12.4, in accordance with Sub-Para (c) thereof, after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.

CONTRACT DATA

Sub-Clauses of Conditions of Contract

1.1.3	Employer's Drawings, if any (To be listed by the Employer)
1.1.4	The Employer means Port Qasim Authority and represented by Director General (Technical), Karachi.
1.1.5	The Contractor means _____
1.1.7	Commencement Date means the date of issue of Engineer's Notice to Commence the work, which shall be issued within fourteen (14) days of the signing of the Contract Agreement.
1.1.9	Time for Completion As notified at serial # 06 in special stipulation (Appendix- A to Bid)
1.1.20	Engineer/E.R Director (M&E), Port Qasim, Karachi & Manager (Electrical) as Engineer's Representative
1.3	Documents forming the Contract listed in the order of priority: The Contract Agreement Letter of Acceptance The completed Form of Bid Contract Data Conditions of Contract The completed Schedules to Bid including Schedule of Prices/BOQ. The specifications Special stipulation Appendixes
2.1	Provision of Site: On the commencement date
3.1	Authorized person: To be notified
3.2	Name and address of Engineer's/Employer's representative To be notified
4.4	Performance Security: 10% of the Bid Amount. The Performance Security shall be valid up to completion of defects liability period of the contract. (Form: As provided under Standard Forms of these Documents)
7.2	Programme: Time for submission: Within fourteen (14) days of the Commencement Date. Form of programme: Bar Chart (Bar Chart /CPM/PERT or other)
7.5	Liquidated Damages Amount payable due to failure to complete the work shall be 0.1 % per day up to a maximum of (10%) of contract sum stated in the Letter of Intent /Acceptance

9.1	<p>Period for remedying defects/ Defects liability period upto completion of maintenance period i.e. 12 Months from issuance of certificate of completion under clause 9.1</p> <p>After expiry of contract period the performance Bond furnished will be released on the request of contractor.</p>
10.2	<p>Variation procedure per clause 10 of condition of contract.</p>
11.1(a)	<p><u>Terms of payments:</u></p> <p>Payment of Contract Price shall be made in the following manners: The Engineer after examining each such monthly statement certify the amount of payment of the contractor which he shall consider reasonable and proper in respect thereof subject to retention of percentage of Retention money and deduction of any such sum which may have become due to payable by the contractor to the Authority.</p> <p>For all payments made to the Contractor, a deduction of five percent shall be made from each bill as Retention Money. The Retention Money shall be refunded to the Contactor after issuance of certificate of completion under clause 9.1</p> <p>The amount due to the Contractor under any certificate duly certificate for payment by the Engineer pursuant to this clause or to any terms of the Contract, shall be paid by the Authority to the Contractor after such certification.</p> <p>The amount due to the Contractor under any certificate for payment by the Engineer pursuant to this clause or to any terms of the Contract, shall be paid by the Authority to the Contractor after such certification.</p> <p>All contents in them payment certificate issued by the Engineer and also by the payments that have been made shall be considered partial and provisional and nor final and on account, of any mistake in measurement or computation in the payment certificate shall be corrected and payment be adjusted accordingly.</p> <p><u>ii). Final Payment</u></p> <p>Not later than one month after the completion of the Contract period, the Contractor shall submit to the Engineer a statement of final account with supporting documents showing the value of the work done in accordance with the Contract together with all further sums which the Contractor to be due to him under the Contract within one month after the receipt of his final account and of all information reasonably required for its verification. The</p>

	Engineer shall issue a final certificate stating: The amount which in his opinion is finally due under the Contract and after giving credit to the Authority for all amounts previously paid by the Authority and for all sums to which the Authority is entitled under the Contract.
11.1 (b)	Valuation of the Works*: Lump sum price with bill of quantities _____ (details)
11.2(b)	Percentage of value of Materials and Plant: Materials Eighty (80%)* Plant Twenty (20%)*
11.4	Percentage of retention: five percent (5%)
11.6	Currency of payment: Pak. Rupees
14.1	Insurances: Type of cover: Contractor's All Risk Policy Amount of cover: The sum stated in the Letter of Acceptance plus fifteen percent (15%) Type of cover Contractor's Equipment: Amount of cover Full replacement cost Type of cover Third Party-injury to persons and damage to property. (The minimum limit amount of third party insurance should be Rs.150,000/- to 300,000/- each occurrence). Workers: _____ Other covers _____ (In each case name of insured is Contractor and Employer) Type of cover: Workmen's compensation policy
14.2	Amount to be recovered Premium plus ten percent (10%).
16.3	Arbitration Place of Arbitration: Karachi

SPECIFICATIONS
A - GENERAL
B - TECHNICAL

A-GENERAL

1. SCOPE OF WORK

The works comprise of “Supply, Installation, Testing And Commissioning Of Aluminum HT Cable From Industrial Sub-Station To A-Building Sub-Station And MSS To PDS-V Sub-Station”.

2. GENERAL INSTRUCTIONS

- a) The entire electrical installation work shall be carried out by licensed workmen, authorized to undertake such work under the provisions of the Electricity Act 1910 and the Pakistan Electricity Rules 1937 is adopted and modified up to date by the Government of Pakistan.
- b) The Contractor shall be fully familiar with the latest edition of the Regulations of the Electrical Equipment of Buildings, 14th edition 1966, issues by the Institute of Electrical Engineers, London, Standard Code of Practices, Electricity Rules 1937, bye-laws that are in force from time to time; and all works shall be carried out in accordance with the Regulations mention above. Any discrepancy between the specifications in the contract and above Regulations all be brought to the notice of Engineer for his instructions.
- c) The Contractor shall be responsible for submitting the test certificates and having the installation passed by Government Electric Inspector for that Region. All requirements of the Electric Inspector shall be complied with.

3. AMBIENT CONDITIONS

All equipment supplied shall with stand without developing defect any defect, the following climate conditions:

Maximum ambient	:	48°C
Minimum ambient	:	8°C
Maximum humidity	:	90%
Atmosphere	:	Tropical, humid and dusty
Altitudes	:	Mean sea level

4. STANDARD

The latest standard and B.B.S Codes VDF and I.F.C and I.E.E recommendations shall be applicable and followed by for the equipment specified herein.

5. SUBSTITUTE MATERIALS

In the specifications, certain type and make of equipment/material have been specified only for the purpose of reference and guidance. For items differing from the type of and make specified herein for items specified as approved equivalent or for any item which requires the approval by the Engineer, the Contractor shall submit in duplicate complete data within 45 days after award of contract. If the Contractor fails to submit the required approved data within the specified 45 days, it shall be interpreted to mean that Contractor will furnish equipment/material as specified. Request for approval of substitute materials after 45 days will be considered by Engineer only if he is satisfied that due to circumstances beyond the control of Contractor the specified material could not be obtained in time to prevent unnecessary delay of construction. The data to be applied shall include, apart from technical details, all changes which may be required in the system and all portions of project affected by substitution.

5. Marking

The contractor shall provide "**Danger Board**" and "**Shock Chart**" whenever required to comply with the requirements of local Electricity Rules and according to normal practice.

6. GUARANTEE

The contractor shall furnish written guarantee of the manufacturer or supplier against performance of each equipment which shall be for replacement and repair of or part of whole equipment which may be defective in material or workmanship. The guarantee shall cover a minimum period of 12 month, after issuance of Taking Over Certificate. This guarantee shall not relieve the Contractor his obligations. He will be fully responsible for the repair or replacement of any defective material in time, so as not to cause any undue delay in carrying out the repair and replacement.

7. FACTORY TESTS

All types and routine test of electrical cables, electrical equipment / material and all other equipment shall be performed at the manufacturer's works in the presence of engineer or his representative. The test may be waived off in case the certified test certificates are produced, issued by some standard laboratories of international repute, but nearly producing certificate will not be sufficient in case of routine test. The Contractor shall inform the Engineer and Employer representative about the date and time of tests of each equipment at least two weeks in advance. All test result shall be supplied in triplicate. The witnessing of test by the Engineer or his representative or Employer's representative shall not absolve the Contractor from his responsibility for the proper functioning of the tenders and for the furnishing the guarantee.

2 INSTALLATION INSTRUCTION- GENERAL

The contractor shall furnish all labour and materials, tools and equipment required for laying, testing and commissioning of HT feeder cables & accessories specified here. Contractor shall be responsible to repair/replace defective/faulty equipment/material even in event of his following of manufacturer's instructions for installation. The repair shall be to the satisfaction of the Engineer/Employer. For any departure from the working drawing that are deemed necessary by the contractor due to site conditions, he shall submit the details and obtain the Engineer's approval before starting such works.

3 CONTRACTOR'S CAMP

The space for establishment for site office / camp area will be provided by PQA till completion of work on free of charge. The contractor has to establish the facilities required for completion of job at his own expenses.

4 FACILITIES FOR THE ENGINEER

The contractor shall provide the following facilities for the Engineer:

A) Megger Set of 05 KW (KEW Model 3125A Brand KYORITSU) Japan or equivalent Make

Upon completion of the Contract above said Equipment shall be the property of the Authority.

B) HT Tester of 11 KV (SEW Model 276)Taiwan or any Equivalent Make

Upon completion of the Contract above said Equipment shall be the property of the Authority.

5 PAYMENT OF WORK

No separate payment shall be made for above works involved within the scope of this section "Specification". The cost thereof shall be deemed to have been included in the quoted unit rate of other items of the Bill of Quantity.

B) TECHNICAL SPECIFICATIONS

ELECTRICAL INSTALLATIONS

SCOPE

This section relates to supplying, laying, installation and commissioning of HT cables and Electrical works collectively related to material, services and facilities specified herein, indicated on drawing or otherwise required for Supply, Installation, Testing and Commissioning of Aluminum HT Cable from Industrial Sub-Station to A-Building Sub-Station and MSS to PDS-V Sub-Station and complete in strict accordance of this section of specification and subject to the terms and condition of the following major works:

1. HT/LT Distribution cable network
2. Termination Kits and Jointing Work
3. Excavation and backfilling
4. Earthing System
5. Laying of UPVC Pipes
6. Thrust Boring

1. HT DISTRIBUTION CABLE NETWORK

Under this section, scope of work includes supplying, installing, testing and commissioning_of high tension (HT) cable and accessories as specified herein or as stated on the Tender Drawing and in the Bill of Quantities.

The Contractor shall discuss the electrical layout with the Engineer and co-ordinate at site with other services for exact route, location and position of the electrical lines.

The HT cable with accessories shall also comply with the General Specifications for Electrical Works Section-8001 and with other relevant provisions of the Tender Documents.

1.1. GENERAL

The cable shall suitable for nominal service voltage of 15 KV, have Aluminum conductor and cross-linked polyethylene (XLPE) insulated, shielded, armoured and sheathed. It shall be suitable for indoor and outdoor use in the transmission and distribution of electrical energy.

1.2. APPLICABLE STANDARD/CODES

The following standards and codes shall be applicable for the materials within the scope of this Section.

IEC 60502 - Power cables with extruded insulation and their accessories for rated voltage from 1KV up to 30 KV

IEC 60540 - Test methods for insulation and sheaths of electric cable and cords.

1.3. MATERIAL

1.3.1 11 KV CABLE

The cable shall meet the following specifications:

Nominal / System Voltage	15 KV
Frequency	50 Hz
Phase	- 3 Phase
Conductor Size	Sqmm As given in BOQ
Cores	No. 3
Rated Voltage	KV 15/8.76 phase to phase/phase to ground
Continuous operating temperature of conductor	°C 90
Conductor material	- Aluminum stranded
Insulation	- Cross-linked polyethylene
Shielding	- Copper tape
Jacket	- PVC
Armouring	- Galvanized wire
Over sheathing	- Extruded PVC
Phase identification	- Red, Yellow, Blue

1.3.2 CONDUCTOR

The conductor shall be of high conductivity electrolytic Aluminum, stranded in accordance with specified standard.

1.3.4 INSULATION

The insulation shall be cross linked polyethylene extruded over the conductor. The insulation shall be laid to avoid any gap/air packets between the conductor and insulation.

The insulation shall be easy to strip from individual conductors and to separate for jointing/termination purpose.

1.3.5 SHIELDING

Each core shall be shielded by a layer of semi- conducting material applied directly over the insulation. The semi-conducting insulation shall be covered by a bare copper tape applied with suitable overlapping.

Phase identification tape of red, yellow, and blue colour shall be wrapped over the copper shield.

1.3.6 ASSEMBLY

The three insulated conductors shall be assembled with PVC or non-hygroscopic filter and bounded with tape. The tape binder shall then be covered with extruded PVC jacket shall be padded with a suitable material before application or armour.

1.3.7 ARMOUR

Armoring shall be provided with single layer of galvanized steel wire to provide cable protection and also act as low resistance earth return path. The armoring shall be covered with binder tape. The armour shall be of appropriate size to carry the system fault current.

1.3.8 OVERSHEATH

The entire cable assembly shall be covered with a PVC jacket of thickness not less 2.5mm. The colour of the jacket shall be black. In addition to any other marking proposed by manufacturer, the size of cable and voltage grade shall be given on the over sheath at every meters interval.

2. TERMINATION KITS

The termination kits for the above cable shall be manufacturers recommended kits and shall be indoor type. The cost of the termination kits shall be provided as per BOQ rate. . The termination kits shall be complete with all material and compound. A bill of quantity of material included shall be furnished by the tender a long with sectional drawing and detailed descriptive splicing instructions.

2.1. STRAIGHT THROUGH JOINT BOXES

- (a) The straight through joint boxes for the above cable shall be manufacturer's recommended boxes for indoor or outdoor and underground use.
- (b) The joints boxes shall be horizontal, straight through heat shrink /resin type, approved Make. These shall be suitable for direct burial, underground and shall be proofed against ingress of moisture.
- (c) The boxes shall have external armour clamps to hold cable assembly.
- (d) Ground straps will be furnished for grounding wire armour on the inside of joint box.
- (e) Tinned copper shielding braid shall be 25 mm wide and the grounding braid 13mm wide.
- (f) Aluminum A bill of quantity of all splicing material e.g. connectors, solder, sealing compound, abrasive cloth, ground clamps, tapes (insulating, friction, cotton, plastic and semi-conducting), shielding and grounding braids shall be furnished by the tenderer a long with a sectional dimensioned drawing and detailed descriptive splicing instructions.

3. CONDUITS, PIPES & ACCESSORIES

3.1. GENERAL:-

The work under this section consists of supplying all material, labour, services and supervision required for all the complete installation of conduits system as specified for herein or stated on this drawings and is Bill of Quantities. The contractor shall discus the electrical layout with the Engineer and Co-ordinate at site with other services for exact route, location and position of Electrical lines.

3.2. UPVC CONDUITS AND ACCESSORIES

The UPVC conduit and pipes shall be suitable for laying HT feeder under paved area or existing road where ever, specified shall be UPVC electrical conduits manufactured by

Pakistan PVC Limited. The PVC conduit, UPVC and accessories shall conform standard codes "Shavyl" Pak Arab, Dadex or equivalent /as per BOQ.

3.3. RIGID UPVC PIPES AND ACCESSORIES

For protection of HT cables / Feeder to be laid underground, rigid PVC pipe shall be used where ever required. The rigid UPVC/PVC pipe shall be confirm to the requirements of class D or class B of BSS 3505. All pipes up to nominal diameter shall be class D type (working pressure 12kg / cm²). The pipes shall be as manufactured by Pakistan PVC Limited under the name SHAVYL PVC pressure pipes or equivalent make or as per BOQ brand i.e. Dadex, Pak Arab Ltd.

The depth of pipe shall vary according to the conditions at site and approved of Engineer shall be obtained prior to installation. In general the pipes shall be installed underground at the following depth measured from the top of the pipe:

- a) Under roads and paved surface 900mm below the finished surface.
- b) When crossing after services 250mm vertical clearance, 500mm horizontal clearance.

After installation the ends of pipes shall be plugged with material impervious o water and Chemicals. Joints shall be sealed adequately to prevent entry of for eignelements.

4. THRUST BORING:

The boring shall be carried out under paved road areas at crossing with other services and for laying of entrance of HT feeder as per standard technical / data because to protect the existing road/paved area. The depth of the boring shall vary according to the condition at site, and approval of Engineer shall be obtained prior to installation.

5. EXCAVATION AND BACKFILLING

All excavation shall be made to the lines, levels and grades shown on the drawings or established by the Engineer. The sides of trench shall be as nearly vertical as practical. If found necessary by the Engineer a side slope on either side of the trench may be permitted for a trench equal to or greater than 2 meters depth that the average width of the trench does not exceed 2.5 meters. Bell holes and depressions for joints shall be dug after the bottom of trench has been graded. Bell holes and depressions shall only be of such length, depth and width as required for properly making the particular type of joints as shown the drawings on Engineer. or as directed by the engineer.

If the contractor excavates beyond the required depth it shall be backfilled with approved material and thoroughly compacted at the expense of the Contractor.

Before starting the excavation, the Contractor shall ensure the correct alignment of the pipe line on the ground the depth and width of excavation of the trench, all in accordance with the drawings and instructions of the Engineer. The Contractor shall make profile with cement concrete pillars.

Excavation shall be carried out to true lines, levels, grades and widths as shown on the drawings or as directed by the Engineer ensuring proper laying of the pipe line, the bedding fill, construction of chambers for appurtenances and any other structures. The trench bottom shall be graded to provide even and substantial bearing over the specified bedding and of the structure.

The Contractor, at his cost shall provide to the satisfaction of the Engineer all timbering, approved supports, shores and bracings to the sides of the excavated trench and foundations in such a manner so as to secure the sides of the trench and excavations from falling or adverse movement. All responsibility connected with such shoring shall rest with the Contractor.

Without the written permission of the Engineer, not more than 200 meter of the trench shall be opened in advance of the completed pipe line.

The bottoms of all excavations shall be carefully level led. Any pockets of soft or loose material in the bottoms of the trenches shall be removed and the cavities so formed filled with lean concrete at the Contractors expense.

During excavation, material suitable for backfilling shall be stockpiled in an orderly manner at sufficient distance from the excavated trenches for reuse in backfill.

6. TESTING

6.1 GENERAL

Upon completion of the installation, the Contractor shall perform field tests on all equipment, materials and systems. All tests shall be conducted in the presence of the Engineer for the purpose of demonstrating equipment or systems compliance with Specifications.

The Contractor shall furnish, install and maintain all tools, instruments, test equipment, materials, etc. and furnish all personnel including supervision and “stand-by” labour required for the testing, setting and adjustment of all electrical facilities and their component parts, including putting the same into operation.

All tests shall be made with proper regard for the protection of the equipment and the Contractor shall be responsible for adequate protection to all personnel during such tests.

The Contractor shall record all test values of the tests made by him on all equipment, giving both & “as found” and “as left” conditions. Five (5) copies of all test data shall be given to the Engineer for record purposes.

The witnessing of any tests by the Engineer does not. relieve the Contractor of his guarantees for materials, equipment and workmanship, as specified in the Conditions of Contract.

6.2 INSULATION RESISTANCE TESTS

Insulation resistance tests shall be made on all electrical equipment by using a megger of 5KV.

The insulation resistance values of cables, transformers and switchgear, etc., shall be as per B.S.S. and Pakistan Electricity Rules.

Before making connections at the ends of each cable run, the insulation resistance measurement test of each cable shall be made. Each conductor of a multicore cable shall be tested individually with each other conductor of the group and also with earth. If insulation resistance test readings are found to be less than the specified minimum in any conductor, the entire cable shall replace and the new cable tested.

All transformers and switchgears shall be given an insulation resistance measurement test to ground after installation but before any wiring is connected. Insulation tests shall be made between open contacts of circuit breakers, switches and between each phase and earth. If the insulation resistance of the circuit under test is less than that specified above, the cause of the low reading shall be determined and removed. Corrective measures shall include dry-out procedure by means of heaters if equipment is found to contain moisture. Where corrective measures have been necessary and the insulation resistance readings taken after the correction has been made, satisfy the requirements herein, repeat insulation resistance measurements shall be made twice and at least 12 hours apart. The maximum range for each reading in the three successive tests shall not exceed 20% of the average value. After all tests have been made, the equipment shall be reconnected.

6.3 EARTH RESISTANCE TEST

Earth resistance tests shall be made by the Contractor on the earthing system, separating and reconnecting each earth connection as may be required by the Engineer. If it is indicated that soil treatment or other corrective measures are required to lower the ground resistance values, the Engineer will determine the extent of such corrective measures.

The electrical resistance of the E.C.C. together with the resistance of the earthing lead measured from the connection with earth electrode to any other position in the complete installation shall not exceed one ohm.

Earth resistance test shall be performed as per Electric Inspector's requirements. Where more earthing sets than one are installed, the earth resistance test between two sets shall be measured by means of resistance bridge instrument. The earth resistance between two sets shall not exceed one ohm.

The completed Lightning Protection System shall be tested for continuity and earth resistance. The combined earth resistance at any point in the system shall not exceed 10 Ohms.

6.4 COMPLETED TESTS

After any equipment has been tested, checked for operation etc., and is accepted by the Engineer, the Contractor shall be responsible for the proper protection of that equipment so that subsequent testing of other equipment systems does not disturb the completed work.

BILL OF QUANTITIES (BOQ)

Bill of Quantities

Preamble

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract (in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the contract include all costs of Labor, supervision, materials, execution, insurance, profit, all type of taxes including federal and provisional, together with all general risks, liabilities and obligations set out or implied in the contract. Furthermore, all duties, taxes and other levies payable by the Contract or under the contract or for any other cause as on the date 14 days prior to deadline for submission of Bids in case of International Competitive Bidding /National Competitive Bidding respectively, shall be included in the rates and prices and the total bid price submitted by the bidder.
4. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the works
5. General directions and description of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the bidding documents shall be made before entering prices against each item in the priced Bill of Quantities.
6. Contractor must visit the site before filling up the rates against each item.

PORT QASIM AUTHORITY

(MECHANICAL & ELECTRICAL DEPARTMENT)

(BILL OF QUANTITIES)

SUBJECT: SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF ALUMINUM HT CABLE FROM INDUSTRIAL SUB-STATION TO A-BUILDING SUB-STATION AND MSS TO PDS-V SUB-STATION.

SL #	Description	Qty	Unit	Rate	Amount (Rs.)
	Providing, Laying, Installation, testing and commissioning of the following Electrical Installations / accessories as per specifications and as directed by the Engineer:-				
1	Supply and laying of 300 Sqmm, 3 Core, 15KV Standard Aluminum Conductor Cable, XLPE insulated to IEC 60502-2, extruded PVC bedded steel wire armoured & PVC sheathed as per Specification in trenches. Complete in all respects to be laid underground and as directed by Engineer. Cable shall be Pakistan Cables Ltd. or Equivalent make. 1. From Industrial SS to A Building 2. From MSS to PDS-V	4000 2600	Meter Meter		
2	“Jointing Kits” for HT Aluminum cable size 300 Sqmm, 11 KV, 3 Core, XLPE heat shrink type with boots, lugs, ferrule clips and earth wire etc. Complete in all respects and as directed by Engineer. Cable jointing kit shall be 3M, Raychem or equivalent make. 1. From Industrial SS to A Building 2. From MSS to PDS-V	14 10	Nos. Nos.		
3	Supply and Installation of 300 Sqmm, 15KV indoor/outdoor “Termination Kit”, consisting of heat shrink (HS) boots, lugs, ferrule, clips & earth wire etc for HT cable to be installed in the existing OCB/VCB Switch Board/Panel. Termination kit shall be 3M, Raychem or Equivalent make. 1. From Industrial SS to A Building 2. From MSS to PDS-V	02 02	Nos. Nos.		

4	<p>Cleaning of bush removing through excavator / excavation equipment all shrubs trees up to (140-152) mm girth etc. through the manual or machine and taking out their entire roots and filling the hollows with soil including stacking the serviceable material and disposal of unused material from site location/area away. Complete in all respects and as directed by Engineer.</p> <p>1. From Industrial SS to A Building 2. From MSS to PDS-V</p>	8500 2000	Sq meter Sq meter		
5	<p>Excavation of HT cable trench of at least 1.0 meter deep in all kind of Soil as per required dimensions and site requirement. Complete in all respects and as directed by Engineer.</p> <p>1. From Industrial SS to A Building 2. From MSS to PDS-V</p>	1875 1225	Cum Cum		
6	<p>Backfilling of the existing trench including tamping, consolidation, placing of tiles, bricks, sand, laying of warning tape etc. as per site requirement. Complete in all respects and as directed by Engineer.</p> <p>1. From Industrial SS to A Building 2. From MSS to PDS-V</p>	1875 1225	Cum Cum		
7	<p>8 inches dia UPVC pipe "D" class to be laid underground / paved area for HT/LT cable trenches concealed as per site requirement for the standard specification suitable for paved area, Pipe shall be Dadex/Pak Arab or Equivalent make.</p> <p>1. From Industrial SS to A Building 2. From MSS to PDS-V</p>	250 150	RM RM		
8	<p>Thrust boring of existing sub road under paved area suitable and laying of UPVC pipe of 8 inches dia up to existing shoulders of road etc. complete in all respects and as directed by Engineer.</p> <p>1. From Industrial SS to A Building 2. From MSS to PDS-V</p>	250 150	RM RM		

9	<p>Supply and installation of new Medium Voltage, 11KV, 630 Amps, 3-Phase VCB INDOOR PANEL for transformer protection along with all protective relays, CTs, PTs and all other required accessories as per technical specifications and K-Electric Standard. Make shall be Schneider Electric Ltd / Siemens Pakistan Ltd, PEL or Equivalent. Complete in all respects and as directed by Engineer.</p> <p>1. From Industrial SS to A Building 2. From MSS to PDS-V</p>	02 01	Jobs Jobs		
10	<p>Making of earthing system with high conductivity copper plate size 2'x2' x ¼" or copper earthing electrode 01 inch dia, 60 ft long braiding in the earth upto water level with 02 No flexible copper conductor 70 sqmm, Single core, standard conductor drawn in 43mm dia GI pipe for wiring in HT/LT Switch gears and Power Transformers etc. complete in all respects.</p> <p>1. At A – Building (Sub-Station) 2. At PDS-V</p>	01 01	Job Job		
Grand total inclusive of all applicable taxes					

Total Bid Price including all applicable taxes in figures and words Rs _____

Rupees (_____) only