

# **E D U C A T I O N   C I T Y**

## **INFRASTRUCTURE DEVELOPMENT OF EDUCATION CITY, KARACHI PHASE - 1 (4800 Acres)**

**PACKAGE - 1-A(i)  
CA NO. CGDC/PIU/ECP/2024/PKG-1-A(i)**

### **TENDER DOCUMENT VOLUME - I**

**OCTOBER, 2024**



**GOVERNMENT OF SINDH**



**CGD CONSULTING**

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# **INSTRUCTIONS TO BIDDERS**



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## **INSTRUCTIONS TO BIDDERS**

(Note: These Instructions to Bidders along with Bidding Data Sheet will not be part of the Contract and will cease to have effect once the contract is signed.)

### **A. GENERAL**

#### **IB.1 Scope of Bid**

- 1.1 The Employer as defined in the Bidding Data Sheet hereinafter called “the Employer” wishes to receive bids for the construction and completion of works as described in these Bidding Documents, and summarized in the Bidding Data Sheet 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 applied for/received a loan/credit from the source (s) indicated in the Bidding Data Sheet in various currencies towards the cost of the project specified in the Bidding Data Sheet and it is intended that part of the proceeds of this loan/credit will be applied to eligible payments under the Contract for which these Bidding Documents are issued.

#### **IB.3 Bidders**

- 3.1 Bidding Document shall be issued only to Prequalified Firms.

#### **IB.4 One Bid per Bidder**

- 4.1 Each bidder shall submit only one bid. A bidder who participates in more than one bid (other than alternatives pursuant to Clause IB.16) will be disqualified.

#### **IB.5 Cost of Bidding**

- 5.1 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 lands 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. Instructions to Bidders
2. Bidding Data Sheet
3. General Conditions of Contract, Part-I (GCC)
4. Particular Conditions of Contract, Part-II (PCC)
5. Specifications - Special Provisions
6. Specifications - Technical Provisions
7. Form of Bid & Appendices to Bid
8. Bill of Quantities (Appendix-D to Bid)
9. Form of Bid Security
10. Form of Contract Agreement
11. Forms of Performance Security and Mobilization Advance Guarantee/Bond and Form of Indemnity Bond for Secured Advance
12. Drawings
13. Integrity Bond

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.

## **C. PREPARATION OF BIDS**

### **IB.8 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 Sheet 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.9 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 duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 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.

Additional / reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be dealt as per prevailing law.



- 12.4 The rates and prices quoted by the bidders are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 70 of the Conditions of Contract. The bidders shall furnish the prescribed information for the price adjustment formulae in Appendix C to Bid and shall submit with the bids such other supporting information as required under the said clause.

#### **IB.10 Currencies of Bid and Payment**

- 13.1 The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees. A bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country (referred to as the "Foreign Currency Requirements") shall indicate the same in Appendix-B to Bid. The proportion of the Bid Price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements either (i) entirely in the currency of the Bidder's home country or, (ii) at the bidder's option, entirely in Pak rupees provided always that a bidder expecting to incur expenditures in a currency or currencies other than those stated in (i) and (ii) above for a portion of the foreign currency requirements, and wishing to be paid accordingly, shall indicate the respective portions in his bid.
- 13.2 The rates of exchange to be used by the bidder for currency conversion shall be the TT & OD Selling Rates published or authorized by the State Bank of Pakistan prevailing on the date 28 days prior to the deadline for submission of bids. For the purpose of payments, the exchange rates used in bid preparation shall apply for the duration of the Contract.

#### **IB.11 Bid Validity**

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data Sheet after the Date of Bid Opening specified in Clause IB.23.
- 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.12 Bid Security**

- 15.1 Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data Sheet in Pak Rupees.
- 15.2 The Bid Security shall be, at the option of the bidder, in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan in favor 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.
- 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 22.1;
- b). If the bidder does not accept the correction of his Bid Price pursuant to IB 27.2 hereof; or
- c). In the case of successful bidder, if he fails within the specified time limit to:
  - i). Furnish the required Performance Security;
  - ii). Sign the Contract Agreement.

**IB.13 Alternate Proposals by Bidder**

16.1 Should any bidder consider that he can offer any advantages to the Employer by a modification to the designs, specifications or other conditions, he may, in addition to his bid to be submitted in strict compliance with the Bidding Documents, submit any Alternate Proposal(s) containing (a) relevant design calculations; (b) technical specifications; (c) proposed construction methodology; and (d) any other relevant details / conditions, provided always that the total sum entered on the Letter of Price Bid shall be that which represents complete compliance with the Bidding Documents. The technical details and financial implication involved are to be submitted in two separate sealed envelopes as to be followed in main bid proposals.

16.2 Alternate Proposal(s), if any, of the lowest evaluated responsive bidder only may be considered by the Employer as the basis for the award of Contract to such bidder.

**IB.14 Pre-Bid Meeting**

17.1 The Employer may, on his own motion or at the request of any prospective bidder(s), hold a pre-bid meeting to clarify issues and to answer any questions on matters related to the Bidding Documents. The date, time and venue of pre-bid meeting, if convened, is as stipulated in the Bidding Data Sheet. All prospective bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.

17.2 The bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than seven (7) days before the proposed pre-bid meeting.

17.3 Minutes of the pre-bid meeting, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bidding Documents. Any modification of the Bidding Documents listed in IB 7.1 hereof, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.

17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a bidder.

**IB.15 Format and Signing of Bid**

18.1 Bidders are particularly directed that the amount entered on the Letter of Price Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.

18.2 All appendices to Bid are to be properly completed and signed.

18.3 No alteration is to be made in the Letters of Price and Technical Bids 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.



- 18.4 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.
- 18.5 Bidders shall indicate in the space provided in the Letter of Technical and Price Bids, 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.
- 18.6 Bidders should retain a copy of the Bidding Documents as their file copy.

#### **D. SUBMISSION OF BIDS**

##### **IB.16 Sealing and Marking of Bids**

- 19.1 Each bidder shall submit his bid as under:
- a). ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.
  - b). The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed / identified as given in IB 19.2 hereof.
- 19.2 The inner and outer envelopes shall:
- a). Be addressed to the Employer at the address provided in the Bidding Data Sheet;
  - b). Bear the name and identification number of the contract as defined in the Bidding Data Sheet; and
  - c). Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data Sheet.
- 19.3 In addition to the identification required in IB 19.2 hereof, the inner envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared “late” pursuant to Clause IB.21.
- 19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

##### **IB.17 Deadline for Submission of Bids**

- 20.1
- a). Bids must be received by the Employer at the address specified no later than the time and date stipulated in the Bidding Data Sheet.
  - 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.



- 20.2 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.18 Late Bids**

- 21.1 a). Any bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.20 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.19 Modification, Substitution and Withdrawal of Bids**

- 22.1 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.
- 22.2 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.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No bid may be modified by a bidder after the deadline for submission of bids except in accordance with IB 22.1 and 27.2.
- 22.4 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. 20 Bid Opening**

- 23.1 The Employer will open the Financial Bids of Pre-qualified Bidders in public at the address, date and time specified in the Bidding Data Sheet in the presence of Bidders' designated representatives and anyone who choose to attend.
- 23.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out at bid opening.
- 23.3 Second, outer envelopes marked "SUBSTITUTION" shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Price Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Price Bid will remain unopened in accordance with IB 23.1. No envelope shall be substituted unless the corresponding

Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening.





- 23.4 Next, outer envelopes marked “MODIFICATION” shall be opened. No Technical Bid and/or Price Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original and Modification, will remain unopened in accordance with IB 23.1. The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 23.5 The Employer will invite only those bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award of works.
- The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Price Bids.
- 23.6 The Employer shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, publically in the presence of Bidders’ representatives who choose to attend at the address, date and time specified by the Employer. The Bidder’ representatives who are present shall be requested to sign a register evidencing their attendance.
- 23.7 All envelopes containing Price Bids shall be opened one at a time and the following read out and recorded:
- a). The name of the Bidder;
  - b). Whether there is a modification or substitution;
  - c). The Bid Prices, including any discounts and alternative offers; and
  - d). Any other details as the Employer may consider appropriate.
- Only Price Bids and discounts, read out and recorded during the opening of Price Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Price Bids.
- 23.8 If this Bidding Document allows Bidders to quote separate prices for different contracts, and the award to a single Bidder of multiple contracts, the methodology to determine the lowest evaluated price of the contract combinations is that which is most economical to the Employer.

## **IB.21 Process to be Confidential**

- 24.1 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. 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.

## **IB.22 Clarification of Bids**

- 25.1 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.28.

- 25.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its bid may be rejected.

### **IB.23 Examination of Bids and Determination of Responsiveness**

- 26.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.
- 26.2 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; (iv) Includes signed Integrity Pact where required as per clause IB.35 and (v) 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; (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Only substantially responsive bid shall be considered for further evaluation.
- 26.3 If a bid is not substantially responsive, it may not subsequently be made responsive by correction or withdrawal of the non-conforming material deviation or reservation. The Employer may, however, seek confirmation/ clarification in writing which shall be responded in writing.

### **IB.24 Correction of Errors**

- 27.1 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.
- 27.2 The amount stated in the Letter of Price 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.25 Evaluation and Comparison of Bids**

- 28.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.26.
- 28.2 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.27;

- b). Excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including competitively priced Day work; and
  - c). Making an appropriate adjustment for any other acceptable variation or deviation.
- 28.3 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.
- 28.4 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.32 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.
- 28.5 Bids will be evaluated on the basis of Bidding Data Sheet Clause 28.5.

## **F. AWARD OF CONTRACT**

### **IB.26 Award**

- 29.1 Subject to Clauses IB.30 and IB.34, 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 Clause IB.3 and qualify pursuant to IB 29.2.
- 29.2 The Employer, at any stage of the bid evaluation, having credible reasons for or prima facie evidence of any defect in bidder's capacities, may require the bidders to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

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

### **IB.27 Employer's Right to Accept any Bid and to Reject any or all Bids**

- 30.1 Notwithstanding Clause IB.29, 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.28 Notification of Award**

- 31.1 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").





- 31.2 No Negotiation with the bidder having evaluated as lowest responsive or any other bidder shall be permitted.
- 31.3 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.
- 31.4 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.29 Performance Security**

- 32.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Bidding Data Sheet and the Conditions of Contract within a period of 28 days after the receipt of Letter of Acceptance.
- 32.2 Failure of the successful bidder to comply with the requirements of IB.32.1 or IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

#### **IB.30 Signing of Contract Agreement**

- 33.1 Within 14 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.
- 33.2 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.

#### **IB. 31 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.32 Integrity Pact**

The Bidder shall sign and stamp the Integrity Pact provided at Appendix-L 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.

#### **IB.33 Instructions not Part of Contract**

Bids shall be prepared and submitted in accordance with these Instructions which are provided to assist bidders in preparing their bids, and do not constitute part of the Bid or the Contract Documents.



# **BIDDING DATA SHEET**

## **BIDDING DATA SHEET**

The following specific data for the Works to be bid shall complement, amend, or supplement the provisions in the Instructions to Bidders. Wherever there is a conflict, the provisions herein shall prevail over those in the Instructions to Bidders.

### *Instructions to Bidders* *Clause Reference*

#### **1. Name and address of the Employer**

##### **a. Name and address of the Employer is:**

Project Implementation Unit,  
Education City Project  
1<sup>st</sup> Floor, Block-A. Finance & Trade Centre  
Shahra-e-Faisal, Karachi

##### **b. Name of the Project & Summary of the Works:**

Name of the Project:-

**Construction of Infrastructure Development of Education City, Karachi,  
Phase – 1 (4800 Acres) - Package-1-A(i),**

Summary of the Project:-

***Construction & Commissioning in all respect with the provision of plant/equipment, labour and material required for execution, completion, for providing the same as specified in the Contract.***

#### **2. Name of the Borrower/Source of Financing/Funding Agency**

*The Employer has arranged funds from its own sources.*

#### **3. Amount and type of financing**

*Not used*

#### **4. Pre-qualified Bidders**

**a) Bidders should have valid licence for 2024 from Pakistan Engineering Council, in Category C-A with specialization codes CE-01, CE-02, CE-09, CE-10, CE-11, BC-01, EE-06, EE-11.**

**b) Active Tax Payer Registration with FBR**

**c) Active Registration with Sindh Board Of Revenue SBR**

#### **5. Time limit for clarification**

***07 days prior to the deadline for submission of bids.***

#### **6. Bid language**

*The same language in which the bid documents are written i.e. English language.*





**7. (A) The Bidder shall submit the following documents**

- a). Bid Security (IB.15)
- b). Written confirmation authorizing the signatory of the Bid to commit the Bidder (IB.18.5)
- c). Pending litigation information
- d). Special Stipulations (as filled by the Employer) (Appendix - A)
- e). Proposed Construction Schedule (Appendix - E)
- f). Method of Performing the Work (Appendix - F)
- g). Availability of Critical Equipment (Appendix - G)
- h). Construction Camp and Housing Facilities (Appendix - H)
- i). **List of Sub-contractors** (Appendix - I)
- j). Organization Chart for Supervisory Staff (Separately for Construction & O & M Period) (Appendix - K)
- k). Integrity Pact (Appendix - L)
- l). Financial Competence and Access to financial Resources (appendix - M)

**(B) The Bidder shall submit with its Price Bid the following documents**

- a). Letter of Price Bid
- b). Price Adjustment under Clause 70 (Appendix - C)
- c). Bill of Quantities (Appendix - D)
- d). Proposed Payment Yard Stick (Appendix - J)

**8. Bidders to quote entirely in Pak. Rupees only**

**9. Period of Bid Validity**

*Ninety (90) days*

**10. Amount of Bid Security**

**10.1** *Each Bidder shall furnish, as part of his bid, a Bid Security in the amount of not less than 2 % of the cost of Bid in PKR.in the form of Pay Order in favour of Employer or Bank Guarantee from a Schedule Bank of Pakistan . or from a Foreign Bank duly counter guaranteed by a Scheduled Bank in Pakistan in favour of the Employer.*

**10.2** *The Bid Security shall be, at the option of the bidder, in the Form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan or from a Foreign Bank duly counter guaranteed by a Scheduled Bank in Pakistan in favour of the Employer.*

**11. Alternate Proposals by Bidders**

*Not Allowed*

**12. Venue, time, and date of the pre-Bid meeting**

Venue : Project Implementation Unit, Education City, 1<sup>st</sup> Floor, Block-A. Finance & Trade Centre, Shahra-e-Faisal, Karachi

Time : \_\_\_\_\_

Date : Will Be Intimated if required

Bidders have to submit their queries in writing for determination of the Pre Bid Meeting.



**13. Number of copies of the Bid to be completed and returned**

*One original and one copy*

**14. Employer's address for the purpose of Bid submission**

**Name and address of the Employer is:**

Project Implementation Unit,  
Education City Project,  
1<sup>st</sup> Floor, Block-A. Finance & Trade Centre  
Shahra-e-Faisal, Karachi

**15. Name and Number of the Contract**

Construction of Infrastructure Development of Education City, Karachi,  
Phase – 1 (4800 Acres) - Package-1-A(i),

BID Reference No. CGDC/PIU/ECP/2024/PKG-1-A(i)

**16. Deadline for submission of bids**

\_\_\_\_\_ Hours on \_\_\_\_\_ 2024

**17. Venue, time, and date of Bid opening**

**Opening of Financial Proposals:**

**Venue :** Project Implementation Unit, Education City, 1<sup>st</sup> Floor, Block-A. Finance & Trade Centre, Shahra-e-Faisal, Karachi

**Time :** \_\_\_\_\_

**Date :** \_\_\_\_\_

**18. Evaluation and Comparison of Bids**

**(a) Evaluation / Qualification Criteria**

Evaluation criteria are being given for the benefit of the Employer and bidder. Evaluation based on **Single Stage - Single Envelope** procedure is adopted as per SPPRA Rules 2010 amended up to date. Evaluation criteria as set forth in this proposal are based on mandatory requirements and marks / score and both are adopted as the selection method while evaluating the constructors / firms. Information will be given in forms and marks will be given as per the information given in the submitted technical bid by the bidder.

**I. Mandatory provisions / Eligibility**

- a. FINANCIAL PROPOSALS of Prequalified firms only who qualify the mandatory requirements.
- b. Conditional or incomplete tenders shall be rejected.
- c. Each page of the Bid Document & Profile of firm must be paginated, signed & stamped by Bidder.
- d. Any information regarding the project can be obtained from the office of the undersigned during office hours.
- e. In case Government announce any public holiday on scheduled dates,



- e. In case Government announce any public holiday on scheduled dates, the tender will be submitted / opened on the next working day, as per usual scheduled in accordance with Rule 41 (3) of SPPRA Rule 2010 (Amended up to date).
- f. Bid Security **2%** of bid amount in shape of Cali Deposit / Pay Order/ Demand Draft from any scheduled Bank of Pakistan in favor of the Employer.

**(b) Commercial Evaluation**

It will be examined in detail whether the Bids comply with the commercial/ contractual conditions of the Bid Documents. It is expected that no major deviation/ stipulation shall be taken by the Bidders.

**(c) Evaluated Bid Price**

In evaluating the Bids, the Employer will determine for each Bid in addition to the Bid Price, the following factors (adjustments) in the manner and to the extent indicated below to determine the Evaluated Bid Price:

- (i) Making any correction for errors pursuant to Sub-Clause 27.2 hereof.
- (ii) Excluding Provisional Sums, if any, but including priced Day work (if applicable)
- (iii) Making an appropriate adjustment for any other acceptable variation or deviation.

**19. Standard form and amount of Performance Security acceptable to the Employer**

*Amount of Performance Security shall be per Clause 10.1 of Part II-Conditions of Particulars Application.*

**20. Signing of Contract Agreement**

*The agreement would be made on stamp paper of value to be determined at the rate of 0.35 percent of the contract value or as determined by the Inspectorate of Stamp Duty. Cost of stamp duty would be borne by the Contractor before mobilization on site.*



**LETTER OF PRICE BID AND**  
**APPENDICES TO BID**

## LETTER OF PRICED BID

Date: \_\_\_\_\_

Bid Reference No. CGDC/PIU/ECP/2024/PKG-1-A(i)

**SUBJECT: Submission of Financial Bid for Infrastructure Development of Education City, Karachi, Phase – 1 (4800 Acres) – Package 1-A(i)**

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (IB)9;
- (b) The total price of our Bid, excluding any discounts offered in item (c) below is:  
Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only)
- (c) The discounts offered and the methodology for their application are:
- (d) Our Bid shall be valid for a period of 90 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (e) If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
- (f) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.
- (g) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (h) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.
- (i) If awarded the contract, the person named below shall act as Contractor's Representative.

LPB-2

Name .....

In the capacity of .....

Signed .....

.....

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

Date.....

Address.....





**BA-1**  
**APPENDIX - A TO BID**

**SPECIAL STIPULATIONS**

		<b>Clause No.</b>	
1.	Engineer's Authority to issue Variation in emergency	2.1	<b>2%</b> of the Contract price stated in the Letter of Acceptance.
2.	Law applicable	5.1 (b)	The law to be applied is the Law of Islamic Republic of Pakistan
3.	Amount of Performance Security	10.1	5% of Contract Price stated in the Letter of Acceptance in the form of (a) bank guarantee from any Scheduled Bank in Pakistan or (b) bank guarantee from a bank located outside Pakistan duly counter-guaranteed by a Scheduled Bank in Pakistan or (c) Bank Draft/Pay Order in favour of Employer.
4.	Time for Furnishing Program	14.1	Within 30 days from the date of receipt of Letter of Acceptance.
5.	Minimum amount of Third Party Insurance	23.2	Rupees one million (Rs. 1,000,000) per occurrence with number of occurrences unlimited.
6.	Time for Commencement	41.1	Within Fourteen (14) days from the date of receipt of Engineers Letter to commence which shall be issued within Fourteen (14) days after signing of Contract Agreement
7.	Time for Completion	43.1 48.2	<b>24 Months</b> from the date of receipt of Engineer's Notice to Commence
8.	Amount of Liquidated Damages	47.1	0.1 % of contract price for each day of delay in completion of works subject to a maximum of 10% of contract price stated in the Letter of Acceptance
9.	Defects Liability Period	49.1	The Defect Liability Period is 364 days.
10.	Percentage of Retention Money	60.2	5% of the amount of Interim Payment Certificate.
11.	Limit of Retention Money	60.2	5% of Contract Price stated in the Letter of Acceptance.
12.	Minimum amount of Interim Payment Certificates (Running Bills)	60.2	Total Contract Price stated in the Letter of Acceptance / (time for completion in months)
13.	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	60.10	30 days
14.	Mobilization Advance (Interest Free)	60.12	An interest-free Mobilization Advance up to <b>5%</b> 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 as per SPPRA rules and regulations.

Initials of Signatory of Bid \_\_\_\_\_



**BB-1**  
**APPENDIX-B TO BID**

**FOREIGN CURRENCY REQUIREMENTS**

1. The Bidder may indicate here in below his requirements of foreign currency (if any), with reference to various inputs to the Works.
2. Foreign Currency Requirement as percentage of the Bid Price excluding Provisional Sums \_\_\_\_\_%.
3. Table of Exchange Rates

Unit of Currency	Equivalent in Pak. Rupees
Australian Dollar	_____
Euro	_____
Japanese Yen	_____
U.K. Pound	_____
U.S. Dollars	_____
_____	_____
_____	_____



**BC-1**  
**APPENDIX-C TO BID**

**PRICE ADJUSTMENT UNDER CLAUSE 70  
OF CONDITIONS OF CONTRACT**

The source of indices and the weightages or coefficients for use in the adjustment formula under Clause 70 shall be as follows:

<b>Cost Element</b>	<b>Description</b>	<b>Weightages</b>	<b>Applicable index</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
(i)	Fixed Portion	0.25	
(ii)	Local Labour	0.15	Government of Pakistan (GP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
(iii)	Cement	0.10	“ “ “
(iv)	Reinforcing Steel ( G- 60 )	0.15	“ “ “
(v)	Pre-stressing Strands	0.05	
(vi)	Bitumen	0.10	
(vii)	High Speed Diesel (HSD)	0.10	As per the rates fixed by Oil & Gas Regulatory Authority (OGRA)
(vii)	Cables Electrical/IT	0.10	
	<b>Total</b>	<b>1.00</b>	

**Notes:**

- 1) Indices for (ii) to (iv) are taken from the Government of Pakistan Federal Bureau of Statistics, Monthly Statistical Bulletin and (v) is taken from Oil & Gas Regulatory Authority (OGRA) rates. The base cost indices or prices shall be those applying 28 days prior to the latest day for submission of bids. Current indices or prices shall be those applying 28 days prior to the last day of the billing period.
- 2) Any fluctuation in the indices or prices of materials other than those given above shall not be subject to adjustment of the Contract Price.
- 3) The weightages have been determined for fixed portion considering cost elements having cost impact of 3% or more in this specific project.



**BD-1**  
**Appendix-D to Bid**

**BILL OF QUANTITIES**

**A. 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 in accordance with provisions of the Contract.
3. The rates and prices entered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract include all costs of Contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, 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 Contractor under the Contract, or for any other cause, as on the date 28 days prior to deadline for submission of Bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
5. 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.
6. General directions and description of work and materials are not necessarily repeated nor summarised 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.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clause 58.2 of Part I, General Conditions of Contract.



**BD-8**  
**Appendix-D to Bid**

**BILL OF QUANTITIES**

**C. Daywork Schedule**

**General**

1. Reference is made to Sub-Clause 52.4 of the General Conditions of Contract Part-I. Work shall not be executed on a day work basis except by written order of the Engineer. Bidders shall enter basic rates for Daywork items in the Schedules, which rates shall apply to any quantity of Daywork ordered by the Engineer. Nominal quantities have been indicated against each item of Daywork, and the extended total for Daywork shall be carried forward to the Bid Price.

**Daywork Labour**

2. In calculating payments due to the Contractor for the execution of Daywork, the actual time of classes of labour directly doing the Daywork ordered by the Engineer and for which they are competent to perform will be measured excluding meal breaks and rest periods. The time of gangers (charge hands) actually doing work with the gang will also be measured but not the time of foreman or other supervisory personnel.
3. The Contractor shall be entitled to payment in respect of the total time that labour is employed on Daywork, calculated at the basic rates entered by him in the Schedule of Daywork Rates for labour together with an additional percentage, payment on basic rates representing the Contractor's profit, overheads, etc., as described below:
  - a) the basic rates for labour shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances and any sums paid to or on behalf of such labour for social benefits in accordance with Pakistan law. The basic rates will be payable in local currency only; and
  - b) the additional percentage payment to be quoted by the Bidder and applied to costs incurred under (a) above shall be deemed to cover the Contractor's profit, overheads, superintendence, liabilities and insurances and allowances to labour timekeeping and clerical and office work; the use of consumable stores, water, lighting and power; the use and repair of stagings, scaffolding, workshops and stores, portable power tools, manual plant and tools; supervision by the Contractor's staff, foremen and other supervisory personnel; and charges incidental to the foregoing.

***BD-08 to BD-15 of Standard Form of Bidding Documents for Procurement of Civil Works are deleted being Not Applicable.***





**GRAND SUMMARY FOR PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

CIVIL & INFRASTRUCTURE				
Sub-Head	Name of Work	Schedule Items Amount (Rs.)	Non Schedule Items Amount (Rs.)	Total Amount (Rs.)
		A	B	C = (A+B)
<b>1</b>	<b>SCHEDULE &amp; NON SCHEDULE ITEMS</b>			
i.	ROAD WORK & BOX CULVERTS.	1,528,178,866		
ii.	WATER SUPPLY & WATER SUPPLY RESERVIOR, STORM WATER DRAIN, IRRIGATION & IRRIGATION RESERVOIR, SEWERAGE.	1,191,195,218		
iii.	GATE HOUSE	117,327,126		
iv.	GATE HOUSE PLUMBING WATER SUPPLY	1,969,055		
v.	BRIDGE	307,839,632		
vi.	STREAMS	-		
vii.	URBAN FOREST	-		
	<b>Total Amount Rs.</b>	<b>3,146,509,896</b>		
ELECTRICAL				
Sub-Head	Name of Work	Schedule Items Amount (Rs.)	Non Schedule Items Amount (Rs.)	Total Amount (Rs.)
		D	E	F = (D+E)
<b>2</b>	<b>SCHEDULE &amp; NON SCHEDULE ITEMS</b>			
i.	BRIDGE	84,913		
ii.	GATE HOUSE	8,769,044		
iii.	STREET LIGHTINING	8,034,114		
iv.	MV DISTRIBUTION	-		
	<b>Total Amount Rs.</b>	<b>16,888,072</b>		
<b>Total Amount (Rs.) G = (C + F)</b>				
<b>Adding 5% Contingency Factor</b>				
<b>SST</b>				
<b>Grand Total Cost</b>				



**BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

**SUMMARY**

<b>Sub-Head</b>	<b>Name of Work</b>	<b>Amount (Rs.)</b>
<b>1</b>	<b>SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	1,493,410,069
ii)	BOX CULVERTS	34,768,797
	Add Premium Above or Below _____% on Schedule Items	
	<b>Sub-Total (A)</b>	
<b>2</b>	<b>NON-SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	
ii)	HORTICULTURE	
iii)	BOX CULVERT	
	<b>Sub-Total (B)</b>	
	<b>Total (A+B)</b>	



## **BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
	<b>A</b>	<b>SINDH SCHEDULE RATE MAY - 2024 (HIGHWAYS WORKS)</b>				
		<b>CONSTRUCTION OF ROAD</b>				
		<b>EARTH WORK</b>				
1	HW-1 page-211	Clearing and grubbing the site by cutting, up rooting and removing all rubbish and shrubs including disposal to (outside limits) designated places.	SM	280150.00	31.00	8,684,650
2	HW-2 page-211	Compaction of Natural Ground upto a depth of 20cm (8"inch) below the natural ground level compacted upto 90% density modified AASHTO.	SM	212154.60	50.40	10,692,592
3	C-8/68 page-50	Providing & fixing cement paving blocks flooring having size of 197 x 97 x 60 (mm) of city /quddra / cobble shape with pigmented, having strength b/w 5000 psi to 8500 psi i/c filling the joints with hill sand over a bed of 2" thick hill sand or stone dust and laying and compacting in specified manner/ pattern and design etc complete.( Pigmented ) ( PSI 5000 to 8500e / Tameer Works or Equivalent manufacturer )				
	i)	60mm Cosmic, zigzag/Plain interlock paver	SM	57645.36	2,276.17	131,210,639
	ii)	Providing laying cobble stone / CC tile size 600xx 600 mm.	SM	38430.24	2,276.17	87,473,759
4	HW-9 page-212	Preparing sub grade including earth excavation or filling to an average depth of 9" dressing to camber and consolidation with power Roller.				
	(a)	Subgrade preparation	SM	190274.70	176.41	33,566,360
5	M Basic/1 page-10	Carriage of 100Cft /5Tons of all materials like, Stone aggregate, Spawl, Coal, Lime, Surkhi, etc. B.G Rail fastening points and crossing bridge, Girders, Pipes, Sheets Rails, M.S Bars etc. or 1000 Nos. Bricks (10"5"x3") or 1000Nos. Tiles(12"x6"x2") or 150Cft of Timber or 100 Maunds of fuel wood by trucks or any other means owned by the contractors.				
	i.	Carriage 1st mile to 6th mile	CM	78614.60	511.08	40,178,350
	ii.	Carriage (100km or 62.15 mile - 6mile =56.15 56.15 x 105.93 = 5947.97 / 100 = 59.48 / Cft 59.48 x 35.32 = 2100.83 / Cm. around project approved source material.	CM	78614.60	2,100.83	165,155,910
	iii.	Note :- Incase from where the source will pass, the rate will be calculated or deducted on the basis of kilometers. Rs. 105.93 / 100Cft or 37.414/ Cm per mile.	CM			
6	HW-11d page-213	Preparing Sub-Base by supplying and spreading well graded pit or bed run gravel having a liquit limt not greater than 25 and plasticity index not greater than 6 in proper camber and grade including watering rolling and compacting in layers, thickness of each compacted layer not compacted exceeding upto 6" 98-100% density as per modified AASHO density (Rate i/c all cost of materials T&P and carriage upto 3 chanins)	CM	35359.59	3,429.99	121,283,040



## **BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
7	HW-13B page-214	Providing and laying Aggregate base course in proper grade and camber having CBR 80% as per AASHTO standard specifications i/c spreading and compacting by approved mechanical means (Motor grader, Vibratory roller and Smooth wheel roller etc) watering to maintain the moisture content the compaction of each layer shall 100 percent to the max dry density (Rate i/c all cost of materials T&P and carriage upto 3 chains).	CM	43255.01	4,893.72	211,677,908
8	HW-39/14 page-221	Providing & fixing Precast Edge Block 3750 PSI Industrial Made Size 6 inches thick x 12 inches long x 18 inches high including the cost of Cartage, excavation, form Work for haunching, 1450 PSI lean concrete, 2250 PSI concrete for haunching, 1:4 cement sand mortar.				
	i	Size - 6" x12"x 18" (150 x300 x450mm)	RM	8448.00	2,225.09	18,797,560
9	HW-23A page-217	Providing and laying Plant mixed Asphalt Concrete Binder Course compacted thickness 3 inches (75mm thick) as per approved job mix formula using crush aggregate from approved sources. Using asphalt of grade 80/100 during laying temperature not less than 140C compacted by steel wheel & PTR roller. The procedure of laying binder course material & methodology shall fully comply with AASHTO and as directed by Engineer Incharge. Minimum bitumen content should be 3.5% binder course shall be spreading using paver machine. Rolling & Finishing to design proper grade line level and camber etc: (Machinery with POLs cost of material carriage).	SM	82858.65	2,871.34	237,915,356
10	HW-24B page-218	Laying to Proper line and grade plant mixed Asphalt concrete paver finished (Hydraulic / Electronic control) Prepared to specified formula according to job mix formula approved by Engineer incharge including rolling and finishing to Proper line, grade level and camber etc: (Machinery with POLs cost of material carriage).	SM	141725.85	2,138.44	303,072,227
11	HW-31a page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.70 kg required per sqm = 127.69 + 37.67 = 165.36	SM	141725.85	165.36	23,435,787
12	HW-31b page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.20 kg required per sqm = 36.48 + 37.67 = 74.15 (Bitumen Basic rate page-24/No123)	SM	82858.65	74.15	6,143,969
13	HW-39/4 page-221	<b>Cutting and removing trees within distances of 100 ft:</b>				
	a	Upto 2.0ft : Girth.	Each	45.00	2,763.26	124,347
	b	2.50 Ft. to 6.0 Ft. Girth.	Each	30.00	5,397.57	161,927



## **BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
	c	Removal of trees 150 mm to 300mm girth including uprooting and disposal to (outside limits) designated places.	Each	50.00	559.29	27,965
14	HW-39/12 page-221	Supplying and Fixing of reflectorize Road Studs Double Face, Flush surface type.				
	i)	Reflectorized Pavement Stud (Flush Profile Type - Double) 100x100mm	Each	9308.10	1,520.42	14,152,221
15	HW-39/13 page-221	Pavement marking in Reflective Thermo Plastic Paint for Lines of 6" Width.				
	i)	Pavement Marking in reflective TP Paint for Line of 15 cm width.	RM	56658.00	282.51	16,006,452
	<b>HW-39/18 page-222</b>	<b>Traffic Signs</b>				
16	a)	Providing & Fixing traffic sign 3' dia G.I. Pipe post and sign of equilateral triangular shape each side 3' long i/c Painting, Marking as directed each.	Each	10.00	55,873.81	558,738
	b)	Providing & Fixing 3' dia G.I single post sign of circular shape 3' Dia i/c Painting, Marking as directed each.	Each	10.00	55,873.81	558,738
	c)	Providing & Fixing Rectangular shape 3'x2' comprizing 2Nos: 3" Dia G.I pipe Post i/c Painting, writing as directed each.	Each	10.00	52,117.78	521,178
17	HW-18/(c) II page-222	Providing & Fixing In formatory Sign Rectangular shape 4' x 3' comprizing 2 Nos: 3" Dia G.I pipe Post i/c Painting, writing as directed each.	Each	8.00	56,706.63	453,653
18	HW-40 page-223	Scarifying the existing road surface by means of Cold Milling upto the depth of 0 30mm including removal of excavated material from the site	SM	8000.00	192.18	1,537,440
19	HW-43 page-224	The Composite Rates below are inclusive of cartage / carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor )				
	HW-43/16 page-225	Lean Concrete 1450 psi	CM	50.00	13,892.95	694,682
20	HW-43/10 page-224	Class - B 2400 psi	CM	13.95	18,243.05	254,491
21	HW-43/8 page-224	Class - A3 4000 psi (For Roundabout Water Bodies etc)	CM	225.00	29,946.55	6,737,974
22	C-1/7a page-15	(a) Excavation in hard rock requiring blasting and disposal of excavated material (blasted material) upto 50 ft. lead (including dressing and levelling to designed section etc, complete.				
	a)	Grade - 1	CM	8500.00	907.72	7,715,620
	b)	Grade - 2	CM	8000.00	984.72	7,877,760
	c)	Grade - 3	CM	7500.00	1,189.58	8,921,850





**BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
23	C-18/108 page-86	Stone cladding of required size on wall facing of approved design shape and pattern set in cement sand mortar ratio 1:2 in gray cement 3/4" thick in/c washing of joints with net white cement salary and pigment in desire shape in/c cutting and dressing the stone tile to proper profile in/c labour etc complete as per specification as directed by the Engineer / Incharge.	SM	350.00	5,831.17	2,040,910
24	C-18/125 page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp over roof in/c necessary overlaps etc complete.	SM	1200.00	2,187.50	2,625,000
25	C-6/23 page-39	Stone Pitching including sub-base with hammer dressed stone on surface laid-in courses including Carriage of materials Chains.	CM	3292.80	7,030.80	23,151,018
<b>TOTAL SCHEDULE ITEMS Rs.</b>						<b>1,493,410,069</b>



## **BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	<b>B</b>	<b>NON SCHEDULE ITEMS</b>				
		<b>CONSTRUCTION OF ROAD</b>				
		<b>EARTH WORK</b>				
1	HW-1	Striping all type material with disposal any lead & lift.	CM	10,000.00		
		<b>EXCAVATION OF UNSUITABLE OR SURPLUS MATERIAL</b>				
2	HW-2	Formation of Embankment Road way Excavation in common material up to required level in ordinary soil and using excavated earth Laying in layers including all lead and lift in project area, dressing, leveling of earth to design section and location, compaction by sheep foot roller / power roller with optimum moisture content to achieve minimum 95% of modified A.A.S.H.T.O dry density complete as per drawings and specifications and as directed by The Engineer	CM	130425.75		
3	HW-3	Formation of embankment from borrow excavation in common material including laying in 6" (150mm) layer, clod breaking, ramming, dressing and compaction by sheep foot roller / power roller with optimum moisture content to achieve minimum 95% of modified A.A.S.H.T.O dry density complete, up to any lift and lead out side of project boundry, complete as per drawings and specifications and as directed by The Engineer.	CM	188451.25		
4	HW-4	Excavation and disposal of unsuitable or surplus material any kind any lift of 5ft max (1.50m) and lead upto 100 ft (30m) which declared in writing by the engineer to be unsuitable for use or surplus to the requirement of project. Directed by the engineer incharge.				
		Excavate unsuitable common material also disposal any lead & lift.	CM	10,000.00		
5	HW-5	Excavate surplus common material also disposal any lead & lift.	CM	17,500.00		
6	HW-6	Providing, fabrication, painting/ galvanizing complete placing and fixing following signs as shown on the drawings and detail or as directed by the Engineer, complete in all respect including structural steel work, embedded parts, foundations, earthwork and related civil works.				
	i)	Gantry Sign 11.50 x 1.20M	Each	4.00		
	ii)	Gantry Sign 8.00 x 1.20M	Each	4.00		
7	HW-7	This work shall consist of furnishing non reflective or reflective chlorinated rubber based or thermoplastic paint material or retroreflective preformed pavement marking (tape) whichever is called for in the Special Provisions and shown in the Bill of Quantities, for sampling and packing, for the preparation of the surface and for the application of the paint to the pavement surface all in accordance with these Specifications.				



### **BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	i)	Pavement Marking in reflective TP Paint for 4M Arrows.	EACH	25.00		
8	HW-8	Thermo Plastic reflective paint on kerb blocks. Complete in all respects as directed by the engineer incharge.	SM	18,334.80		
9	HW-9	Providing and applying waterproofing system as described below to concrete surfaces including surface preparation (screeding, crack filling, grouting, prime coat etc.) where required.				
	i)	Providing & applying Cementitious / Crystalline Waterproofing of Fospak brand or approved equivalent as per drawings and details	SM	1200.00		
10	HW-10	Providing and laying Skirting of approved coloured non skid porcelain tiles 10mm thick laid in white cement and pigment on a bed of 20mm thick cement mortar 1:2.	SM	975.00		
11	HW-11	Providing and laying floors of approved coloured non skid porcelain tiles 10mm thick laid in white cement and pigment on a bed of 20mm thick cement mortar 1:2.	SM	325.00		
12	HW-12	Providing and fixing Stone coping on wall, beams, columns etc. (As approved by Architect) top to be laid on cement sand mortar including setting with maching cement slurry and jointing/washing the ledges, curing and cleaning etc. Complete as per Drawings, and as directed by the Consultants.	SM	375.00		
13	HW-13	Providing and laying Precast PCC Bullnose Kerb-stone, size 900 x 300 x 150 mm including setting, jointing and pointing in CM 1:4, Complete with all respects as per drawings, details & approved by Architect.	RM	1000.00		
14	HW-14	Providing & fixing Precast Edge Block 3750 PSI Industrial Made Size 6 inches thick x 12 inches long x 18 inches high including the cost of Cartage, excavation, form Work for haunching, 1450 PSI lean concrete, 2250 PSI concrete for haunching, 1:4 cement sand mortar.				
	i	Size - 6" x12"x 12" (150 x300 x300mm)	RM	38090.00		
	ii	Size - 6" x12"x 12" (150 x300 x300mm)	RM	23760.00		
15	HW-15	Supplying and Fixing of reflectorize Road Studs Double Face, Flush surface type.				
	i)	Reflectorized Pavement Stud (Flush Type-single) 100x100mm	Each	6205.40		
16	HW-16	Pavement marking in Reflective Thermo Plastic Paint for Lines of 8" Width.				
	ii)	Pavement Marking in reflective TP Paint for Line of 20 cm width.	RM	8000.00		
<b>TOTAL NON SCHEDULE ITEMS Rs.</b>						-

## **BILL OF QUANTITY OF HORTICULTURE WORK**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
<b>HORTICULTURE WORKS</b>						
		<b>Non-Schedule Items</b>				
1		Supplying and stacking approved garden soil (sweet earth) free from salts, pebbles and grass roots etc including all leads and lifts. Complete with all respects as per drawings, details & approved by Architect.	13250.25	Cum		
2		Supplying, stacking and spreading cow dung manure / Slaughter House manure and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete. Complete with all respects as per drawings, details & approved by Architect.	4416.75	Cum		
3		Providing and Planting Ground covers and 3" depth dung manure as approved by the Architect including sweet earth filling up to 9" depth as shown on the drawings Complete with all respects as per drawings, details & approved by Architect.	2450.00	Sqm		
4		Supplying and stacking live (Dacca) grass in slabs with earth intact including all lead and lift & maintenance for 45 days. as shown on the drawings Complete with all respects as per drawings, details & approved by Architect.	58890.00	Sqm		
5		Providing and laying matte random stone in lawn spaces etc. Complete with all respects as per drawings, details & approved by Architect.	300.00	SM		
6		Plantation Providing and fixing Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth Complete with all respects as per drawings, details & approved by Architect. (Pots Size Tree Heights & Plantation Heights approved by Architect.)				
		<b>Trees 4m Height</b>				
i)		NEEM Grith 4" x Height - 4m Pot size 24"	225.00	Each		
ii)		GUL MOHER Grith 4" x Ht - 4m Pot size 24"	225.00	Each		
iii)		DALBERGIA SISSOO Grth 4" xHt 4m Pot size 24"	225.00	Each		
iv)		TABEBUIA Grith - 4" x Height - 4m	300.00	Each		
v)		ACALIA NILOTIC - 4" x Height - 4m	275.00	Each		
vi)		TERMINALIA ARJUNE Grith - 4"x Ht - 4m Pot size 24"	250.00	Each		
vii)		SUMBUL CICEGI	225.00	Each		
viii)		KANGI PALM Height - 4m Pot size 24"	225.00	Each		
ix)		Flowers/Shrubs (Any approved Variety) 1m Height	1550.00	Sqm		
x)		Cassia Nodosa	250.00	Each		
7		Providing & fixing fountain with all specified material use to as shown on the drawings i/c water proof motor pump lights wiring etc complete with all respects as per drawings, details & approved by Architect.	14.00	Each		



### **BILL OF QUANTITY OF HORTICULTURE WORK**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
<b>HORTICULTURE WORKS</b>						
Total Non-Schedule Items Amount Rs.						-





## BILL OF QUANTITY OF STRUCTURE (BOX CULVERTS)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	A	SINDH SCHEDULE RATE MAY - 2024				
STRUCTURE						
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).				
	a)	0' to 7.0' ( 0 to 2.15m) depth	CM	2,687.09	645.75	1,735,188
2	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	741.99	44.85	33,278
2a	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	741.99	229.58	170,346
	HW/43 page-224	Prestressed Concrete Bridges (Highways)				
		The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor )				
3	HW-43/1 page-224	Concrete Class A1 Under Ground.	CM	73.12	24,021.96	1,756,485.72
4	HW-43/2 page-224	Concrete Class A1 On Ground	CM	505.76	26,096.27	13,198,449.52
5	HW-43/3 page-224	Concrete Class A1 Elevated	CM	505.76	27,100.60	13,706,399.46
6	HW-43/16 page-225	Lean Concrete Class-E (cylinder strength 1450 psi)	CM	100.67	13,892.95	1,398,603.28
7	HW-43/29 page-225	Premoulded Joint Filler 12mm Thick	SM	11.64	5,410.27	62,995.83
8	HW-43/36 page-226	Providing & fixing water stops size 8" wide as per required area complete with all respect as per drawing and specification directed by engineer incharge.	RM	600.40	3,432.24	2,060,716.90
9	C-2/19(b) page-20	Dismantling cement concrete with all respect directed by engineer incharge.	CM	210.00	3,077.78	646,333.80
10	C-6/12 page-38	Grouting stone pitching or apron in 1:3 cement mortar.	SM	98.40	4,441.84	437,077.06
	Total Rs.					34,768,797.17

**BILL OF QUANTITY OF STRUCTURE (BOX CULVERTS)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	<b>B</b>	<b>NON SCHEDULE</b>				
1	BC-1	Fabrication of deformed steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade -60	Cwt	2384.38		
	<b>Total Rs.</b>					



**MAIN SUMMARY OF AMOUNT Rs.**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Description	Amount Rs.
A	WATER SUPPLY	
B	STORM WATER DRAIN	
C	IRRIGATION	
D	SEWERAGE	
	<b>SUB TOTAL RS. :</b>	



**BILL OF QUANTITIES**  
**WATER SUPPLY PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
<b>1</b>	<b>SCHEDULE ITEMS</b>	
i)	CIVIL & WATER SUPPLY WORK	543,083,712
ii)	WATER SUPPLY BORE, RESEVOIR & PUMP STATION	45,495,019
	Add Premium Above or Below _____% on Schedule Items	
	<b>Sub-Total (A)</b>	
<b>2</b>	<b>NON-SCHEDULE ITEMS</b>	
i)	CIVIL & WATER SUPPLY WORK	
ii)	WATER SUPPLY BORE, RESEVOIR & PUMP STATION	
	<b>Sub-Total (B)</b>	
	<b>Total (A+B)</b>	



**BILL OF QUANTITIES (WATER SUPPLY)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
<b>A</b>		<b>SINDH SCHEDULE RATE MAY - 2024</b>				
		<b>WATER SUPPLY SYSTEM</b>				
	<b>E-1</b>	Providing, Laying and Jointing P.E pipes.				
1	PH/E-1 Page-113	Providing,Laying & Fixing in trench i/c fitting, jointing & testing etc complete in all respect the high Density Polythylene PE pipes (HDPE-100) for W/S confirming ISO 4427/DIN8074/8075 B.S 3580 & PSI 3051. PN-10				
	PN-10/q Page-114	a. 315mm Dia	RM	6107.00	15,383.35	93,946,118.45
	PN-10/t Page-114	b. 450mm Dia.	RM	1980.00	31,127.51	61,632,469.80
	PN-10/q Page-114	c. 610mm Dia	RM	535.00	58,804.00	31,460,140.00
	PN-10/q Page-114	d. 760mm Dia	RM	1412.00	82,612.00	116,648,144.00
	PN-10/q Page-115	e. 1070mm Dia	RM	1096.00	163,161.09	178,824,554.64
1a	E-2/Page-116	Laying P.E pipes of all types and fixing in trench i/c cutting, fitting and jointing with Butt Fussion joint i/c testing with water to Specified fied pressure. Laying and Jointing P.E pipes (i/c cost of jointing material).				
	E-2/q Page-117	a. 315mm Dia	RM	6107.00	344.49	2,103,800.43
	E-2/q Page-117	b. 450mm Dia.	RM	1980.00	434.31	859,933.80
	E-2/q Page-117	c. 610mm Dia	RM	535.00	494.20	264,397.00
	E-2/q Page-117	d. 760mm Dia	RM	1412.00	613.97	866,925.64
	E-2/q Page-117	e. 1070mm Dia	RM	1096.00	613.97	672,911.12
1b	C-4/ Page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				
	i)/Page-99	a. 315mm Dia	RM	6107.00	27.85	170,079.95
	l)/Page-100	b. 450mm Dia.	RM	1980.00	54.89	108,682.20
	n)/Page-101	c. 610mm Dia	RM	535.00	73.19	39,156.65
	o)/Page-101	d. 760mm Dia	RM	1412.00	31.79	44,887.48
	q)/Page-102	e. 1070mm Dia	RM	1096.00	63.58	69,683.68
2	PH Basic C-11/page-66	<b>HDPE-100 END CAPS PN-10.</b>				
	11/Page-66	315mm Dia	Nos.	13.00	11,000.00	143,000.00
	A/Page-148	<b>(I) EARTH WORK (FOR PIPE LINES)</b>				



**BILL OF QUANTITIES (WATER SUPPLY)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
3	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	18,418.58	645.75	11,893,798.61
4	PH/A-3 Page-149	Excavation for pipe line in trenches, and pits in hard soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain also filling watering ramming & compaction as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	9,917.70	699.56	6,938,024.40
5	C1/13 Page-16	Earth work compaction Compaction of earth work (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	12,430.01	44.85	557,485.90
5a	C1/21 Page-17	Filling, watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	12,430.01	229.58	2,853,681.43
6	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	CM	12,793.38	2,031.60	25,991,024.27
	B/Page-106	<b>Providing, Laying and Jointing RCC ASTM pipes (Rubber Gasket Joints).</b>				
	B-1/ Page-106	Providing, Laying RCC pipes of A.S.T.MC-76-62 T/C-76-70 of Class-II wall Band fixing in trench i/c cutting, fitting and jointing with rubber ring i/c testing with water to specified pressure.				
7	B-1/d Page-106	18" Dia RCC Pipe	RM	195.00	7,853.06	1,531,346.70
	B-1/g Page-106	27" Dia RCC Pipe.	RM	150.00	14,640.24	2,196,036.00
	B-1/d Page-106	33" Dia RCC Pipe. Basic rate (30")	RM	105.00	2,276.31	239,012.55
	B-1/d Page-106	42" Dia RCC Pipe.	RM	65.00	36,388.90	2,365,278.50
	C-2/ Page-88	Cartage of RCC pipes any class/ ASTM/ Prestressed with collars by mechanical transport i/c loading unloading and stacking at site.				
7a	C-2/f Page-90	18" Dia RCC Pipe	RM	195.00	116.24	22,666.80
	C-2/i Page-91	27" Dia RCC Pipe.	RM	150.00	232.67	34,900.50
	C-2/j Page-91	33" Dia RCC Pipe. Basic rate (30")	RM	105.00	279.22	29,318.10
	C-2/k Page-92	42" Dia RCC Pipe.	RM	65.00	465.36	30,248.40
8	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	SM	300.00	234.89	70,467.00



**BILL OF QUANTITIES (WATER SUPPLY)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
9	M.Basic A-11/Page-66	HDPE-100 Elbow (outer dia) 22-1/2 Degrees - 315mm	Nos.	19.00	16,398.00	311,562.00
10	M.Basic A-11/Page-66	HDPE Siphon Band 45 Degrees - 315mm	Nos.	4.00	16,398.00	65,592.00
11	M.Basic D-11/Page-67	HDPE Siphon Tee 315x 315x 315mm	Nos.	4.00	24,596.00	98,384.00
<b>TOTAL OF SCHEDULE ITEMS RS. :</b>						<b>543,083,712</b>
<b>B</b>		<b>NON SCHEDULE</b>				
		<b>WATER SUPPLY SYSTEM</b>				
1	WS-1	Placement of 1:3:6 CC thrust blocks for bends, elbow end piece and whereas mentioned on drawings/details	Nos.	50.00		
2	WS-2	Construction of Gate Valve, Air Valve & Washout Valve chambers with material including, excavation, base top RCC slab, RCC cover, plaster, bitumen coating. (SR cement shall be used). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
	a.	315mm Dia Chamber Size (1065x 1065mm)	Nos.	9.00		
	b.	610mm Dia Chamber Size (1525x 1525mm)	Nos.	2.00		
	c.	760mm Dia Chamber Size (1525x 1525mm)	Nos.	1.00		
	d.	1070mm Dia Chamber Size (1830x1830mm)	Nos.	2.00		
3	WS-3	Providing and installing 2way pillar hydrant test pressure 25 bar, 2.5" brass landing valve female instantaneous BS 336 intel 4" 150 class flange 190 PCD with 2' x2' x 3' PCC foundation & required all accessories as per drawing & detail complete in all respects.	Nos.	67.00		
4	WS-4	CI body gate valves with flanges (Key operated). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
	a)	315mm Dia	Nos.	9.00		
	b)	610mm Dia	Nos.	2.00		
	c)	760mm Dia	Nos.	1.00		
	d)	1070mm Dia	Nos.	2.00		
5	<b>WS-5</b>	<b>Specials (Elbo)</b>				
	a)	HDPE Siphon Band 45 Degrees - 760mm	Nos.	2.00		
6	<b>WS-6</b>	<b>Specials (Tee)</b>				
	a)	HDPE Siphon Tee 450x 450x 315mm	Nos.	3.00		
	b)	HDPE Siphon Tee 760x 760x 315mm	Nos.	1.00		
	c)	HDPE Siphon Tee 1070x 1070x 1070mm	Nos.	2.00		
	d)	HDPE Siphon Tee 1070x 1070x 315mm	Nos.	1.00		





**BILL OF QUANTITIES (WATER SUPPLY)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
	e)	HDPE Siggot Tee 610x 610x 610mm	Nos.	1.00		
	f)	HDPE Siggot Tee 1070x 1070x 610mm	Nos.	1.00		
	g)	HDPE Siggot Tee 1070x 1070x 760mm	Nos.	1.00		
	h)	HDPE Siggot Tee 1200x 1200x 1200mm	Nos.	1.00		
7	<b>WS-7</b>	<b>Specials (Reducer)</b>				
	a)	HDPE Siggot Reducer 450~315mm	Nos.	1		
	b)	HDPE Siggot Reducer 1070~315mm	Nos.	1		
	c)	HDPE Siggot Reducer 1200~315mm	Nos.	1		
	d)	HDPE Siggot Reducer 400~355mm	Nos.	1		
	e)	HDPE Siggot Reducer 500~400mm	Nos.	1		
	f)	HDPE Siggot Reducer 560~500mm	Nos.	1		
	g)	HDPE Siggot Reducer 610~450mm	Nos.	1		
	h)	HDPE Siggot Reducer 1070~450mm	Nos.	1		
	i)	HDPE Siggot Reducer 1070~610mm	Nos.	1		
	j)	HDPE Siggot Reducer 710~560mm	Nos.	1		
	k)	HDPE Siggot Reducer 900~710mm	Nos.	1		
	l)	HDPE Siggot Reducer 1070~900mm	Nos.	1		
	m)	HDPE Siggot Reducer 1070~1200mm	Nos.	1		
8		<b>HDPE-100 END CAPS PN-10.</b>				
	i)	610mm Dia	Nos.	2.00		
	ii)	760mm Dia	Nos.	2.00		
	iii)	1070mm Dia	Nos.	1.00		
		<b>TOTAL OF NON SCHEDULE ITEMS RS. :</b>				



**BILL OF QUANTITIES WATER SUPPLY RESERVOIR**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
	<b>A</b>	<b>SINDH SCHEDULE RATE MAY - 2024</b>				
	<b>PH-Aii/ page-155</b>	<b>Earth work for Storage Tank/Reservoir</b>				
1	A-ii/5 Page-157	Excavation for tanks and reservoir in all kind of soils murum hard average or soft i/c trimming and dressing sides to true alignment/design sections/profiles and shape levelling of beds of trenches to correct level and grade i/c laying of earth in 6" layer for construction of banks also compaction and dressing and disposal of surplus earth. Excavated earth within a one chain as directed by Engineer Incharge i/c providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required depth as per drawing & detail, lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	4,855.50	747.99	3,631,865
		<b>Prestressed Concrete Bridges (Highways)</b>				
	HW/43 page-224	The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor )				
2	HW-43/1 page-224	Concrete Class A1 Under Ground.	CM	523.92	24,021.96	12,585,654
	HW-43/2 page-224	Concrete Class A1 On Ground	CM	294.89	26,096.27	7,695,399
	HW-43/3 page-224	Concrete Class A1 Elevated	CM	19.70	27,100.60	533,855
3	HW-43/16 page-225	Lean Concrete Class-E (cylinder strength 1450 psi)	CM	136.24	13,892.95	1,892,782
4	HW-43/36 page-226	Providing & fixing pvc water stops size 8" wide complete in with all respect as per drawing and specification directed by engineer incharge.	RM	206.80	3,432.24	709,787
5	C-4/11(i) page-26	Providing and fixing ornamental cement jalli 2" thick (1 : 2 : 4) without steel Complete in all respects.	SM	24.00	1,517.59	36,422
6	C-4/24 page-27	Providing and laying 1 : 3 : 6 cement concrete solid block masonry wall 6" and below in thickness set in 1: 6 cement mortar in ground floor Super Structure including raking out joints & curring etc, complete.	CM	125.25	18,183.44	2,277,407
7	C-8/16d page-45	Providing and laying 3" thick topping of cement concrete Class-D including Surface finishing and dividiing into panels:				
	d)	3" (75mm) thick	SM	913.10	1,560.20	1,424,619
8	C-9/11 page-52	Cement plaster ratio1:4 upto 12' height complete in all respects				
	11-b)	1/2" thick Internal Plaster	SM	212.18	428.57	90,933
	11-c)	3/4" thick External Plaster	SM	90.93	579.10	52,660



**BILL OF QUANTITIES WATER SUPPLY RESERVOIR**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
9	C-18/125 page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp overroof in/c necessary overlaps etc complete.	SM	2295.10	2,187.50	5,020,531
	<b>N/page-129</b>	<b>TUBE WELLS.</b>				
10	N/4(d) page-130	Boring for tube well in all water bearing soils from depth 300.1 to 400 ft. or 91.51 to 122 meter below ground level i/c sinking and with drawing of casing pipe. d) 375 mm (15" dia)	RM	250.00	29,357.06	7,339,265
11	N/6 page-131	Taking and preserving 2 LBs (1 Kg) sample of per strata from borre holes.	P. Sample	2.00	2,880.00	5,760
12	N/7 page-131	Taking samples of water from bore hole and placing in two separate bottles.	P. Sample	2.00	2,952.00	5,904
13	N/8a page-131	Development of tube well Testing charges of samples from Laboratory	P.RM	100.00	787.44	78,744
14	N/8b page-131	Supplying & fixing M.S bail plug	P.Each	2.00	15,373.80	30,748
15	N/18g page-133	Shrouding with graded bajri (3/8" to 1/8") or (9 to 3 mm) in between bore and blind pipe for the following diameters of strainers.	RM	220.00	4,271.62	939,756
16	C1/4(f) page-98	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.	RM	250.00	7.60	1,900
17	D/6(h) page-112	Providing, Laying uPVC pipes of Class 'D' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c Testing with water to a head of 122 meter or 400 ft.dia 6" (150mm) complete in all respects.	RM	250.00	4,564.11	1,141,028
		<b>TOTAL OF SCHEDULE ITEMS RS. :</b>				<b>45,495,019</b>
	<b>B</b>	<b>NON SCHEDULE</b>				
	<b>A)</b>	<b>EXTERNAL RESERVOIR STATION</b>				
1	RS-1	Providing & fixing 1 Nos. Etanorm 125-100-250 GG flow 1000 IGPM head 200ft motor 75 k.watt 100hp @ 2 Pole approved pump for water Lifting including float switch, water proof cable, check valve with union, Ms pipe, Ms Bend with flanges, flange joints, sluice valve, Non return valve, flanges, holding clamps, gaskit, nut bolts, solution, inlet/outlet connection & relative accessories complete job Motor Control Unit 75 k.watt, Automatic starter switch, Am meter, Voltmeter, Conductor, Breakers, switches & Cover plate (M.S), S.S. Nut bolts, Rubber packing, Cable tie, Clamps. (G.I) with testing commisioning in all respects as per drawings details and insutruction of engineering incharge.	Nos.	1.00		
2	RS-2	Providing and installing submersible pump BPDS 8/95-121 pump with motor flow 350 IGPM head 450ft motor 55 k.watt 75hp 2 pole complete in all respects.	Nos.	2.00		



**BILL OF QUANTITIES WATER SUPPLY RESERVOIR**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
3	RS-3	CI 160mm dia 1000 mm high vent pipe with ventilator cowl in U/G tank top slab.	Nos.	12.00		
4	RS-4	Crystalin waterproofing slurry at the rate of 1 kg./Sq.m. per coat to all exposed structural concrete surfaces.	SM	1,476.12		
5	RS-5	Providing & fixing MS Rungs dia 16mm @ 300mm c/c including fixing in position, complete in all respect as per drawing & detail directed Engineer incharge.	Nos.	64.00		
6	RS-6	uPVC Elbo 90 Degree 150mm (6") dia	P.Each	2.00		
7	RS-7	uPVC Tee 150mm (6") dia	P.Each	2.00		
8	RS-8	Placement of 1:3:6 CC thrust blocks for bends, elbow end piece and whereas mentioned on drawings/details	P.Each	10.00		
9	RS-9	Providing & fixing MS door with frame including hardware set, lock handle, red oxide, approved colour as per schedule complete in all respect as shown on the drawings:	SM	6.85		
10	RS-10	Providing & fixing MS louver window with frame including hardware set, lock handle, red oxide, approved colour as per schedule complete in all respect as shown on the drawings:	SM	1.50		
11	RS-11	Fabrication of deformed steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade -60	Cwt	3018.24		
		<b>TOTAL OF NON SCHEDULE ITEMS RS. :</b>				



**BILL OF QUANTITIES**  
**STORM WATER DRAIN PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
<b>1</b>	<b>SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	258,243,266
	Add Premium Above or Below _____% on Schedule Items	
	<b>Sub-Total (A)</b>	
<b>2</b>	<b>NON-SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	
	<b>Sub-Total (B)</b>	
	<b>Total (A+B)</b>	



**BILL OF QUANTITIES STROM WATER DRAIN**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
	<b>A</b>	<b>SINDH SCHEDULE RATE MAY - 2024</b>				
		<b>STORM WATER DRAIN SYSTEM</b>				
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth with in a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	17657.00	645.75	11,402,007.75
2	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	6013.80	44.85	269,719.01
3	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	6013.80	229.58	1,380,648.59
4	HW/43 page-224	The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor )				
	HW/43-1 page-224	Concrete Class - A1	CM	6262.00	24,021.96	150,425,513.52
5	HW/43-16 page-225	Lean concrete plain machine mixed 1450psi. Complete in all respects.	CM	892.00	13,892.95	12,392,511.40
6	HW/43-17 page-225	Precast Concrete Class "A1"	CM	2192.69	26,432.94	57,959,111.04
7	C-17/2 Page-75	Fabrication of heavy steel work with angles, tees, flat iron, round iron and sheet iron for making trusses, girders, tands etc. including cutting, tanks etc. including cutting, drilling rivetting, handling assembling and fixing but excluding erection in position.	Cwt	574.00	20,366.45	11,690,342.30
8	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	SM	19685.00	234.89	4,623,809.65
9	C/4 page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				
	C4/f page-98	a) uPVC 150mm Catch Basin To main Drain crossing	RM	716.00	7.60	5,441.60
	C4/n page-101	c) uPVC 610mm For Road Crossing	RM	259.00	73.19	18,956.21
9a	D/4 page-111	Providing, Laying uPVC pipes of Class 'B' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c testing with water to a head of 61 meter or 200 ft. with solvent cement joint.				
	D/4d page-111	a) uPVC 150mm Catch Basin To main Drain crossing	RM	716.00	2,508.19	1,795,864.04
	D/4l page-112	c) uPVC 610mm For Road Crossing	RM	259.00	24,244.56	6,279,341.04

**BILL OF QUANTITIES STORM WATER DRAIN**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
		<b>TOTAL OF SCHEDULE ITEMS RS. :</b>				<b>258,243,266</b>
	<b>B</b>	<b>NON SCHEDULE</b>				
		<b>STORM WATER DRAIN SYSTEM</b>				
1	SW-1	Providing & fixing 0.25mm polythene sheet 1000 gauge High Density of 32 kg./Sq.m. to all exposed structural concrete surfaces.	SM	11297.00		
2	SW-2	Stone Soling under lean concrete complete in all respects.	Cm	1986.81		
3	SW-3	Fabrication of deformed steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade -60.	Cwt	29980.47		
		<b>TOTAL OF NON SCHEDULE ITEMS RS. :</b>				





**BILL OF QUANTITIES**  
**IRRIGATION PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	<b>SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	242,107,972
ii)	IRRIGATION RESEVOIR & PUMP STATION	14,202,516
	Add Premium Above or Below _____% on Schedule Items	
	<b>Sub-Total (A)</b>	
2	<b>NON-SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	
ii)	IRRIGATION RESEVOIR & PUMP STATION	
	<b>Sub-Total (B)</b>	
	<b>Total (A+B)</b>	



**BILL OF QUANTITIES IRRIGATION WORK**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
	<b>A</b>	<b>SINDH SCHEDULE RATE MAY - 2024</b>				
		<b>IRRIGATION SYSTEM</b>				
	<b>E-1</b>	Providing, Laying and Jointing P.E pipes.				
1	PH/E-1 Page-113	Providing, Laying & Fixing in trench i/c fitting, jointing & testing etc complete in all respect the high Density Polythylene PE pipes (HDPE-100) for W/S confirming ISO 4427/DIN8074/8075 B.S 3580 & PSI 3051. PN-10				
	PN-10/a Page-114	a. 25mm Dia for drip Irrigation (PN-10)	RM	37,455.00	190.26	7,126,188.30
	PN-10/d Page-114	a. 50mm Dia for drip Irrigation Connection Reservoir (PN-10)	RM	100.00	472.69	47,269.00
	PN-10/q Page-114	a. 315mm Dia (PN-10)	RM	11,870.00	15,383.35	182,600,364.50
1a	E-2/Page-116	Laying P.E pipes of all types and fixing in trench i/c cutting, fitting and jointing with Butt Fussion joint i/c testing with water to Specified fied pressure. Laying and Jointing P.E pipes (i/c cost of jointing material).				
	E-2/a Page-116	a. 25mm Dia for drip Irrigation (PN-10)	RM	37,455.00	89.97	3,369,826.35
	E-2/d Page-117	a. 50mm Dia for drip Irrigation Connection Reservoir (PN-10)	RM	100.00	104.95	10,495.00
	E-2/q Page-117	a. 315mm Dia (PN-10)	RM	11,870.00	344.49	4,089,096.30
1b	C-4/Page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				
	a)/Page-96	a. 25mm Dia for drip Irrigation (PN-10)	RM	37,455.00	0.96	35,956.80
	a)/Page-96	a. 50mm Dia for drip Irrigation Connection Reservoir (PN-10)	RM	100.00	0.96	96.00
	i)/Page-99	a. 315mm Dia (PN-10)	RM	11,870.00	27.85	330,579.50
2	PH Basic C-11/page-66	PE end caps on outgoing connection to plots and at end of pipeline. Complete in all respect drawing & Design directed by engineer Incharge.				
	11/Page-66	a. 315mm Dia	Nos.	16.00	11,000.00	176,000.00
3	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	23,758.99	645.75	15,342,369.08



**BILL OF QUANTITIES IRRIGATION WORK**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
4	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	11,621.96	44.85	521,245.11
4a	C1/21 Page-17	Filling, watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	11,621.96	229.58	2,668,170.61
5	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	CM	10,825.86	2,031.60	21,993,809.40
6	B/Page-106	<b>Providing, Laying and Jointing RCC ASTM pipes (Rubber Gasket Joints).</b>				
	B-1/ Page-106	Providing, Laying RCC pipes of A.S.T.MC-76-62 T/C-76-70 of Class II wal lBand fixing in trench i/c cutting, fitting and jointing with rubber ring i/c testing with water to specified pressure.				
	B-1/d Page-106	18" Dia RCC Pipe	RM	350.00	7,853.06	2,748,571.00
6a	C-2/ Page-88	Cartage of RCC pipes any class/ ASTM/ Prestressed with collars by mechanical transport i/c loading unloading and stacking at site.				
	C-2/f Page-90	18" Dia RCC Pipe	RM	350.00	116.24	40,684.00
7	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	SM	200.00	234.89	46,978.00
8	M.Basic A-11/Page-66	HDPE-100 band (outer dia) 22-1/2 Degrees - 315mm	Nos.	18.00	16,398.00	295,164.00
	M.Basic A-11/Page-66	HDPE Sipgot Band 45 Degrees - 315mm	Nos.	15.00	16,398.00	245,970.00
9		<b>Tee</b>				
	M.Basic D-11/Page-67	HDPE Sipgot Tee 315x 315x 315mm	Nos.	17.00	24,596.00	418,132.00
	M.Basic D-1/Page-67	HDPE Sipgot Tee 50x 50x 50mm (Basic rate 63mm)	Nos.	1.00	1,007.00	1,007.00
<b>TOTAL OF SCHEDULE ITEMS RS. :</b>						<b>242,107,972</b>



**BILL OF QUANTITIES IRRIGATION WORK**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
	<b>B</b>	<b>NON SCHEDULE</b>				
1	IRS-1	Placement of 1:3:6 CC thrust blocks for bends, elbow end piece and whereas mentioned on drawings / details	Nos.	55.00		
2	IRS-2	Construction of Gate Valve, Air Valve & Washout Valve chambers with material including, excavation, base top RCC slab, RCC cover, plaster, bitumen coating. (SR cement shall be used). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
		a. 315mm Dia Chamber Size (1065x 1065mm)	Nos.	15.00		
3	IRS-3	CI body gate valves with flanges (Key operated). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
		a. 315mm Dia	Nos.	15.00		
		<b>TOTAL OF NON SCHEDULE ITEMS RS. :</b>				



**BILL OF QUANTITIES IRRIGATION RESERVOIR**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
	<b>A</b>	<b>SINDH SCHEDULE RATE MAY - 2024</b>				
	<b>PH-Aii</b>	<b>Earth work for Storage Tank/Reservoir</b>				
1	Aii/5 Page-157	Excavation for tanks and reservoir in all kind of soils murum hard average or soft i/c trimming and dressing sides to true alignment/design sections/profiles and shape levelling of beds of trenches to correct level and grade i/c laying of earth in 6" layer for construction of banks also compaction and dressing and disposal of surplus earth. Excavated earth within a one chain as directed by Engineer Incharge i/c providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required depth as per drawing & detail, lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	1139.72	747.99	852,501
		<b>Prestressed Concrete Bridges (Highways)</b>				
	HW/43 page-224	The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor )				
2	HW-43/1 page-224	Concrete Class A1 Under Ground.	CM	80.31	24,021.96	1,929,201
	HW-43/2 page-224	Concrete Class A1 On Ground	CM	112.86	26,096.27	2,945,220
	HW-43/3 page-224	Concrete Class A1 Elevated	CM	78.71	27,100.60	2,133,088
3	HW-43/16 page-225	Lean Concrete (cylinder strength 1450 psi)	CM	18.72	13,892.95	260,007
4	C-6/1 page-35	Random, rubble masonry (uncoursed FOUNDATION AND PLINTH. i) Dry masonry.	CM	37.64	4,028.95	151,630
	<b>N/page-129</b>	<b>TUBE WELLS.</b>				
5	N/4(d) page-130	Boring for tube well in all water bearing soils from depth 300.1 to 400 ft. or 91.51 to 122 meter below ground level i/c sinking and with drawing of casing pipe. d) 375 mm (15" dia)	RM	125.00	29,357.06	3,669,633
6	N/6 page-131	Taking and preserving 2 LBs (1 Kg) sample of per strata from borre holes.	P. Sample	1.00	2,880.00	2,880
7	N/7 page-131	Taking samples of water from bore hole and placing in two separate bottles.	P. Sample	1.00	2,952.00	2,952
8	N/8a page-131	Development of tube well Testing charges of samples from Laboratory	P.RM	50.00	787.44	39,372
9	N/8b page-131	Supplying & fixing M.S bail plug	P.Each	1.00	15,373.80	15,374
10	N/18g page-133	Shrouding with graded bajri (3/8" to 1/8") or (9 to 3 mm) in between bore and blind pipe for the following diameters of strainers.	RM	125.00	4,271.62	533,953



**BILL OF QUANTITIES IRRIGATION RESERVOIR**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
11	C1/4(f) page-98	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.	RM	125.00	7.60	950
11a	D/6(h) page-112	Providing, Laying uPVC pipes of Class 'D' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c Testing with water to a head of 122 meter or 400 ft. dia 6" (150mm) complete in all respects.	RM	125.00	4,564.11	570,514
12	C-18/125 page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp overroof in/c necessary overlaps etc complete.	SM	500.68	2,187.50	1,095,242.53
		<b>TOTAL OF SCHEDULE ITEMS RS. :</b>				<b>14,202,516</b>
	<b>B</b>	<b>NON SCHEDULE</b>				
	<b>A)</b>	<b>EXTERNAL RESERVOIR STATION</b>				
1	RS-1	Providing & fixing Etanorm 100-80-200 GG flow 500 IGPM, head 200ft motor 45 k.watt 60 hp @ 2 pole approved Motor pump for water Lifting including float switch, water proof cable, check valve with union, Ms pipe, Ms Bend with flanges, flange joints, sluice valve, Non return valve, flanges, holding clamps, gasket, nut bolts, solution, inlet/outlet connection & relative accessories complete job Motor Control Unit 45 k.watt 60 hp, Automatic starter switch, Am meter, Voltmeter, Conductor, Breakers, switches & Cover plate (M.S), S.S. Nut bolts, Rubber packing, Cable tie, Clamps. (G.I) with testing commssioning in all repects as per drawings details and insutruccion of engineering incharge.	Nos.	1.00		
2	RS-2	Providing and installing submersible pump BPDS 8/95-121 pump with motor flow 350 IGPM head 450ft motor 55 k.watt 75hp 2 pole complete in all respects.	Nos.	1.00		
3	RS-3	MS 4" pipe ghoose neck for venting U/G tanks.	Nos.	2.00		
4	RS-4	Heavy duty cover & frame 900x 900mm with all respect. As per drawing detail & design directed by engineering Incharge.	Nos.	1.00		
5	RS-5	Crystalin waterproofing slurry at the rate of 1 kg./Sq.m. per coat to all exposed structural concrete surfaces.	SM	365.71		
6	RS-6	Providing & fixing MS door & Window with frame including hardware set, lock handle, red oxide, approved colour as per schedule complete in all respect as shown on the drawings:	SM	5.00		
7	RS-7	Fabrication of deformed steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade -60	Cwt	550.18		



**BILL OF QUANTITIES IRRIGATION RESERVOIR**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
		TOTAL OF NON SCHEDULE ITEMS RS. :				





**BILL OF QUANTITIES**  
**SEWERAGE PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL WORKS	88,062,733
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL WORKS	
	Sub-Total (B)	
	Total (A+B)	



**BILL OF QUANTITIES SEWERAGE WORK**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	DESCRIPTION	Unit	Qty	Rate PKR	Amount PKR
A		<b>SINDH SCHEDULE RATE MAY - 2024</b>				
	A)	<b>Sewerage System</b>				
	a)	<b>Piping Network</b>				
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).				
	a)	0' to 7.0' ( 0 to 2.15m) depth	CM	25,990.00	645.75	16,783,045
	b)	7' below (2.15to4.50m) depth(Basic Rate 645.75) 5%	CM	17,326.67	678.04	11,748,175
2	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	41,686.03	44.85	1,869,618
2a	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	41,686.03	229.58	9,570,278
3	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	CM	1,673.48	2,031.60	3,399,851
4	B/Page- 106	<b>Providing, Laying and Jointing RCC ASTM pipes (Rubber Gasket Joints).</b>				
	B-1/ Page- 106	Providing, Laying RCC pipes of A.S.T.MC-76-62 T/C-76-70 of Class II wall Band fixing in trench i/c cutting, fitting and jointing with rubber ring/c testing with water to specified pressure.				
	B-1/a Page-106	a. 8" dia (200mm) (Basic Rate 225mm)	RM	8,545.00	3,068.40	26,219,478
	B-1/c Page-106	b. 15" dia (380mm)	RM	662.00	5,753.43	3,808,771
	B-1/6 Page-106	c. 18" dia (450mm) RCC Pipe	RM	1,530.00	7,853.06	12,015,182
5	C-2/ Page-88	Cartage of RCC pipes any class/ ASTM/ Prestressed with collars by mechanical transport i/c loading unloading and stacking at site.				
	C-2/c Page-89	a. 8" dia (200mm) (Basic Rate 225mm)	RM	8,545.00	45.40	387,943
	C-2/e Page-90	b. 15" dia (380mm)	RM	662.00	87.26	57,766
	C-2/f Page-90	c. 18" dia (450mm) RCC Pipe	RM	1,530.00	116.24	177,847
	b)	<b>Manholes</b>				



**BILL OF QUANTITIES SEWERAGE WORK**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	DESCRIPTION	Unit	Qty	Rate PKR	Amount PKR
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).				
	a)	0' to 7.0' ( 0 to 2.15m) depth	CM	2,003.05	645.75	1,293,469
	b)	7' below(2.15to4.50m) depth (Basic Rate 645.75) 5%	CM	1,078.57	678.04	731,310
		<b>TOTAL OF SCHEDULE ITEMS RS. :</b>				<b>88,062,733</b>
<b>B</b>		<b>NON SCHEDULE</b>				
1	SWG-1	Constructing manhole or inspection chamber for the required dia of circular sewer and 12' depth with walls of B.B in cement mortar 1:3 cement plastered 1:3, 1/2" thick, inside of walls and 1" (25 mm) thick over benching and channel i/c fixing C.I manhole cover with frame of clear opening 2' x 2' (457x457 mm) of 4.5 cwt. embaded in 9" thick R.C.C 1:2:4 two way reinforced i/c fixing 1" (25 mm) dia M.S steps 6" (150 mm) wide projecting 4" (102 mm) from the face of wall at 12" (305 mm) C/C duly bitumen painted etc, complete as per standard specification and drawing.				
	a)	RCC Pipe 4" to 12" dia 4'-6"x3'x12'	Each	184.00		
	b)	RCC Pipe 15" dia 4'-6"x3'-6"x12'	Each	13.00		
	c)	RCC Pipe 18" to 21" dia 4'-6"x 4'x12'	Each	38.00		
		<b>TOTAL OF NON SCHEDULE ITEMS RS. :</b>				



**BILL OF QUANTITIES****PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	<b>SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	117,327,126
	Add Premium Above or Below _____% on Schedule Items	
	<b>Sub-Total (A)</b>	
2	<b>NON-SCHEDULE ITEMS</b>	
i)	CIVIL WORKS	
ii)	HORTICULTURE	
	<b>Sub-Total (B)</b>	
	<b>Total (A+B)</b>	



## GATE HOUSE

### BILL OF QUANTITIES

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
<b>Schedule Item Sindh CSR-2024</b>						
1	C-1/18b Page-17	Excavtion in foundation of Building and other structures including dag belling dressing,refilling around structrure with excavated earth Watering and ramming lead up to5 ft. , lead up to one chain (30 metre) and lift upto 5 ft. (1.5 metre) complete with all respects as per drawings, details and Engineer Incharge.	844.00	Cum	419.60	354,143.75
2	C-1/18c Page-17	In hard soil or soft murum.	422.00	Cum	419.60	177,071.20
3	C-18/91 Page-84	Providing Anti-termite treat ment by spraying / sprinkling /spreading Neptachler 0.5% Emulsion as an over all pre construction treatment in slab type construction along external foundation trenches of the building over complete parameter of the foundation trench etc, complete with all respects as per drawings, details and Engineer Incharge.	1,660.00	Sqm	797.75	1,324,259.02
4	C-6/1(i) Page-35	Stone filling dry hand packed as filling behind Foundation & Plinth Beam and aprons.with all respects as per drawings, details and Engineer Incharge.	408.00	Cum	4,028.95	1,643,812.58
5	C-7/38 Page-43	Providing & Laying single layer Polythene sheet 0.13 mm thick for water proofing as per specification and instruction of engineer incharge.	1,144.00	Sqm	258.35	295,549.65
6	C-18/125 Page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp overroof in/c necessary overlaps etc complete.	212.00	Sqm	2,187.51	463,751.70
7	C-18/98 Page-85	Placing, compacting, finishing and curing of concrete using ordinary Portland Cement/ Sulphate resistant cement / Slag cement asmay be required: including screening, washing of aggregates and mixing of consituents using batching plant, transportation by transit mixer, pouring with pump in the required portion to achive a cylindrical strenth in the field as per ACI 214, with the specified consistency i/c the cost of shuttering, compaction with copmactor, excluding the cost of admixture, as approved and directed by the Engineer Incharge.				
		(i) 1450 PSI	250.00	Cum	14,147.43	3,536,856.50
		(ii) 2250 PSI	18.00	Cum	15,612.15	281,018.64
		(iv) 4000 PSI In Sub-Structure (Using S.R. Cement)				
		i. Foundation	210.00	Cum	31,798.95	6,677,779.33
		ii. Short Columns	32.00	Cum	31,798.95	1,017,566.37
		iii.Plinth Beam	46.00	Cum	31,798.95	1,462,751.66
		<b>In Super Structure (Using O.P. Cement)</b>				



**GATE HOUSE**  
**BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
		iv.Columns,Wall,Beam Slabs etc.	292.00	Cum	31,798.95	9,285,293.17
8	C-4/8a Page-26	Fabrication of deformed steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade-60	1,208.08	Cwt	18,934.02	22,873,810.88
9	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	1,146.00	Sqm	234.89	269,183.94
10	C-4/23 Page-27	Providing and laying 1 :3 : 6 Cement concrete solid Block masorany wall above 6" in thickness set in1:6 cement mortar in G.Fground floor superstructure including raking out joints & curing etc, complete.	242.00	Cum	17,440.66	4,220,640.40
11	C-9/11 Page-52	Providing and laying Cement plaster 1:4 upto 12' height .complete with all respects as per drawings, details and Engineer Incharge.				
		b. (1/2" Interna Plasterl)	3046.00	Sqm	428.57	1,305,426.66
		c. (3/4" External Plaster)	830.00	Sqm	579.10	480,655.66
12	C-8/16 Page-45	Providing and laying 1" thick topping of cement concrete (1:2:4) including Surface finishing and dividiing into panels.complete with all respects as per drawings, details and Engineer Incharge.				
	i	a) 25mm thick	210.00	Sqm	705.53	148,161.97
	ii	d) 75mm thick	250.00	Sqm	1,560.20	390,050.00
13	C-9/36A Page-54	Preparing the surface and painting with matt finish l/c rubbing the surface with Bathy (silicon carbide rubbing brick) filling the voids with zink/chalk/ plaster of paris mixture, applying first coat premix, making the surface smooth and then painting 3 coats with matt finish of approved make etc: complete .(new surface). Three Coats. Complete with all respects as per drawings, details and Engineer Incharge.	3046.00	Sqm	530.15	1,614,822.28
	C-9/36B	2nd Coat & subsequent Coat	3046.00	Sqm	277.39	844,938.47
14	C-9/38A Page-54	Preparing the surface and painting with weather coat l/c rubbing the surface with rubbing brick /sand Paper,filling the voids with chalk/ plaster of Paris and then painting with weather coat of approved make. Three Coats complete with all respects as per drawings, details and Engineer Incharge.	958.00	Sqm	423.73	405,932.19
	C-9/38B	2nd Coat & subsequent Coat	958.00	Sqm	253.94	243,270.69
15	C-9/40A Page-54	Preparing the surface and painting with plastic emulsion paint of approved make l/c rubbing the surface with sand Paper,filling the voids with chalk/ plaster of paris and then painting etc complete.Three Coats complete with all respects as per drawings, details and Engineer Incharge.	1523.00	Sqm	416.52	634,359.35



**GATE HOUSE**  
**BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
16	C-17/2 Page-75	Fabrication of heavy steel work with angles, tees flat iron, round iron and sheet iron for making trusses, girders, tands etc. including cutting, tanks etc. including cutting, drilling rivetting, handling assembling & fixing but excluding erection in position .complete with all respects as per drawings, details and Engineer Incharge.	2,391.08	Cwt	20,366.45	48,697,890.02
17	C-8/24 Page-45	Laying floor of approved with glazed tiles 1/4" thick dado of approved color & size jointing in white cement and laid over 1:2 cement sand mortor 3/4" thick including grouting with matching color and finishing complete in all respects.	232.00	Sqm	4,189.51	971,967.16
18	C-8/25 Page-46	Laying floors of approved coloured glazed tiles 1/4" thick floor of approved color & size jointing in white cement and laid over 1:2 cement sand mortor 3/4" thick including grouting with matching color and finishing complete in all respects.	92.00	Sqm	3,501.30	322,119.97
19	C-8/28(vii) Page-46	Providing & Laying Full Body Porcelain Tile in Flooring or Facing of Approved Design Set in Gry Cement Motor 1:2 or of 3/4" Thickness I/C Washing & Joints With White Cement Slurry Using Colour Pigment for matching complete as per Spacification. (x) size 24"x36"x5/16"	212.00	Sqm	6,679.49	1,416,050.86
20	C-18/83 Page-83	Supply & fixing in position aluminum channels framing for hinged door or made with 5 mm thick tinted glass glazing (belgium) and alpja (japan) locks i/c handles stopers etc complete with all respects as per drawings, details and Engineer Incharge.(openable/fixing/sliding) (a) Deluxe model (White)	34.00	Sqm	17,816.73	605,768.85
21	C-18/84 Page-83	Supplying & fixing in position Aluminum channels framing for sliding windows & vantilators of made with 5 mm thick tinted glass glazing (Belgium) & aluminum fly screen i/c handles stopers & locking arrangement etc complete with all respects as per drawings, details and Engineer Incharge. (openable/fixing/sliding) (a) Deluxe model (White)	24.00	Sqm	25,681.21	616,349.16
22	C-18/111 Page-86	Providing & fixing in positions UPVC (openable/fixid/sliding) channels framing of sliding door windows & vantilators of unplyasticied polyvinyl chloride (UPVC) with fly screen i/c handle stoppers looking arrangement etc (approved by architect designer / drawing details) complete with all respects as per drawings, details and Engineer Incharge.	22.00	Sqm	37,317.40	820,982.84





# GATE HOUSE

## BILL OF QUANTITIES

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
23	C-10/51 Page-60	Providing & fixing in position doors, windows & ventilators of 1st class deodar wood frames, and 1-1/2" thick teak wood ply shutters of first class deodar wood skeleton (solid) styles and rails core of partial wood and teak ply wood (3 ply) on both side including holds fast hinges, iron tower bolts, handles and cleats with cord etc. complete with all respects as per drawing details & engineer incharge.	34.00	Sqm	32,857.38	1,117,150.97
24	HW-14 Page-221	Providing & fixing precast edge blocks 3750 PSI Industrial mad size 6" inches thick x 12 inches long x 18 inch high including the cost of cartage, excavation form work for haunching 1450 psi lean concrete for haunching 1:4 cement sand mortar (Kerb Blocks).				
	i	Size - 6" x12"x 18" (150 x300 x450mm)	288.00	RM	2,225.09	640,825.92
25	C-8/68 Page-50	Providing & fixing cement paving blocks flooring have size of 197 X 97 X 60 mm of city/quaddra/cobble shape with pigmented having strength b/w 5000 psi to 8500 psi i/c filling the joints with hill sand over bed of 2" thick hill sand or stone dust and laying & compacting in specified manner / pattern and design etc. complete (pigmented) PSI 5000 to 8500e /tameer works or equivalent manufacturer)				
	i.	60mm Cosmic, zigzag/Plain interlock paver	952.00	Sqm	2,276.17	2,166,913.84
<b>Total Schedule Amount (RS.)</b>						<b>117,327,125.63</b>
<b>Non Schedule Item</b>						
1		Formation of embankment from borrow excavation in common material including laying in 6" (150mm) layer, clod breaking, ramming, dressing and compaction by sheep foot roller / power roller with optimum moisture content to achieve minimum 95% of modified A.A.S.H.T.O dry density complete, up to any lift and lead out side of project boundry, complete as per drawings and specifications and as directed by the engineer.	758.00	Cum		
2		Providing and applying waterproofing system as described below to concrete surfaces including surface preparation (screeding, crack filling, grouting, prime coat etc.) with all respects as per drawings, details and Engineer Incharge.				
	i	Cementitious / Crystalline Waterproofing (wet Area) of Fospak brand or approved equivalent as per drawings and details	92.00	Sqm		
3		Providing and fixing Aluminum composite panel cladding/Aluminium Cladding with metal framing mechanically fixed (brand / color / thickness / finish as per approved by the Architect). Including EPS thermal insulation, scaffolding, crane lifting, trim, flashing etc. complete with all respects as per drawings, details and Engineer Incharge.	1,041.00	Sqm		



## GATE HOUSE

### **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
4		Providing and laying porcelain tiles skirting using high (dimension colour,thickness tile and shade as approved by the Architect) to be laid over cement sand scratched plaster 1:5 (1-cement, 5- fine sand) including setting the tiles with gray cement slurry jointing, cutting, washing the tiles with matching colour cement slurry, curing and cleaning etc., complete with all respects as per drawings, details and Engineer IncharBasege.	72.00	Sqm		
5		Providing and fixing painted gypsum board ceiling including suspension systems, attachment devices, hangers, edge mouldings, trim clips, trimming and any extra hangers as required, including making provision for light fixtures etc., complete as per drawings, details and as directed by the Consultants.	304.00	Sqm		
6		Providing and fixing 12mm thk. tempered glass with aluminium framing (size as approved by architect/drawings) Including clips, aluminum u channel for holding complete with all respects as per drawings, details and as per directed by the consultant / engineer Incharge.	948.00	Sqm		
7		Providing and fixing 12mm thk. tempered glass door (size as per approved by the Architect /drawings). Including, door stopper, locks, hardwares complete with all respects as per drawings, details and as per directed by the consultant / engineer Incharge.	10.00	Each		
8		Providing fabrication & fixing / installation Wooden Pargola with (thickness design & other requirement As per drawing details & approved by Architect) including angle Support Redoxide, enamel paint/Polish complete with all respects as per drawings, details & approved by Architect.	72.00	Sqm		
9		Providing and fixing wood benches with mention drawing details (design as per approved by Architect) including Enamel Paint/Polish complete with all respects as per drawings, details & approved by Architect.	6.00	Each		
10		Providing, fabricating and fixing MS staircase & related material including providing & applying Redoxide with Enamel Paint with complete with all respects as per drawings, details and Engineer Incharge.	23.00	Per Step		
<b>Total Non Schedule Civil Amount (Rs.)</b>						<b>-</b>
<b>HORTICULURAL WORKS (Non Schedule)</b>						
1		Providing and Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth as approved by the Architect or Consultant complete with all respects as per drawings, details and Engineer Incharge.				
		<b>Trees 3M Height</b>				



**GATE HOUSE****BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
i		Flowers Shrub Ground Covered of approved height (Seasonal Variety)	50.00	Sqm		
ii		Naeem	50.00	Each		
iii		Gul Mohar	50.00	Each		
iv		Bougainvillea (1.2M Height)	50.00	Each		
v		Terminalia,	50.00	Each		
vi		Tabebuia,	50.00	Each		
vii		Date Palm	25.00	Each		
2		Supplying and stacking approved garden soil (sweet earth) free from salts, pebbles and grass roots etc including all leads and lifts.complete with all respects as per drawings, details and engineer Incharge.	67.04	Cum		
3		Supplying, stacking and spreading cow dung manure / Slaughter House manure and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete with all respects as per drawings, details and engineer incharge.	67.04	Cum		
4		Supplying and stacking live (Dacca) grass in slabs with earth intact including all lead and lifts complete with all respects as per drawings, details and Engineer Incharge.	92.47	Sqm		
<b>Total Non Schedule Horticulture Amount (Rs.)</b>						<b>-</b>



**BILL OF QUANTITIES**  
**PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
<b>1</b>	<b>SCHEDULE ITEMS</b>	
i)	PLUMBING FIXTURES	958,126.00
ii)	WATER SUPPLY WORK	406,320.00
iii)	SEWERAGE & DRAINAGE	604,608.77
	Add Premium Above or Below _____ % on Schedule Items	
	<b>Sub-Total (A)</b>	
<b>2</b>	<b>NON-SCHEDULE ITEMS</b>	
i)	PLUMBING FIXTURES	
ii)	WATER SUPPLY WORK	
iii)	SEWERAGE & DRAINAGE	
	<b>Sub-Total (B)</b>	
	<b>Total (A+B)</b>	



**BILL OF QUANTITIES**  
**PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
<b>A</b>		<b>SINDH SCHEDULE RATE MAY - 2024</b>				
	<b>1.0</b>	<b>PLUMBING FIXTURES</b>				
1	WS-1/4 page-186	Providing and fixing European type white glazed earthen ware wash down W.C. pan complete with & including the cost of white / black plastic seat ( Best quality ) and lid with C.P. brass hinges best quality and buffers 3 gallons white glazed earthen ware low level flushing cistem with siphon fitting 1½ " dia white porcelain enameled flush bend dia and making requisite number of holes in walls , plinth & floor for pipe connection & making good in cement concrete 1:2:4 ( Foreign quality ) . ( ICL or equivalent ).	Each	10	44,244.72	442,447.00
2	WS-1/19(b) page-188	Providing and fixing steel sinks stainless local bt make complete with cast iron or wrought iron LINA ALVH brackets 6 inches built into wall, 1- 1/2" rubber plug and chrome plated brass chain 1- 1/2" C.P brass waste with 1-1/2" P.V.C. waste pipe & making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4.				
	9b)	Steel Sink stainless size 36"x18" local make (standard pattern)	Each	2	10,215.27	20,431.00
3	WS-1/10 page-187	Providing and fixing 24"x18" lavatory basin in white glazed earthen ware complete with & including the cost of W.I. or C.I. cantilever bracket 6 inches built into wall, painted white in two coats after a primary coat of red lead paint, a pair of 1- 1/2" dia chrome plated pillar taps, 1-1/2" rubber plug & chrome plated brass chain 1-1/4" dia malleable iron or C.P. brass traps malleable iron or brass unions and making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4 (Foreign Equivalent).	Each	10	24,094.98	240,950.00
4	WS-1/11 page-187	Add extra for providing & fixing of earth ware pedestal white or coloured Glazed ( Foregin or equivalent )	Each	10	3,675.07	36,751.00
5	WS-1/22 page-188	Providing and fixing 1.5 cm (1/2") dia connection pipe, including check nuts, etc; plastic rubber connection.	Each	26	760.50	19,773.00
6	WS-2/2(b) page-190	Providing and fixing C.P. brass toilet paper brackets complete (similar) to twyford design number 1108 (Suparear Quality).	Each	10	1,170.00	11,700.00
7	WS-2/(II)b page-190	Providing and fixing towel rail 24"x3/4" round or with brackets screws nuts & cleats etc. complete (Suparear quality).	Each	10	2,524.57	25,246.00
8	WS-2/5 page-190	Supplying & fixing soap tray of superior quality and design with fine finishing with C.P. screws etc. complete	Each	10	585.00	5,850.00
9	WS-6/11(B) page-198	S/fixing concealed stop cock of suprior best quality with C.P.head 1/2" dia	Each	25	1,848.60	46,215.00



**BILL OF QUANTITIES**  
**PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
10	WS-6/14(b) page-199	Supplying & fixing wash basin mixture of superior quality with C.P. Crystal head 1/2" dia	Each	10	4,890.60	48,906.00
11	WS-6/17 page-199	Supplying & fixing Sink mixture cock of superior quality with C.P. head etc. complete	Each	2	2,550.60	5,101.00
12	WS-6/19A page-199	Supplying & fixing C.P muslim shower with double bib cock and ring pipe etc. complete	Each	10	5,475.60	54,756.00
		<b>Sub total: Plumbing Fixtures</b>				<b>958,126.00</b>
	<b>2.0</b>	<b>Water Supply</b>				
1	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	Cu.m.	200.00	2,031.60	406,320.00
		<b>Sub total: Water Supply</b>				<b>406,320.00</b>
	<b>3.0</b>	<b>Sewerage and Drainage</b>				
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	Cu.m.	320.02	645.75	206,650.00
	C1/13 Page-16	Earth work compaction Compaction of earth work (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	Cu.m.	320.02	44.85	14,353.00
	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	Cu.m.	320.02	229.58	73,469.00
2	PH-D/6 page-112	Providing, Laying uPVC pipes of Class 'D' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c Testing with water to a head of 122 meter or 400 ft.				
a	D/6(b) page-112	1 1/2" i/d 38mm	R.m	8.00	428.43	3,427.44
b	D/6(c) page-112	2" i/d 50mm	R.m	2.00	638.84	1,277.68
c	D/6(e) page-112	3" i/d 80mm	R.m	42.00	1,329.96	55,858.32
d	D/6(f) page-112	4" i/d 100mm	R.m	30.00	2,168.02	65,040.60
e	D/6(h) page-112	6" i/d 150mm	R.m	15.00	4,564.11	68,461.65
	C-4 page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				



**BILL OF QUANTITIES**  
**PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
2a	C/4(a) page-96	1 1/2" i/d 38mm	R.m	8.00	0.96	7.68
	C/4(a) page-96	2" i/d 50mm	R.m	2.00	0.96	1.92
	C/4(c) page-97	3" i/d 80mm	R.m	42.00	2.09	87.78
	C/4(d) page-97	4" i/d 100mm	R.m	30.00	3.49	104.70
	C/4(f) page-98	6" i/d 150mm	R.m	15.00	7.60	114.00
3	WS-2/3(b) page-190	Providing & fixing 15"x12" bavelled edge mirror of Belgium glass completed with 1/8" thick hard and C.P. screws fixed to wooden cleats (Suparear quality).	Each	10.00	3,510.00	35,100.00
4	WS-7/2 page-200	Providing chambers 15"x19" (inside dimension) x24" deep for house meters with 6" thick C.C. 1:2:4 blocks set in 1:6 cement mortar 6" thick C.C. 1:4:8 in foundation, " thick cement plaster 1:3 to all inside wall surfaces and to top 1" thick C.C. 1:2:4 fl.				
		i) upto 2ft depth	Nos.	4.00	9,051.80	36,207.00
5	WS-16/1c page-209	Manufacturing & Supplying of R.C.C manhole cover cast in 1:2:4 cement concrete ratio 3" inch deep at center reinforced with 1/2" dia tor steel bars with 4" c/c welded to a 3/16" thick 2 inch wide M.S Plate and two hooks of 3/8" inch dia tor bars including compacting, curing and transportation within 10 miles.	Nos.	4.00	6,556.10	26,224.00
6	WS-10/1 page-203	Providing & fixing 6"x4" C.C. gully trap with 4" outlet complete with 4" thick 1:2:4 for bed & 1/2" thick cement plaster (1:3) to the karb, C.I. grating 6"x6" & C.I. cover and frame 12"x12" (inside etc. complete).				
	a-i page-203	C.C. gully trap 6"x6"x4" C.I Cover and Frame	Nos.	6.00	3,037.32	18,224.00
		<b>Sub total: Sewerage and Drainage</b>				<b>604,608.77</b>



**BILL OF QUANTITIES**  
**PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

Item #	Description of Work	Unit	Qty.	Rate	Amount
<b>B</b>	<b>NON SCHEDULE ITEMS</b>				
<b>1.0</b>	<b>PLUMBING FIXTURES</b>				
1	Providing and fixing chromium plated bottle trap with waste pipe, etc. complete:- 4 cm (1 1/2").	Each	17		
	<b>Sub total: Plumbing Fixtures</b>				-
<b>2.0</b>	<b>Water Supply</b>				
1	Providing, fixing, jointing and testing polypropylene random (PPR) pipes or approved equivalent pressure pipe for cold water as per DIN 16962, PN 8077-8078, PN-25 for pipes and Din 16962, PN-25 for fittings (polyfusion welded joints) inside building including fitting and specials (sockets, tee, elbows, bends, crosses, reducers, adaptor, plugs and union etc) supported on walls or suspended from roof slab or run in chases including pipe hangers, supports, cutting and making good the chases and holes, complete in all respects.				
i)	19 mm O.D	R.m	80		
ii)	40 mm O.D	R.m	10		
iii)	50 mm O.D	R.m	12		
2	Providing and installing Brass Ball / Handle valves of following nominal dia, including jointing, fitting, painting and testing complete in all respects to match with PPR/uPVC pipes of following diameters.				
i)	25 mm O.D	Each	10		
ii)	40 mm O.D	Each	2		
iii)	50 mm O.D	Each	2		
3	Supply and installation of Electric geysers of following capacity, including ball valves on inlet and outlet connections complete in all respects.				
i)	25 Gallons	Each	4		
	<b>Sub total: Water Supply</b>				-
<b>3.0</b>	<b>Sewerage and Drainage</b>				
1	Providing and fixing AGM uPVC floor trap 75mm of approved quality including PVC grating and cover.	Each	22		
2	Providing and fixing uPVC Floor Trap 100mm of approved quality including PVC grating and cover.	Each	6		
3	Providing and fixing 4" dia 100mm cowl for vent pipe of approved quality.	Each	4		
4	Providing and fixing angle drain for 4" dia 100mm rainwater pipe with brass top complete in all respects.	Each	4		
	<b>Sub total: Sewerage and Drainage</b>				-





**BILL OF QUANTITIES**  
**BRIDGE-07 PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORK.	307,839,632
	Add Premium Above or Below _____ % on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORK.	
	Sub-Total (B)	
	Total (A+B)	



**BILL OF QUANTITIES**  
**BRIDGE B-07 GATE HOUSE (30m wide) WORKS**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
	<b>A</b>	<b>SINDH SCHEDULE RATE MAY - 2024</b>				
		<b>Bridge B-7 GATE 30m Wide</b>				
		<b>EARTH WORKS</b>				
1	C-1/18b page-17	Excavation in foundation of Building Bridges and other structures including dagbelling dressing, refilling around structure with excavated earth watering and ramming lead upto 5 ft. , lead upto one chain (30 metre) and lift upto 5 ft. (1.5 metre)	Cu.m.	3765.63	419.60	1,580,059.19
		<b>PILING WORKS</b>				
2	HW-43/40 page-226	Drilling of boreholes in pile 1000mm diameter in all kinds of sub-surface material including disposal of drilled material to designated places.				
	a)	0 - 20m	R.m.	1235.00	11,423.50	14,108,022.50
3	HW-43/42 page-226	Drilling of boreholes in pile 1200mm diameter in all kinds of sub-surface material including disposal of drilled material to designated places.				
	a)	0 - 20m	R.m.	500.00	22,643.25	11,321,625.00
4	C-4/4b page-24	Class 'E' 5mpa dummy concrete using specified cement to cover the exposed reinforcement of piles (Optional Item).	Cu.m.	31.26	10,479.09	327,576.35
5	HW-43/1 page-224	<b>Class 'A1'</b> providing & pouring reinforced concrete in pile of the following diameter using specified cement excluding the cost of reinforcement.				
	a)	Type-P1 1200 mm dia.	Cu.m.	565.55	24,021.96	13,585,619.48
	b)	Type-P2 1000 mm dia.	Cu.m.	970.22	24,021.96	23,306,489.94
		<b>PLAIN AND REINFORCED CONCRETE</b>				
6	C-4/5i page-24	Class 'E' 1450 psi concrete using specified cement as shown on the drawings and as directed by the Engineer.	Cu.m.	121.97	12,320.67	1,502,727.48
7	HW-43 page-224	<b>Class 'A3'</b> reinforced concrete using specified cement in following sub-structures:				
	HW-43/7 page-224	a) Concrete A-3 (Under Ground Pile Cap)	Cu.m.	1685.64	27,472.95	46,309,503.44
8	HW-43/8 page-224	b) Abutment transom (On Ground)	Cu.m.	966.73	29,946.55	28,950,315.13
		c) Pier Column	Cu.m.	148.64	29,946.55	4,451,361.50
		d) Pier cap & Barriers	Cu.m.	119.99	29,946.55	3,593,226.64
		e) Approach Slab	Cu.m.	100.20	29,946.55	3,000,644.31
		f) Shear key	Cu.m.	40.00	29,946.55	1,197,862.00
9	HW-43/21 page-225	<b>Class 'D2'</b> fairfaced Precast Prestressed reinforced concrete <b>Box Girders, Diaphragms</b> with specified cement including transportation, launching and placing in position, complete in all respect as shown on the drawings and specifications or as directed by the Engineer. (Excluding reinforcing bars, Prestressing strand & accessories.)	Cu.m.	2185.32	36,438.41	79,629,586.14

**BILL OF QUANTITIES**  
**BRIDGE B-07 GATE HOUSE (30m wide) WORKS**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
10	HW-43/1 page-224	<b>Class 'A1'</b> fairfaced reinforced concrete using specified cement including polypropylene fibrous reinforcement in following super structures: (Barriers)	Cu.m.	79.00	24,021.96	1,897,734.84
11	HW-39/14 page-221	Providing & fixing Precast Edge Block 3750 PSI Industrial Made Size 6 inches thick x 12 inches long x 18 inches high including the cost of Cartage, excavation, form Work for haunching, 1450 PSI lean concrete, 2250 PSI concrete for haunching, 1:4 cement sand mortar.	R.m.	400.00	2,225.09	890,036.00
		<b>PRESTRESSING</b>				
12	HW-43/27 page-225	Providing, placing and prestressing High Tensile steel tendons conforming to ASTM A-416 (Grade 270) including all accessories complete as per specifications or as directed by the Engineer.	tonne	45.60	460,389.77	20,993,773.51
		<b>BEARING PADS</b>				
13	HW-43/38 page-226	Elastomeric bearing pads imported approved equivalent, of the following sizes & Types as shown on the drawing complete and as directed by the Engineer.				
		a). 300 X 400 X 50 mm	C.cm	603000	10.41	6,277,230.00
		<b>PIPE FITTINGS</b>				
14	PH-K/1(d) page-	Providing & fixing 31mm dia PVC pipe Class-B sleeves fitting accessories & fittings complete in all respect as shown on the drawings and specifications.	R.m.	124.00	40.69	5,045.56
15	HW-9 page-212	Preparing sub grade including earth excavation or filling to an average depth of 9" dressing to camber and consolidation with power Roller.	Sq.m	6006.00	176.41	1,059,518.46
16	M Basic/1 page-10	Carriage of 100Cft /5Tons of all materials like, Stone aggregate, Spawl, Coal, Lime, Surkhi, etc. B.G Rail fastening points and crossing bridge, Girders, Pipes, Sheets Rails, M.S Bars etc. or 1000 Nos. Bricks (10"5"x3") or 1000Nos. Tiles(12"x6"x2") or 150Cft of Timber or 100 Maunds of fuel wood by trucks or any other means owned by the contractors.				
	i.	Carriage 1st mile to 6th mile	CM	1740.20	511.08	889,381
	ii.	Carriage (100km or 62.15 mile - 6mile =56.15 56.15 x 105.93 = 5947.97 / 100 = 59.48 / Cft 59.48 x 35.32 = 2100.83 / Cm. around project approved source material.	CM	1740.20	2,100.83	3,655,864
	iii.	Note :- Incase from where the source will pass, the rate will be calculated or deducted on the basis of kilometers. Rs. 105.93 / 100Cft or 37.414/ Cm per mile.	CM			



**BILL OF QUANTITIES**  
**BRIDGE B-07 GATE HOUSE (30m wide) WORKS**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
17	HW-11d page-213	Preparing Sub-Base by supplying and spreading well graded pit or bed run gravel having a liquid limit not greater than 25 and plasticity index not greater than 6 in proper camber and grade including watering rolling and compacting in layers, thickness of each compacted layer not compacted exceeding upto 6" 98-100% density as per modified AASHTO density (Rate i/c all cost of materials T&P and carriage upto 3 chains).	Cu.m.	994.40	3,429.99	3,410,782.06
18	HW-13B page-214	Providing and laying Aggregate base course in proper grade and camber having CBR 80% as per AASHTO standard specifications i/c spreading and compacting by approved mechanical means (Motor grader, Vibratory roller and Smooth wheel roller etc) watering to maintain the moisture content the compaction of each layer shall 100 percent to the max dry density (Rate i/c all cost of materials T&P and carriage upto 3 chains).	Cu.m.	745.80	4,893.72	3,649,736.38
19	HW-23A page-217	Providing and laying Plant mixed Asphalt Concrete Binder Course compacted thickness 3 inches (75mm thick) as per approved job mix formula using crush aggregate from approved sources. Using asphalt of grade 80/100 during laying temperature not less than 140C compacted by steel wheel & PTR roller. The procedure of laying binder course material & methodology shall fully comply with AASHTO and as directed by Engineer Incharge. Minimum bitumen content should be 3.5% binder course shall be spreading using paver machine. Rolling & Finishing to design proper grade line level and camber etc: (Machinery with POLs cost of material carriage).	Sq.m	4830.32	2,871.34	13,869,491.03
20	HW-24B page-218	2" (50 mm) Thick Asphalt Concrete Wearing Course Plant Mix Laying to Proper line and grade plant mixed Asphalt concrete paver finished (Hydraulic / Electronic control) Prepared to specified formula according to job mix formula approved by Engineer incharge including rolling and finishing to Proper line, grade level and camber etc: (Machinery with POLs cost of material carriage).	Sq.m	7245.48	2,138.44	15,494,024.25
21	HW-31a page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.70 kg required per sqm = 127.69 + 37.67 = 165.36	Sq.m	7245.48	165.36	1,198,112.57
22	HW-31b page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.20 kg required per sqm = 36.48 + 37.67 = 74.15 (Bitumen Basic rate page-24/No123)	Sq.m	4830.32	74.15	358,168.23
		<b>TRAFFIC MARKING &amp; PAVEMENT STUDS</b>				

**BILL OF QUANTITIES**  
**BRIDGE B-07 GATE HOUSE (30m wide) WORKS**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
23	HW-39/13 page-221	Pavement Marking in reflective TP Paint for Line of 15 cm width.	Sq.m	247.50	282.51	69,921.23
24	HW-39/12 page-221	Supplying and Fixing of reflectorize Road Studs Double Face, Flush surface type.				
	i)	Reflectorized Pavement Stud (Flush Profile Type - Double) 100x100mm	Nos.	100.00	1,520.42	152,042.00
		<b>STEEL PIPES &amp; PIPE FITTINGS</b>				
25	PH-F/1c page-118	Manufacturing, Supplying & fixing black steel M.S pipe 150mm dia 5mm thick made out of M.S sheet confirming to API 5L grade X- 42 ERW & Externally 3 LPE coating inspection and tesing will be carried out as per DIN 30670 standard and internally CC Lining to be done as per AWWA C-205 standard i/c laying jointing with welding in trenches i/c cost of bends of any degree & testing with water specified pressure.	R.m.	60.00	13,135.07	788,104.20
		<b>WATER PROOFING AND BUILT-UP ROOFING</b>				
26	C-11/9 page-63	Two protective coats of hot bitumen grade 10/20 applied @ 1 Kg./sq.m. per coat	Sq.m	1345.51	234.89	316,046.61
		<b>TOTAL COST OF SCHEDULE ITEMS</b>				<b>307,839,631.80</b>



**BILL OF QUANTITIES**  
**BRIDGE B-7 GATE HOUSE (30m wide) WORKS**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
<b>NON SCHEDULE ITEMS</b>					
	<b>Bridge B-7 GATE 30m Wide</b>				
1	Static Pile Load test on test pile as per latest version of ASTM D 1143 for the following diameter.				
	a) 600 tonne (1000mm diameter)	No.	0.80		
	b) 1230 tonne (1200mm diameter)	No.	0.80		
1a	Static Pile Load test on test pile as per latest version of ASTM D 1143 for the following diameter.				
	a) 300 tonne (1000mm diameter)	No.	0.80		
	b) 615 tonne (1200mm diameter)	No.	0.80		
2	Pile integrity test on all piles as per latest version of ASTM D 5882 for the following diameter.				
	a) 1000mm diameter	Each	25.60		
	b) 1200mm diameter	Each	19.20		
3	Precast concrete paving tiles of size 300 x 300 x 40 mm laid in approved pattern over 50mm thick sand cushion complete in all respects, as shown on drawings and as directed by the Engineer.	Sq.m.	650.00		
4	a) Providing & Laying Non Shrink grout.	Cum	12.22		
5	# 25mm dia Galvanized Mild steel dowel Bar placing at 350mm c/c fixing accessories & fixing as shown on the drawings or as directed by the Engineer.	No.	450.00		
6	Providing and fixing MS End plate 280x 280x 20mm with 350x 350x 50mm protective cover as per specifications and as per directed by the Engineer.	No.	48.00		
7	Providing and fixing MS plate 230 x 1720 x 20mm as per specifications and as per directed by the Engineer.	No.	24.00		
<b>EXPANSION JOINTS:</b>					
8	Expansion Joint between deck slab comprising DK NEW MONOCELL JOINT (DK NMC-50) or approved equivalent including Non shrink grout & anchoring system etc. complete in all respects as per manufacturer's instructions & as shown on the drawings.	R.m.	150.00		
9	50x50mm polyurethane sealant	R.m.	100.00		
10	Bitumenious impregnated Soft Board	R.m.	26.00		
11	Hot dip galvanized heavy duty railing including fabrication, erection/ embedding and Embeded parts including fixing and all fixing accessories etc.complete in all respect as shown on the drawings and as per specifications.	R.m.	200.00		



**BILL OF QUANTITIES**  
**BRIDGE B-7 GATE HOUSE (30m wide) WORKS**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
12	Providing and applying traffic marking arrows using thermo plastic paint with glass beads, paint of specified quality as per drawings complete in all respect as directed by the Engineer.	Sq.m	80.00		
13	Providing, fabrication, painting/ galvanizing complete placing and fixing Gantry signs as shown on the drawings and detail or as directed by the Engineer, complete in all respect including structural steel work, embedded parts, foundations, earthwork and related civil works.				
a)	Gantry As per drawing & Specification	job	3.00		
14	Reinforcement As Per AASHTO M-31 Grade 60 including cutting,bending,binding and fixing in position for required components of Pre-Stressed Bridges.The rate also include the cost of binding wire and its labour fixing	tonne	1000.32		
	<b>TOTAL COST OF NON SCHEDULE ITEMS</b>				-



**BILL OF QUANTITIES**  
**STREAM PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
2	NON-SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORKS	
ii)	ELECTRICAL WORKS	
	Sub-Total (B)	
	Total (A+B)	





## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
<b>STREAMS (CIVIL &amp; ARCHITECTURAL WORKS)</b>					
<b>B NON SCHEDULE ITEMS</b>					
1	Excavation for trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth in required area any lead & lift also refilling watering ramming & compaction around structure as directed by Engineer Incharge . Providing fence guards, lights, flag etc as per side requirement.	7,500	Cu.m.		
2	Supplying suitable earth from approved outside sources (borrowpits) including digging, loading and unloading, cartage upto site of work and filling in foundation trenches, plinth or under floor, etc. including breaking clods, dressing, watering and consolidation by ramming in layers not exceeding up to required depth full compaction complete including all lead and lift. The item rate shall include all costs related to the item complete in all respect as per drawing and as directed by the Consultants/ Engineer Incharge.	1,500	Cu.m.		
3	Providing and laying SF56 - 190 GSM 100% Polypropylene Mechanically and Thermally Bonded Isotropic Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,270	Sq.m.		
4	Providing and laying Gravel in trenches as per approved size and thickness. Including leveling and compacting where required complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	1,200	Cu.m.		
5	Providing and laying 1mm thick PVC Geomembrane Liner as per ASTM D7176-06 (Impervious Layer) or approved equivalent. Including overlapping and field seam testing of PVC Geomembrane liner as per ASTM D7177. Complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	6,270	Sq.m.		
6	Providing and laying NP 17 - 150 GSM Polypropylene Needle-Punched Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,270	Sq.m.		
7	Providing and laying fibre reinforced cement concrete consisting of Class B Concrete, 100% Polypropylene Fibrillated Fiber DCF-25/13 (Dosage is 1.8 kg per cubic meter) or approved equivalent excluding formwork. Including hoisting, placing, compacting, finishing, curing complete in all repect as as per drawings, details and as per approved by the consultants / Engineer Incharge.	1,026	Cu.m.		
8	Providing, laying and spreading graded aggreagte base course material upto any thickness in base course in required grade and AASHTO T-96, T-180 & T-193 compacted to the required density corresponding to 98% of the maximum dry density and approved mechanical means (vibratory roller, road packer and smooth wheel rollers, etc) as per design and specifications including watering also specific lab test, with all lead and lift, etc complete (actual compacted depth shall be considered for payment, complete as per drawings and specifications and as per directed by The Engineer.	375	Cu.m.		



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
9	Providing laying and jointing fair face precast bullnose Kerb block approved quality and make having a minimum works cylindrical strength of 3000 lbs Class -A. per sq. inch at 28 days with a mix not leaner than 1:1-1/2:3 as per design and drawing, laid in cement mortar 1:3 and racking out joints, curing etc. I/C Excavation, back filling with 3" thick lean concrete under the kerb and back hanching 6"x9" (150mm x 229mm) 1:3:6 complete as desired, complete with all respects as per drawings, details and Engineer Incharge.				
i	Size - 6" x 36"x 12" (150 x900 x300mm)	2,820	R.m.		
10	Providing and laying ellipse, round or other shape pebble gravel bolder pathway with 1:3 mortar grout approved design as per architect drawing at required areas, also mortar base and making of grout setting levelling etc. complete as per drawings, details and Engineer Incharge.	1,050	Sq.m.		
11	Providing, laying & jointing pre-cast cobble stone as manufactured by Envicrete, Hub Block or equivalent approved by architect complete i/c sand filling bed 2" (0.050mm) thick and grouting of all voids with fine sand, complete with all respects as per drawings, details and Engineer Incharge.				
i	60 mm thk.	4,010	Sq.m.		
12	Providing and fixing Precast C.C Bench with consisting of fairface concrete (cast in place / precast 4000 psi as per Architects approval), 457mm wide 254mm thk & 580mm height, also hard cultural 2" x 1 1/4" wooden planks with screwed or nailed etc. Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	70	Each		
13	Construction of 4000 psi fair face concrete bench cast in place/precast with 150mm wide 8mm thick fiber cement board strip laminated to 25mm thick hard wood and screwed or nailed to concrete bench also strip light under bench and 2" thick cultural stone cladding fixed on concrete wall with 1" thick cement sand mortar and also 18"x 12"x 3 1/2" thick stone coping where required. (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	336	R.m.		
14	Providing and planting Miyawaki Forest area consisting of multiple varieties of trees / plants of approved height, girth and pot size (Trees / Plants, shurbs & Bermuda grass as per approved by the Architect). Including, making of tree pits, filling sweet earth 0.225 thick, manure 0.075 thick all other components and as per techniques provided Consultant complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	5,303	Sq.m.		
15	Rough dressing of the area for lawn including picking stones, pebbles, stubble, grass roots and other injurious matters and breaking of clods complete including disposal of rubbish as per direction of engineer	6,550	Sq.m.		
16	Supplying and stacking approved garden soil (sweet earth) 0.225 thick free from salts, pebbles and grass roots etc including all leads and lifts.complete with all respects as per drawings, details and Engineer Incharge.	1,495	Cu.m.		



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
17	Supplying, stacking and spreading cow dung manure / Slaughter House manure 0.075 thick and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete with all respects as per drawings, details and Engineer Incharge.	500	Cu.m.		
18	Supplying and stacking live (Bermuda) grass in slabs with earth intact including all lead and lifts complete with all respects as per drawings, details and Engineer Incharge.	6,640	Sq.m.		
19	Providing and fixing MS / Fiber / PVC or any other Dust Bin with selected material (as per approved by the Architect). Including, square pipe for holding pipe. Complete with all respects. As per drawings, details and Engineer Incharge.	70	Each		
20	Providing and Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth as approved by the Architect or Consultant.				
	<b>Trees 3m Height</b>				
i)	Neem (75-100mm Girth & 450-600mm dia pot size)	50	Each		
ii)	Gul mohar (75-100mm Girth & 450-600mm dia pot size)	50	Each		
iii)	Peepal (75-100mm Girth & 450-600mm dia pot size)	50	Each		
iv)	Mango (75-100mm Girth & 450-600mm dia pot size)	50	Each		
v)	Almond Tree (75-100mm Girth & 450-600mm dia pot size)	50	Each		
vi)	Babul Tree (75-100mm Girth & 450-600mm dia pot size)	50	Each		
vii)	Chikoo Tree (75-100mm Girth & 450-600mm dia pot size)	50	Each		
21	<b>Palm 3m Height</b>				
i)	Date Palm (75-100mm Girth & 450-600mm dia pot size)	50	Each		
ii)	Flowers/Shrubs (Any approved Variety) 1m Height	750	Sq.m.		
<b>Total Amount Rs.</b>					-



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
<b>STREAMS (ELECTRICAL WORKS)</b>					
<b>B NON SCHEDULE ITEMS</b>					
1	Providing and fixing 100mmx 100mmx 6m high light poles (design as per approved by the Architect) with LED Pole Light IP-65 60-80W 4000K or approved equivalent. Including, 600mmx 600mmx 1200mm pole foundation, lean, junction box, single arm, M.S plate, bolts, internal wiring and other accessories complete in all respects as per drawings, details and as per directed by the Consultants / Engineer Incharge.	EACH	126		
1A	Supply, laying, termination, tagging, testing and commissioning of following size of single core / multicore, PVC insulated, PVC/PVC, XLPE/ PVC sheathed, non-armored Copper conductor 600V/1000V or 450/750V voltage grade cable in already laid raceways or in ducts including all accessories lugs, cable glands, etc., as per drawings and specifications, complete in all respect. Note: Contractor is advised to confirm the cable running length before commencement of work and termination as per site requirements.				
i)	<b>4 Core - Cu.XLPE/PVC Cable (600/1000V)</b>				
	4 Core - 16 Sq.mm	Rm.	1295		
ii)	<b>1 Core - CU/PVC Cable (For Pole Earthing)</b>				
	1 Core - 16 Sq.mm Cu/PVC Cable	Rm.	1295		
2	Supply, installation, testing & commissioning of following Isolators, in 16 SWG sheet steel enclosure with neutral and earth terminal strips, including all mounting accessories as per specification & drawing, complete in all respect.				
i	40A, TPN Isolator	No.	2		
ii	20A, SPN Isolator	No.	2		
3	Providing and laying of following size uPVC class D pipe for Incoming cable, Buried in ground/under road/under floor Including excavation for laying of pipe, bricks, warning tape, and backfilling with warning tape, and fresh soil as per specification as shown on the drawing, as per drawings and specification etc.,complete in all respect.				
	100 mm dia uPVC Pipe	Rm.	1295		
	50 mm dia uPVC Pipe	Rm.	100		
4	Supply & installing of Pull Box as per drawing and specification, complete in all respect.	No.	2		
5	Providing and Construction of Manhole Size 2'-0" x 2'-0" x 2'-6" deep, 6"thick, concrete 1:2:4 ratio with 2' round heavy duty cast iron cover, 100% water proof, as per specification as shown on the drawing, as per drawings and specification etc., complete in all respect.	No.	4		
6	Providing and fixing DB (Surface Type) with 18SWG Enclosure, changeover, circuit breakers and accessories etc. complete in all respects as per drawings, details and Engineer Incharge.	EACH	2		
<b>Total Amount Rs.</b>					<b>-</b>



**BILL OF QUANTITIES**  
**URBAN FOREST PACKAGE 1-A(i)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
2	NON-SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORKS	
ii)	ELECTRICAL WORKS	
	Sub-Total (B)	
	Total (A+B)	



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
<b>URBAN FOREST (CIVIL &amp; ARCHITECTURAL WORKS)</b>					
<b>B NON SCHEDULE ITEMS</b>					
1	Excavation for trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth in required area any lead & lift also refilling watering ramming & compaction around structure as directed by Engineer Incharge . Providing fence guards, lights, flag etc as per side requirement.	12,200	Cu.m.		
2	Supplying suitable earth from approved outside sources (borrowpits) including digging, loading and unloading, cartage upto site of work and filling in foundation trenches, plinth or under floor, etc. including breaking clods, dressing, watering and consolidation by ramming in layers not exceeding up to required depth full compaction complete including all lead and lift. The item rate shall include all costs related to the item complete in all respect as per drawing and as directed by the Consultants/ Engineer Incharge.	2,650	Cu.m.		
3	Providing and laying SF56 - 190 GSM 100% Polypropylene Mechanically and Thermally Bonded Isotropic Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,188	Sq.m.		
4	Providing and laying Gravel in trenches as per approved size and thickness. Including leveling and compacting where required complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	1,238	Cu.m.		
5	Providing and laying 1mm thick PVC Geomembrane Liner as per ASTM D7176-06 (Impervious Layer) or approved equivalent. Including overlapping and field seam testing of PVC Geomembrane liner as per ASTM D7177. Complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	6,188	Sq.m.		
6	Providing and laying NP 17 - 150 GSM Polypropylene Needle-Punched Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,188	Sq.m.		
7	Providing and laying fibre reinforced cement concrete consisting of Class B Concrete, 100% Polypropylene Fibrillated Fiber DCF-25/13 (Dosage is 1.8 kg per cubic meter) or approved equivalent excluding formwork. Including hoisting, placing, compacting, finishing, curing complete in all respect as as per drawings, details and as per approved by the consultants / Engineer Incharge.	974	Cu.m.		
8	Providing, laying and spreading graded aggregate base course material upto any thickness in base course in required grade and AASHTO T-96, T-180 & T-193 compacted to the required density corresponding to 98% of the maximum dry density and approved mechanical means (vibratory roller, road packer and smooth wheel rollers, etc) as per design and specifications including watering also specific lab test, with all lead and lift, etc complete (actual compacted depth shall be considered for payment, complete as per drawings and specifications and as per directed by The Engineer.	160	Cu.m.		



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
9	Providing laying and jointing fair face precast bullnose Kerb block approved quality and make having a minimum works cylindrical strength of 3000 lbs Class -A. per sq. inch at 28 days with a mix not leaner than 1:1-1/2:3 as per design and drawing, laid in cement mortar 1:3 and racking out joints, curing etc. I/C Excavation, back filling with 3" thick lean concrete under the kerb and back hanching 6"x9" (150mm x 229mm) 1:3:6 complete as desired, complete with all respects as per drawings, details and Engineer Incharge.				
i	Size - 6" x 36"x 12" (150 x900 x300mm)	424	R.m.		
10	Providing laying and jointing fair face Kerb block approved quality and make having a minimum works cylindrical strength of 3000 lbs Class -A. per sq. inch at 28 days with a mix not leaner than 1:1-1/2:3 as per design and drawing, laid in cement mortar 1:3 and racking out joints, curing etc. I/C Excavation, back filling with 3" thick lean concrete under the kerb and complete as desired, complete with all respects as per drawings, details and Engineer Incharge.				
i)	Size - 6" x 12"x 12" (150 x300 x300mm)	2,982	R.m.		
11	Providing and laying ellipse, round or other shape pebble gravel bolder pathway with 1:3 mortar grout approved design as per architect drawing at required areas, also mortar base and making of grout setting levelling etc. complete as per drawings, details and Engineer Incharge.	380	Sq.m.		
12	Providing, laying & jointing pre-cast cobble stone as manufactured by Envicrete, Hub Block or equivalent approved by architect complete i/c sand filling bed 2" (0.050mm) thick and grouting of all voids with fine sand, complete with all respects as per drawings, details and Engineer Incharge.				
i	60 mm thk.	1,450	Sq.m.		
13	Providing and fixing Precast C.C Bench with consisting of fairface concrete (cast in place / precast 4000 psi as per Architects approval), 457mm wide 254mm thk & 580mm height, also hard cultural 2" x 1 1/4" wooden planks with screwed or nailed etc. Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	50	Each		
14	Construction of 4000 psi fair face concrete bench cast in place/precast with 150mm wide 8mm thick fiber cement board strip laminated to 25mm thick hard wood and screwed or nailed to concrete bench also strip light under bench and 2" thick cultural stone clading fixed on concrete wall with 1" thick cement sand mortar and also 18"x 12"x 3 1/2" thick stone coping where required. (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	150	R.m.		
15	Providing and planting Miyawaki Forest area consisting of multiple varieties of trees / plants of approved height, girth and pot size (Trees / Plants, shrubs as per approved by the Architect). Including, making of tree pits, sweet earth, cow dung , coal & all other components and as per techniques provided Consultant complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	22,223	Sq.m.		



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
16	Rough dressing of the area for lawn including picking stones, pebbles, stubble, grass roots and other injurious matters and breaking of clods complete including disposal of rubbish as per direction of engineer	6,550	Sq.m.		
17	Supplying and stacking approved garden soil (sweet earth) 0.225 thick free from salts, pebbles and grass roots etc including all leads and lifts.complete with all respects as per drawings, details and Engineer Incharge.	950	Cu.m.		
18	Supplying, stacking and spreading cow dung manure / Slaughter House manure 0.075 thick and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete with all respects as per drawings, details and Engineer Incharge.	282	Cu.m.		
19	Supplying and stacking live (Bermuda) grass in slabs with earth intact including all lead and lifts complete with all respects as per drawings, details and Engineer Incharge.	3,418	Sq.m.		
20	Providing and fixing MS / Fiber / PVC or any other Dust Bin with selected material (as per approved by the Architect). Including, square pipe for holding pipe. Complete with all respects. As per drawings, details and Engineer Incharge.	30	Each		
21	Providing installing lower bridge as per required location shown in drawing. also ms frame, ms pillar, ms curve beam, concrete foundation, wooden planks with wooden railing and other relative material as per requirement of bridge etc. complete in all respect as per drawings, details and as per approved by the consultants / Engineer Incharge.	50	R.m.		
22	Providing installing Elevated bridge as per required location shown in drawing. also ms frame, ms pillar, ms curve beam, concrete foundation, wooden planks with wooden railing and other relative material as per requirement of bridge etc. complete in all respect as per drawings, details and as per approved by the consultants / Engineer Incharge.	110	R.m.		
23	Providing fixing RCC concrete bollard 450mm dia height 800mm mosaic / Terrazo finish with strip LED light complete with all respects, as per drawings details and Engineer Incharge.	60	Each		
24	Providing and laying big rock stones shown in drawings (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, detials and as directed by the Consultant / Engineer Incharge.	210	Cu.m		
25	Providing & Laying crushed stone 25~50mm thick approved by Engineer shown in drawings placing at proposed areas depth 3". Complete in all respects as per drawings, detials and as directed by the Consultant / Engineer Incharge.	440	Cu.m.		
26	Providing & Laying crushed stone 25~50mm thick approved by Engineer with mix sand placing in pathways depth 3", also compacting watering as per requirement. Complete in all respects as per drawings, detials and as directed by the Consultant / Engineer Incharge.	130	Cu.m.		





## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
27	Providing & fixing CC tile 4000 psi (size 6'x 6'x 3" & 6'x 2'x 3") cast in place/precast shown in drawing including placing compacting placing finishing curing complete also including screening and washing at stone aggregate with formwork. Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	15	Cu.m.		
28	Construction of washroom & cycle stand building furnished civil, electrical & plumbing work rate covered area. (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	120	Sq.m.		
29	Providing and Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth as approved by the Architect or Consultant.				
	<b>Trees 3m Height</b>				
i)	Neem (75-100mm Girth & 450-600mm dia pot size)	25	Each		
ii)	Gul mohar (75-100mm Girth & 450-600mm dia pot size)	25	Each		
iii)	Peepal (75-100mm Girth & 450-600mm dia pot size)	25	Each		
iv)	Mango (75-100mm Girth & 450-600mm dia pot size)	25	Each		
v)	Almond Tree (75-100mm Girth & 450-600mm dia pot size)	25	Each		
vi)	Babul Tree (75-100mm Girth & 450-600mm dia pot size)	25	Each		
vii)	Chikoo Tree (75-100mm Girth & 450-600mm dia pot size)	25	Each		
30	<b>Palm 3m Height</b>				
i)	Date Palm (75-100mm Girth & 450-600mm dia pot size)	25	Each		
ii)	Flowers/Shrubs (Any approved Variety) 1m Height	350	Sq.m.		
<b>Total Amount Rs.</b>					<b>-</b>



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit  
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
<b>URBAN FOREST (ELECTRICAL WORKS)</b>					
<b>B NON SCHEDULE ITEMS</b>					
1	Providing and fixing 100mmx100mmx6m high light poles (design as per approved by the Architect) with LED Pole Light IP-65 60-80W 4000K or approved equivalent. Including, 600mmx600mmx1200mm pole foundation, lean, junction box, single arm, M.S plate, bolts, internal wiring and other accessories complete in all respects as per drawings, details and as per directed by the Consultants / Engineer Incharge.	EACH	85		
	Supply, laying, termination, tagging, testing and commissioning of following size of single core / multicore, PVC insulated, PVC/PVC, XLPE/PVC sheathed, non-armored Copper conductor 600V/1000V or 450/750V voltage grade cable in already laid raceways or in ducts including all accessories lugs, cable glands, etc., as per drawings and specifications, complete in all respect. Note: Contractor is advised to confirm the cable running length before commencement of work and termination as per site requirements.				
i)	<b>4 Core - Cu.XLPE/PVC Cable (600/1000V)</b>				
	4 Core - 16 Sq.mm	Rm.	710		
ii)	<b>1 Core - CU/PVC Cable (For Pole Earthing)</b>				
	1 Core - 16 Sq.mm Cu/PVC Cable	Rm.	710		
2	Supply, installation, testing & commissioning of following Isolators, in 16 SWG sheet steel enclosure with neutral and earth terminal strips, including all mounting accessories as per specification & drawing, complete in all respect.				
i	40A, TPN Isolator	No.	2		
ii	20A, SPN Isolator	No.	2		
3	Providing and laying of following size uPVC class D pipe for Incoming cable, Buried in ground/under road/under floor Including excavation for laying of pipe, bricks, warning tape, and backfilling with warning tape, and fresh soil as per specification as shown on the drawing, as per drawings and specification etc., complete in all respect.				
	100 mm dia uPVC Pipe	Rm.	710		
	50 mm dia uPVC Pipe	Rm.	100		
4	Supply & installing of Pull Box as per drawing and specification, complete in all respect.	No.	2		
5	Providing and Construction of Manhole Size 2'-0" x 2'-0" x 2'-6" deep, 6"thick, concrete 1:2:4 ratio with 2' round heavy duty cast iron cover, 100% water proof, as per specification as shown on the drawing, as per drawings and specification etc., complete in all respect.	No.	2		
6	Providing and fixing DB (Surface Type) with 18SWG Enclosure, changeover, circuit breakers and accessories etc. complete in all respects as per drawings, details and Engineer Incharge.	EACH	2		
<b>Total Amount Rs.</b>					<b>-</b>



**BILL OF QUANTITIES****PACKAGE 1-A (i)****BRIDGE**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

**SUMMARY**

Sub-Head	Name of Work	Amount (Rs.)
<b>C</b>	<b>ELECTRICAL WORKS</b>	
C1	BRIDGE LIGHTING	
<b>1</b>	<b><u>SCHEDULE ITEMS</u></b>	
i	SUB HEAD I MAINS & SUB-MAINS	84,913.40
	TOTAL OF SCHEDULE ITEMS (Rs.) ===>>>	84,913.40
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	--
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ===>>>	84,913.40
<b>2</b>	<b><u>NON-SCHEDULE ITEMS</u></b>	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ===>>>	
	<b>Sub-Total (C) (1+2) ===&gt;&gt;&gt;</b>	



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Gov. of Sindh CSR-2024 Schedule Item # / Page #	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
<b>SCHEDULE ITEMS</b>						
C1		BRIDGE LIGHTING				
1	Chapter No. 1	SUB HEAD I MAINS & SUB-MAINS				
	J	WITH 3 CORE OVERHEAD OR UNDERGROUND 300/500				
1.1	Item # 49 (J) / Page # 232	Providing & laying (MAIN or SUB MAIN) PVC insulated with three core copper conductor 300/500 volts size 2.5mm <sup>2</sup>	P.Rft	260	326.59	84,913
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>						<b>84,913</b>
<b>Total Amount Rs.</b>						<b>84,913</b>



## **BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
<b>NON-SCHEDULE ITEMS</b>					
<b>C1</b>	<b>BRIDGE LIGHTING</b>				
a)	Supply, installation, testing and commissioning of following Octagonal Street lighting pole, hot dipped galvanized (Zinc coating not less than 100 micron) from inside and outside with 4mm wall thickness including base plate anchor bolt, nuts and washer, self inspection door with special keys, cable connection box, all required materials and accessories etc., (detail shown on the drawings). Complete in all respects as per specification and drawings.				
i	6 meter High, Single Arm Pole	No.	10		
b)	Construction and installation of Pole foundation in concrete class "A", reinforcement as per AASHTO M31, lean concrete, nuts, base plate, anchor bolts etc. Excavation and backfilling for the Pole foundation shall be included in this job. Foundation constructed above the drain or any location in project. Complete in all respects as per specifications and drawings.	Job.	10		
c)	Supply, installation, testing and commissioning of Street light fixture with 100W LED, min. Luminous Flux/watt 150, Color temperature shall be 4000K, Surge Protection min. 15kV, (IP-66 & IK-09 Rated), must be Painted Aluminum Injection housing material, as per specification and drawing. Lighting fixture samples must be submitted to Consultant for approval, complete in all respect. Note: Cost includes Street light fixture, bracket and other all required installation accessories.	No.	10		
d)	Supply, installation, testing and commissioning of Flood light fixture with 50W LED (IP 66) for under Bridge lighting, surface mounted including Bracketas as per specification and drawing. Lighting fixture samples must be submitted to Consultant for approval, complete in all respect.	No.	40		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
e)	Supply, installation, testing and commissioning of Terminal Box (IP 65 rated), including 1 No. 4A, Circuit Breaker with terminals, as per specification and drawing, complete in all respect.	No.	10		
f)	Supply, installation, testing and commissioning of following Pole mounted, Weatherproof IP65 rated, Lighting Control Panel (LCP) (mounted on existing pole) made with 14/16 SWG sheet metal, dust protected, vermin proof housing, confirming to protection class (IP-65), epoxy powder coated paint with approved color, having all the required installation materials, mounting accessories and protections etc. as per specifications and drawings, complete in all respect with providing shop drawings, manual and warranty documents to owners representative / Consultant.				
i	LCP	No.	1		
g)	Supply, laying, termination, tagging, testing and commissioning of following sizes of 600/1000 volts grade Copper conductor cable, multi core / single core, Cu/PVC/PVC, unarmoured, as incoming supply from nearest power source to LCP in already installed uPVC buried conduit, including cable glands, cable ID marker etc. Complete in all respects, as per drawing and specification and the entire satisfaction of the engineer and employer. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				
i	4C, 16 Sq.mm Cu/XLPE/PVC + 1C, 10 Sq.mm Cu/PVC as ECC	Rm.	60		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
h)	Supply, laying, termination, tagging, testing and commissioning of following sizes of Copper conductor cables, multi core / single core, Cu/PVC, Cu/PVC/PVC, unarmoured, 600/1000V, 450/750V or 300/500V voltage grade cables from LCP to Street light Pole / Under Bridge light and lights to lights, run in already installed uPVC burried pipe / Sleeves or run in already installed uPVC pipe in Jersey barrier including cable glands, cable ID marker etc. Complete in all respects, as per drawing, specification and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				
i	4C, 6 Sq.mm Cu/XLPE/PVC + 1C, 6 Sq.mm Cu/PVC as ECC	Rm.	150		
ii	3C, 6 Sq.mm Cu/XLPE/PVC	Rm.	550		
j)	Supply and laying of following sizes of uPVC Class-D Pipes / Road Crossing Sleeves for LV Cables, burried in ground including excavation of trenches in hard / soft soil for laying of pipe, cost including providing fresh sand (6" under and 6" above pipe), laying protection A class bricks on sand, warning tape and backfilling with new and fresh sand, compaction, plugging of conduits ends etc., as per detail shown on the drawings and specifications, complete in all respect and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the actual pipe lengths as per site conditions before commencement of work.				
i	50mm dia uPVC Pipe (Class-D)	Rm.	400		
k)	Supply and laying of following sizes of uPVC Class-D Pipes run in Jersey barrier and from Jersey barrier to Lighting Pole for LV Cables, as per drawings and specifications, cost also includes concrete filling around the Pole. Complete in all respect and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the actual pipe lengths as per site conditions before commencement of work.				
i	2 x 50mm dia uPVC Pipe (Class-D)	Rm.	60		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
l)	Supply, installation, testing and commissioning of Earth pit with Rod type earth electrode, 3/4" dia and 9 Ft. long copper Clad rod for earthing system, including cost 4" dia boring up to water level or as directed by the engineer in charge, with Bentonite chemical, filling mixture material etc. as per specification to achieve earthing resistance not more than 1 ohm, Inspection pit 15" x 15" x 18" deep (min) with heavy duty C.I cover, complete as per detail drawing and instruction of consultant. providing as built drawings, test reports documents to Employer / Consultant representative. Complete in all respect.	No.	1		
m)	Supply, laying, termination, tagging, testing and commissioning of following size PVC insulated (yellow/green) earth continuity copper conductor (ECC) from earth pits to LCP/poles, in already installed conduit / directly buried, including all accessories lugs, cable gland etc. as per drawings and specification, complete in all respect. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.				
i	1C, 10 Sq.mm Cu/PVC as ECC	Rm.	15		
n)	Preparation of scaled Shop drawings of complete works after approval from the consultant/client. Job also includes any relocation works. Preparation of shop drawings is compulsory before execution of work as per requirement of consultant's design and site during project execution with coordination of all other services.	Job	1		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>Total Amount Rs.</b>					





**BILL OF QUANTITIES****PACKAGE 1-A (i)****GATE HOUSE**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

<b>SUMMARY</b>		
<b>Sub-Head</b>	<b>Name of Work</b>	<b>Amount (Rs.)</b>
<b>C</b>	<b>ELECTRICAL WORKS</b>	
1	<u>SCHEUDLE ITEMS</u>	
i	SUB HEAD I MAINS & SUB-MAINS	8,638,432.80
ii	SUB HHEAD XI ELECTRICAL ACCESSORIES	130,611.68
	TOTAL OF SCHEDULE ITEMS (Rs.) ===>>>	8,769,044.48
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	--
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ===>>>	8,769,044.48
2	<u>NON-SCHEUDLE ITEMS</u>	
C1	LOW VOLTAGE CABLES AND WIRES	
C2	L.V. DISTRIBUTION BOARDS	
C3	CONDUITS & PIPES	
C4	WIRING FOR LIGHTS, FANS & SOCKETS	
C5	WIRING ACCESSORIES	
C6	LIGHT FIXTURE & FANS	
C7	EARTHING SYSTEM	
C8	VOICE, DATA COMMUNICATION & CCTV CABLING SYSTEMS (Passive Equipment Only)	
C9	ADDRESSABLE FIRE ALARM SYSTEM	
C10	DIESEL GENERATOR SET	
C11	HVAC SYSTEM	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ===>>>	
	<b>Sub-Total (C) (1+2) ===&gt;&gt;&gt;</b>	

**BILL OF QUANTITIES**  
**GATE HOUSE (SCHEDULE ITEMS)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Gov. of Sindh CSR-2024 Schedule Item # / Page #	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
1	<b>Chapter No. 1</b>	<b>SUB HEAD I MAINS &amp; SUB-MAINS</b>				
	<b>D</b>	<b>WITH 3 WIRE PVC CONDUIT RECESSED IN THE WALL OR COLUMN</b>				
1.1	Item # 22 (J) / Page # 230	Providing & laying (Main or Sub Main) PVC insulated with size 3-3/.029 copper conductor in ¾" dia PVC conduit recessed in the wall or column as required. (1.5mm2)	P.Rft	2755	519.35	1,430,809
1.2	Item # 24 (J) / Page # 230	Providing & laying (MAIN or SUB MAIN) PVC insulated with size 3-7/.029 copper conductor in ¾" Dia PVC conduit recessed in the wall or column as required. (2.5mm2)	P.Rft	6605	684.64	4,522,047
1.3	Item # 25 (J) / Page # 230	Providing & laying (MAIN or SUB MAIN) PVC insulated with size 3-7/.036 copper conductor in ¾" Dia PVC conduit recessed in the wall or column as required. (4mm2)	P.Rft	710	934.36	663,396
1.4	Item # 26 (J) / Page # 230	Providing & laying (MAIN or SUB MAIN) PVC insulated with size 3-7/.044 (6mm2) copper conductor in 1" Dia PVC conduit recessed in the wall or column as required.	P.Rft	1475	1,370.97	2,022,181
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>						<b>8,638,433</b>
2	<b>Chapter No. 11</b>	<b>Sub Head XI Electrical Accessories</b>				
	<b>B</b>	<b>CEILING ROSE</b>				
2.1	Item # 191 (B) / Page # 244	Providing & fixing Bakelite ceiling rose with two terminals	Per No.	4	373.39	1,494
	<b>C</b>	<b>FAN</b>				
2.2	Item # 195 (C) / Page # 244	Providing & fixing A.C Electric Ceiling fan 56" (good quality)	Per No.	4	14,869.21	59,477
2.3	Item # 196 (C) / Page # 244	Providing & fixing A.C Electric Wall Bracket fan 18" (good quality)	Per No.	6	11,606.88	69,641
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>						<b>130,612</b>
<b>Total Amount Rs.</b>						<b>8,769,044</b>



**BILL OF QUANTITIES**  
**GATE HOUSE (NON-SCHEDULE ITEMS)**


Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
<b>C1</b>	<b>LOW VOLTAGE CABLES AND WIRES</b>				
	Supply, laying, termination, tagging, testing and commissioning of following size of single core / multicore, PVC insulated, PVC/PVC, XLPE/PVC sheathed, non-armored Copper conductor 600V/1000V or 450/750V voltage grade cable in already laid raceways or in ducts including all accessories lugs, cable glands, etc., as per drawings and specifications, complete in all respect. Note: Contractor is advised to confirm the cable running length before commencement of work and termination as per site requirements.				
a)	4 Core, Cu/XLPE/PVC Cable (600/1000V)				
i	4C, 70 Sq.mm Cu/XLPE/PVC Cable	Rm.	25		
ii	4C, 50 Sq.mm Cu/XLPE/PVC Cable	Rm.	200		
iii	4C, 25 Sq.mm Cu/XLPE/PVC Cable	Rm.	200		
iv	4C, 16 Sq.mm Cu/XLPE/PVC Cable	Rm.	220		
v	4C, 10 Sq.mm Cu/XLPE/PVC Cable	Rm.	20		
vi	4C, 6 Sq.mm Cu/XLPE/PVC Cable	Rm.	10		
b)	1 Core, Cu/PVC/PVC Cable (600/1000V)				
i	5 x 1C, 4 Sq.mm Cu/PVC/PVC Cable	Rm.	100		
c)	1 Core, Cu/PVC Cable (450/750V)				
i	3 x 1C, 6 Sq.mm Cu/PVC Cable	Rm.	250		
d)	1 Core, Cu.PVC Cable as ECC (450/750V)				
i	1C, 35 Sq.mm Cu/PVC Cable as ECC	Rm.	25		
ii	1C, 25 Sq.mm Cu/PVC Cable as ECC	Rm.	200		
iii	1C, 16 Sq.mm Cu/PVC Cable as ECC	Rm.	420		
iv	1C, 10 Sq.mm Cu/PVC Cable as ECC	Rm.	20		
v	1C, 6 Sq.mm Cu/PVC Cable as ECC	Rm.	10		




Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C2</b>	<b>L.V. DISTRIBUTION BOARDS</b>				
a)	Supply, installation, testing & commissioning of Wall/Flush mounted Main Distribution Board (MDB) / Sub Main Distribution Board (SMDB) / Distribution Boards (DB), made with 16 SWG sheet steel metal, as per single line diagram, dust protected, vermin proof housing coated with approved color having all the necessary switching & protections, including all mounting accessories as per specifications and drawings, complete in all respect.				
i	MDB-GH (including 50 kVAR PFI & ATS/AMF Panel)	No.	1		
ii	SMDB-GH	No.	1		
iii	LPDB-1	No.	1		
iv	UPSDB-1	No.	1		
v	EXTDB-1	No.	1		
vi	LPDB-2	No.	1		
vii	UPSDB-2	No.	1		
viii	EXTDB-2	No.	1		
ix	DB-CP-01	No.	1		
x	DB-CP-02	No.	1		
b)	Supply, installation, testing & commissioning of following Isolators, in 16 SWG sheet steel enclosure with neutral and earth terminal strips, including all mounting accessories as per specification & drawing, complete in all respect.				
i	40A, TPN Isolator Weatherproof type	No.	1		
ii	20A, SPN Isolator Weatherproof type	No.	16		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C3</b>	<b>CONDUITS &amp; PIPES</b>				
a)	Supply and laying of following size (inner dia) PVC Conduit / uPVC Pipe (Class D) / Flexible PVC Conduit, as race ways with all accessories, recessed / surface on wall / column / under floor, as per specifications and drawings, complete in all respect.				
i	25 mm dia PVC Conduit	Rm.	25		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
ii	38 mm dia PVC Conduit	Rm.	15		
iii	50 mm dia PVC Conduit	Rm.	30		
iv	32 mm dia uPVC Pipe (Class-D)	Rm.	50		
v	38 mm dia uPVC Pipe (Class-D)	Rm.	15		
vi	50 mm dia uPVC Pipe (Class-D)	Rm.	15		
vii	25 mm dia Flexible PVC Conduit	Rm.	30		
b)	Supply and installation of following size (inner dia) uPVC Pipe (Class-D) / Road Crossing Sleeves (Class-D), buried in ground / under roads / under floor as per specification, including excavation of trenches in hard / soft soil for laying of pipe, cost including providing fresh sand (6" under and 6" above pipe), laying protection A class bricks on sand, warning tape, backfilling etc. (wherever required), as shown on drawing, complete in all respect and the entire satisfaction of the engineer and employer.				
i	1 x 50 mm dia uPVC Pipe (Class-D)	Rm.	30		
ii	2 x 50 mm dia uPVC Pipe (Class-D)	Rm.	135		
iii	4 x 50 mm dia uPVC Pipe (Class-D)	Rm.	125		
iv	1 x 100 mm dia uPVC Pipe (Class-D)	Rm.	260		
v	2 x 50 mm dia uPVC Pipe (Class-D) Road Crossing Sleeves	Rm.	90		
vi	1 x 100 mm dia uPVC Pipe (Class-D) Road Crossing Sleeves	Rm.	55		
c)	Supply and installation of following size (inner dia) G.I Pipe as race ways with all accessories, recessed / surface on wall / column / under floor, as per drawing and relevant specification, complete in all respect.				
i	38 mm dia G.I Pipe	Rm.	50		
ii	50 mm dia G.I Pipe	Rm.	25		
d)	Supply and installation of Pull Box with all installation accessories, as per specifications, drawings and approved brands, complete in all respect.	No.	10		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
e)	Supply, installation, testing and commissioning of In-ground Poly Carbonated Cable Junction Box (IP-65), Size (300x200x100mm) for LED Strip Light Drivers (imported) with all accessories, as per drawings, specifications and site requirements, complete in all respect.	No.	40		
f)	Supply and Construction of Handhole Size 1'-6" x 1'-6" x 2'-0" deep, 6"thick, concrete 1:2:4 ratio with 1'-6" round heavy duty cast iron cover, 100% water proof, as per specification and shown on the drawing, complete in all respect.	No.	24		
g)	Supply and Construction of Manhole Size 3'-0" x 3'-0" x 3'-0" deep, 6"thick, concrete 1:2:4 ratio with 3' round heavy duty cast iron cover, 100% water proof, as per specification and shown on the drawing, complete in all respect.	No.	2		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C4</b>	<b>WIRING FOR LIGHTS, FANS &amp; SOCKETS</b>				
a)	Supply, installation, testing and commissioning of circuit wiring from DB to first light point with 3 core, 2.5 sq.mm multi core copper conductor PVC insulated cable in 25mm dia PVC conduit / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	1		
b)	Supply, installation, testing and commissioning of Point wiring from light point to light point with 3 core, 2.5 sq.mm multi core copper conductor PVC insulated cable in 25mm dia PVC conduit / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	1		
c)	Supply, installation, testing and commissioning of circuit wiring from DB to first Bollard light / Flood light point with 2x2.5 sq.mm + 1x2.5 sq.mm as ECC single core copper conductor PVC insulated wires in 32mm dia uPVC Pipe / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	6		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
d)	Supply, installation, testing and commissioning of Point wiring from Bollard light / Flood light point to light point with 2x2.5 sq.mm + 1x2.5 sq.mm as ECC single core copper conductor PVC insulated wires in 32mm dia uPVC Pipe / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	28		
e)	Supply, installing, testing and commissioning of wiring for 32A, 5-Pin Industrial Outlet (for Floor Standing AC units) with 4x6 sq.mm +1x6 sq.mm as ECC single core copper conductor PVC insulated wires in 32mm dia PVC conduit surface / recessed in wall, column, ceiling, under floor etc., including with all conduit accessories as per drawing and specification, complete in all respect.				
i	DB to 32A 5-Pin Industrial Outlet	No.	4		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C5</b>	<b>WIRING ACCESSORIES</b>				
a)	Supply, installation, testing and commissioning of following 10/13/15/16/20 Amps, One / Two / Three / Four gang type Switches, Dimmer Switches, Sockets, Industrial Socket including 16 SWG Sheet Steel powder coated back Boxes with earth terminal, recessed in wall / column etc. with all accessories, as per drawings and specification, complete in all respects.				
i	One Gang Switch 10A	No.	20		
ii	Two Gang Switch 10A	No.	10		
iii	Three Gang Switch 10A	No.	6		
iv	Four Gang Switch 10A	No.	1		
v	One Gang Fan Dimmer Switch 10A	No.	4		
vi	13A, International Switched Socket Outlet	No.	46		
vii	13A, 3-Pin Flat 2-Gang Switched Socket Outlet	No.	20		
viii	13A, Unswitched Spur Outlet	No.	1		
ix	15A, 3-Pin Switched Socket Outlet	No.	10		
x	20A, Flex Outlet	No.	2		


Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
xi	20A, Double Pole Switch with Neon	No.	14		
xii	32A, 3-Pin Industrial Socket with Plug top	No.	4		
xiii	32A, 5-Pin Industrial Socket with Plug top	No.	4		
b)	Supply, installation, testing and commissioning of Floor Distribution Box (imported), 14 SWG Sheet Steel with all accessories, as per drawings, specifications and site requirements, complete in all respect. Note: Excluded of all Sockets and Face plates.	No.	4		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C6</b>	<b>LIGHT FIXTURE &amp; FANS</b>				
a)	Supply, installation, testing and commissioning of following Light fixtures complete with starters, Electronic ballast (unless mention otherwise), lamps, lamp holders, drivers, mounting and connection accessories etc., as per drawings and specifications, complete in all respects. Lighting fixtures sample must be submitted to consultant for approval. Note: - For complete detail references of Light Fixtures, please refer to Light Fixture Schedules. - The Bidder shall provide the complete Technical Literature of light fixtures. - All light fixtures and its color temperature subject to approval of Architect. Lighting fixtures Sample must be submitted for approval.				
i	Surface Ceiling mounted Indoor LED Down Light Fixture, 4000K, IP-20 rated with 10W LED	No.	156		
ii	Surface Ceiling mounted Indoor LED Down Light Fixture, 4000K, IP-20 rated with 15W LED	No.	8		
iii	Floor mounted Extruded LED Bollard Light Fixture, 3000K, IP-54 rated with Aluminum Housing and 1x16W LED	No.	24		
iv	Surface Ceiling mounted LED Panel Light Fixture with 40W LED lamp	No.	4		
v	Wall mounted Indoor Wall Light Fixture, 4000K, IP-20 rated with 20W LED	No.	10		
vi	Floor mounted LED Flood Light Fixture, 3000K, IP-65 rated with Die Cast Aluminum housing and 150W LED	No.	2		
vii	Floor mounted LED Flood Light Fixture, 3000K, IP-65 rated with Die Cast Aluminum housing and 35W LED	No.	8		






Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
viii	Wall Surface mounted LED Picture Light Fixture, IP-20 rated with 1x12W LED	No.	2		
ix	Recessed mounted LED Under Water Light Fixture (IP-68) with 5W LED Lamp	No.	4		
x	Surface mounted LED Planter Light Fixture (IP-65) with Aluminum / Tempered Glass Housing and 6W LED lamp	No.	14		
xi	LED Mono Strip Light Fixture (Flexi Tube Diffused), 3000K, IP-65 rated with 10W/Meter LED, Drivers etc. for Facade Lighting	Rm.	420		
xii	8W, Emergency light with self contained Battery, Ceiling mounted, IP-20 rated, UL 924 Listed, as per specification and drawing complete in all respect. (non-maintained)	No	6		
xiii	8W, Emergency light with self contained Battery, Wall mounted, IP-65 rated, UL 924 Listed, as per specification and drawing complete in all respect. (non-maintained)	No	12		
xiv	Surface mounted Emergency Exit Light Fixture, IP-20 rated, (3 Hrs Battery Backup, Maintained Type) with Poly Carbonate housing and 8W LED Lamp	No	6		
b)	Supply, installation, testing and commissioning of following types of fan including all connecting accessories, flexible wire etc. as per drawings and specifications, complete in all respects.				
i	8" dia Exhaust Fan	No.	10		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C7</b>	<b>EARTHING SYSTEM</b>				
a)	Supply, installing, testing and commissioning of following items for complete earthing system including all connecting accessories as per drawings & specifications complete in all respect.				
i	Earth pit with Rod type earth electrode, 20mm dia and 3 meter long copper rod .	No.	4		
b)	Supply, installation, testing and commissioning of Copper Earth Bar 475 mm x 90 mm x 96 mm with single disconnecting link for earthing system as per drawings and instruction of consultant, including all mounting accessories etc., complete in all respect.	No.	1		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
c)	Supply, laying, testing and commissioning of 1x16 Sq.mm PVC insulated Cu. Conductor cable as earth continuity conductor (ECC) in 25 mm dia uPVC conduit, complete in all respect.	No.	40		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C8</b>	<b>VOICE &amp; DATA COMMUNICATION</b>				
	Supply, installation, testing and commissioning of following items for Voice & Data Communication System, described below including all accessories, wiring etc. as per drawings and specifications, complete in all respect.				
a)	Supply, installation, testing and commissioning of Dual RJ-45, Cat-6 outlet for Voice & Data with shutter type and 16 SWG back box including tagging, as per drawing and specification, complete in all respect.	No.	4		
b)	Supply, laying, termination, testing and commissioning of CAT 6 - 4 pair cable for Single RJ-45 outlet (Data, Voice, Camera, IPTV and Wifi systems) in 25mm dia PVC conduit concealed / surface from each outlet to IDF racks, including tagging and piping with all necessary accessories, complete in all respect.	Mtr.	150		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C9</b>	<b>ADDRESSABLE FIRE ALARM SYSTEM</b>				
	Supply, installation, testing and commissioning of following items for Addressable Fire Alarm System, described below including all accessories, complete with mounting brackets, installation accessories, wiring etc. as per drawings and specifications, complete in all respect.				
a)	Supply, laying, termination, testing and commissioning of wiring for complete Fire Alarm System with 2C-1.5 Sq.mm shielded FP-200, twisted pair Fire Resistant Cable (2 hrs. rated) in 25mm dia PVC conduit concealed, (M.S conduit for surface.) etc., including any wiring between fire alarm control panel and other's systems control panel's etc. Complete in all respect.	Mtr.	550		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
b)	Supply, installation, testing and commissioning of Addressable Photoelectric Smoke Detector with base and back box, as per drawing and specification, complete in all respect.	No.	31		
c)	Supply, installation, testing and commissioning of Addressable Photoelectric Heat Detector with base and back box, as per drawing and specification, complete in all respect.	No.	2		
d)	Supply, installation, testing and commissioning of Addressable Manual Pull Station / Call Point with base and back box, as per drawing and specification, complete in all respect.	No.	6		
e)	Supply, installation, testing and commissioning of Addressable EVAC Speaker with flasher / Strobe, base and back box, as per drawing and specification, complete in all respect.	No.	6		
f)	Supply, installation, testing and commissioning of 01 Loop Addressable Fire Alarm Control Panel (FACP), including all necessary accessories, identification tagging etc. and 3Hrs battery back up. FACP as per drawing and specification, complete in all respect.	No.	2		
g)	Installation, testing and commissioning, Softwear, Programming by Manufacturer Authorized Agent / Dealer and handing over complete Fire Alarm system to owner with providing training, SOP, complete equipment's manual and warranty documents to Owner's Representative.	Job.	1		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C10</b>	<b>DIESEL GENERATOR SET</b>				
	All items under this head to be carried out as per technical specifications and Electrical Inspector / Explosives Inspector approval, Drawings, relevant BSI / ASTM Standards, IEC regulation, complete in all respect and to the entire satisfaction of the Employer, and as mentioned in General Notes or noted otherwise, Including providing of shop and as built drawings. complete in all respects.				

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
a)	Supply, installation, testing and commissioning of 100 kVA (Prime Power Rated) 3 phase, 4 wire, 400V, 50 Hz, Diesel Generator set with Weather proof acoustic Canopy, Electronic Governor, AMF, an advanced LCD Display control panel (Programmable), Batteries, battery charger, battery cables, battery stand and circuit breaker and its accessories, as per specification, including transportation up to site and foundation pad. Exhaust piping, critical silencer with elbow, base fuel tank (8 hrs.) etc., also inclusive of Power cable end termination, with the approval of engineer. Complete in all respect.	No.	1		
b)	Prepare and Construction of RCC base as foundation / pad for above Generator (as per recommendation of manufacturer and specification) with the approval of engineer, complete in all respect.	Job	1		
c)	Providing, installing, testing and commissioning of Control Cabling with appropriate sized (multicore) cable as per manufacturer recommendation, between Generator and MDB, including terminations and all mounting accessories etc., complete in all respects.	Job	1		
d)	Supply and Handing Over to Client Representative of Standard Spare Parts as recommended by the manufacturer for the operation of 1000 hours for the above D.G. Set (List of Spares to be provided as per specification) and as per standard engine & alternator models provided by manufacturer.	Lot.	1		
e)	Getting necessary Approval/ NOC's for installation of above Generator from concerned Authorities (Electric Inspector) etc. All expenses are the responsibility of contractor.	Job	1		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>C11</b>	<b>HVAC SYSTEM</b>				
	DX-SPLIT TYPE AIRCONDITIONING UNIT (INVERTER)				



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
a)	Supply, installation, testing and commissioning of Wall mounted type DX Split Air-conditioning Units (Indoor Unit + Outdoor Condensing Unit), as shown on the drawings including copper piping with insulation, cladding, thermostate, control and power cables, connection from electrical outlet to the unit, hanger and supports, fittings, jointing and all needed material required for installation, and as directed by the engineer incharge in following sizes and capacities, complete in all respect.				
i	Capacity 1.0 TR	No.	2		
ii	Capacity 1.5 TR	No.	4		
iii	Capacity 2.0 TR	No.	6		
b)	Supply, installation, testing and commissioning of Floor Standing Air-conditioning Units, as shown on the drawings including copper piping with insulation, cladding, thermostate, control and power cables, connection from electrical outlet to the unit, hanger and supports, fittings, jointing and all needed material required for installation, and as directed by the engineer incharge in following sizes and capacities, complete in all respect.				
i	Capacity 1.0 TR	No.	8		
c)	Supply, installation and fixing of following size UPVC Class 'E' pipes and fittings as per BS 3505 (EN 1401) for Condenser Water drainage including insulation, fittings, bends, cuttings, filling etc. as indicated on drawings, as per specifications and Engineer's approval.				
i	1" dia	Rft.	800		
ii	1-1/2" dia	Rft.	400		
d)	Supply, Installation and Coordination of Refrigerant copper piping with insulation, with running length and sizes as per manufacturer's recommendation, This includes Wall or Floor Penetration with piping supports and hangers.	Job	1		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>Total Amount Rs.</b>					

**BILL OF QUANTITIES**  
**PACKAGE 1-A (i)**  
**STREET LIGHTING**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
<b>C</b>	<b>ELECTRICAL WORKS</b>	
C1	STREET LIGHTING	
1	<u>SCHEDULE ITEMS</u>	
i	SUB HEAD I MAINS & SUB-MAINS	8,034,114.00
	TOTAL OF SCHEDULE ITEMS (Rs.) ===>>>	8,034,114.00
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	--
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ===>>>	8,034,114.00
2	<u>NON-SCHEDULE ITEMS</u>	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ===>>>	
	<b>Sub-Total (C) (1+2) ===&gt;&gt;&gt;</b>	



**BILL OF QUANTITIES**  
**STREET LIGHTING (SCHEDULE ITEMS)**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Gov. of Sindh CSR-2024 Schedule Item # / Page #	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
C1		STREET LIGHTING				
1	Chapter No. 1	SUB HEAD I MAINS & SUB-MAINS				
	J	WITH 3 CORE OVERHEAD OR UNDERGROUND 300/500				
1.1	Item # 49 (J) / Page # 232	Providing & laying (MAIN or SUB MAIN) PVC insulated with three core copper conductor 300/500 volts size 2.5mm <sup>2</sup>	P.Rft	24600	326.59	8,034,114
CARRIED TO ELECTRICAL SUMMARY =====>>>>						8,034,114
Total Amount Rs.						8,034,114



**BILL OF QUANTITIES****EDUCATION CITY KARACHI PACKAGE 1-A (i)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
<b>C1</b>	<b>STREET LIGHTING</b>				
a)	Supply, installation, testing and commissioning of following Octagonal Street lighting pole, hot dipped galvanized (Zinc coating not less than 100 micron) from inside and outside with 4mm wall thickness including base plate anchor bolt, nuts and washer, self inspection door with special keys, cable connection box, all required materials and accessories etc., (detail shown on the drawings). Complete in all respects as per specification and drawings.				
i	8 meter High, Single Arm Pole	No.	77		
ii	8 meter High, Double Arm Pole	No.	0		
iii	10 meter High, Single Arm Pole	No.	0		
iv	10 meter High, Double Arm Pole	No.	34		
v	10 meter High, Split Double Arm Pole	No.	103		
vi	12 meter High, Single Arm Pole	No.	4		
vii	12 meter High, Double Arm Pole	No.	121		
b)	Construction and installation of Pole foundation in concrete class "A", reinforcement as per AASHTO M31, lean concrete, nuts, base plate, anchor bolts etc. Excavation and backfilling for the Pole foundation shall be included in this job. Foundation constructed above the drain or any location in project. Complete in all respects as per specifications and drawings.	Job.	339		







Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
c)	Supply, installation, testing and commissioning of Street light fixture with 200W LED, min. Luminous Flux/watt 150, Color temperature shall be 4000K, Surge Protection min. 15kV, (IP-66 & IK-09 Rated), must be Painted Aluminum Injection housing material, as per specification and drawing. Lighting fixture samples must be submitted to Consultant for approval, complete in all respect. Note: Cost includes Street light fixture, bracket and other all required installation accessories.	No.	597		
d)	Supply, installation, testing and commissioning of Terminal Box (IP 65 rated), including 1 No. 4A, Circuit Breaker with terminals, as per specification and drawing, complete in all respect.	No.	81		
e)	Supply, installation, testing and commissioning of Terminal Box (IP 65 rated), including 2 No. 4A, Circuit Breakers with terminals, as per specification and drawing, complete in all respect.	No.	258		
f)	3.5 Meter High Hot Dip Galvanized Decorative Urban Pole covered with Stiff Poly Urethane Decorative Material Anti Corrosion, Post Top Decorative 50W LED Light Fixture, IP66 rated including all required materials and accessories etc.	No.	290		
g)	4.5 Meter High Hot Dip Galvanized Decorative Urban Pole covered with Stiff Poly Urethane Decorative Material Anti Corrosion, Post Top Decorative 50W LED Light Fixture, IP66 rated including all required materials and accessories etc.	No.	293		
h)	Recessed mounted LED Under Water Light Fixture (IP-68) with 10W LED Lamp	No.	12		
j)	LED Mono Strip Light Fixture (Flexi Tube Diffused), 3000K, IP-68 rated with 10W/Meter LED, Drivers etc.	Rm.	300		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
k)	Supply, installation, testing and commissioning of following Pad mounted, Weatherproof IP65 rated Feeder Pillar (FP) / Lighting Control Panel (LCP) made with 14/16 SWG sheet metal, dust protected, vermin proof housing, epoxy powder coated paint with approved color, having all the required installation materials, mounting accessories & protections, RCC foundation (including all civil related work) etc. as per specifications and drawings, complete in all respect with providing shop drawings, manual and warranty documents to owners representative / Consultant.				
i	FP (Feeder Pillar)	No.	3		
l)	Supply, laying, termination, tagging, testing and commissioning of following sizes of 600/1000 volts grade Copper conductor cables, multi core / single core, Cu/XLPE/SWA/PVC, Cu/PVC, armoured / unarmoured, as incoming supply from PMU to Feeder Pillar in already installed trenches, including cable glands, cable ID marker etc. Complete in all respects, as per drawing and specification and the entire satisfaction of the engineer and employer. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				
i	4C, 70 Sq.mm Cu/XLPE/SWA/PVC + 1C, 35 Sq.mm Cu/PVC as ECC	Rm.	150		
ii	4C, 50 Sq.mm Cu/XLPE/SWA/PVC + 1C, 25 Sq.mm Cu/PVC as ECC	Rm.	200		
m)	Supply, laying, termination, tagging, testing and commissioning of following sizes of 600/1000 volts grade Copper conductor cables, multi core / single core, Cu/XLPE/SWA/PVC, Cu/PVC, armoured / unarmoured cable from Feeder Pillar to Street light Pole and poles to poles in already installed trenches, including cable glands, cable ID marker etc. Complete in all respects, as per drawing, specification and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
i	4C, 16 Sq.mm Cu/XLPE/SWA/PVC + 1C, 10 Sq.mm Cu/PVC as ECC	Rm.	9500		
ii	4C, 10 Sq.mm Cu/XLPE/SWA/PVC + 1C, 10 Sq.mm Cu/PVC as ECC	Rm.	2050		
iii	4C, 6 Sq.mm Cu/XLPE/SWA/PVC + 1C, 6 Sq.mm Cu/PVC as ECC	Rm.	6500		
n)	Excavation of trenches in hard / soft soil, cost including providing fresh sand 6" above and 6" under cable, laying protection A class bricks on sand, warning tape and backfilling after laying of cables, compaction etc., as per detail shown on the drawing, complete in all respect and the entire satisfaction of the engineer and employer. (for underground Street Lighting Cables)	Rm.	7500		
o)	Supply and laying of following sizes of uPVC Class-D Road Crossing Sleeves for LV Cables, buried in ground including excavation of trenches in hard / soft soil for laying of pipe, cost including providing fresh sand (6" under and 6" above pipe), laying protection A class bricks on sand, warning tape and backfilling with new and fresh sand, compaction, plugging of conduits ends etc., as per detail shown on the drawings and specifications, complete in all respect and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the actual pipe lengths as per site conditions before commencement of work.				
i	2 x 50mm dia uPVC Road Crossing Sleeves (Class-D)	Rm.	70		
p)	Supply, installation, testing and commissioning of following 11000 / 415V, 50Hz, 3 phase, 4 wire, Pad mounted Transformer (PMU) with canopy (IP66 - Weather proof), including MV incoming, outgoing loop to the other Transformer and outgoing Disconnect Switches, MV HRC Fuse Links, LV Breaker, earth fault indicator, control cables, RCC foundation (including all civil related work) and all necessary installation accessories etc., as per KE specifications, drawings, data sheets and approval. Complete in all respects.				
i	500 kVA Pad Mounted Transformers	No.	3		
q)	Preparation of foundation for following Pad Mounted distribution transformers conforming to requirements, Technical Specifications, Standards, Drawings etc; complete in all respects and to the approval of the Engineer.				

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
i	For 500 KVA Trafo	No.	3		
r)	Supply, installation, testing and commissioning of Earth pit with Rod type earth electrode, 3/4" dia and 9 Ft. long copper Clad rod for earthing system, including cost 4" dia boring up to water level or as directed by the engineer in charge, with Bentonite chemical, filling mixture material etc. as per specification to achieve earthing resistance not more than 1 ohm, Inspection pit 15" x 15" x 18" deep (min) with heavy duty C.I cover, complete as per detail drawing and instruction of consultant. providing as built drawings, test reports documents to Employer / Consultant representative. Complete in all respect. (Pit for PMU)	No.	6		
s)	Supply, installation, testing and commissioning of Earth pit with Rod type earth electrode, 3/4" dia and 9 Ft. long copper Clad rod for earthing system, including cost 4" dia boring up to water level or as directed by the engineer in charge, with Bentonite chemical, filling mixture material etc. as per specification to achieve earthing resistance not more than 1 ohm, complete as per detail drawing and instruction of consultant. providing as built drawings, test reports documents to Employer / Consultant representative. Complete in all respect. (Pit for Lighting Circuits)	No.	84		
t)	Supply, installation, testing and commissioning of Copper Earth Bar 475 mm x 90 mm x 96 mm with single disconnecting link for earthing system as per drawings and instruction of consultant, including all mounting accessories etc., complete in all respect.	No.	3		
u)	Supply, laying, termination, tagging, testing and commissioning of following size PVC insulated (yellow/green) earth continuity copper conductor (ECC) from earth pits to LCP/poles, in already installed conduit / directly buried, including all accessories lugs, cable gland etc. as per drawings and specification, complete in all respect. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.				
i	1C, 35 Sq.mm Cu/PVC as ECC	Rm.	120		
ii	1C, 10 Sq.mm Cu/PVC as ECC	Rm.	1000		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
iii	1C, 6 Sq.mm Cu/PVC as ECC	Rm.	200		
v)	Supply and Construction of Manhole Size 3'-0" x 3'-0" x 3'-0" deep, 6"thick, concrete 1:2:4 ratio with 3' round heavy duty cast iron cover, 100% water proof, as per specification and shown on the drawing, complete in all respect.	No.	50		
w)	Preparation of scaled Shop drawings of complete works after approval from the consultant/client. Job also includes any relocation works. Preparation of shop drawings is compulsory before execution of work as per requirement of consultant's design and site during project execution with coordination of all other services.	Job	1		
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>Total Amount Rs.</b>					



**BILL OF QUANTITIES**  
**PACKAGE 1-A (i)**  
**MV POWER DISTRIBUTION**

Client / Owner : Project Implementation Unit  
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)  
Name of Work : Infrastructure Development Works for Package 1-A(i)

<b>SUMMARY</b>		
<b>Sub-Head</b>	<b>Name of Work</b>	<b>Amount (Rs.)</b>
<b>C</b>	<b>ELECTRICAL WORKS</b>	
C1	MV POWER DISTRIBUTION	
1	<b><u>SCHEDULE ITEMS</u></b>	
	TOTAL OF SCHEDULE ITEMS (Rs.) ===>>>	
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ===>>>	
2	<b><u>NON-SCHEDULE ITEMS</u></b>	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ===>>>	
	<b>Sub-Total (C) (1+2) ===&gt;&gt;&gt;</b>	



## **BILL OF QUANTITIES**

### **MV POWER DISTRIBUTION (NON-SCHEDULE ITEMS)**


Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
<b>C1</b>	<b>MV POWER DISTRIBUTION</b>				
	Note: All items shall be carried out in accordance with the specification and drawings and to the satisfaction of the Engineer.				
a)	Excavation of cable trench in any type of soil within the project area for laying of MV cables, as per dimensions and procedure given on the drawings, complete in all respects and to the approval of the Engineer.	Cu.mtr	7500		
b)	Backfilling of any type of trench already excavated, after laying various cables (MV) including sand, protective bricks and excavated earth compacted to 95% modified AASHTO density in layers of not exceeding 9" thickness, site cleaning etc, as per drawings, complete in all respects and to the approval of the Engineer:				
i	Sand (Bed and Cover)	Cu.mtr	450		
ii	Bricks (Protection Cover) 3" thick	Sq.mtr	950		
iii	Excavated earth back filling and compaction	Cu.mtr	6000		
iv	Supply and installation of HT cable markers as per specifications, drawings complete in all respects and to the approval of the Engineer.	Each	70		
c)	Supply, laying, connecting, testing and commissioning of following 8750 / 15000 Volt grade HT XLPE/SWA/PVC armoured aluminium conductor cables, in already excavated trenches or directly buried (already installed at road crossing) including provision of warning tape as per requirement, K-Electric specification and standards provided in the given drawings, complete in all respect and to the approval of the Engineer.				
i	400 Sq. mm XLPE/SWA/PVC armoured aluminium conductor 3-Core Cable	m	12000		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
d)	Supply, installation, testing and commissioning of following indoor type HT heat shrinkable termination kits for cables, including cable glands, ferules, lugs, ties and miscellaneous materials and installation as per requirements, standards, specification, complete in all respect and to the approval of the engineer.				
i	400 Sq. mm XLPE/SWA/PVC armoured aluminium conductor 3-Core Cable	Each	5		
e)	Supply and installation of straight cable joints pre-mold/cold shrink type for medium voltage cable as per K-Electric specifications, drawings, complete in all respects and to the approval of the engineer.				
i	400 Sq. mm XLPE/SWA/PVC armoured aluminium conductor 3-Core Cable	Each	4		
f)	Supply and installation of buried PE pipe, including jointing, excavation, sand bedding back-filling etc., complete in all respect and as per Specification and Drawings and to the approval of the Engineer, in the following sizes:				
i	150 mm (6") dia PE Pipe	m	900		
g)	Providing, laying and jointing of 150 mm (6") dia heavy gauge G.I. pipe as raceway for cable crossing including all accessories, bends, boxes, complete in all respect and as per Specifications and to the approval of the Engineer.	m	175		
h)	Supply, installation, testing and commissioning of following 11 KV HT, 4 way & 3 way pad mounted switches (Ring Main Units) as per K-Electric Specification provided with Tender document and provision of foundation according to drawings provided by manufacturer complete in all respect including the foundation and to the approval of the engineer.				
i	3-Way Type Pad Mounted Ring Main Unit	Each	1		
j)	Supply, installation, testing and commissioning of Pad Mounted distribution transformers conforming to requirements, K-Electric Specifications, Standards, Drawings etc; complete in all respects and to the approval of the Engineer.				
i	500 KVA	Each	1		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
k)	Preparation of foundation for following Pad Mounted distribution transformers conforming to requirements, Technical Specifications, Standards, Drawings etc; complete in all respects and to the approval of the Engineer.				
i	500 KVA	Each	1		
l)	Supply, installation, testing and commissioning of Earthing System for HT 3-Way, 4-Way Switches (Ring Main Unit), Pad Mounted Distribution Transformers including earth electrode set, with 18 mm dia 3 meter long driven GI rod, connected with PVC insulated GI conductor, upto earth connecting point to achieve the specified earthing results up to 2.5 Ohms for transformer and 5 ohms for enclosures/HT panels as required for completion of the item as per requirements, specifications complete in all respects and to the approval of the Engineer.	Jobs	3		
	<b>Notes:</b>  - Package 1ai only contains the road lighting, Gate House and Bridge.  - MV Distribution network is only considered for Gate House, Considering the fact that MV Network for institutes and other amenities will be considered at the time of occupancy of Institutes and amenities.				
<b>CARRIED TO ELECTRICAL SUMMARY =====&gt;&gt;&gt;&gt;</b>					
<b>Total Amount Rs.</b>					



**BE-1**  
**Appendix-E to Bid**

**PROPOSED CONSTRUCTION SCHEDULE**

Pursuant to Sub-Clause 43.1 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 as Appendix-E to Bid, the Construction Schedule in the bar chart and Primavera (Level-III) 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 in days noted below and counted from the date of receipt of Engineer's Notice to Commence (Attach sheets as required for the specified form of Construction Schedule)

A separate Bar Chart Showing monthly percentage progress showing major activities related to Cost of Project be attached which will be considered as "Scheduled Progress" throughout the currency of Contract unless revised with the approval of Client.

Description		Time for Completion
a)	Whole Works	_____ days
b)	Part-A	_____ days (If applicable)
c)	Part-B	_____ days (If applicable)
d)	_____	_____ days
e)	_____	_____ days



**BF-1**  
**Appendix-F to Bid**

**METHOD 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. Mobilization in Pakistan, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for storage, communications, security and other services to be used.
3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.
4. Quality control / Quality assurance measures to be adopted including procedures to be followed for carrying out all tests required under specifications.



**BG-1**  
**Appendix-G to Bid**

**LIST OF MAJOR EQUIPMENT – RELATED ITEMS**

The Bidder will provide a list of all major equipment and related items, under separate heading for items owned, to be purchased or to be arranged on lease by him to carry out the Works. The information shall include make, type, capacity, and anticipated period of utilization for all equipment which shall be in sufficient detail to demonstrate fully that the equipment will meet all requirements of the Specifications.

**LIST OF MAJOR EQUIPMENT**

<b>Owned Purchased or Leased</b>	<b>Description of Unit (Make, Model, Year)</b>	<b>Capacity HP Rating</b>	<b>Condition</b>	<b>Present Location or Source</b>	<b>Date of Delivery at Site</b>	<b>Period of Work on Project</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
a. Owned						
b. To be Purchased						
c. To be arranged on Lease						



**BG-2**  
**Appendix-G to Bid**

**Equipment:**

The Bidder must demonstrate that it has the key equipment listed hereafter:

No.	PLANT/ EQUIPMENT				
	Equipment type and characteristics	Total Nos. available	Under Utilization on other projects, if applicable	Nos. waiting to be shifted to new project(s)	Min. Number Required for this Project



**BH-1**  
**Appendix-H to Bid**

### **CONSTRUCTION CAMP AND HOUSING FACILITIES**

The Contractor in accordance with Clause 34 of the Conditions of Contract shall provide description of his construction camp's facilities and staff housing requirements.

The Contractor shall be responsible for pumps, electrical power, water and electrical distribution systems, and sewerage system including all fittings, pipes and other items necessary for servicing the Contractor's construction camp.

The Bidder shall list or explain his plans for providing these facilities for the service of the Contract as follows:

1. Site Preparation (clearing, land preparation, etc.).
2. Provision of Services.
  - a) Power (expected power load, etc.).
  - b) Water (required amount and system proposed).
  - c) Sanitation (sewage disposal system, etc.).
3. Construction of Facilities
  - a) Contractor's Office. Workshop and Work Areas (areas required and proposed layout, type of construction of buildings, etc.).
  - b) Warehouses and Storage Areas (area required, type of construction and layout).
  - c) Housing and Staff Facilities (Plans for housing for proposed staff, layout, type of construction, etc.).
4. Construction Equipment Assembly and Preparation (detailed plans for carrying out this activity).
5. Other Items Proposed (Security services, etc.). The Contractor should mention here what are his proposed environmental measures for the project as per EPA rules like treatment of wastewater and water quality etc. The Contractor shall submit a detailed EMP (Environmental Management Plan) to describe how materials are removed from site and disposed off at a safe location, prevention for the contamination of ground and surface water in neighboring areas etc. including remedial measures for adoption.
6. Detail of testing Lab with testing equipment etc.



**BI-1**  
**Appendix-I to Bid**

**LIST OF SUBCONTRACTORS**

I/We intend to subcontract the following parts of the Work to subcontractors. In my/our opinion, the subcontractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of subcontractors, the curriculum vitae and experience of their key personnel who will be assigned to the Contract, equipment to be supplied by them, size, location and type of contracts carried out in the past.

<b>Part of Works (Give Details)</b>	<b>Subcontractor (With Complete Address)</b>
<b>1</b>	<b>2</b>



**BJ-1**  
**Appendix-J to Bid**

**ESTIMATED PROGRESS PAYMENTS**

Bidder's estimate of the value of work which would be executed by him during each of the periods stated below, based on his Programme of the Works and the Rates in the Bill of Quantities, expressed in thousands of Pakistani Rupees:

<b>Month</b>	<b>Amounts (1,000 Rs.)</b>
<b>1</b>	<b>2</b>
1 <sup>st</sup> Quarter	
2 <sup>nd</sup> Quarter	
3 <sup>rd</sup> Quarter	
4 <sup>th</sup> Quarter	
-----	
-----	
-----	
<b>Bid Price</b>	





**BK-1**  
**Appendix-K to Bid**

**ORGANIZATION CHART  
FOR THE  
SUPERVISORY STAFF AND LABOUR**



**BL-1**  
**Appendix-L to Bid**

**(INTEGRITY PACT)**

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

Contract No. \_\_\_\_\_ Dated \_\_\_\_\_  
Contract Value: \_\_\_\_\_  
Contract Title: \_\_\_\_\_

..... [name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of 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 times the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Buyer: .....  
Signature: .....  
[Seal]

Name of Seller/Supplier: .....  
Signature: .....  
[Seal]



**BM-1**  
**Appendix-M to Bid**

**FINANCIAL COMPETENCE AND ACCESS TO FINANCIAL RESOURCES**

The financial position of the bidder shall be checked as per following details:

**1. SOUNDNESS AND ACCESS TO FINANCIAL RESOURCES:**

“The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credits, and other financial means, other than any contractual advance payments, to meet the financial requirements of the contract in the amount of his bid. As a minimum the Bidder must show that his resources, in term of at least his latest years working capital and line of credits, will be adequate to cover an amount equivalent to his bid price and current work commitments i.e.

[5 x working capital + Project specific lines of credit\*– 40% of current contract commitments] > Bid price.

Working capital is the difference between current assets and current liabilities and measures the firm’s ability to generate cash in the short term.”

*\*Any line of credit indicated for this (tendered) project needs to have been certified by the Bank and the said certificate is enclosed with this Appendix.*

**2. AVERAGE ANNUAL CONSTRUCTION TURNOVER**

Criteria	Bidders’ to list their certified yearly turnover for last 3 years
Minimum average annual construction turnover of Pak Rs. _____ calculated as total certified payments received for contracts in progress or completed, within the last 03 years.	



**BN-1**  
**Appendix-N to Bid**

**PAST PERFORMANCE, CURRENT COMMITMENT, QUALIFICATION AND  
EXPERIENCE**

**1) General Construction Experience**

Requirement	Bidder to provide details	Role
Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last 5 years prior to the bid submission deadline		

**2) Contracts of Similar Size and Nature**

Requirement	Bidder to provide specific details	Role
Participation as contractor, management contractor, or subcontractor, in at least 3 Contracts within the last 5 years, each with a value of at least Rs . . . . . that has been successfully or is substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods, technology or other characteristics as indicated in these Bidding Documents.		



**BN-2**  
**Appendix-N to Bid**

**3) Personnel**

No.	Position	Total No. in the firm	Minimum requirement for the project	Total work experience (years)	Nos. already posted on other projects	Nos. being allocated for this project	Professional credit point

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



**BN-3**  
**Appendix-N to Bid****4) Data regarding past performance and present commitment of the Bidders:**

<b>Present Commitment</b>								
<b>Sr. No.</b>	<b>Name of ongoing projects</b>	<b>Name of Employer</b>	<b>Date of Start</b>		<b>Progress</b>		<b>Remark regarding delays if applicable</b>	<b>Satisfactory performance certificate from Employer (Minimum requirement)</b>

Number of projects that a bidder can undertake to construct as per PEC works by laws is aggregate Professional Credit Points (PCPs) authorized for a category of licensee divided by the PCP of construction and capital cost of single project under consideration.

For example C-3 category contractor should have a minimum of 15 PCPs as per table „A“ below from the Bye Laws/S.R.O. 568(I)/87 at all times and the PCP of individual project (costing say 100 million rupees) is 5 calculated on the basis of 1 PCP for every 20 million project cost. It means the contractor can have ongoing projects up to 3 ( $15 \div 5$ ) number of this size.

Table A:-

<b>Contractor' Category</b>	<b>Limit of Construction Cost of Project (Million rupees )</b>	<b>Average annual value of work for last 3 years (million rupees)</b>	<b>Largest project value during last 5 years (Million rupees)</b>	<b>Paid up capital or net/capital worth (million rupees)</b>	<b>Minimum requirement of professional credit points (PCP credit)</b>
C-3	Upto 100	10	20	5	15

The evaluation of the personnel shall be carried out as per PEC Engineering Bye Laws 1987 and review his qualification accordingly. PCP/ minimum requirement of staff required for the contractor's works in hand should be in accordance with the provisions of PEC's works byelaws. For example, subject to the other conditional points and limits, a single registered Engineer is given 1 PCP for each year of experience in the construction and operation of engineering works (subject to a minimum of 10 PCPs and maximum of 30 PCPs). The contractor setup has to meet the minimum PCP requirements all time during the currency of the contract for engineering staff to be deployed/ already deployed.



## **FORMS**

- **BID SECURITY**
- **FORM OF PERFORMANCE SECURITY**
- **FORM OF CONTRACT AGREEMENT**
- **FORM MOBILIZATION ADVANCE  
GUARANTEE/BOND**
- **INDEMNITY BOND FOR SECURED  
ADVANCE AGAINST MATERIAL  
BROUGHT AT SITE**

**BS-1**

**BID SECURITY**

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 bind 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; and

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; and
- (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 therefor, 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.





**BS-2**

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**

**WITNESS:**

1. \_\_\_\_\_

\_\_\_\_\_

Corporate Secretary (Seal)

2. \_\_\_\_\_

\_\_\_\_\_

Name, Title & Address

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Corporate Guarantor (Seal)



## FORM OF PERFORMANCE SECURITY

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 bind 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 defences 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.



**PS-2**

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

Witness:

1. \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

\_\_\_\_\_  
Corporate Secretary (Seal)

2. \_\_\_\_\_

\_\_\_\_\_  
Name, Title & Address

\_\_\_\_\_  
Corporate Guarantor (Seal)



CA-1

## FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the “Agreement”) made on the \_\_\_\_\_ day of \_\_\_\_\_ (month) 2016 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 witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda / Clarification as agreed or otherwise, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract, viz: :
  - a). The Contract Agreement;
  - b). The Letter of Acceptance;
  - c). The completed Form of Bid;
  - d). Specification - Special Provision
  - e). Special Stipulations (Appendix-A to Bid);
  - f). The Particular Conditions of Contract - Part II;
  - g). The General Conditions - Part I;
  - h). Tender Drawings;
  - i). Specifications - Technical Provisions
  - j). The completed Appendices to Bid (B, C, E to N);
  - k). The priced Bill of Quantities (Appendix-D to Bid);
  - l). \_\_\_\_\_ (any other)
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)



**CA-2**

Signed, Sealed and Delivered in the presence of:

Witness:

Witness:

\_\_\_\_\_

(Name, Title and Address)

\_\_\_\_\_

(Name, Title and Address)



**MG-1**

**MOBILIZATION ADVANCE GUARANTEE/ BOND**

Guarantee No. \_\_\_\_\_ Date \_\_\_\_\_

WHEREAS \_\_\_\_\_ (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 Rupees \_\_\_\_\_ (Rs \_\_\_\_\_) 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 mobilization advance for the performance of his obligations under the said Contract.

AND WHEREAS, \_\_\_\_\_ (Scheduled Bank in Pakistan) (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, 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 remain in force until the advance is fully adjusted against payments from the Interim Payment Certificates of the Contractor or until \_\_\_\_\_ (Date) whichever is earlier.

The Guarantor's liability under this Guarantee shall not in any case exceed the sum of Rupees \_\_\_\_\_ (Rs \_\_\_\_\_).

This Guarantee shall remain valid up to the aforesaid date and shall be null and void after the aforesaid date or earlier if the advance made to the Contractor is fully adjusted against payments from Interim Payment Certificates of the Contractor provided that the Guarantor agrees that the aforesaid period of validity shall be deemed to be extended if on the above mentioned date the advance payment is not fully adjusted.

**GUARANTOR**

1. Signature \_\_\_\_\_
2. Name \_\_\_\_\_
3. Title \_\_\_\_\_

**WITNESS**

1. \_\_\_\_\_  
Corporate Secretary (Seal)

2. \_\_\_\_\_  
(Name Title & Address)

\_\_\_\_\_  
Corporate Guarantor (Seal)



IB-1

**INDEMNITY BOND  
FOR SECURED ADVANCE  
AGAINST MATERIALS BROUGHT AT SITE  
(ON RS.40 NONJUDICIAL STAMP PAPER)**

This Deed of Indemnity is issued by M/s. \_\_\_\_\_ (Name of the Contractor)  
in favour of M/s. \_\_\_\_\_ (Name of the Employer)

Whereas \_\_\_\_\_ (hereinafter called the Employer) has  
paid the Secured Advance against the cost of material through any Bank or like agency by any  
other method by virtue of the terms of the contract existing between the parties. The details of the  
material and their price for which secured advance is being sought for the period  
\_\_\_\_\_ till consumption of the material is as under:

- |    |       |              |           |             |
|----|-------|--------------|-----------|-------------|
| 1. | _____ | at Rs. _____ | per _____ | = Rs. _____ |
| 2. | _____ | at Rs. _____ | per _____ | = Rs. _____ |
| 3. | _____ | at Rs. _____ | per _____ | = Rs. _____ |
| 4. | _____ | at Rs. _____ | per _____ | = Rs. _____ |

**THEREFORE THIS DEED OF INDEMNITY WITNESSETH AS FOLLOWS:**

I/We \_\_\_\_\_ of M/s. \_\_\_\_\_  
do hereby indemnify M/s \_\_\_\_\_ for all losses due to thefts, arson, pilferage,  
loss due to flood and inundation, shortage, deterioration and depreciation etc. through any act of  
Man or God or slump in the Market of any or all the materials financed or paid by the Employer on  
our request for financing payment against material.

I/We \_\_\_\_\_ shall indemnify \_\_\_\_\_ against any or  
all claims, action damages arising out of or resulting to the said material.

I/We \_\_\_\_\_ further declare that we will faithfully abide by the above  
declaration and solemnly affirm that we will not remove, sell, pilferage any of the materials against  
which M/s \_\_\_\_\_ has paid us such a secured advance and will not pledge the  
same with any Bank, Finance Corporation, Firm, Company, Individual or the like agency or create  
any change whereon in any from what so ever.

I/We \_\_\_\_\_ do hereby also declare that in the event of my/our  
infringement of the declaration made above \_\_\_\_\_ will be entitled to forfeit all such  
material and also proceed against me/us according to the relevant clause pertaining to breach of  
contract and further invoke the power or seek any remedies secured of \_\_\_\_\_  
under the contract Agreement signed with us or otherwise available under law.

Place \_\_\_\_\_ Dated \_\_\_\_\_

Contractor \_\_\_\_\_



**PART I -**  
**GENERAL CONDITIONS OF CONTRACT**





**FEDERATION INTERNATIONALE DES INGENIEURS-CONSEILS**

# **CONDITIONS OF CONTRACT**

## **FOR WORKS OF CIVIL**

### **ENGINEERING CONSTRUCTION**

#### **PART I GENERAL CONDITIONS WITH FORMS OF TENDER AND AGREEMENT**

FOURTH EDITION 1987

Reprinted 1988 with editorial amendments

Reprinted in 1992 with further amendments



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## **PART I - GENERAL CONDITIONS**

### **Definitions and Interpretation**

#### **1.1 Definitions**

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

- (a) (i) "Employer" means the person named as such in Part II of these Conditions and the legal successors in title to such person, but not (except with the consent of the Contractor) any assignee of such person.
- (ii) "Contractor" means the person whose tender has been accepted by the Employer and the legal successors in title to such person, but not (except with the consent of the Employer) any assignee of such person.
- (iii) "Subcontractor" means any person named in the Contract as a Subcontractor for a part of the Works or any person to whom a part of the Works has been subcontracted with the consent of the Engineer and the legal successors in title to such person, but not any assignee of any such person.
- (iv) "Engineer" means the person appointed by the Employer to act as Engineer for the purposes of the Contract and named as such in Part II of these Conditions.
- (v) "Engineer's Representative" means a person appointed from time to time by the Engineer under Sub-Clause 2.2.
- (b) (i) "Contract" means these Conditions (Parts I and II), the Specification, the Drawings, the Bill of Quantities, the Tender, the Letter of Acceptance, the Contract Agreement (if completed) and such further documents as may be expressly incorporated in the Letter of Acceptance or Contract Agreement (if completed).
- (ii) "Specification" means the specification of the Works included in the Contract and any modification thereof or addition thereto made under Clause 51 or submitted by the Contractor and approved by the Engineer.
- (iii) "Drawings" means all drawings, calculations and technical information of a like nature provided by the Engineer to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation and maintenance manuals and other technical information of a like nature submitted by the Contractor and approved by the Engineer.
- (iv) "Bill of Quantities" means the priced and completed bill of quantities forming part of the Tender.
- (v) "Tender" means the Contractor's priced offer to the Employer for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract, as accepted by the Letter of Acceptance.





- (vi) "Letter of Acceptance" means the formal acceptance by the Employer of the Tender.
- (vii) "Contract Agreement" means the contract agreement (if any) referred to in Sub-Clause 9.1.
- (viii) "Appendix to Tender" means the appendix comprised in the form of Tender annexed to these Conditions.
- (c) (i) "Commencement Date" means the date upon which the Contractor receives the notice to commence issued by the Engineer pursuant to Clause 41.
- (ii) "Time for Completion" means the time for completing the execution of and passing the Tests on Completion of the Works or any Section or part thereof as stated in the Contract (or as extended under Clause 44) calculated from the Commencement Date.
- (d) (i) "Tests on Completion" means the tests specified in the Contract or otherwise agreed by the Engineer and the Contractor which are to be made by the Contractor before the Works of any Section or part thereof are taken over by the Employer.
- (ii) "Taking-Over Certificate" means a certificate issued pursuant to Clause 48.
- (e) (i) "Contract Price" means the sum stated in the Letter of Acceptance as payable to the Contractor for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract.
- (ii) "Retention Money" means the aggregate of all monies retained by the Employer pursuant to Sub-Clause 60.2(a).
- (iii) "Interim Payment Certificate" means any certificate of payment issued by the Engineer other than the Final Payment Certificate.
- (iv) "Final Payment Certificate" means the certificate of payment issued by the Engineer pursuant to Sub-Clause 60.8.
- (f) (i) "Works" means the Permanent Works and the Temporary Works or either of them as appropriate.
- (ii) "Permanent Works" means the permanent works to be executed (including Plant) in accordance with the Contract.
- (iii) "Temporary Works" means all temporary works of every kind (other than Contractor's Equipment) required in or about the execution and completion of the Works and the remedying of any defects therein.
- (iv) "Plant" means machinery, apparatus and the like intended to form or forming part of the Permanent Works.
- (v) "Contractor's Equipment" means all appliances and things of whatsoever nature



(other than Temporary Works) required for the execution and completion of the Works and the remedying of any defects therein, but does not include Plant, materials or other things intended to form or forming part of the Permanent Works.

- (vi) "Section" means a part of the Works specifically identified in the Contract as a Section.
- (vii) "Site" means the places provided by the Employer where the Works are to be executed and any other places as may be specifically designated in the Contract as forming part of the Site.
- (g) (i) "cost" means all expenditure properly incurred or to be incurred, whether, on or off the Site, including overhead and other charges properly allocable thereto but does not include any allowance for profit.
- (ii) "day" means calendar day.
- (iii) "foreign currency" means a currency of a country other than that in which the Works are to be located.
- (iv) "writing" means any hand-written, type-written, or printed communication, including telex, cable and facsimile transmission.

## **1.2 Headings and Marginal Notes**

The headings and marginal notes in these Conditions shall not be deemed part thereof or be taken into consideration in the interpretation or construction thereof or of the Contract.

## **1.3 Interpretation**

Words importing persons or parties shall include firms and corporations and any organization having legal capacity.

## **1.4 Singular and Plural**

Words importing the singular only also include the plural and vice versa where the context requires.

## **1.5 Notices, Consents, Approvals, Certificates and Determinations**

Wherever in the Contract provision is made for the giving or issue of any notice, consent, approval, certificate or determination by any person, unless otherwise specified such notice, consent, approval, certificate or determination shall be in writing and the words "notify", "certify" or "determine" shall be construed accordingly. Any such consent, approval, certificate or determination shall not unreasonably be withheld or delayed.

## **Engineer and Engineer's Representative**

### **2.1 Engineer's Duties and Authority**

- (a) The Engineer shall carry out the duties specified in the Contract.



- (b) The Engineer may exercise the authority specified in or necessarily to be implied from the Contract, provided, however, that if the Engineer is required, under the terms of his appointment by the Employer, to obtain the specific approval of the Employer before exercising any such authority, particulars of such requirements shall be set out in Part II of these Conditions. Provided further that any requisite approval shall be deemed to have been given by the Employer for any such authority exercised by the Engineer.
- (c) Except as expressly stated in the Contract, the Engineer shall have no authority to relieve the Contractor of any of his obligations under the Contract.

## **2.2 Engineer's Representative**

The Engineer's Representative shall be appointed by and be responsible to the Engineer and shall carry out such duties and exercise such authority as may be delegated to him by the Engineer under Sub-Clause 2.3.

## **2.3 Engineer's Authority to Delegate**

The Engineer may from time to time delegate to the Engineer's Representative any of the duties and authorities vested in the Engineer and he may at any time revoke such delegation. Any such delegation or revocation shall be in writing and shall not take effect until a copy thereof has been delivered to the Employer and the Contractor.

Any communication given by the Engineer's Representative to the Contractor in accordance with such delegation shall have the same effect as though it had been given by the Engineer. Provided that:

- (a) any failure of the Engineer's Representative to disapprove any work, materials or Plant shall not prejudice the authority of the Engineer to disapprove such work, materials or Plant and to give instructions for the rectification thereof; and
- (b) if the Contractor questions any communication of the Engineer's Representative he may refer the matter to the Engineer who shall confirm, reverse or vary the contents of such communication.

## **2.4 Appointment of Assistants**

The Engineer or the Engineer's Representative may appoint any number of persons to assist the Engineer's Representative in the carrying out of his duties under Sub-Clause 2.2. He shall notify to the Contractor the names, duties and scope of authority of such persons. Such assistants shall have no authority to issue any instructions to the Contractor save in so far as such instructions may be necessary to enable them to carry out their duties and to secure their acceptance of materials, Plant or workmanship as being in accordance with the Contract, and any instructions given by any of them for those purposes shall be deemed to have been given by the Engineer's Representative.

## **2.5 Instructions in Writing**

Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any such instruction orally, the Contractor shall comply with such instruction. Confirmation in writing of such oral instruction given by



the Engineer, whether before or after the carrying out of the instruction, shall be deemed to be an instruction within the meaning of this Sub-Clause. Provided further that if the Contractor, within 7 days, confirms in writing to the Engineer any oral instruction of the Engineer and such confirmation is not contradicted in writing within 7 days by the Engineer, it shall be deemed to be an instructions of the Engineer.

The provisions of this Sub-Clause shall equally apply to instructions given by the Engineer's Representative and any assistants of the Engineer or the Engineer's Representative appointed pursuant to Sub-Clause 2.4.

## **2.6 Engineer to Act Impartially**

Wherever, under the Contract, the Engineer is required to exercise his discretion by:

- (a) giving his decision, opinion or consent,
- (b) expressing his satisfaction or approval,
- (c) determining value, or
- (d) otherwise acting which may affect the rights and obligations of the Employer or the Contractor

he shall exercise such discretion impartially within the terms of the Contract and having regard to all the circumstances. Any such decision, opinion, consent expression of satisfaction, or approval, determination of value or action may be opened up, reviewed or revised as provided in Clause 67.

## **Assignment and Subcontracting**

### **3.1 Assignment of Contract**

The Contractor shall not, without the prior consent of the Employer (which consent, notwithstanding the provisions of Sub-Clause 1.5, shall be at the sole discretion of the Employer), assign the Contract or any part thereof, or any benefit or interest therein or thereunder, otherwise than by:

- (a) a charge in favour of the Contractor's bankers of any monies due or to become due under the Contract, or
- (b) assignment to the Contractor's insurers (in cases where the insurers have discharged the Contractor's loss or liability) of the Contractor's right to obtain relief against any other party liable.

### **4.1 Subcontracting**

The Contractor shall not subcontract the whole of the Works. Except where otherwise provided by the Contract, the Contractor shall not subcontract any part of the Works without the prior consent of the Engineer. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents servants or workmen.



Provided that the Contractor shall not be required to obtain such consent for:

- (a) the provision of labour,
- (b) the purchase of materials which are in accordance with the standards specified in the Contract,
- (c) the subcontracting of any part of the Works for which the Subcontractor is named in the Contract.

#### **4.2 Assignment of Subcontractors' Obligations**

In the event of a Subcontractor having undertaken towards the Contractor in respect of the work executed, or the goods, materials, Plant or services supplied by such Subcontractor, any continuing obligation extending for a period exceeding that of the Defects Liability Period under the Contract, the Contractor shall at any time, after the expiration of such Period, assign to the Employer, at the Employer's request and cost, the benefit of such obligation for the unexpired duration thereof.

### **Contract Documents**

#### **5.1 Language/s and Law**

There is stated in Part II of these Conditions:

- (a) the language or languages in which the Contract documents shall be drawn up, and
- (b) the country or state the law of which shall apply to the Contract and according to which the Contract shall be construed.

If the said documents are written in more than one language, the language according to which the Contract shall be construed and interpreted is also stated in Part II of these Conditions, being therein designated the "Ruling Language".

#### **5.2 Priority of Contract Documents**

The several documents forming the Contract are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer who shall thereupon issue to the Contractor instructions thereon and in such event, unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows:

- (1) The Contract Agreement (if completed);
  - (2) The Letter of Acceptance;
  - (3) The Tender;
  - (4) Part II of these Conditions;
  - (5) Part I of these Conditions; and
- Any other document forming part of the Contract.

#### **6.1 Custody and Supply of Drawings and Documents**

The Drawings shall remain in the sole custody of the Engineer, but two copies thereof shall be provided to the Contractor free of charge. The Contractor shall make at his own cost any further copies required by him. Unless it is strictly necessary for the purposes of



the Contract, the Drawings, Specification and other documents provided by the Employer or the Engineer shall not, without the consent of the Engineer, be used or communicated to a third party by the Contractor. Upon issue of the Defects Liability Certificate, the Contractor shall return to the Engineer all Drawings, Specification and other documents provided under the Contract.

The Contractor shall supply to the Engineer four copies of all Drawings, specification and other documents submitted by the Contractor and approved by the Engineer in accordance with Clause 7, together with a reproducible copy of any material which cannot be reproduced to an equal standard by photocopying. In addition, the Contractor shall supply such further copies of such Drawings, Specification and other documents as the Engineer may request in writing for the use of the Employer, who shall pay the cost thereof.

## **6.2 One Copy of Drawings to be Kept on Site**

One copy of the Drawings, provided to or supplied by the Contractor as aforesaid, shall be kept by the Contractor on the Site and the same shall at all reasonable times be available for inspection and use by the Engineer and by any other person authorised by the Engineer in writing.

## **6.3 Disruption of Progress**

The Contractor shall give notice to the Engineer, with a copy to the Employer, whenever planning or execution of the Works is likely to be delayed or disrupted unless any further drawing or instruction is issued by the Engineer within a reasonable time. The notice shall include details of the drawing or instruction required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.

## **6.4 Delay and Cost of Delay of Drawings**

If, by reason of any failure or inability of the Engineer to issue, within a time reasonable in all the circumstances, any drawing or instruction for which notice has been given by the Contractor in accordance with Sub-Clause 6.3, the Contractor suffers delay and/or incurs costs then the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

## **6.5 Failure by Contractor to Submit Drawings**

If the failure or inability of the Engineer to issue any drawings or instructions is caused in whole or in part by the failure of the Contractor to submit Drawings, Specification or other documents which he is required to submit under the Contract, the Engineer shall take such failure by the Contractor into account when making his determination pursuant to Sub-Clause 6.4.

## **7.1 Supplementary Drawings and Instructions**



The Engineer shall have authority to issue to the Contractor, from time to time, such supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and completion of the Works and the remedying of any defects therein. The Contractor shall carry out and be bound by the same.

## **7.2 Permanent Works Designed by Contractor**

Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall submit to the Engineer, for approval:

- (a) such drawings, specifications, calculations and other information as shall be necessary to satisfy the Engineer as to the suitability and adequacy of that design, and
- (b) operation and maintenance manuals together with drawings of the Permanent Works as completed, in sufficient detail to enable the Employer to operate, maintain, dismantle, reassemble and adjust the Permanent Works incorporating that design. The Works shall not be considered to be completed for the purposes of taking over in accordance with Clause 48 until such operation and maintenance manuals together with drawings on completion have been submitted to and approved by the Engineer.

## **7.3 Responsibility Unaffected by Approval**

Approval by the Engineer, in accordance with Sub-Clause 7.2, shall not relieve the Contractor of any of his responsibilities under the Contract.

# **General Obligations**

## **8.1 Contractor's General Responsibilities**

The Contractor shall, with due care and diligence, design (to the extent provided for by the Contract), execute and complete the Works and remedy any defects therein in accordance with the provisions of the Contract. The Contractor shall provide all superintendence, labour, material, Plant, Contractor's Equipment and all other things, whether of a temporary or permanent nature, required in and for such design, execution, completion and remedying of any defects, so far as the necessity for providing the same is specified in or is reasonably to be inferred from the Contract.

## **8.2 Site Operations and Methods of Construction**

The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations and methods of construction. Provided that the Contractor shall not be responsible (except as stated hereunder or as may be otherwise agreed) for the design or specification of Permanent Works, or for the design or specification of any Temporary Works not prepared by the Contractor. Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall be fully responsible for that part of such Works, notwithstanding any approval by the Engineer.

## **9.1 Contract Agreement**

The Contractor shall, if called upon so to do, enter into and execute the Contract Agreement, to be prepared and completed at the cost of the Employer, in the form annexed to these Conditions with such modification as may be necessary.





## **10.1 Performance Security**

If the Contract requires the Contractor to obtain security for his proper performance of the Contract, he shall obtain and provide to the Employer, such security within 28 days after the receipt of the Letter of Acceptance, in the sum stated in the Appendix to Tender. When providing such security to the Employer, the Contractor shall notify the Engineer of so doing. Such security shall be in the form annexed to these Conditions or in such other form as may be agreed between the Employer and the Contractor. The institution providing such security shall be subject to the approval of the Employer. The cost of complying with the requirements of this Clause shall be borne by the Contractor, unless the Contract otherwise provides.

## **10.2 Period of Validity of Performance Security**

The performance security shall be valid until the Contractor has executed and completed the Works and remedied any defects therein in accordance with the Contract. No claim shall be made against such security after the issue of the Defects Liability Certificate in accordance with Sub-Clause 62.1 and such security shall be returned to the Contractor within 14 days of the issue of the said Defects Liability Certificate.

## **10.3 Claims under Performance Security**

Prior to making a claim under the performance security the Employer shall, in every case, notify the Contractor stating the nature of the default in respect of which the claim is to be made.

## **11.1 Inspection of Site**

The Employer shall have made available to the Contractor, before the submission by the Contractor of the Tender, such data on hydrological and sub-surface conditions as have been obtained by or on behalf of the Employer from investigations undertaken relevant to the Works but the Contractor shall be responsible for his own interpretation thereof.

The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself (so far as is practicable, having regard to considerations of cost and time) before submitting his Tender, as to:

- (a) the form and nature thereof, including the sub-surface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works and the remedying of any defects therein, and
- (d) the means of access to the Site and the accommodation he may require,

and, in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender.





The Contractor shall be deemed to have based his Tender on the data made available by the Employer and on his own inspection and examination, all as aforementioned.

#### **12.1 Sufficiency of Tender**

The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices stated in the Bill of Quantities, all of which shall, except insofar as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, Plant or services or of contingencies for which there is a Provisional Sum) and all matters and things necessary for the proper execution and completion of the Works and the remedying of any defects therein.

#### **12.2 Not Foreseeable Physical Obstructions or Conditions**

If, however, during the execution of the Works the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which obstructions or conditions were, in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer, with a copy to the Employer. On receipt of such notice, the Engineer shall if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of any costs which may have been incurred by the Contractor by reason of such obstructions or conditions having been encountered, which shall be added to the Contract Price,

and shall notify the Contractor accordingly, with a copy to the Employer. Such determination shall take account of any instruction which the Engineer may issue to the Contractor in connection therewith, and any proper and reasonable measures acceptable to the Engineer which the Contractor may take in the absence of specific instructions from the Engineer.

#### **13.1 Work to be in Accordance with Contract**

Unless it is legally or physically impossible, the Contractor shall execute and complete the Works and remedy any defects therein in strict accordance with the Contract to the satisfaction of the Engineer. The Contractor shall comply with and adhere strictly to the Engineer's instructions on any matter, whether mentioned in the Contract or not, touching or concerning the Works. The Contractor shall take instructions only from the Engineer (or his delegate).

#### **14.1 Programme to be Submitted**

The Contractor shall, within the time stated in Part II of these Conditions after the date of the Letter of Acceptance, submit to the Engineer for his consent a programme, in such form and detail as the Engineer shall reasonably prescribe, for the execution of the Works. The Contractor shall, whenever required by the Engineer, also provide in writing for his information a general description of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.



## **14.2 Revised Programme**

If at any time it should appear to the Engineer that the actual progress of the Works does not conform to the programme to which consent has been given under Sub-Clause 14.1, the Contractor shall produce, at the request of the Engineer, a revised programme showing the modifications to such programme necessary to ensure completion of the Works within the Time for Completion.

## **14.3 Cash Flow Estimate to be Submitted**

The Contractor shall, within the time stated in Part II of these Conditions after the date of the Letter of Acceptance, provide to the Engineer for his information a detailed cash flow estimate, in quarterly periods, of all payments to which the Contractor will be entitled under the Contract and the Contractor shall subsequently supply revised cash flow estimates at quarterly intervals, if required to do so by the Engineer.

## **14.4 Contractor not Relieved of Duties or Responsibilities**

The submission to and consent by the Engineer of such programmes or the provision of such general descriptions or cash flow estimates shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

## **15.1 Contractor's Superintendence**

The Contractor shall provide all necessary superintendence during the execution of the Works and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. The Contractor, or a competent and authorised representative approved of by the Engineer, which approval may at any time be withdrawn, shall give his whole time to the superintendence of the Works. Such authorised representative shall receive, on behalf of the Contractor, instructions from the Engineer.

If approval of the representative is withdrawn by the Engineer, the Contractor shall, as soon as is practicable, having regard to the requirement of replacing him as hereinafter mentioned, after receiving notice of such withdrawal, remove the representative from the Works and shall not thereafter employ him again on the Works in any capacity and shall replace him by another representative approved by the Engineer.

## **16.1 Contractor's Employees**

The Contractor shall provide on the Site in connection with the execution and completion of the Works and the remedying of any defects therein:

- (a) only such technical assistants as are skilled and experienced in their respective callings and such foremen and leading hands as are competent to give proper superintendence of the Works, and
- (b) such skilled, semi skilled and unskilled labour as is necessary for the proper and timely fulfilling of the Contractor's obligations under the Contract.

## **16.2 Engineer at Liberty to Object**



The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the Works any person provided by the Contractor who, in the opinion of the Engineer, misconducts himself, or is incompetent or negligent in the proper performance of his duties, or whose presence on Site is otherwise considered by the Engineer to be undesirable, and such person shall not be again allowed upon the Works without the consent of the Engineer. Any person so removed from the Works shall be replaced as soon as possible.

#### **17.1 Setting-out**

The Contractor shall be responsible for:

- (a) the accurate setting-out of the Works in relation to original points, lines and levels of reference given by the Engineer in writing,
- (b) the correctness, subject as above mentioned of the position, levels dimensions and alignment of all parts of the Works, and
- (c) the provision of all necessary instruments, appliances and labour in connection with the foregoing responsibilities.

If, at any time during the execution of the Works, any error appears in the position, levels, dimensions or alignment of any part of the Works, the Contractor, on being required so to do by the Engineer, shall, at his own cost, rectify such error to the satisfaction of the Engineer, unless such error is based on incorrect data supplied in writing by the Engineer, in which case the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.

The checking of any setting-out or of any line or level by the Engineer shall not in any way relieve the Contractor of his responsibility for the accuracy thereof and the Contractor shall carefully protect and preserve all bench-marks, sight-rails, pegs and other things used in setting-out the Works.

#### **18.1 Boreholes and Exploratory Excavation**

If, at any time during the execution of the Works, the Engineer requires the Contractor to make boreholes or to carry out exploratory excavation, such requirement shall be the subject of an instruction in accordance with Clause 51, unless an item or a Provisional Sum in respect of such work is included in the Bill of Quantities.

#### **19.1 Safety, Security and Protection of the Environment**

The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein:

- (a) have full regard for the safety of all persons entitled to be upon the Site and keep the Site (so far as the same is under his control) and the Works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons,
- (b) provide and maintain at his own cost all lights, guards, fencing, warning signs and



watching, when and where necessary or required by the Engineer or by any duly constituted authority, for the protection of the Works or for the safety and convenience of the public or others, and

- (c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

## **19.2 Employer's Responsibilities**

If under Clause 31 the Employer shall carry out work on the Site with his own workmen he shall, in respect of such work:

- (a) have full regard to the safety of all persons entitled to be upon the Site, and
- (b) keep the Site in an orderly state appropriate to the avoidance of danger to such persons.

If under Clause 31 the Employer shall employ other contractors on the Site he shall require them to have the same regard for safety and avoidance of danger.

## **20.1 Care of Works**

The Contractor shall take full responsibility for the care of the Works and materials and Plant for incorporation therein from the Commencement Date until the date of issue of the Taking-Over Certificate for the whole of the Works, when the responsibility for the said care shall pass to the Employer. Provided that:

- (a) if the Engineer issues a Taking-Over Certificate for any Section or part of the Permanent Works the Contractor shall cease to be liable for the care of that Section or part from the date of issue of the Taking-Over Certificate, when the responsibility for the care of that Section or part shall pass to the Employer, and
- (b) the Contractor shall take full responsibility for the care of any outstanding Works and materials and Plant for incorporation therein which he undertakes to finish during the Defects Liability Period until such outstanding Works have been completed pursuant to Clause 49.

## **20.2 Responsibility to Rectify Loss or Damage**

If any loss or damage happens to the Works, or any part thereof, or materials or Plant for incorporation therein, during the period for which the Contractor is responsible for the care thereof, from any cause whatsoever, other than the risks defined in Sub-Clause 20.4, the Contractor shall, at his own cost, rectify such loss or damage so that the Permanent Works conform in every respect with the provisions of the Contract to the satisfaction of the Engineer. The Contractor shall also be liable for any loss or damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under Clauses 49 and 50.

## **20.3 Loss or Damage Due to Employer's Risks**

In the event of any such loss or damage happening from any of the risks defined in Sub-



Clause 20.4, or in combination with other risks, the Contractor shall, if and to the extent required by the Engineer, rectify the loss or damage and the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer. In the case of a combination or risks causing loss or damage any such determination shall take into account the proportional responsibility of the Contractor and the Employer.

## **20.4 Employer's Risks**

The Employer's risks are:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, revolution, insurrection, or military or usurped power, or civil war,
- (c) 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 thereof,
- (d) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
- (e) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractor and arising from the conduct of the Works,
- (f) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works, except as may be provided for in the Contract,
- (g) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible, and
- (h) any operation of the forces of nature against which an experienced contractor could not reasonably have been expected to take precautions.

## **21.1 Insurance of Works and Contractor's Equipment**

The Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 20, insure:

- (a) the Works, together with materials and Plant for incorporation therein, to the full replacement cost (the term "cost" in this context shall include profit),
- (b) an additional sum of 15 per cent of such replacement cost, or as may be specified in Part II of these Conditions, to cover any additional costs of and incidental to the rectification of loss or damage including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature, and
- (c) the Contractor's Equipment and other things brought onto the Site by the Contractor, for a sum sufficient to provide for their replacement at the Site.



## 21.2 Scope of Cover

The insurance in paragraphs (a) and (b) of Sub-Clause 21.1 shall be in the joint names of the Contractor and the Employer and shall cover:

- (a) the Employer and the Contractor against all loss or damage from whatsoever cause arising, other than as provided in Sub-Clause 21.4, from the start of work at the Site until the date of issue of the relevant Taking-Over Certificate in respect of the Works or any Section or part thereof as the case may be, and
- (b) the Contractor for his liability:
  - (i) during the Defects Liability Period for loss or damage arising from a cause occurring prior to the commencement of the Defects Liability Periods, and
  - (ii) for loss or damage occasioned by the Contractor in the course of any operations carried out by him for the purpose of complying with his obligations under Clauses 49 and 50.

## 21.3 Responsibility for Amounts not Recovered

Any amounts not insured or not recovered from the insurers shall be borne by the Employer or the Contractor in accordance with their responsibilities under Clause 20.

## 21.4 Exclusions

There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by:

- (a) war, hostilities (where war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, revolution, insurrection, or military or usurped power, or civil war,
- (c) ionising, 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 thereof, or
- (d) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds.

## 22.1 Damage to Persons and Property

The Contractor shall, except if and so far as the Contract provides otherwise, indemnify the Employer against all losses and claims in respect of:

- (a) death of or injury to any person, or
- (b) loss of or damage to any property (other than the Works),

which may arise out of or in consequence of the execution and completion of the Works and the remedying of any defects therein, and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, subject



to the exceptions defined in Sub-Clause 22.2.

## **22.2 Exceptions**

The "exceptions" referred to in Sub-Clause 22.1 are:

- (a) the permanent use or occupation of land by the Works, or any part thereof,
- (b) the right of the Employer to execute the Works, or any part thereof, on, over, under, is or through any land,
- (c) damage to property which is the unavoidable result of the execution and completion of the Works, or the remedying of any defects therein, in accordance with the Contract, and
- (d) death of or injury to persons or loss of or damage to property resulting from any act or neglect of the Employer, his agents servants or other contractors, not being employed by the Contractor, or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or, where the injury or damage was contributed to by the Contractor, his servants or agents, such part of the said injury or damage as may be just and equitable having regard to the extent of the responsibility of the Employer, his servants or agents or other contractors for the injury or damage.

## **22.3 Indemnity by Employer**

The Employer shall indemnify the Contractor against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the exceptions defined in Sub-Clause 22.2

## **23.1 Third Party Insurance (including Employer's Property)**

The Contractor shall, without limiting his or the Employer's obligation and responsibilities under Clause 22, insure, in the joint names of the Contractor and the Employer, against liabilities for death of or injury to any person (other than as provided in Clause 24) or loss of or damage to any property (other than the Works) arising out of the performance of the Contract, other than the exceptions defined in paragraphs (a), (b) and (c) of Sub-Clause 22.2.

## **23.2 Minimum Amount of Insurance**

Such insurance shall be for at least the amount stated in the Appendix to Tender.

## **23.3 Cross Liabilities**

The insurance policy shall include a cross liability clause such that the insurance shall apply to the Contractor and to the Employer as separate insured.

## **24.1 Accident or Injury to Workmen**

The Employer shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or any





Subcontractor, other than death or injury resulting from any act or default of the Employer, his agents or servants. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, other than those for which the Employer is liable as aforesaid, and against all claims, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto.

## **24.2 Insurance Against Accident to Workmen**

The Contractor shall insure against such liability and shall continue such insurance during the whole of the time that any persons are employed by him on the Works. Provided that, in respect of any persons employed by any Subcontractor, the Contractor's obligations to insure as aforesaid under the Sub-Clause shall be satisfied if the Subcontractor shall have insured against the liability in respect of such persons in such manner that the Employer is indemnified under the policy, but the Contractor shall require such Subcontractor to produce to the Employer, when required, such policy of insurance and the receipt for the payment of the current premium.

## **25.1 Evidence and Terms of Insurances**

The Contractor shall provide evidence to the Employer prior to the start of work at the Site that the insurances required under the Contract have been effected and shall, within 84 days of the Commencement Date, provide the insurance policies to the Employer. When providing such evidence and such policies to the Employer, the Contractor shall notify the Engineer of so doing. Such insurance policies shall be consistent with the general terms agreed prior to the issue of the Letter of Acceptance. The Contractor shall effect all insurances for which he is responsible with insurers and in terms approved by the Employer.

## **25.2 Adequacy of Insurances**

The Contractor shall notify the insurers of changes in the nature, extent or programme for the execution of the Works and ensure the adequacy of the insurances at all times in accordance with the terms of the Contract and shall, when required, produce to the Employer the insurance policies in force and the receipts for payment of the current premiums.

## **25.3 Remedy on Contractor's Failure to Insure**

If the Contractor fails to effect and keep in force any of the insurances required under the Contract, or fails to provide the policies to the Employer within the period required by Sub-Clause 25.1, then and in any such case the Employer may effect and keep in force any such insurances and pay any premium as may be necessary for that purpose and from time to time deduct the amount so paid from any monies due or to become due to the Contractor, or recover the same as a debt due from the Contractor.

## **25.4 Compliance with Policy Conditions**

In the event that the Contractor or the Employer fails to comply with conditions imposed by the insurance policies effected pursuant to the Contract, each shall indemnify the other against all losses and claims arising from such failure.

## **26.1 Compliance with Statutes, Regulations**





The Contractor shall conform in all respects, including by the giving of all notices and the paying of all fees, with the provisions of:

- (a) any National or State Statute, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relation to the execution and completion of the Works and the remedying of any defects therein, and
- (b) the rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the Works,

and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such provisions. Provided always that the Employer shall be responsible for obtaining any planning, zoning or other similar permission required for the Works to proceed and shall indemnify the Contractor in accordance with Sub-Clause 22.3.

#### **27.1 Fossil**

All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the Site shall, as between the Employer and the Contractor, be deemed to be the absolute property of the Employer. The Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall, immediately upon discovery thereof and before removal, acquaint the Engineer of such discovery and carry out the Engineer's instructions for dealing with the same. If, by reason of such instructions, the Contractor suffers delay and/or incurs costs then the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

#### **28.1 Patent Rights**

The Contractor shall save harmless and indemnify the Employer from and against all claims and proceedings for or on account of infringement of any patent rights, design trademark or name or other protected rights in respect of any Contractor's Equipment, materials or Plant used for or in connection with or for incorporation in the Works and from and against all damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, except where such infringement results from compliance with the design or Specification provided by the Engineer.

#### **28.2 Royalties**

Except where otherwise stated, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required for the Works.

#### **29.1 Interference with Traffic and Adjoining Properties**

All operations necessary for the execution and completion of the Works and the remedying of any defects therein shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with:



- (a) the convenience of the public, or
- (b) the access to, use and occupation of public or private roads and footpaths to or of properties whether in the possession of the Employer or of any other person.

The Contractor shall save harmless and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of, or in relation to, any such matters insofar as the Contractor is responsible therefor.

### **30.1 Avoidance of Damage to Roads**

The Contractor shall use every reasonable means to prevent any of the roads or bridges communicating with or on the routes to the Site from being damaged or injured by any traffic of the Contractor or any of his Subcontractors and, in particular, shall select routes, choose and use vehicles and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from the moving of materials, Plant, Contractor's Equipment or Temporary Works from and to the Site shall be limited, as far as reasonably possible, and so that no unnecessary damage or injury may be occasioned to such roads and bridges.

### **30.2 Transport of Contractor's Equipment or Temporary Works**

Save insofar as the Contract otherwise provides, the Contractor shall be responsible for and shall pay the cost of strengthening any bridges or altering or improving any road communicating with or on the routes to the Site to facilitate the movement of Contractor's Equipment or Temporary Works and the Contractor shall indemnify and keep indemnified the Employer against all claims for damage to any such road or bridge caused by such movement, including such claims as may be made directly against the Employer, and shall negotiate and pay all claims arising solely out of such damage.

### **30.3 Transport of Materials or Plant**

If, notwithstanding Sub-Clause 30.1, any damage occurs to any bridge or road communicating with or on the routes to the Site arising from the transport of materials or Plant, the Contractor shall notify the Engineer with a copy to the Employer, as soon as he becomes aware of such damage or as soon as he receives any claim from the authority entitled to make such claim. Where under any law or regulation the haulier of such materials or Plant is required to indemnify the road authority against damage the Employer shall not be liable for any costs, charges or expenses in respect thereof or in relation thereto. In other cases the Employer shall negotiate the settlement of and pay all sums due in respect of such claim and shall indemnify the Contractor in respect thereof and in respect of all claims, proceedings damages, costs, charges and expenses in relation thereto. Provided that if and so far as any such claim or part thereof is, in the opinion of the Engineer, due to any failure on the part of the Contractor to observe and perform his obligations under Sub-Clause 30.1, then the amount determined by the Engineer, after due consultation with the Employer and the Contractor, to be due to such failure shall be recoverable from the Contractor by the Employer and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided also that the Employer shall notify the Contractor whenever a settlement is to be negotiated and, where any amount may be due from the Contractor, the Employer shall consult with the Contractor before such settlement is agreed.



#### **30.4 Waterborne Traffic**

Where the nature of the Works is such as to require the use by the Contractor of waterborne transport the foregoing provisions of this Clause shall be construed as though "road" included a lock, dock, sea wall or other structure related to a waterway and "vehicle" included craft, and shall have effect accordingly.

#### **31.1 Opportunities for Other Contractors**

The Contractor shall, in accordance with the requirements of the Engineer, afford all reasonable opportunities for carrying out their work to:

- (a) any other contractors employed by the Employer and their workmen,
- (b) the workmen of the Employer, and
- (c) the workmen of any duly constituted authorities who may be employed in the execution on or near the Site of any work not included in the Contract or of any contract which the Employer may enter into in connection with or ancillary to the Works.

#### **31.2 Facilities for Other Contractors**

If, however, pursuant to Sub-Clause 31.1 the Contractor shall, on the written request of the Engineer:

- (a) make available to any other contractor, or to the Employer or any such authority, any roads or ways for the maintenance of which the Contractor is responsible,
- (b) permit the use, by any such, of Temporary Works or Contractor's Equipment on the Site, or
- (c) provide any other service of whatsoever nature for any such, the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.

#### **32.1 Contractor to Keep Site Clear**

During the execution of the Works the Contractor shall keep the Site reasonably free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment and surplus materials and clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required.

#### **33.1 Clearance of Site on Completion**

Upon the issue of any Taking-Over Certificate the Contractor shall clear away and remove from that part of the Site to which such Taking-Over Certificate relates all Contractor's Equipment, surplus materials, rubbish and Temporary Works of every kind, and leave such part of the Site and Works clean and in a workmanlike condition to the satisfaction of the Engineer. Provided that the Contractor shall be entitled to retain on Site, until the end of the Defects Liability Period, such materials, Contractor's Equipment and Temporary Works as are required by him for the purpose of fulfilling his obligations



during the Defects Liability Period.

## **Labour**

### **34.1 Engagement of Staffs and Labour**

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

### **35.1 Returns of Labour and Contractor's Equipment**

The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such information respecting Contractor's Equipment as the Engineer may require.

## **Materials, Plant and Workmanship**

### **36.1 Quality of Materials, Plant and Workmanship**

All materials, Plant and workmanship shall be:

- (a) of the respective kinds described in the Contract and in accordance with the Engineer's instructions, and
- (b) subjected from time to time to such tests as the Engineer may require at the place of manufacture, fabrication or preparation, or on the Site or at such other place or places as may be specified in the Contract, or at all or any of such places.

The Contractor shall provide such assistance, labour, electricity, fuels, stores, apparatus and instruments as are normally required for examining, measuring and testing any materials or Plant and shall supply samples of materials, before incorporation in the Works, for testing as may be selected and required by the Engineer.

### **36.2 Cost of Samples**

All samples shall be supplied by the Contractor at his own cost if the supply thereof is clearly intended by or provided for in the Contract.

### **36.3 Cost of Tests**

The cost of making any test shall be borne by the Contractor if such test is:

- (a) clearly intended by or provided for in the Contract, or
- (b) particularised in the Contract (in cases only for a test under load or of a test to ascertain whether the design of any finished or partially finished work is appropriate for the purposes which it was intended to fulfil) in sufficient detail to enable the Contractor to price or allow for the same in his Tender.



### **36.4 Cost of Tests not Provided for**

If any test required by the Engineer which is:

- (a) not intended by or provided for,
- (b) (in the cases above mentioned) not so particularised, or
- (c) (though so intended or provided for) required by the Engineer to be carried out at any place other than the Site or the place of manufacture, fabrication or preparation of the materials or Plant tested,

shows the materials, Plant or workmanship not to be in accordance with the provisions of the Contract to the satisfaction of the Engineer, then the cost of such test shall be borne by the Contractor, but in any other case Sub-Clause 36.5 shall apply.

### **36.5 Engineer's Determination where Tests not Provided for**

Where, pursuant to Sub-Clause 36.4, this Sub-Clause applies the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time of which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

### **37.1 Inspection of Operations**

The Engineer, and any person authorised by him, shall at all reasonable times have access to the Site and to all workshops and places where materials or Plant are being manufactured, fabricated or prepared for the Works and the Contractor shall afford every facility for and every assistance in obtaining the right to such access.

### **37.2 Inspection and Testing**

The Engineer shall be entitled, during manufacture, fabrication or preparation to inspect and test the materials and Plant to be supplied under the Contract. If materials or Plant are being manufactured, fabricated or prepared in workshops or places other than those of the Contractor, the Contractor shall obtain permission for the Engineer to carry out such inspection and testing in those workshops or places. Such inspection or testing shall not release the Contractor from any obligation under the Contract.

### **37.3 Dates for Inspection and Testing**

The Contractor shall agree with the Engineer on the time and place for the inspection or testing of any materials or Plant as provided in the Contract. The Engineer shall give the Contractor not less than 24 hours notice of his intention to carry out the inspection or to attend the tests. If the Engineer, or his duly authorised representative, does not attend on the date agreed, the Contractor may, unless otherwise instructed by the Engineer, proceed with the tests, which shall be deemed to have been made in the presence of the Engineer. The Contractor shall forthwith forward to the Engineer duly certified copies of the tests



readings. If the Engineer has not attended the tests, he shall accept the said readings as accurate.

#### **37.4 Rejection**

If, at the time and place agreed in accordance with Sub-Clause 37.3, the materials or Plant are not ready for inspection or testing or if, as a result of the inspection or testing referred to in this Clause, the Engineer determines that the materials or Plant are defective or otherwise not in accordance with the Contract, he may reject the materials or Plant and shall notify the Contractor thereof immediately. The notice shall state the Engineer's objections with reasons. The Contractor shall then promptly make good the defect or ensure that rejected materials or Plant comply with the Contract. If the Engineer so requests, the tests of rejected materials or Plant shall be made or repeated under the same terms and conditions. All costs incurred by the Employer by the repetition of the test shall after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer and may be deducted from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

#### **37.5 Independent Inspection**

The Engineer may delegate inspection and testing of materials or Plant to an independent inspector. Any such delegation shall be effected in accordance with Sub-Clause 2.4 and for this purpose such independent inspector shall be considered as an assistant of the Engineer. Notice of such appointment (not being less than 14 days) shall be given by the Engineer to the Contractor.

#### **38.1 Examination of Work before Covering up**

No part of the works shall be covered up or put out of view without the approval of the Engineer and the Contractor shall afford full opportunity for the Engineer to examine and measure any such part of the Works which is about to be covered up or put out of view and to examine foundations before any part of the Works is placed thereon. The Contractor shall give notice to the Engineer whenever any such part of the Works or foundations is or are ready or about to be ready for examination and the Engineer shall, without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such part of the Works or of examining such foundations.

#### **38.2 Uncovering and Making Openings**

The Contractor shall uncover any part of the Works or make openings in or through the same as the Engineer may from time to time instruct and shall reinstate and make good such part. If any such part has been covered up or put out of view after compliance with the requirement of Sub-Clause 38.1 and is found to be executed in accordance with the Contract, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount the Contractor's costs in respect of such of uncovering, making openings in or through, reinstating and making good the same, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer. In any other case all costs shall be borne by the Contractor.

#### **39.1 Removal of Improper Work, Materials or Plant**





The Engineer shall have authority to issue instructions from time to time, for:

- (a) the removal from the Site, within such time or times as may be specified in the instruction, of any materials or Plant which, in the opinion of the Engineer, are not in accordance with the Contract,
- (b) the substitution of proper and suitable materials or Plant, and
- (c) the removal and proper re-execution, notwithstanding any previous test thereof or interim payment therefor, of any work which, in respect of
  - (i) materials, Plant or workmanship, or
  - (ii) design by the Contractor or for which he is responsible, is not, in the opinion of the Engineer, in accordance with the Contract.

### **39.2 Default of Contractor in Compliance**

In case of default on the part of Contractor in carrying out such instruction within the time specified therein or, if none, within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

## **Suspension**

### **40.1 Suspension of Work**

The Contractor shall, on the instructions of the Engineer, suspend the progress of the Works or any part thereof for such time and in such manner as the Engineer may consider necessary and shall, during such suspension, properly protect and secure the Works or such part thereof so far as is necessary in the opinion of the Engineer. Unless such suspension is:

- (a) otherwise provided for in the Contract,
- (b) necessary by reason of some default of or breach of contract by the Contractor or for which he is responsible,
- (c) necessary by reason of climatic conditions of the Site, or
- (d) necessary for the proper execution of the Works or for the safety of the Works or any part thereof (save to the extent that such necessity arises from any act or default by the Engineer or the Employer or from any of the risks defined in Sub-Clause 20.4), Sub-Clause 40.2 shall apply.

### **40.2 Engineer's Determination following Suspension**

Where, pursuant to Sub-Clause 40.1, this Sub-Clause applies the Engineer shall, after



due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount, which shall be added to the Contract Price, in respect of the cost incurred by the Contractor by reason of such suspension, and shall notify the Contractor accordingly, with a copy to the Employer.

#### **40.3 Suspension lasting more than 84 Days**

If the progress of the Works or any part thereof is suspended on the written instructions of the Engineer and if permission to resume work is not given by the Engineer within a period for 84 days from the date of suspension then, unless such suspension is within paragraph (a), (b), (c) or (d) of Sub-Clause 40.1, the Contractor may give notice to the Engineer requiring permission, within 28 days from the receipt thereof, to proceed with the Works or that part thereof in regard to which progress is suspended. If, within the said time, such permission is not granted, the Contractor may, but is not bound to, elect to treat the suspension, where it affects part only of the Works, as an omission of such part under Clause 51 by giving a further notice to the Engineer to that effect, or, where it affects the whole of the Works, treat the suspension as an event of default by the Employer and terminates his employment under the Contract in accordance with the provisions of Sub-Clause 69.1, whereupon the provisions of Sub-Clause 69.2 and 69.3 shall apply.

### **Commencement and Delays**

#### **41.1 Commencement of Works**

The Contractor shall commence the Works as soon as is reasonably possible after the receipt by him of notice to this effect from the Engineer, which notice shall be issued within the time stated in the Appendix to Tender after the date of the Letter of Acceptance. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

#### **42.1 Possession of Site and Access Thereto**

Save insofar as the Contract may prescribe:

- (a) the extent of portions of the Site of which the Contractor is to be given possession from time to time,
- (b) the order in which such portions shall be made available to the Contractor, and, subject to any requirement in the Contract as to the order in which the Works shall be executed, the Employer will, with the Engineer's notice to commence the Works, give to the Contractor possession of
- (c) so much of the Site, and
- (d) such access as, in accordance with the Contract, is to be provided by the Employer as may be required to enable the Contractor to commence and proceed with the execution of the Works in accordance with the programme referred to in Clause 14, if any, and otherwise in accordance with such reasonable proposals as the Contractor shall, by notice to the Engineer with a copy to the Employer, make. The Employer





will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due dispatch in accordance with such programme or proposals, as the case may be.

#### **42.2 Failure to Give Possession**

If the Contractor suffers delay and/or incurs costs from failure on the part of the Employer to give possession in accordance with the terms of Sub-Clause 42.1, the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

#### **42.3 Rights of Way and Facilities**

The Contractor shall bear all costs and charges for special or temporary wayleaves required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by him for the purposes of the Works.

#### **43.1 Time for Completion**

The whole of the Works and, if applicable, any Section required to be completed within a particular time as stated in the Appendix to Tender, shall be completed, in accordance with the provisions of Clause 48, within the time stated in the Appendix to Tender for the whole of the Works or the Section (as the case may be), calculated from the Commencement Date, or such extended time as may be allowed under Clause 44.

#### **44.1 Extension of Time for Completion**

In the event of:

- (a) the amount or nature of extra or additional work,
- (b) any cause of delay referred to in these Conditions,
- (c) exceptionally adverse climatic conditions,
- (d) any delay, impediment or prevention by the Employer, or
- (e) other special circumstances which may occur, other than through a default of or breach of contract by the Contractor or for which he is responsible, being such as fairly to entitle the Contractor to an extension of the Time for Completion of the Works, or any Section or part thereof, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of such extension and shall notify the Contractor accordingly, with a copy to the Employer.

#### **44.2 Contractor to Provide Notification and Detailed Particulars**



Provided that the Engineer is not bound to make any determination unless the Contractor has

- (a) within 28 days after such event has first arisen notified the Engineer with a copy to the Employer, and
- (b) within 28 days or such other reasonable time as may be agreed by the Engineer, after such notification submitted to the Engineer detailed particulars of any extension of time to which he may consider himself entitled in order that such submission may be investigated at the time.

#### **44.3 Interim Determination of Extension**

Provided also that where an event has a continuing effect such that it is not practicable for the Contractor to submit detailed particulars within the period of 28 days referred to in Sub-Clause 44.2(b), he shall nevertheless be entitled to an extension of time provided that he has submitted to the Engineer interim particulars at intervals of not more than 28 days and final particulars within 28 days of the end of the effects resulting from the event. On receipt of such interim particulars, the Engineer shall, without undue delay, make an interim determination of extension of time and, on receipt of the final particulars, the Engineer shall review all the circumstances and shall determine an overall extension of time in regard to the event. In both such cases the Engineer shall make his determination after due consultation with the Employer and the Contractor and shall notify the Contractor of the determination, with a copy to the Employer. No final review shall result in a decrease of any extension of time already determined by the Engineer.

#### **45.1 Restriction on Working Hours**

Subject to any provision to the contrary contained in the Contract, none of the Works shall, save as hereinafter provided, be carried on during the night or on locally recognised days of rest without the consent of the Engineer, except when work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer. Provided that the provisions of this Clause shall not be applicable in the case of any work which it is customary to carry out by multiple shifts.

#### **46.1 Rate of Progress**

If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Section is at any time, in the opinion of the Engineer, too slow to comply with the Time for Completion, the Engineer shall so notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Engineer, to expedite progress so as to comply with the Time for Completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor considers that it is necessary to do any work at night or on locally recognised days of rest, he shall be entitled to seek the consent of the Engineer so to do. Provided that if any steps, taken by the Contractor in meeting his obligations under this Clause, involve the Employer in additional supervision costs, such cost shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor



accordingly, with a copy to the Employer.

#### **47.1 Liquidated Damages for Delay**

If the Contractor fails to comply with the Time for Completion in accordance with Clause 48, for the whole of the Works or, if applicable, any Section within the relevant time prescribed by Clause 43, then the Contractor shall pay to the Employer the relevant sum stated in the Appendix to Tender as liquidated damages for such default and not as a penalty (which sum shall be the only monies due from the Contractor for such default) for every day or part of a day which shall elapse between the relevant Time for Completion and the date stated in a Taking-Over Certificate of the whole of the Works or the relevant Section, subject to the applicable limit stated in the Appendix to Tender. The Employer may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or to become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the Contract.

#### **47.2 Reduction of Liquidated Damages**

If, before the Time for Completion of the whole of the Works or, if applicable, any Section, a Taking-Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of Alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions of this Sub-Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

#### **48.1 Taking-Over Certificate**

When the whole of the Works have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer with a copy to the Employer, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer to issue a Taking-Over Certificate in respect of the Works. The Engineer shall within 21 days of the date of delivery of such notice, either issue to the Contractor, with a copy to the Employer, a Taking-Over Certificate, stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all the work which, in the Engineer's opinion, is required to be done by the Contractor before the issue of such Certificate. The Engineer shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such Taking-Over Certificate within 21 days of completion, to the satisfaction of the Engineer, of the Works so specified and remedying any defects so notified.

#### **48.2 Taking Over of Sections or Parts**

Similarly, in accordance with the procedure set out in Sub-Clause 48.1, the Contractor may request and the Engineer shall issue a Taking-Over Certificate in respect of:



- (a) any Section in respect of which a separate Time for Completion is provided in the Appendix to Tender,
- (b) any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer and, otherwise than as provided for in the Contract, occupied or used by the Employer, or
- (c) any part of the Permanent Works which the Employer has elected to occupy or use prior to completion (where such prior occupation or use is not provided for in the Contract or has not been agreed by the Contractor as a temporary measure).

#### **48.3 Substantial Completion of Parts**

If any part of the Permanent Works has been substantially completed and has satisfactorily passed any Tests on Completion prescribed by the Contractor, the Engineer may issue a Taking-Over Certificate in respect of that part of the Permanent Works before completion of the whole of the Works and, upon the issue of such Certificate, the Contractor shall be deemed to have undertaken to complete with due expedition any outstanding work in that part of the Permanent Works during the Defects Liability Period.

#### **48.4 Surfaces Requiring Reinstatement**

Provided that a Taking-Over Certificate given in respect of any Section or part of the Permanent Works before completion of the whole of the Works shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Taking-Over Certificate shall expressly so state.

### **Defects Liability**

#### **49.1 Defects Liability Period**

In these Conditions the expression "Defects Liability Period" shall mean the defects liability period named in the Appendix to Tender, calculated from:

- (a) the date of completion of the Works certified by the Engineer in accordance with Clause 48, or
- (b) in the event of more than one certificate having issued by the Engineer under Clause 48, the respective dates so certified,

and in relation to the Defects Liability Period the expression "the Works" shall be construed accordingly.

#### **49.2 Completion of Outstanding Work and Remedying Defects**

To the intent that the Works shall, at or as soon as practicable after the expiration of the Defects Liability Period, be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall:



- (a) complete the work, if any, outstanding on the date stated in the Taking-Over Certificate as soon as practicable after such date, and
- (b) execute all such work of amendment, reconstruction, and remedying defects, shrinkages or other faults as the Engineer may, during the Defects Liability Period or within 14 days after its expiration, as a result of an inspection made by or on behalf of the Engineer prior to its expiration, instruct the Contractor to execute.

#### **49.3 Cost of Remedying Defects**

All work referred to in Sub-Clause 49.2(b) shall be executed by the Contractor at his own cost if the necessity thereof is, in the opinion of the Engineer, due to:

- (a) the use of materials, Plant or workmanship not in accordance with the Contract,
- (b) where the Contractor is responsible for the design of part of the Permanent Works, any fault in such design, or
- (c) the neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

If, in the opinion of the Engineer, such necessity is due to any other cause, he shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.

#### **49.4 Contractor's Failure to Carry Out Instructions**

In case of default on the part of the Contractor in carrying out such instruction within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and if such work is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all cost consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

#### **50.1 Contractor to Search**

If any defect, shrinkage or other fault in the Works appears at any time prior to the end of the Defects Liability Period, the Engineer may instruct the Contractor, with a copy to the Employer, to search under the directions of the Engineer for the cause thereof. Unless such defect, shrinkage or other fault is one for which the Contractor is liable under the Contract, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount in respect of the costs of such search incurred by the Contractor, which shall be added to the Contract Price and shall notify the Contractor accordingly, with a copy to the Employer. If such defect, shrinkage or other fault is one for which the Contractor is liable, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case remedy such defect, shrinkage or other fault at his own cost in accordance with the provisions of Clause 49.

### **Alterations, Additions and Omissions**



## **51.1 Variations**

The Engineer shall make any variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he shall have the authority to instruct the Contractor to do and the Contractor shall do any of the following:

- (a) increase or decrease the quantity of any work included in the Contract,
- (b) omit any such work (but not if the omitted work is to be carried out by the Employer or by another contractor),
- (c) change the character or quality or kind of any such work,
- (d) change the levels, lines, position and dimensions of any part of the Works,
- (e) execute additional work of any kind necessary for the completion of the Works, or
- (f) change any specified sequence or timing of construction of any part of the Works.

No such variation shall in any way vitiate or invalidate the Contract, but the effect, if any, of all such variations shall be valued in accordance with Clause 52. Provided that where the issue of an instruction to vary the Works is necessitated by some default of or breach of contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the Contractor.

## **51.2 Instructions for Variations**

The Contractor shall not make any such variation without an instruction of the Engineer. Provided that no instruction shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an instruction given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities.

## **52.1 Valuation of Variations**

All variations referred to in Clause 51 and any additions to the Contract Price which are required to be determined in accordance with Clause 52 (for the purposes of this Clause referred to as "varied work"), shall be valued at the rates and prices set out in the Contract if, in the opinion of the Engineer, the same shall be applicable. If the Contract does not contain any rates or prices applicable to the varied work, the rates and prices in the Contract shall be used as the basis for valuation so far as may be reasonable, failing which, after due consultation by the Engineer with the Employer and the Contractor, suitable rates or prices shall be agreed upon between the Engineer and the Contractor. In the event of disagreement the Engineer shall fix such rates or prices as are, in his opinion, appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates or prices to enable on-account payments to be included in certificates issued in accordance with Clause 60.

## **52.2 Power of Engineer to Fix Rates**

Provided that if the nature or amount of any varied work relative to the nature or amount of the whole of the Works or to any part thereof, is such that, in the opinion of the Engineer, the rate or price contained in the Contract for any item of the Works is, by reason of such varied work, rendered inappropriate or inapplicable, then, after due consultation by the Engineer with the Employer and the Contractor, a suitable rate or price shall be agreed upon between the Engineer and the Contractor. In the event of





disagreement the Engineer shall fix such other rate or price as is, in his opinion, appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates or prices to enable on-account payments to be included in certificates issued in accordance with Clause 60.

Provided also that no varied work instructed to be done by the Engineer pursuant to Clause 51 shall be valued under Sub-Clause 52.1 or under this Sub-Clause unless, within 14 days of the date of such instruction and, other than in the case of omitted work, before the commencement of the varied work, notice shall have been given either:

- (a) by the Contractor to the Engineer of his intention to claim extra payment or a varied rate or price, or
- (b) by the Engineer to the Contractor of his intention to vary a rate or price.

### **52.3 Variations Exceeding 15 per cent**

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

- (a) all varied work valued under Sub-Clauses 52.1 and 52.2, and
- (b) all adjustments upon measurement of the estimated quantities set out in the Bill of Quantities, excluding Provisional Sums, dayworks and adjustment of price made under Clause 70.

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 per cent of the "Effective Contract Price" (which for the purposes of this Sub-Clause shall mean the Contract Price, excluding Provisional Sums and allowance for dayworks, 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 sums 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 under this Sub-Clause, with a copy to the Employer. Such sum shall be based only on the amount by which such additions or deductions shall be in excess of 15 per cent of the Effective Contract Price.

### **52.4 Daywork**

The Engineer may, if in his opinion it is necessary or desirable, issue an instruction that any varied work shall be executed on a daywork basis. The Contractor shall then be paid for such varied work under the terms set out in the daywork schedule included in the Contract and at the rates and prices affixed thereto by him in the Tender.

The Contractor shall furnish to the Engineer such receipts or other vouchers as may be necessary to provide the amounts paid and, before ordering material, shall submit to the Engineer quotations for the same for his approval.

In respect of such of the Works executed on a daywork basis, the Contractor shall during



the continuance of such work, deliver each day to the Engineer an exact list in duplicate of the names, occupation and time of all workmen employed on such work and a statement, also in duplicate, showing the description and quantity of all materials and Contractor's Equipment used thereon or therefor other than Contractor's Equipment which is included in the percentage addition in accordance with such daywork schedule. One copy of each list and statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor.

At the end of each month the Contractor shall deliver to the Engineer a priced statement of the labour, materials and Contractor's Equipment, except as aforesaid, used and the Contractor shall not be entitled to any payment unless such lists and statements have been fully and punctually rendered. Provided always that if the Engineer considers that for any reason the sending of such lists or statements by the Contractor, in accordance with the foregoing provision, was impracticable he shall nevertheless be entitled to authorise payment for such work, either as daywork, on being satisfied as to the time employed and the labour, materials and Contractor's Equipment used on such work, or at such value therefor as shall, in his opinion, be fair and reasonable.

## **Procedure for Claims**

### **53.1 Notice of Claims**

Notwithstanding any other provision of the Contract, if the Contractor intends to claim any additional payment pursuant to any Clause of these Conditions or otherwise, he shall give notice of his intention to the Engineer with a copy to the Employer, within 28 days after the event giving rise to the claim has first arisen.

### **53.2 Contemporary Records**

Upon the happening of the event referred to in Sub-Clause 53.1, the Contractor shall keep such contemporary records as may reasonably be necessary to support any claim he may subsequently wish to make. Without necessarily admitting the Employer's liability, the Engineer shall, on receipt of a notice under Sub-Clause 53.1, inspect such contemporary records and may instruct the Contractor to keep any further contemporary records as are reasonable and may be material to the claim of which notice has been given. The Contractor shall permit the Engineer to inspect all records kept pursuant to this Sub-Clause and shall supply him with copies thereof as and when the Engineer so instructs.

### **53.3 Substantiation of Claims**

Within 28 days, or such other reasonable time as may be agreed by the Engineer, of giving notice under Sub-Clause 53.1, the Contractor shall send to the Engineer an account giving detailed particulars of the amount claimed and the grounds upon which the claim is based. Where the event giving rise to the claim has a continuing effect, such account shall be considered to be an interim account and the Contractor shall, at such intervals as the Engineer may reasonably require, send further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. In cases where interim accounts are sent to the Engineer, the Contractor shall send a final account within 28 days of the end of the effects resulting from the event. The Contractor shall, if required by the Engineer so to do, copy to the Employer all accounts sent to the





Engineer pursuant to this Sub-Clause.

#### **53.4 Failure to Comply**

If the Contractor fails to comply with any of the provisions of this Clause in respect of any claim which he seeks to make, his entitlement to payment in respect thereof shall not exceed such amount as the Engineer or any arbitrator or arbitrators appointed pursuant to Sub-Clause 67.3 assessing the claim considers to be verified by contemporary records (whether or not such records were brought to the Engineer's notice as required under Sub-Clause 53.2 and 53.3).

#### **53.5 Payment of Claims**

The Contractor shall be entitled to have included in any interim payment certified by the Engineer pursuant to Clause 60 such amount in respect of any claim as the Engineer, after due consultation with the Employer and the Contractor, may consider due to the Contractor provided that the Contractor has supplied sufficient particulars to enable the Engineer to determine the amount due. If such particulars are insufficient to substantiate the whole of the claim, the Contractor shall be entitled to payment in respect of such part of the claim as such particulars may substantiate to the satisfaction of the Engineer. The Engineer shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.

### **Contractor's Equipment, Temporary Works and Materials**

#### **54.1 Contractor's Equipment, Temporary Works and Materials; Exclusive Use for the Works**

All Contractor's Equipment, Temporary Works and materials provided by the Contractor shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works and the Contractor shall not remove the same or any part thereof, except for the purpose of moving it from one part of the Site to another, without the consent of the Engineer. Provided that consent shall not be required for vehicles engaged in transporting any staff, labour, Contractor's Equipment, Temporary Works, Plant or materials to or from the Site.

#### **54.2 Employer not Liable for Damage**

The Employer shall not at any time be liable, save as mentioned in Clauses 20 and 65, for the loss of or damage to any of the said Contractor's Equipment, Temporary Works or materials.

#### **54.3 Customs Clearance**

The Employer will use his best endeavours in assisting the Contractor, where required, in obtaining clearance through the Customs of Contractor's Equipment, materials and other things required for the Works.

#### **54.4 Re-export of Contractor's Equipment**

In respect of any Contractor's Equipment which the Contractor has imported for the purposes of the Works, the Employer will use his best endeavours to assist the Contractor, where required, in procuring any necessary Government consent to the re-



export of such Contractor's Equipment by the Contractor upon the removal thereof pursuant to the terms of Contract.

#### **54.5 Conditions of Hire of Contractor's Equipment**

With a view to securing, in the event of termination under Clause 63, the continued availability, for the purpose of executing the Works, of any hired Contractor's Equipment, the Contractor shall not bring on to the Site any hired Contractor's Equipment unless there is an agreement for hire thereof (which agreement shall be deemed not to include an agreement for hire purchase) which contains a provision that the owner thereof will, on request in writing made by the Employer within 7 days after the date on which any termination has become effective, and on the Employer undertaking to pay all hire charges in respect thereof from such date, hire such Contractor's Equipment to the Employer on the same terms in all respect as the same was hired to the Contractor save that the Employer shall be entitled to permit the use thereof by any other contractor employed by him for the purpose of execution and completing the Works and remedying any defects therein, under the terms of the said Clause 63.

#### **54.6 Costs for the Purpose of Clause 63**

In the event of the Employer entering into any agreement for the hire of Contractor's Equipment pursuant to Sub-Clause 54.5, all sums properly paid by the Employer under the provision of any such agreement and all costs incurred by him (including stamp duties) in entering into such agreement shall be deemed, for the purpose of Clause 63, to be part of the cost of executing and completing the Works and the remedying of any defects therein.

#### **54.7 Incorporation of Clause in Subcontracts**

The Contractor shall, where entering into any subcontract for the execution of any part of the Works, incorporate in such subcontract (by reference or otherwise) the provisions of this Clause in relation to Contractor's Equipment, Temporary Works or materials brought on to the Site by the Subcontractor.

#### **54.8 Approval of Materials not Implied**

The operation of this Clause shall not be deemed to imply any approval by the Engineer of the materials or other matters referred to therein nor shall it prevent the rejection of any such materials at any time by the Engineer.

### **Measurement**

#### **55.1 Quantities**

The quantities set out in the Bill of Quantities are the estimated quantities for the Works, and they are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfillment of his obligations under the Contract.

#### **56.1 Works to be Measured**

The Engineer shall, except as otherwise stated, ascertain and determine by measurement the value of the Works in accordance with the Contract and the Contractor shall be paid



that value in accordance with Clause 60. The Engineer shall, when he requires any part of the Works to be measured, give reasonable notice to the Contractor's authorised agent, who shall:

- (a) forthwith attend or send a qualified representative to assist the Engineer in making such measurement, and
- (b) supply all particulars required by the Engineer.

Should the Contractor not attend, or neglect or omit to send such representative, then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of such part of the Works. For the purpose of measuring such Permanent Works as are to be measured by records and drawings, the Engineer shall prepare records and drawings as the work proceeds and the Contractor, as and when called upon to do so in writing, shall, within 14 days, attend to examine and agree such records and drawings with the Engineer and shall sign the same when so agreed. If the Contractor does not attend to examine and agree such records and drawings, they shall be taken to be correct. If, after examination of such records and drawings, the Contractor does not agree the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor, within 14 days of such examination, lodges with the Engineer notice of the respects in which such records and drawings are claimed by him to be incorrect. On receipt of such notice, the Engineer shall review the records and drawings and either confirm or vary them.

#### **57.1 Method of Measurement**

The Works shall be measured net, notwithstanding any general or local custom, except where otherwise provided for in the Contract.

#### **57.2 Breakdown of Lump Sum Items**

For the purposes of statements submitted in accordance with Sub-Clause 60.1, the Contractor shall submit to the Engineer, within 28 days after the receipt of the Letter of Acceptance, a breakdown for each of the lump sum items contained in the Tender. Such breakdowns shall be subject to the approval of the Engineer.

### **Provisional Sums**

#### **58.1 Definition of "Provisional Sum"**

"Provisional Sum" means a sum included in the Contract and so designated in the Bill of Quantities for the execution of any part of the Works or for the supply of goods, materials, Plant or services, or for contingencies, which sum may be used, in whole or in part, or not at all, on the instructions of the Engineer. The Contractor shall be entitled to only such amounts in respect of the work, supply or contingencies to which such Provisional Sums relate as the Engineer shall determine in accordance with this Clause. The Engineer shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.

#### **58.2 Use of Provisional Sums**

In respect of every Provisional Sum the Engineer shall have authority to issue



instructions for the execution of work or for the supply of goods, material, Plant or services by:

- (a) the Contractor, in which case the Contractor shall be entitled to an amount equal to the value thereof determined in accordance with Clause 52, and
- (b) a nominated Subcontractor, as hereinafter defined, in which case the sum to be paid to the Contractor therefor shall be determined and paid in accordance with Sub-Clause 59.4.

### **58.3 Production of Vouchers**

The Contractor shall produce to the Engineer all quotations, invoices, vouchers and accounts or receipts in connection with expenditure in respect of Provisional Sums, except where work is valued in accordance with rates or prices set out in the Tender.

## **Nominated Subcontractors**

### **59.1 Definition of "Nominated Subcontractors"**

All specialists, merchants, tradesmen and others executing any work or supplying any goods, materials, Plant or services for which Provisional Sums are included in the Contract, who may have been or be nominated or selected or approved by the Employer or the Engineer, and all persons to whom by virtue of the provisions of the Contract the Contractor is required to subcontract shall, in the execution of such work or the supply of such goods, materials, Plant or services, be deemed to be subcontractors to the Contractor and are referred to in this Contract as "nominated Subcontractors".

### **59.2 Nominated Subcontractors; Objection to Nomination**

The Contractor shall not be required by the Employer or the Engineer, or be deemed to be under any obligation, to employ any nominated Subcontractor against whom the Contractor may raise reasonable objection, or who declines to enter into subcontract with the Contractor containing provisions:

- (a) that in respect of the work, goods, materials, Plant or services the subject of the subcontract, the nominated Subcontractor will undertake towards the Contractor such obligations and liabilities as will enable the Contractor to discharge his own obligations and liabilities towards the Employer under the terms of the Contract and will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection therewith, or arising out of or in connection with any failure to perform such obligations or to fulfill such liabilities, and
- (b) that the nominated Subcontractor will save harmless and indemnify the Contractor from and against any negligence by the nominated Subcontractor, his agents, workmen and servants and from and against any misuse by him or them of any Temporary Works provided by the Contractor for the purposes of the Contract and from all claims as aforesaid.

### **59.3 Design Requirements to be Expressly Stated**



If in connection with any Provisional Sum the services to be provided include any matter of design or specification of any part of the Permanent Works or of any Plant to be incorporated therein, such requirement shall be expressly stated in the Contract and shall be included in any nominated Subcontract. The nominated Subcontract shall specify that the nominated Subcontractor providing such services will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection with any failure to perform such obligations or to fulfill such liabilities.

#### **59.4 Payments to Nominated Subcontractors**

For all work executed or goods, materials, Plant or services supplied by any nominated Subcontractor, the Contractor shall be entitled to:

- (a) the actual price paid or due to be paid by the Contractor, on the instructions of the Engineer, and in accordance with the subcontract;
- (b) in respect of labour supplied by the Contractor, the sum, if any, entered in the Bill of Quantities or, if instructed by the Engineer pursuant to paragraph (a) of Sub-Clause 58.2, as may be determined in accordance with Clause 52; and
- (c) in respect of all other charges and profit, a sum being a percentage rate of the actual price paid or due to be paid calculated, where provision has been made in the Bill of Quantities for a rate to be set against the relevant Provisional Sum, at the rate inserted by the Contractor against that item or, where no such provision has been made, at the rate inserted by the Contractor in the Appendix to Tender and repeated where provision for such is made in a special item provided in the Bill of Quantities for such purpose.

#### **59.5 Certification of Payments to Nominated Subcontractors**

Before issuing, under Clause 60 any certificate, which includes any payment in respect of work done or goods, materials, Plant or services supplied by any nominated Subcontractor, the Engineer shall be entitled to demand from the Contractor reasonable proof that all payments, less retentions, included in previous certificates in respect of the work or goods, materials, Plant or services of such nominated Subcontractor have been paid or discharged by the Contractor. If the Contractor fails to supply such proof then, unless the Contractor:

- (a) satisfies the Engineer in writing that he has reasonable cause for withholding or refusing to make such payment, and
- (b) produces to the Engineer reasonable proof that he has so informed such nominated Subcontractor in writing,

the Employer shall be entitled to pay to such nominated Subcontractor direct, upon the certificate of the Engineer, all payments, less retention, provided for in the nominated Subcontract, which the Contractor has failed to make to such nominated Subcontractor and to deduct by way of set-off the amount so paid by the Employer from any sums due or to become due from the Employer to the Contractor.

Provided that, where the Engineer has certified and the Employer has paid direct as



aforesaid, the Engineer shall in issuing any further certificate in favour of the Contractor, deduct from the amount thereof the amount so paid, direct as aforesaid, but shall not withhold or delay the issue of the certificate itself when due to be issued under the terms of the Contract.

## **Certificates and Payment**

### **60.1 Monthly Statements**

The Contractor shall submit to the Engineer after the end of each month six copies, each signed by the Contractor's representative approved by the Engineer in accordance with the Sub-Clause 15.1, of a statement, in such form as the Engineer may from time to time prescribe, showing the amounts to which the Contractor considers himself to be entitled up to the end of the month in respect of:

- (a) the value of the Permanent Works executed,
- (b) any other items in the Bill of Quantities including those for Contractor's Equipment, Temporary Works, dayworks and the like,
- (c) the percentage of the invoice value of listed materials, all as stated in the Appendix to Tender, and Plant delivered by the Contractor on the Site for incorporation in the Permanent Works but not incorporated in such Works,
- (d) adjustments under Clause 70, and
- (e) any other sum to which the Contractor may be entitled under the Contract or otherwise.

### **60.2 Monthly Payments**

The Engineer shall, within 28 days of receiving such statement, certify to the Employer the amount of payment to the Contractor which he considers due and payable in respect thereof, subject:

- (a) firstly, to the retention of the account calculated by applying the Percentage of Retention stated in the Appendix to Tender, to the amount to which the Contractor is entitled under paragraph (a), (b), (c) and (e) of Sub-Clause 60.1 until the amount so retained reaches the Limit of Retention Money stated in the Appendix to Tender, and
- (b) secondly, to the deduction, other than pursuant to Clause 47, of any sums which may have become due and payable by the Contractor to the Employer.

Provided that the Engineer shall not be bound to certify any payment under this Sub-Clause if the net amount thereof, after all retentions and deductions, would be less than the Minimum Amount of Interim Payment Certificates stated in the Appendix to Tender.

Notwithstanding the terms of this Clause or any other Clause of the Contract no amount will be certified by the Engineer for payment until the performance security, if required under the Contract, has been provided by the Contractor and approved by the Employer.





### 60.3 **Payment of Retention Money**

- (a) Upon the issue of the Taking-Over Certificate with respect to the whole of the Works, one half of the Retention Money, or upon the issue of a Taking-Over Certificate with respect to a Section or part of the Permanent

Works only such proportion thereof as the Engineer determines having regard to the relative value of such Section or part of the Permanent Works, shall be certified by the Engineer for payment to the Contractor.

- (b) Upon the expiration of the Defects Liability Period for the Works the other half of the Retention Money shall be certified by the Engineer for payment to the Contractor. Provided that, in the event of different Defects Liability Periods having become applicable to different Sections or part of the Permanent Works pursuant to Clause 48, the expression "expiration of the Defects Liability Period" shall, for the purposes of this Sub-Clause, be deemed to mean the expiration of the latest of such periods. Provided also that if at such time, there shall remain to be executed by the Contractor any work instructed, pursuant to Clause 49 and 50, in respect of the Works, the Engineer shall be entitled to withhold certification until completion of such work of so much of the balance of the Retention Money as shall, in the opinion of the Engineer, represent the cost of the work remaining to be executed.

### 60.4 **Correction of Certificates**

The Engineer may by any Interim Payment Certificate make any correction or modification in any previous certificate which shall have been issued by him and shall have authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.

### 60.5 **Statement at Completion**

Not later than 84 days after the issue of the Taking-Over Certificate in respect of the whole of the Works, the Contractor shall submit to the Engineer a Statement at Completion with supporting documents showing in detail, in the form approved by the Engineer:

- (a) the final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate,
- (b) any further sums which the Contractor considers to be due, and
- (c) an estimate of amounts which the Contractor considers will become due to him under the Contract.

The estimated amounts shall be shown separately in such Statement at Completion. The Engineer shall verify payment in accordance with Sub-Clause 60.2.

### 60.6 **Final Statement**

Not later than 56 days after the issue of the Defects Liability Certificate pursuant to Sub-Clause 62.1, the Contractor shall submit to the Engineer for consideration a draft final statement with supporting documents showing in detail, in the form approved by the Engineer:



- (a) the value of all work done in accordance with the Contract, and
- (b) any further sums which the Contractor considers to be due to him under the Contract.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed (for the purposes of these Conditions referred to as the "Final Statement").

If, following discussions between the Engineer and the Contractor and any changes to the draft final statement which may be agreed between them, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer an Interim Payment Certificate for those parts of the draft final statement, if any, which are not in dispute. The dispute may then be settled in accordance with Clause 67.

#### **60.7 Discharge**

Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Payment Certificate issued pursuant to Sub-Clause 60.8 has been made and the performance security referred to in Sub-Clause 10.1, if any, has been returned to the Contractor.

#### **60.8 Final Payment Certificate**

Within 28 days after receipt of the Final Statement, and the written discharge, the Engineer shall issue to the Employer (with a copy to the Contractor) a Final Payment Certificate stating:

- (a) the amount which, in the opinion of the Engineer, is finally due under the Contract or otherwise, and
- (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled other than under Clause 47, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer as the case may be.

#### **60.9 Cessation of Employer's Liability**

The Employer shall not be liable to the Contractor for any matter or thing arising out of or in connection with the Contract or execution of the Works, unless the Contractor shall have included a claim in respect thereof in his Final Statement and (except in respect of matters or things arising after the issue of the Taking-Over Certificate in respect of the whole of the Works) in the Statement at Completion referred to in Sub-Clause 60.5.

#### **60.10 Time for Payment**

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other term of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor within 28 days after such Interim Payment Certificate has been delivered to the Employer, or, in the case of the Final Payment Certificate referred to in Sub-Clause 60.8, within 56 days, after such Final





Payment Certificate has been delivered to the Employer. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor interest at the rate stated in the Appendix to Tender upon all sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69 or otherwise.

#### **61.1 Approval only by Defects Liability Certificate**

Only the Defects Liability Certificate, referred to in Clause 62, shall be deemed to constitute approval of the Works.

#### **62.1 Defects Liability Certificate**

The Contract shall not be considered as completed until a Defects Liability Certificate shall have been signed by the Engineer and delivered to the Employer, with a copy to the Contractor, stating the date on which the Contractor shall have completed his obligations to execute and complete the Works and remedy any defects therein to the Engineer's satisfaction. The Defects Liability Certificate shall be given by the Engineer within 28 days after the expiration of the Defects Liability Period, or, if different defects liability periods shall become applicable to different Sections or parts of the Permanent Works, the expiration of the latest such period, or as soon thereafter as any works instructed, pursuant to Clause 49 and 50, have been completed to the satisfaction of the Engineer. Provided that the issue of the Defects Liability Certificate shall not be a condition precedent to payment to the Contractor of the second portion of the Retention Money in accordance with the conditions set out in Sub-Clause 60.3.

#### **62.2 Unfulfilled Obligations**

Notwithstanding the issue of the Defects Liability Certificate the Contractor and the Employer shall remain liable for the fulfillment of any obligation incurred under the provisions of the Contract prior to the issue of the Defects Liability Certificate which remains unperformed at the time of such Defects Liability Certificate is issued and, for the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties to the Contract.

### **Remedies**

#### **63.1 Default of Contractor**

If the Contractor is deemed by law unable to pay his debts as they fall due, or enters into voluntary or involuntary bankruptcy, liquidation or dissolution (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or becomes insolvent, or makes an arrangement with, or assignment in favour of, his creditors, or agrees to carry out the Contract under a committee of inspection of his creditors, or if a receiver, administrator, trustee or liquidator is appointed over any substantial part of his assets, or if, under any law or regulation relating to reorganization, arrangement or readjustment of debts, proceedings are commenced against the Contractor or resolutions passed in connection with dissolution or liquidation or if any steps are taken to enforce any security interest over a substantial part of the assets of the Contractor, or if any act is done or event occurs with respect to the Contractor or his assets which, under any applicable law has a substantially similar effect to any of the foregoing acts or events, or if the



Contractor has contravened Sub-Clause 3.1, or has an execution levied on his goods, or Contract, if the Engineer certifies to the Employer, with a copy to the Contractor, that, in his opinion, the Contractor:

- (a) has repudiated the Contract, or
- (b) without reasonable excuse has failed
  - (i) to commence the Works in accordance with Sub-Clause 41.1,
  - (ii) to proceed with the Works, or any Section thereof, within 28 days after receiving notice pursuant to Sub-Clause 46.1,
- (c) has failed to comply with a notice issued pursuant to Sub-Clause 37.4 or an instruction issued pursuant to Sub-Clause 39.1 within 28 days after having received it
- (d) despite previous warning from the Engineer, in writing, is otherwise persistently or flagrantly neglecting to comply with any of his obligations under the Contract, or
- (e) has contravened Sub-Clause 4.1,

then the Employer may, after giving 14 days' notice to the Contractor, enter upon the Site and the Works and terminate the employment of the Contractor without thereby releasing the Contractor from any of his obligations or liabilities under the Contract, or affecting the rights and authorities conferred on the Employer or the Engineer by the Contract, and may himself complete the Works or may employ any other contractor to complete the Works. The Employer or such other contractor may use for such completion so much of the Contractor's Equipment, Temporary Works and materials as he or they may think proper.

### **63.2 Valuation at Date of Termination**

The Engineer shall, as soon as may be practicable after any such entry and termination by the Employer, fix and determine ex parte, or by or after reference to the parties or after such investigation or enquiries as he may think fit to make or institute, and shall certify:

- (a) what amount (if any) had, at the time of such entry and termination, been reasonably earned by or would reasonably accrue to the Contractor in respect of work then actually done by him under the Contract, and
- (b) the value of any of the said unused or partially used materials, any Contractor's Equipment and any Temporary Works.

### **63.3 Payment after Termination**

If the Employer terminates the Contractor's employment under this Clause, he shall not be liable to pay to the Contractor any further amount (including damages) in respect of the Contract until the expiration of the Defects Liability Period and thereafter until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any) and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the Engineer. The Contractor shall then be entitled to receive only such sum (if any) as the Engineer may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount exceeds the sum which would have been payable to the Contractor on due completion by him, then the Contractor shall, upon demand, pay to the Employer the



amount of such excess and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly.

#### **63.4 Assignment of Benefit of Agreement**

Unless prohibited by law, the Contractor shall, if so instructed by the Engineer within 14 days of such entry and termination referred to in Sub-Clause 63.1, assign to the Employer the benefit of any agreement for the supply of any goods or materials or services and/or for the execution of any work for the purposes of the Contract, which the Contractor may have entered into.

#### **64.1 Urgent Remedial Work**

If, by reason of any accident, or failure, or other event occurring to, in, or in connection with the Works, or any part thereof, either during the execution of the Works, or during the Defects Liability Period, any remedial or other work is, in the opinion of the Engineer, urgently necessary for the safety of the Works and the Contractor is unable or unwilling at once to do such work, the Employer shall be entitled to employ and pay other persons to carry out such work as the Engineer may consider necessary. If the work or repair so done by the Employer is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided that the Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof.

### **Special Risks**

#### **65.1 No Liability for Special Risks**

The Contractor shall be under no liability whatsoever in consequence of any of the special risks referred to in Sub-Clause 65.2, whether by way of indemnity or otherwise, for or in respect of:

- (a) destruction of or damage to the Works, save to work condemned under the provisions of Clause 39 prior to the occurrence of any of the said special risks,
- (b) destruction of or damage to property, whether of the Employer or third parties, or
- (c) injury or loss of life.

#### **65.2 Special Risks**

The Special Risks are:

- (a) the risks defined under paragraphs (a), (c), (d) and (e) of Sub-Clause 20.4, and
- (b) the risks defined under paragraph (b) of Sub-Clause 20.4 insofar as these relate to the country in which the Works are to be executed.



### **65.3 Damage to Works by Special Risks**

If the Works or any materials or Plant on or near or in transit to the Site, or any of the Contractor's Equipment, sustain destruction or damage by reason of any of the said special risks, the Contractor shall be entitled to payment in accordance with the Contract for any Permanent Works duly executed and for any materials or Plant so destroyed or damaged and, so far as may be required by the Engineer or as may be necessary for the completion of the Works, to payment for:

- (a) rectifying any such destruction or damage to the Works, and
- (b) replacing or rectifying such materials or Contractor's Equipment,

and the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 (which shall in the case of the cost of replacement of Contractor's Equipment include the fair market value thereof as determined by the Engineer) and shall notify the Contractor accordingly, with a copy to the Employer.

### **65.4 Projectile, Missile**

Destruction, damage, injury or loss of life caused by the explosion or impact, whenever and wherever occurring, of any mine, bomb, shell, grenade, or other projectile, missile, munition, or explosive of war, shall be deemed to be a consequence of the said special risks.

### **65.5 Increased Costs arising from Special Risks**

Save to the extent that the Contractor is entitled to payment under any other provision of the Contract, the Employer shall repay to the Contractor any costs of the execution of the Work (other than such as may be attributable to the cost of reconstructing work condemned under the provisions of Clause 39 prior to the occurrence of any special risk) which are howsoever attributable to or consequent on or the result of or in any way whatsoever connected with the said special risks, subject however to the provisions in this Clause hereinafter contained in regard to outbreak of war, but the Contractor shall, as soon as any such cost comes to his knowledge, forthwith notify the Engineer thereof. The Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of the Contractor's costs in respect thereof which shall be added to the Contract Price and shall notify the Contractor accordingly, with a copy to the Employer.

### **65.6 Outbreak of War**

If, during the currency of the Contract, there is an outbreak of war, whether war is declared or not, in any part of the world which, whether financially or otherwise, materially affects the execution of the Works, the Contractor shall, unless and until the Contract is terminated under the provisions of this Clause, continue to use his best endeavour to complete the execution of the Works. Provided that the Employer shall be entitled, at any time after such outbreak of war, to terminate the Contract by giving notice to the Contractor and, upon such notice being given, the Contract shall, except as to the rights of the parties under this clause and Clause 67, terminate, but without prejudice to



the rights of either party in respect of any antecedent breach thereof.

#### **65.7 Removal of Contractor's Equipment on Termination**

If the Contract is terminated under the provisions of Sub-Clause 65.6, the Contractor shall, with all reasonable dispatch, remove from the Site all Contractor's Equipment and shall give similar facilities to his Subcontractors to do so.

#### **65.8 Payment if Contract Terminated**

If the Contract is terminated as aforesaid, the Contractor shall be paid by the Employer, insofar as such amounts or items have not already been covered by payments on account made to the Contractor, for all work executed prior to the date of termination at the rates and prices provided in the Contract and in addition:

- (a) the amounts payable in respect of any preliminary items referred to in the Bill of Quantities, so far as the work or service comprised therein has been carried out or performed, and a proper portion of any such items which have been partially carried out or performed;
- (b) the cost of materials, Plant or goods reasonably ordered for the Works which have been delivered to the Contractor or of which the Contractor is legally liable to accept delivery, such materials, Plant or goods becoming the property of the Employer upon such payments being made by him;
- (c) a sum being the amount of any expenditure reasonably incurred by the Contractor in the expectation of completing the whole of the Works insofar as such expenditure has not been covered by any other payments referred to in this Sub-Clause;
- (d) any additional sum payable under the provisions of Sub-Clauses 65.3 and 65.5;
- (e) such proportion of the cost as may be reasonable, taking into account payments made or to be made for work executed, of removal of Contractor's Equipment under Sub-Clause 65.7 and, if required by the Contractor, return thereof to the Contractor's main plant yard in his country of registration or to other destination, at no greater cost; and
- (f) the reasonable cost of repatriation of all the Contractor's staff and workmen employed on or in connection with the Works at the time of such termination.

Provided that against any payment due from the Employer under this Sub-Clause, the Employer shall be entitled to be credited with any outstanding balances due from the Contractor for advances in respect of Contractor's Equipment, materials and Plant and any other sums which, at the date of termination, were recoverable by the Employer from the Contractor under the terms of Contract. Any sums payable under this Sub-Clause shall, after due consultation with the Employer and the Contractor, be determined by the Engineer who shall notify the Contractor accordingly, with a copy to the Employer.

### **Release from Performance**

#### **66.1 Payment in Event of Release from Performance**



If any circumstance outside the control of both parties arises after the issue of the Letter of Acceptance which renders it impossible or unlawful for either party to fulfill his or their contractual obligations, or under the law governing the Contract the parties are released from further performance, then the parties shall be discharged from the Contract, except as to their rights under this Clause and Clause 67 and without prejudice to the rights of either party in respect of any antecedent breach of the Contract, and the sum payable by the Employer to the Contractor in respect of the work executed shall be the same as that which would have been payable under Clause 65 if the Contract had been terminated under the provisions of Clause 65.

## **Settlement of Disputes**

### **67.1 Engineer's Decision**

If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the execution of the Works, whether during the execution of the Works or after their completion and whether before or after repudiation or other termination of the Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, 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 eighty-fourth day after the day on which he received such reference the Engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this Clause.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the Works 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 amicable settlement or an arbitral award.

If either the Employer or the Contractor be dissatisfied with any decision of the Engineer, or if the Engineer fails to give notice of his decision on or before the eighty-fourth day on which he received the reference, then either the Employer or the Contractor may, on or before the seventieth day after the day on which he received notice of such decision, or on or before the seventieth day after the day on which the said period of 84 days expired, as the case may be, give notice to the other party, with a copy for information to the Engineer, of his intention to commence arbitration, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and, subject to Sub-Clause 67.4, no arbitration in respect thereof may be commenced unless such notice is given.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notice of intention to commence arbitration as to such dispute has been given by either the Employer or the Contractor on or before the seventieth day after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor.

### **67.2 Amicable Settlement**





Where notice of intention to commence arbitration as to a dispute has been given in accordance with Sub-Clause 67.1, the parties shall attempt to settle such dispute amicably before the commencement of arbitration. Provided that, unless the parties otherwise agree, arbitration may be commenced on or after the fifty-sixth day after the day on which notice of intention to commence arbitration of such dispute was given, even if no attempt at amicable settlement thereof has been made.

### **67.3 Arbitration**

Any dispute in respect of which:

(a) the decision, if any, of the Engineer has not become final and binding pursuant to Sub-Clause 67.1, and

(b) amicable settlement has not been reached within the period stated in Sub-Clause 67.2,

shall be finally settled, unless otherwise specified in the Contract, under the Rules of Conciliation and Arbitration of the International Chamber of Commerce by one or more arbitrators appointed under such Rules. The said arbitrator/s shall have full power to open up, review and revise any decision, opinion, instruction, determination, certificate or valuation of the Engineer related to the dispute.

Neither party shall be limited in the proceedings before such arbitrator/s to the evidence or arguments put before the Engineer for the purpose of obtaining his said decision pursuant to Sub-Clause 67.1. No such decision shall disqualify the Engineer from being called as a witness and giving evidence before the arbitrator/s on any matter whatsoever relevant to the dispute.

Arbitration may be commenced prior to or after completion of the Works, provided that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the Works.

### **67.4 Failure to Comply with Engineer's Decision**

Where neither the Employer nor the Contractor has given notice of intention to commence arbitration of a dispute within the period stated in Sub-Clause 67.1 and the related decision has become final and binding, either party may, if the other party fails to comply with such decision, and without prejudice to any other rights it may have, refer the failure to arbitration in accordance with Sub-Clause 67.3. The provisions of Sub-Clause 67.1 and 67.2 shall not apply to any such reference.

## **Notices**

### **68.1 Notice to Contractor**

All certificates, notices or instructions to be given to the Contractor by the Employer or the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to or left at the Contractor's principal place of business or such other address as the Contractor shall nominate for that purpose.

### **68.2 Notice to Employer and Engineer**

Any notice to be given to the Employer or to the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to or left at the



respective addresses nominated for that purpose in Part II of these Conditions.

### **68.3 Change of Address**

Either party may change a nominated address to another address in the country where the Works are being executed by prior notice to the other party, with a copy to the Engineer, and the Engineer may do so by prior notice to both parties.

### **Default of Employer**

#### **69.1 Default of Employer**

In the event of the Employer:

- (a) failing to pay to the Contractor the amount due under any certificate of the Engineer within 28 days after the expiry of the time stated in Sub-Clause 60.10 within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract,
- (b) interfering with or obstructing or refusing any required approval to the issue of any such certificate,
- (c) becoming bankrupt or, being a company, going into liquidation, other than for the purpose of a scheme of reconstruction or amalgamation, or
- (d) giving notice to the Contractor that for economic reasons it is impossible for him to continue to meet his contractual obligations,

the Contractor shall be entitled to terminate his employment under the Contract by giving notice to the Employer, with a copy to the Engineer. Such termination shall take effect 14 days after the giving of the notice.

#### **69.2 Removal of Contractor's Equipment**

Upon the expiry of the 14 days' notice referred to in Sub-Clause 69.1, the Contractor shall, notwithstanding the provisions of Sub-Clause 54.1, with all reasonable despatch, remove from the Site all Contractor's Equipment brought by him thereon.

#### **69.3 Payment on Termination**

In the event of such termination the Employer shall be under the same obligations to the Contractor in regard to payment as if the Contract had been terminated under the provisions of Clause 65, but, in addition to the payments specified in Sub-Clause 65.8, the Employer shall pay to the Contractor the amount of any loss or damage to the Contractor arising out of or in connection with or by consequence of such termination.

#### **69.4 Contractor's Entitlement to Suspend Work**

Without prejudice to the Contractor's entitlement to interest under Sub-Clause 60.10 and to terminate under Sub-Clause 69.1, the Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer within 28 days after the expiry of the time stated in Sub-Clause 60.10 within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 28 days' prior notice to the Employer, with a copy to the Engineer, suspend work or reduce the rate of work.





If the Contractor suspends work or reduces the rate of work in accordance with the provisions of this Sub-Clause and thereby suffers delay or incurs costs the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, which shall be added to the Contract Price,

and shall notify the Contractor accordingly, with a copy to the Employer.

#### **69.5 Resumption of Work**

Where the Contractor suspends work or reduces the rate of work, having given notice in accordance with Sub-Clause 69.4, and the Employer subsequently pays the amount due, including interest pursuant to Sub-Clause 60.10, the Contractor's entitlement under Sub-Clause 69.1 shall, if notice of termination has not been given, lapse and the Contractor shall resume normal working as soon as is reasonably possible.

### **Changes in Cost and Legislation**

#### **70.1 Increase or Decrease of Cost**

There shall be added to or deducted from the Contract Price such sums in respect of rise or fall in the cost of labour and/or materials or any other matters affecting the cost of the execution of the Works as may be determined in accordance with part II of these Conditions.

#### **70.2 Subsequent Legislation**

If, after the date 28 days prior to the latest date for submission of tenders for the Contract there occur in the country in which the Works are being or are to be executed changes to any National or State Statute, Ordinance, Decree or other Law or any regulation or bye-law of any local or other duly constituted authority, or the introduction of any such State Statute, Ordinance, Decree, Law, regulation or bye-law which causes additional or reduced cost to the Contractor, other than under Sub-Clause 70.1, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be added to or deducted from the Contract Price and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

### **Currency and Rates of Exchange**

#### **71.1 Currency Restrictions**

If, after the date 28 days prior to the latest date for submission of tenders for the Contract, the Government or authorized agency of the Government of the country in which the Works are being or are to be executed imposes currency restrictions and/or transfer of currency restrictions in relation to the currency or currencies in which the Contract Price is to be paid, the Employer shall reimburse any loss or damage to the Contractor arising therefrom, without prejudice to the right of the Contractor to exercise any other rights or remedies to which he is entitled in such event.

#### **72.1 Rates of Exchange**



Where the Contract provides for payment in whole or in part to be made to the Contractor in foreign currency or currencies, such payment shall not be subject to variations in the rate or rates of exchange between such specified foreign currency or currencies and the currency of the country in which the Works are to be executed.

#### **72.2 Currency Proportions**

Where the Employer has required the Tender to be expressed in a single currency but with payment to be made in more than one currency and the Contractor has stated the proportions or amounts of other currency or currencies in which he requires payment to be made, the rate or rates of exchange applicable for calculating the payment of such proportions or amounts shall, unless otherwise stated in Part II of these Conditions, be those prevailing, as determined by the Central Bank of the country in which the Works are to be executed, on the date 28 days prior to the latest date for the submission of tenders for the Contract, as has been notified to the Contractor by the Employer prior to the submission of tenders or as provided for in the Tender.

#### **72.3 Currencies of Payment for Provisional Sums**

Where the Contract provides for payment in more than one currency, the proportions or amounts to be paid in foreign currencies in respect of Provisional Sums shall be determined in accordance with the principles set forth in Sub-Clauses 72.1 and 72.2 as and when these sums are utilised in whole or in part in accordance with the provisions of Clauses 58 and 59.

### **REFERENCE TO PART II**



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**PART II**  
**CONDITIONS OF PARTICULAR**  
**APPLICATION**

## **PART II - PARTICULAR CONDITIONS OF CONTRACT**

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## **PART II - PARTICULAR CONDITIONS OF CONTRACT**

### **1.1 DEFINITIONS AND INTERPRETATIONS**

- (a)(i) The Employer is *Project Implementation Unit, Education City, Govt of Sindh*. Wherever the term Client or Owner appears in the Tender Document, it shall mean the “Employer”.
- (iv) (a)(iv) The Engineer is CGD Consulting Pvt Ltd, or any other competent person appointed by the Employer, and notified to the Contractor, to act in replacement of the Engineer. Provided always that except in cases of professional misconduct, the outgoing Engineer to formulate his certifications / recommendations in relation to all outstanding matter, disputes and claims relating to the execution of the Works during his tenure.

Wherever the term Consultant or Consultants appears in the Bidding Documents, it shall mean the “Engineer” and vice-versa.

#### **Employer’s Representative**

Any person appointed by the Employer from time to time shall be deemed the Employer’s Representative, who shall have the authority to enter in to work site, inspect the work for insuring the quality.

- (a)(vii) **Labourers/ Workmen** mean such labourers/ workmen and staff as may be employed by the Contractor for the purpose of carrying out the works specified in the Contract.
- (a)(viii) "Bidder or Tenderer" means any person or persons, company, corporation, firm or joint venture submitting a Bid or Tender.
- (b)(v) Add the following at the end of the paragraph:
- The word "Tender" is synonymous with "Bid" and the word "Tender Documents" with "Bidding Document".
- (b)(ix) "Programme" means the programme to be submitted by the Contractor in accordance with Sub-Clause 14.1 and any approved revisions thereto.
- (b)(x) FIDIC means FEDERATION INTERNATIONALE DES INGENIEURS CONSEILS (International Federation of Consulting Engineers)
- (e)(i) Delete the text and substitutes:  
"Contract Price" means the sum stated in the Letter of Acceptance as payable to the Contractor for the execution and completion of the Works subject to such additions thereto or deductions therefrom as may be made and remedying of any defects therein in accordance with the provisions of the Contract.
- (h) **Approved/ Approval** means approved/ approval in writing by Engineer / Employer or their representative specified in “Conditions of Contract”.
- (i) When the terms **acceptable, satisfactory, proper** or other such general qualifying terms are used in the Contract it shall be understood that reference is made to the sole ruling and the sole judgment of the Employer representative or his Engineer.
- (j) The Word **Equivalent or Equal** where used in these documents in the general sense shall not mean similar but shall mean “**Conforming to, of Like Kind**”



**Quality and Function Proprietary Items**” and **“Trade Name”** are used for the purposes of establishing a standard of **“Kind Quality and Function”** and **“Equivalent”** items, articles, things or materials will be approved if held to be **“Equivalent”** by the Engineer.

- (k) **“Schedule Progress”** means the monthly Percentage progress as described in Appendix-E of Appendices to Bid.

## 2.1 Engineer's Duties and Authority

With reference to Sub-Clause 2.1(b), the following provisions shall also apply;

The Engineer shall obtain the specific approval of the Employer before carrying out his duties in accordance with the following Clauses:

- (i) Consenting to the sub-letting of any part of the Works under Sub-Clause 4.1 “Subcontracting”.
- (ii) Certifying additional cost determined under Sub-Clause 12.2 “Not Foreseeable Physical Obstructions or Conditions”.
- (iii) Any action under Clause 10 “Performance Security” and Clauses 21, 23, 24 & 25 “Insurance” of sorts.
- (iv) Any action under Clause 40 “Suspension”.
- (v) Any action under Clause 44 “Extension of Time for Completion”.
- (vi) Any action under Clause 47 “Liquidated Damages for Delay” or Payment of Bonus for Early Completion of Works (PCC Sub-Clause 47.3).
- (vii) Issuance of “Taking Over Certificate” under Clause 48.
- (viii) Issuing a Variation Order under Clause 51, except:
  - a) in an emergency\* situation, as stated herebelow, or
  - b) if such variation would increase the Contract Price by less than the amount stated in the Appendix-A to Bid.
- (ix) Fixing rates or prices under Clause 52.
- (x) Extra payment as a result of Contractor’s claims under Clause 53.
- (xi) Release of Retention Money to the Contractor under Sub-Clause 60.3 “Payment of Retention Money”.
- (xii) Issuance of “Final Payment Certificate” under Sub-Clause 60.8.
- (xiii) Issuance of “Defect Liability Certificate” under Sub-Clause 62.1.
- (xiv) Any change in the ratios of Contract currency proportions and payments thereof under Clause 72 “Currency and Rate of Exchange”.

\*(If in the opinion of the Engineer an emergency occurs affecting the safety of life or of the Works or of adjoining property, the Engineer may, without relieving the Contractor of any of his duties and responsibilities under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.)

The following Sub-Clauses 2.5(a) & (b), 2.7 and 2.8 are added:



## 2.5 (a) Employer's Instructions

The Employer/ Engineer through its representative may in absolute discretion and from time to time issue written instructions, details, directions and explanations which are hereafter collectively referred to as "Employer's Instructions". The Employer/Engineer shall have the right to reject any materials, workmanship or equipment, which does not conform to the Contract and to suspend any work that is being improperly done. The Engineer's decision as to the construction and meaning of the drawings and specifications shall be final. Precedent or opinion as to what is useful or standard practice shall not be held to affect the status of the Engineer decision in any way or to relieve the Contractor from full responsibility and compliance with all requirements of the specification and plans.

- (b) The Employer/ Engineer shall have the right to inspect and supervise the work. The inspection and supervision of the work by the Engineer shall not relieve the Contractor of his full responsibility and liability of careful and faultless execution of the work.

## 2.7 Engineer not Liable

Approval, reviews and inspection by the Engineer of any part of the Works does not relieve the Contractor from his sole responsibility and liability for the supply of materials, plant and equipment for construction of the Works and their parts in accordance with the Contract and neither the Engineer's authority to act nor any decision made by him in good faith as provided for under the Contract whether to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any of their representatives or employees or any other person performing any portion of the Works.

## 2.8 Replacement of the Engineer

"If the Employer intends to replace the Engineer, the Employer shall, not less than 14 days before the intended date of replacement, give notice to the Contractor, of the name, address and relevant experience of the intended replacement Engineer. The Employer shall not replace the Engineer with a person against whom the Contractor raises reasonable objection by notice to the Employer, with supporting particulars."

## 5.1 Language(s) and Law

- (a) The Contract Documents, shall be drawn up in the English language  
(b) The Contract shall be subject to the Laws of Islamic Republic of Pakistan.

## 5.2 Priority of Contract Documents

The documents listed at (1) to (6) of the Sub-Clause are deleted and substituted with the following:

- (1) The Contract Agreement;
- (2) The Letter of Acceptance;
- (3) The completed Form of Bid;
- (4) Special Stipulations (Appendix-A to Bid);
- (5) Specification - Special Provision
- (6) The Particular Conditions of Contract - Part II;
- (7) The General Conditions - Part I;
- (8) The priced Bill of Quantities (Appendix-D to Bid);
- (9) The completed Appendices to Bid (B, C, E to O);
- (10) The Drawings;
- (11) Specifications - Technical Provisions
- (12) \_\_\_\_\_ (any other)





In case of discrepancies between drawings, those of larger scale shall govern unless they are superseded by a drawing of later date regardless of scale. All Drawings and Specifications shall be interpreted in conformity with the Contract and these Conditions. Addendum, if any, shall be deemed to have been incorporated at the appropriate places in the documents forming the Contract.

### **5.3 Contract Documents are Mutually Complementary**

The Contract Documents are complementary and what is called for by any one shall be as binding as if called for by all.

### **5.5 Marginal Headlines, Titles**

The table of contents/ index, titles, headings, running headlines and marginal notes contained therein and/ or in said documents are solely to facilitate reference to the various provisions of Contract document and in no way shall affect limit or cast light upon the interpretation of provisions to which they refer in case of doubt, conflict in respect of interpretation of General Condition of Contract, shall prevail.

### **6.1 Custody and Supply of Drawings and Documents**

In line seven of Clause 6.1 General Condition of Contract Part-I after word "Certificate" add "or earlier completion / cancellation of contract".

The Sub-Clauses 6.6 and 6.7 are added:

### **6.6 Shop Drawings**

The Contractor shall submit to the Engineer for review 3 copies of all shop and erection drawings applicable to this Contract as per provision of relevant Sub-Clause of the Contract.

Review and approval by the Engineer shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory and that the Engineer's review or approval shall not relieve the Contractor of any of his responsibilities under the Contract.

### **6.7 As-Built Drawings**

At the completion of the Works under the Contract, the Contractor shall furnish to the Engineer 6 copies and one reproducible of all drawings amended to conform with the Works as built. The price of such Drawings shall be deemed to be included in the Contract Price.

### **8.1 Contractor's General Responsibilities**

In line two of Clause 8.1 General Condition of Contract Part-I after word "Works" add "mentioned in the contract and all other work if offered by him complimentary after award of tender and formed part of contract agreement however design of such work before execution shall be vetted by the Engineer".

### **9.1 Contract Agreement**

In line two of Clause 9.1 General Condition of Contract Part-I replace the words "at the cost of the Employer" with "at the cost of the Contractor" and add the following sub paragraphs at the end:

The Contract Agreement would be made on stamp paper of an appropriate value liveable under the law. Cost of stamp duty would be born by the Contractor.





The Contractor shall at his own cost submit to the Employer photocopies of Four (4) sets and to the Engineer two (2) sets of the Contract Documents in bound form, duly initialled and stamped by the Employer, and the Contractor for the use of the Employer and the Engineer. Such submission shall be made within seven (7) days of signing of the Contract Agreement by the Employer and Contractor.

#### **10.1 Performance Security**

The text is deleted and substituted with the following:

The Contractor shall provide Performance Security to the Employer in the prescribed form. The said Security shall be furnished or caused to be furnished by the Contractor within 28 days after the receipt of the Letter of Acceptance. The Performance Security shall be of an amount equal to 10% of the Contract Price stated in the Letter of Acceptance. Such Security shall, at the option of the bidder, be in the form of either (a) bank guarantee from any Scheduled Bank in Pakistan or (b) bank guarantee from a bank located outside Pakistan duly counter-guaranteed by a Scheduled Bank in Pakistan as per SPPRA Rules & Regulations.

The cost of complying with requirements of this Sub-Clause shall be borne by the Contractor.

The following Sub-Clause 10.4 is added:

#### **10.4 Performance Security Binding on Variations and Changes**

The Performance Security shall be binding irrespective of changes in the quantities or variations in the Works or extensions in time for completion of the Works which are granted or agreed upon under the provisions of the Contract.

#### **10.5 Approved Insurance Companies for Performance Security**

All Insurance Companies operating in Pakistan having atleast AA rating from PACRA/ JCR approved for submission of Performance Bond.

#### **13.1 Works to be in accordance with contract**

Add the following para in the end of this clause:-

The Employer/ Engineer shall have the right to retain and / or deduct from contractor's bill an adequate amount of money, if the contractor fails to perform his obligations in terms and conditions of this clause.

#### **14.1 Programme to be submitted**

In line two of Clause 14.1 General Condition of Contract Part-I after the word "consent" add "oblique approval of Employer" and in the third line the text "as the Engineer shall reasonably prescribe" is substituted by "as acceptable to the Engineer".

Add the following sub paras:-

- (a) The contractor shall submit two copies of the program prepared on Project Management Software Primavera P3 or MS Project with in 14 days from the date of receipt of letter of Acceptance/ commencement shown in first written work schedule for labour employment and material procurement.
- (b) The time schedule may be adjusted from time to time but the contractual/ completion date shall remain unchanged unless extension of time is approved by the Employer in accordance with the contract conditions.



- (c) The Contractor shall prepare and submit the programme of work in a way that 40% of his entire progress of building work shall cover Gray Structure of the building.

The Contractor shall submit the programme of work before issuance of Letter of Acceptance on bar chart and Primavera (Level-III). The Contractor must also attach monthly progress schedule in terms of Percentage of project as described in Appendix-E of Appendices to Bid which will be considered as Scheduled Progress.

The approval by the Engineers of the programme shall not relieve the Contractor or the Employer from any obligation under the contract.

#### **14.3 Cash Flow Estimate to be submitted**

The detailed Cash Flow Estimate shall be submitted within 21 days from the date of receipt of Letter of Acceptance.

Add the following Sub-Clause:

#### **14.5 Detailed Programme and Monthly Progress Report**

- a) For purposes of Sub-Clause 14.1, the Contractor shall submit to the Engineer detailed programme for the following:
- (1) Execution of Works;
  - (2) Labour Employment;
  - (3) Local Material Procurement;
  - (4) Material Imports, if any; and
  - (5) Other details as required by the Engineer.
- (b) During the period of the Contract, the Contractor shall submit to the Engineer not later than the 8<sup>th</sup> day of the following month, 10 copies each of Monthly Progress Reports covering:
- (1) A Construction Schedule indicating the monthly progress in percentage;
  - (2) Description of all work carried out since the last report;
  - (3) Description of the work planned for the next 56 days sufficiently detailed to enable the Engineer to determine his programme of inspection and testing;
  - (4) Monthly summary of daily job record;
  - (5) Photographs to illustrate progress; and
  - (6) Information about problems and difficulties encountered, if any, and proposals to overcome the same.
- (c) During the period of the Contract, the Contractor shall keep a daily record of the work progress, which shall be made available to the Engineer as and when requested. The daily record shall include particulars of weather conditions, number of men working, deliveries of materials, quantity, location and assignment of Contractor's equipment.

#### **15.1 Contractor's Superintendence**

Replace Clause 15.1 of General Conditions of Contract Part-I by following

The Contractor shall be responsible to give or provide all necessary superintendence and efficient supervision during the execution of the work using his best skill and attention and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contractor. A competent Agent / Project Manager, registered with Pakistan Engineering Council as Professional Engineer and duly authorized through a power of attorney (whose qualification and



appointment shall be approved in writing by the Engineer / Employer which approval may at any time be withdrawn) is to be constantly posted on the works and shall give his whole time to superintendence of the same.

If such approval shall be withdrawn by the Engineer/Employer the Contractor shall as soon as is practicable (having regard to the requirement of replacing him as hereinafter mentioned) after receiving written notice of such withdrawal, remove the Agent from the site and shall not thereafter employ him again on the site in any capacity and shall promptly replace him by another agent approved by the Engineer with consent of Employer.

The Agent shall receive on behalf of the Contractor, directions or instructions from the Engineer or (subject to the limitations of Clause 2 hereof) the representative of the Engineer. The approval by the Engineer of the qualifications and appointment of Contractor, his agent or representatives for superintendence of the Work shall not relieve the Contractor of any of his duties or responsibilities under the Contract. The Engineer shall have the right to remove from the site any of the Contractor's or his sub-contractor's personnel because of misconduct and/ or incompetence of which the Engineer shall be the sole judge.

In addition to the Contractor's Agent, the contractor shall employ reasonable number of Engineers. The number of Engineers employed should be in accordance with quantum of work and should be approved by the Engineer. The manpower schedule shall be submitted by the contractor alongwith work schedule for the approval of the Engineer. The Employer / Engineer shall have the right to retain and / or deduct from contractor's bills an adequate amount of money, if the contractor fails to perform his obligations in terms and conditions of this clause.

#### **15.2 Language Ability of Contractor's Representative**

The Contractor's authorised representative shall be fluent in the English language. Alternately an interpreter with ability of English language shall be provided by the Contractor on full time basis.

#### **15.3 Contractor's Representative**

The Contractor's authorised representative and his other professional engineers working at site shall register themselves with the Pakistan Engineering Council.

The Contractor's authorized representative at site shall be authorised to exercise adequate administrative and financial powers on behalf of the Contractor so as to achieve completion of the Works as per the Contract.

The following Sub-Clauses 16.3 and 16.4 are added:

#### **16.3 Language Ability of Superintending Staff of Contractor**

A reasonable proportion of the Contractor's superintending staff shall have a working knowledge of the English language. If the Contractor's superintending staff is not fluent in English language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

#### **16.4 Employment of Local Personnel**

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour from sources within Pakistan.

#### **Safety, Security and Protection of Environment**



Add in Sub Clause (c) of clause 19.1 General Conditions of Contract Part-I, after word “Operation” The contractor shall stand liable for any loss to property, or life and shall indemnify the Employer against such claim, charges and proceedings if any.

Add Sub Clause (d):-

In order to minimize the negative impacts during construction stage proper planning to mitigate adverse impacts is, therefore, imperative. The Contractor shall carry out the mitigation measures according to the guidelines and satisfaction of the client. Mitigation measures to be taken to minimize negative impacts due to vehicular emissions, noise, vibrations, dust and exhaust gases. Mitigation measures against damage to utilities and traffic arrangement during construction are the contractor's responsibility. Contractor should combat the problem of inadequate backfilling of trenches/ excavations. Environmental monitoring is to be performed as per environmental Monitoring Plan.

The works carried out as above shall not be measured for payment under this section directly and the cost of such works will be considered to be included in other items of work given in the Bill of Quantities.

### **19.1.1 Safety of Employees and Works**

The Contractor shall throughout the execution and completion be responsible to take all necessary precautions for the safety of Employees on the work, and shall comply with all applicable safety laws and building codes to prevent accident or injury to persons on, about or adjacent to the places where the work is being performed. The Contractor shall provide at works site before commencement of work, sufficient and in good working condition life saving equipments, first aid kit etc.

### **19.1.2 Watching and Lighting**

The Contractor shall in connection with the works provide and maintain at his own cost all lights, guards fencing and watching when and where necessary as required by the Engineer or the Representative of the Engineer or by any duly constituted authority for the protection of the works or for the safety and convenience of the public or others.

### **19.3 Safety Precautions**

In order to provide for the safety, health and welfare of persons, and for prevention of damage of any kind, all operations for the purposes of or in connection with the Contract shall be carried out in compliance with the Safety Requirements of the Government of Pakistan with such modifications thereto as the Engineer may authorise or direct and the Contractor shall take or cause to be taken such further measures and comply with such further requirements as the Engineer may determine to be reasonably necessary for such purpose.

The Contractor shall make, maintain and submit reports to the Engineer concerning safety, health and welfare of persons and damage to property, as the Engineer may from time to time prescribe.

### **19.4 Lighting Works at Night**

In the event of work being carried out at night, the Contractor shall at his own cost, provide and maintain such good and sufficient light as will enable the work to proceed satisfactorily and without danger. The approaches to the Site and the Works where the night-work is being carried out shall be sufficiently lighted. All arrangement adopted for such lighting shall be to the satisfaction of the Engineer's Representative.



## 20.1 Care of Works

Add Sub Para (c) & (d) at the end

- (c) The Contractor shall in addition to the requirement indicated herein protect any utility and work of any kind against damage or interruption of services except as specifically directed or authorized by the Engineer. In case of any damages the same shall be repaired and or restored promptly by or at the expense of the Contractor without cost to the Employer.
- (d) The Employer/Engineer shall have the right to retain and / or deduct from contractor's bill an adequate amount of money due to the contractor if the contractor fails to perform his obligations in terms and conditions of this clause.

## 20.4 Employer's Risks

The Employer's Risks are:

Delete the text and substitute with the following:

- (a) insofar as they directly affect the execution of the Works in Pakistan:
  - i. War and hostilities (whether war be declared or not), invasion, act of foreign enemies
  - ii. Rebellion, revolution, insurrection, or military or usurped power, or civil war;
  - iii. Ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof
  - iv. Pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds,
  - v. Riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors and arising from the conduct of the Works;
- (b) loss or damage due to the use or occupation by the Employer of any Section or part of the permanent works, except as may be provided for in the Contract.
- (c) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible; and
- (d) any operation of the forces of nature (insofar as it occurs on the Site) which an experienced contractor:-
  - i. Could not have reasonably foreseen, or
  - ii. Could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:-
    - (a) prevent loss or damage to physical property from occurring by taking appropriate measures, or
    - (b) Insure against.

## 21.4 Exclusions

The text is deleted and substituted with the following:

There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by the risks listed under Sub-Clause 20.4 paras (a) (i) to (iv).



Add the following after 22.1(b)

## **22.1 The Contractor to Protect Utilities**

- (c) The Contractor shall conduct his operations, make necessary arrangements, take suitable precautions and perform all required work incident to the protection of and avoidance of interference with power transmission, telegraph, telephone and natural gas lines, oil lines water and sewerage mains and other utilities within the areas of his operations in connection with this Contract and the cost thereof shall be borne by the Contractor and the Contractor shall save harmless and indemnify the Employer in respect of all claims, demands, proceedings, costs, charges and expenses whatsoever arising out of or in relation to any such interference.
- (d) The Contractor shall make good, at his own cost, all damages to telephone, telegraph and electric cables or wires, sewer, water or other pipes except where the Authority, Employer or Private Party owing or responsible for the same elects to make good the damage.

All injury to the surface of the land, to the beds of water courses, Protecting Banks, riverbeds, etc. Where disturbed by the works (other than where specifically ordered by the Employer), shall be repaired by the Contractor or the Authorities concerned, at the Contractor's expense. All such making good shall be to the satisfaction of the Employer.

## **22.4 Indemnity by Contractor**

The contractor shall pay and indemnify the employer against liability in respect of all claims proceedings, damages, cost, charges, fee and expenses incurred for no fault of employer and resulting from any act, omission or neglect of contractor, subcontractor, his agents or servants. These indemnifications, obligations shall be limited to claims, damages, losses and expenses which are attributable to bodily injury, sickness, disease or death or injury to or destruction of physical property (other than work), including consequential loss of use. Such obligation shall also be limited to the extent that such claims, damages, losses or expenses are caused in whole or in part by a breach of duty of care imposed by law on the contractor or any one directly or indirectly employed by the contractor.

## **25.1 Evidence and Terms of Insurance**

In line three of Clause 25.1 General Conditions of Contract Part-I substitute "84 days" by "28 days".

The following Sub-Clause 25.5 is added:

## **25.5 Insurance Company**

The Contractor shall be obliged to place all insurance relating to the Contract (including, but not limited to, the insurances referred to in Clauses 21, 23 and 24) with either National Insurance Company of Pakistan or any other insurance company operating in Pakistan having atleast AA rating from PACRA/ JCR.

The cost of complying with requirements of this Clause shall be borne by the Contractor. The Contractor shall be liable for deductible losses not covered by insurance. The Insurance Policy shall state:-

- (1) The Employer shall receive at least 30 calendar days written notice of Intended Cancellation or change effect in coverage.
- (2) The Contractor is fully responsible to provide full indemnity to Employer in respect





of liability against loss or damage.

## **26.1 Compliance with Statutes Regulations, etc.**

Add Sub Paras (c) and (d) at the end of 26.1 of General Conditions of Contract Part-I”

- (c) The Employer presupposes that the Contractor has cognizance of all laws of Pakistan pertaining to the execution of the work. The Contractor shall confirm in all respects with the provisions of any such statute, ordinance or law as aforesaid and the regulations or by-laws of any local or other duly constituted authority which may be applicable to the works or public bodies and companies as aforesaid and shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such statute, ordinance, law regulation or by-law. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the Employer/ Engineer in writing and any necessary changes shall be adjusted as provided in the Contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the Employer, he shall bear all costs arising there from.
- (d) The Contractor and his sub-contractors shall convey, store and make use of all explosives, dangerous petroleum acetylene, carbide of calcium and other similar material provided by them for use in or on the works in strict accordance with the provision of all laws, orders and regulations that are in force at the Site or may be issued from time to time by the Government.

## **29.2 Notices to Adjoining Property Owners**

The Contractor shall send or cause to be sent written notices to Owners of property adjacent to the Site or which may be affected in any way by the performance of the work contemplate notifying them as to the extent of the work included in so far as it affect surrounding property and complying with local ordinance and laws.

## **29.3 Giving of Notices and Payment of Fees**

The Contractor shall give all notices and pay all fees and charges required to be given or paid be any national or state statute, ordinance or other law or any regulation or by-law of any local or other duly constituted authority in relation to the execution of the work or of any temporary works and by the rule and regulations of all public bodies and companies whose property of rights are affected or may be affected in any way by the works or any temporary works.

## **30.2 Transport of Contractor’s Equipment or Temporary Work,**

In line six of Clause 30.2 General Conditions of Contract Part-I, after word “bridge” add “or gas line or any kind of utility lines”.

## **30.3 Transport of Material or Plant**

In line one of Clause 30.3 General Conditions of Contract Part-I after word “bridge” add “gas line, or any kind of utility lines”.

## **31.3 Co-operation with other Contractors**

During the execution of the Works, the Contractor shall co-operate fully with other Contractors working for the Employer at and in the vicinity of the Site and also shall provide adequate precautionary facilities not to make himself a nuisance to local residents and other Contractors.



### **33.1 Clearance of Site on Completion**

At the end of Clause 33.1 General Conditions of Contract Part-I add following:-

The Employer/ Engineer shall have the right to retain an adequate amount of money due to the Contractor until the site is cleaned up and all damages made good.

### **34.2 Rates of Wages and Conditions of Labour**

The contractor shall pay rates of wages and observe conditions of labour not less favorable than those established for the trade or industry where the work is carried out. In the absence of any rates of wages or conditions of labour so established, the Contractor shall pay rates of wages and observe conditions of labour which are not less favorable than the general level of wages and conditions observed by other employers whose general circumstances in the trade or in industry in which the Contractor is engaged are similar.

### **34.3 Employment of Persons in the Service of Others**

The Contractor shall not recruit his staff and labour from amongst the persons in the services of the Employer or the Engineer, except with the prior written consent of the Employer or the Engineer, as the case may be.

### **34.4 Housing for Labour**

Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such housing accommodation and amenities as he may consider necessary for all his supervisory staff and labour, employed for the purposes of or in connection with the Contract including all fencing, electricity supply, sanitation, cookhouses, fire prevention, water supply and other requirements in connection with such housing accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camps or housing provided by the Contractor shall be removed and the Site reinstated, to its original condition, all to the approval of the Engineer.

### **34.5 Health and Safety**

Due precautions shall be taken by the Contractor, and at his own cost, to ensure the safety of his staff and labour at all times throughout the period of the Contract. The Contractor shall further ensure that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements.

### **34.6 Epidemics**

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government, or the local medical or sanitary authorities, for purpose of dealing with and overcoming the same.

### **34.7 Supply of Water**

The Contractor shall, so far as is reasonably practicable, having regard to local conditions, provide on the Site, to the satisfaction of the Engineer or his representative, adequate supply of drinking and other water for the use of his staff and labour.

### **34.8 Alcoholic Liquor or Drugs**

The Contractor shall not, otherwise than in accordance with the Statutes, Ordinances





and Government Regulations or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his Subcontractors, agents, staff or labour.

### **34.9 Arms and Ammunition**

The Contractor shall not give, or otherwise dispose of to any person or persons, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

### **34.10 Festivals and Religious Customs**

The Contractor shall in all dealings with his staff and labour have due regard to all recognized festivals, days of rest, religious, and other customs.

### **34.11 Disorderly Conduct**

The Contractor shall at all times take all reasonable precautions to prevent any unlawful riotous or disorderly conduct by or amongst staff and labour and for the preservation of peace and protection of persons and property in the neighborhood of the Works against the same.

### **34.12 Compliance by Subcontractors**

The Contractor shall be responsible for compliance by his Subcontractors of the provisions of this Clause.

Add the following Sub-Clauses:

### **34.13 Day and Night Work and Work on Sundays or Holidays**

Unless otherwise stated in the Contract, the Works shall be executed in the day only within normal working hours. No work shall be carried out on Site on Sundays (locally recognised as day of rest) and on gazetted holidays, without the consent in writing of the Engineer except if the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the works in which case the Contractor shall immediately advise the Engineer. The Engineer shall not unreasonably withhold any such consent save in exceptional circumstances, nor do so if work on rest days or on gazetted holidays is considered by the Contractor to be necessary to meet the Time for Completion.

In case the contractor needs to work after normal working hours or on Sunday or holidays, he shall get specific approval before hand from the Engineer giving at least 2 days advance written notice. In such case, the contractor undertakes his liability to pay the Engineer for such extra working hours (beyond normal working hours) calculated on the basis of actual extra hours at the rate of 1.5 times of approved man-month rate of the Engineer's staff on duty on overtime payable to the Engineer by the 15<sup>th</sup> day of next month.

If the contractor works in night then he will have sufficient lighting arrangement at site of work and at way leaves also. He will also take necessary measures to avoid any accident.

### **35.2 Records of Safety and Health**

The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

### **35.3 Reporting of Accidents**



The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition notify the Engineer immediately by the quickest available means.

The following Sub-Clause 36.6 is added:

### **36.6 Use of Pakistani Materials and Services**

The Contractor shall, so far as may be consistent with the Contract make the maximum use of materials, supplies, plant and equipment indigenous to or produced or fabricated in Pakistan and services, available in Pakistan provided such materials, supplies, plant, equipment and services shall be of required standard.

### **41.1 Commencement of Works**

The text is deleted and substituted with the following:

The Contractor shall commence the Works on Site within the period named in Appendix-A to Bid from the date of receipt by him from the Engineer of a written Notice to Commence. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

Add the following sub-clause: -

### **46.1 Rate of Progress**

At the end of the sub-clause add following:-

The Contractor shall ensure that rate of progress does not fall below 20% of Scheduled Progress as reflected in the programme of work (submitted before issuance of letter of acceptance).

If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Section is at any time, in the opinion of the Engineer, is below 20% of Schedule Progress as reflected in the programme of work, then the Client will have prerogative to either terminate the contract or reduce/ delete portion of work if the Contractor fails to improve the progress within 45 days of receipt of notice under this Clause.

### **47.3 Bonus for Early Completion of Works**

The Clause is deleted in its entirety.

### **48.2 Taking over of Sections or Parts.**

At the end add;

"Taking over of sections or parts may be considered at the sole discretion of Employer / Engineer".

### **51.2 Instructions for Variations**

In second line of Clause 51.2 General Conditions of Contract, after the word "Engineer", add the words "in writing".

### **52.1 Valuation of Variations**

In the thirteenth line of Clause 52.1 General Conditions of Contract, after the words



“Engineer shall” the following is added:

“Within a period not exceeding one-eighth of the completion time subject to a minimum of 56 days from the date of disagreement whichever is later”.

Add following;

“If the rates and prices in the contract shall not be applicable in the opinion of the Engineer new rates shall be fixed by the Engineer on twenty percent (20%) as contractor’s overhead and profit on the basic cost plus applicable taxes.

#### **52.4 Day work**

In line one of Clause 52.4 General Conditions of Contract Part-I after word “Engineer” add with “consent of Employer”

#### **53.4 Failure to Comply**

Delete this Sub-Clause in its entirety and substituted with the following

“If the Contractor fails to comply with any of the provisions of this Clause i.e. 53, the Contractor shall not be entitled to any additional payment, and the Employer shall be discharged from any liability in connection with the claim”.

#### **54.5 Condition of Hire of Contractor's Equipment**

The following paragraph is added:

The Contractor shall, upon request by the Engineer at any time in relation to any item of hired Contractor's Equipment, forthwith notify the Engineer in writing the name and address of the Owner of the equipment and shall certify that the agreement for the hire thereof contains a provision in accordance with the requirements set forth above.

#### **56.1 Works to be Measured**

In line two of Clause 56.1 General Conditions of Contract Part-I after word “Works” add “deviations / amendments”.

#### **59.4 Payments to Nominated Sub-Contractors**

The Contractor shall pay to the nominated Subcontractor the amounts which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with Clause 58 [Provisional Sums], except as stated in Sub-Clause 59.5 [Certification of Payments].

#### **59.5 Certification of Payments & Nominated Subcontractors**

Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- a) submits reasonable evidence to the Engineer, or
- b)
  - i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
  - ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor’s entitlement,



then the Employer may (at his sole discretion) pay direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.

## **60.1 Monthly Statement**

Sub-Clause 60.1 of the General Conditions of Contract is deleted and is substituted with the following Sub-Clause.

The Contractor shall submit on the basis of the joint measurement of work done under clause 56.1, to the Engineer after the end of each month, Six (6) copies, each signed by the Contractor's representative approved by the Engineer in accordance with Sub-Clause 15.1, of a statement, in a tabulated form approved by the Engineer, showing the amounts to which the Contractor considers himself to be entitled. The statement shall include the following items, as applicable, which shall be taken into account in the sequence listed:

- (a) The value of the works executed up to the end of the month in question.
- (b) The actual value certified for payment for the works executed up to the end of the previous month.
- (c) The value of the executed works for the month in question, obtained by deducting (b) from (a);
- (d) The value of any variation executed up to the end of the month in question, less the amount certified in the previous Interim Payment Certificate;
- (e) Any amount reflecting changes in cost and legislation, pursuant to Clause 70;
- (f) any amount to be withheld for retention, determined by applying the percentage of retention stated in the Appendix A to Bid, to the amount due to the contractor, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Appendix to Bid;
- (g) Any other additions or deductions which may have become due in accordance with the Contract or otherwise.

After verification of monthly statement by the Engineer, the contractor shall make six (6) copies of the same on his own cost and submit the same to the Engineer.

## **60.2 Monthly Payments**

Following paragraph is added at the end of the Clause.

The Engineer shall not be bound to issue an Interim Payment Certificate if the Contractor has not submitted the progress reports in accordance with paragraph (b) of Clause 14.5 and such information as shall be mutually agreed in writing between the Employer and the Contractor.

### **60.10 Time for Payment**

The text is deleted and substituted with the following:

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 , subject to



Clause 47, 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 60.8, within 60 days after such Final Payment Certificate has been jointly verified by Employer and Contractor; Provided that the Interim Payment shall be caused in 42 days and Final Payment in 60 days in case of foreign funded project. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor compensation at the 28 days rate of KIBOR+2% per annum for local currency and LIBOR+1% for foreign currency, upon all sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69.

#### **60.11 Financial Assistance to Contractor**

Financial assistance shall be made available to the Contractor by the Employer as following:

- (a) An interest-free Mobilization Advance of 10% 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 for the full amount of the Advance in the specified form from a Scheduled Bank in Pakistan as per SPPRA rules.
  - (1) First part within 14 days after signing of the Contract Agreement; and
  - (2) Second part within 42 days from the date of payment of the first part, subject to;
    - i). Satisfaction of Engineer regarding mobilization of contractor on site.
    - ii). Provision of Engineer facilities as per clause 11 of Specifications – Special provision.
- (b) This Advance shall be recovered @ 10% of each bill of the contractor till the time the whole of the Mobilization Advance is recovered before the date of completion of works as per Clause 43 hereof.

On full recovery of the Mobilization Advance, the Employer will return the said guarantee to the Contractor duly discharge. However, the Employer will be at liberty to encash the Bank Guarantee of the Contractor, if the Contractor fails to extend the said guarantee 15 days before the expiry date of the guarantee.

#### **63.1 Default of Contractor**

The following para is added at the end of the Sub-Clause:

Provided further that in addition to the action taken by the Employer against the Contractor under this Clause, the Employer may also refer the case of default of the Contractor to Pakistan Engineering Council for punitive action under the Construction and Operation of Engineering Works Bye-Laws 1987, as amended from time to time.

#### **65.2 Special Risks**

The text is deleted and substituted with the following:

The Special Risks are the risks defined under Sub-Clause 20.4 sub paragraphs (a) (i) to (a) (v).



### 65.3 Damage to Work by Special Risks

In first line of Clause 65.3 General Conditions of Contract Part-I after word “on” delete the words “or near or in transit” and in line five after word “plant” add word “on site” and delete all words after “damaged”.

### 65.8. Payment if Contract Terminated

Sub Para (b) of clause 65.8 is replaced with following:-

The cost of materials, plant or goods of the Contractor which has been delivered at site for execution of work, such material, plant or goods becoming property of the Employer upon such payment being made by him.

### 67.3 Arbitration

In the sixth to eighth lines of Clause 67.3 General Conditions of Contract Part-I, the words “shall be finally settled .....appointed under such Rules” are deleted and substituted with the following:

“shall be finally settled under the provisions of the Arbitration Act, 1940 as amended or any statutory modification or re-enactment thereof for the time being in force”.

Add the following paragraph:

The place of arbitration shall be Karachi, Pakistan.

### 68.1 Notices to Contractor

Add the following paragraph:

For the purposes of this Sub-Clause, the Contractor shall, immediately after receipt of Letter of Acceptance, intimate in writing to the Employer and the Engineer by registered post, the address of his principal place of business or any change in such address during the period of the Contract.

### 68.2 Notices to Employer and Engineer

For the purpose of this Sub-Clause, the respective addresses are:

- a) The Employer is:  
**Project Implementation Unit**, Education City Project  
1<sup>st</sup> Floor, Block-A. Finance & Trade Centre  
Shahra-e-Faisal, Karachi.
- b) The Engineer is:  
**M/s. CGD Couslting (Pvt.) Ltd.**  
21-C, 5<sup>th</sup> Zamzama Commercial Lane  
Phase-V, D.H.A, Karachi

### 69.3 Payment on Termination

In line one of Clause 69.3 General Conditions of Contract Part-I after word “termination” add “except for clause 65 or no fault of contractor” and in line five word “any loss” is replaced with “work completed”.





## 70.1 Increase or Decrease of Cost

Sub-Clause 70.1 is deleted in its entirety, and substituted with the following:  
The amounts payable to the Contractor, pursuant to Sub-Clause 60.1, shall be adjusted in respect of the rise or fall in the cost of labor, materials, and other inputs to the Works, by applying to such amount the formula prescribed in this Sub-Clause.

### (a) Other Changes in Cost

To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other Clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs.

### (b) Adjustment Formula

The adjustment to the monthly statements in respect of changes in cost shall be determined from the following formula:-

$$P_n = A + b \frac{L_n}{L_o} + c \frac{M_n}{M_o} + d \frac{E_n}{E_o} + \dots$$

Where:

$P_n$  is a price adjustment factor to be applied to the amount for the payment of the work carried out in the subject month, determined in accordance with Paragraph 60.1 (a), and with Paragraphs 60.1 (b) and (e), where any variations and daywork are not otherwise subject to adjustment;

$A$  is a constant, specified in Appendix-C to Bid, representing the nonadjustable portion in contractual payments;

$b, c, d$ , etc., are weightages or coefficients representing the estimated proportion of each cost element (labour, cement and reinforcing steel etc.) in the Works or Sections thereof, net of Provisional Sums and Prime Cost; the sum of  $A, b, c, d$ , etc., shall be one;

$L_n, M_n, E_n$ , etc., are the current cost indices or reference prices of the cost elements for month “n”, determined pursuant to Sub-Clause 70.1(d), applicable to each cost element; and

$L_o, M_o, E_o$ , etc., are the base cost indices or reference prices corresponding to the above cost elements at the date specified in Sub-Clause 70.1(d).

### (c) Sources of Indices and Weightages

The sources of indices shall be those listed in Appendix-C to Bid, as approved by the Engineer. As the proposed basis for price adjustment, the Contractor shall have submitted with his bid the tabulation of Weightages and Source of Indices if different than those given in Appendix-C to Bid, which shall be subject to approval by the Engineer.

### (d) Base, Current, and Provisional Indices

The base cost indices or prices shall be those prevailing on the day 28 days prior to the latest date for submission of bids. Current indices or prices shall be those prevailing on the day 28 days prior to the last day of the period to which a particular monthly statement is related. If at any time the current indices are not



available, provisional indices as determined by the Engineer will be used, subject to subsequent correction of the amounts paid to the Contractor when the current indices become available.

**(e) Adjustment after Completion**

If the Contractor fails to complete the Works within the Time for Completion prescribed under Clause 43, adjustment of prices thereafter until the date of completion of the Works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices, whichever is more favorable to the Employer, provided that if an extension of time is granted pursuant to Clause 44, the above provision shall apply only to adjustments made after the expiry of such extension of time.

**(f) Weightages**

The weightages for each of the factors of cost given in Appendix-C to Bid shall be adjusted if, in the opinion of the Engineer, they have been rendered unreasonable, unbalanced, or inapplicable as a result of varied or additional work executed or instructed under Clause 51. Such adjustment(s) shall have to be agreed in the variation order.

**71.1 Currency Restrictions**

Delete this Sub-Clause in its entirety:

Add the following Sub-Clause:

**72.1 Rates of Exchange**

Sub-Clause 72.1 is deleted in its entirety.

**73.1 Payment of Income Tax**

The Contractor, Subcontractors and their employees shall be responsible for payment of all their income tax, super tax and other taxes on income arising out of the Contract and the rates and prices stated in the Contract shall be deemed to cover all such taxes.

Add the following Sub-Clause:

**73.4 Adherence to Labour Laws**

The contractor shall be responsible to adhere to all labour laws whether central or provincial and get themselves registered with the relevant department including but not limited to department of Sindh Employees Social Security Institution Karachi (S.E.S.S.I.) and EOBI department and shall be responsible to pay all dues in this regard to the concerned department. The employer reserves the right to ask the contractor to provide evidence of registration and payments if and when required. Further more the contractor shall indemnify the employer and the engineer for any claim/payments etc. in this regard.

**74.1 Integrity Pact**

If the Contractor or any of his Subcontractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Appendix-L 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 Subcontractors, agents or servants;
- (b) terminate the Contract; and
- (c) 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 Subcontractors, agents or servants.

The termination under Sub-Para (b) of this Sub-Clause shall proceed in the manner prescribed under Sub-Clauses 63.1 to 63.4 and the payment under Sub-Clause 63.3 shall be made after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.

#### **75.1 Termination of Contract for Employer's Convenience**

The Employer shall be entitled to terminate the Contract at any time for the Employer's convenience after giving 56 days prior notice to the Contractor, with a copy to the Engineer. In the event of such termination, the Contractor;

- (a) Shall proceed as provided in Sub-Clause 65.7 hereof; and
- (b) Shall be paid by the Employer as provided in Sub-Clause 65.8 hereof

Add the following Sub-Clause:

#### **76.1 Liability of Contractor**

The Contractor or his Subcontractors or assigns shall follow strictly, all relevant labour laws including the Workmen's Compensation Act and the Employer shall be fully indemnified for all claims, damages etc. arising out of any dispute between the Contractor, his Subcontractors or assigns and the labour employed by them.

Add the following Sub-Clause:

#### **77.1 Joint and Several Liabilities**

If the Contractor is a joint venture of two or more persons, all such persons shall be jointly and severally bound to the Employer for the fulfillment of the terms of the Contract and shall designate one of such persons to act as leader with authority to bind the joint venture. The composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer.

Add the following Sub-Clause:

#### **78.1 Details to be Confidential**

The Contractor shall treat the details of the Contract as private and confidential, save in so far as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the prior consent in writing of the Employer or the Engineer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract, the same shall be referred to the decision of the Engineer whose award shall be final.



**SPECIFICATION -**  
**SPECIAL PROVISION**

## **SPECIFICATIONS - SPECIAL PROVISIONS**

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## **SPECIFICATIONS - SPECIAL PROVISIONS**

### **1. DESCRIPTION OF PROJECT**

#### **1.1. General**

The Employer intends to the Construction work of “Infrastructure Development of Education City, Karachi Phase – 1, (4800 Acres) – Package – 1-A(i).

### **2. THE SITE**

#### **2.1. Site of Works**

The Site of the Works is the area for construction lying within the right-of-way lines, boundaries and limits shown on the Drawings and any such additional areas adjacent thereto as may be designated by the Engineer subject to approval of Employer from time to time for the construction to be performed under the Contract, and all such areas and additional areas shall be comprised in the Site as defined in Clause 1 of the Conditions of Contract.

The Employer will give to the Contractor possession of the area designated and defined as the Site and shown on the drawing as may be required to implement as much of the Works, when the Engineer's Notice to Commence the Works is given.

### **3. THE WORKS UNDER THE CONTRACT**

#### **3.1. General Description**

The Contract comprises to construct the work in all respect with the provision of plant/equipment, labor and material required for execution, completion, the execution and completion of the Works, remedying of any defects therein, maintenance of utility services and everything whether of a temporary or permanent nature required in and for such execution, completion, remedying and maintenance so far as the necessity for providing the same is specified or can reasonably be inferred from the Contract.

The following description of the Works to be performed under this Contract is general in nature and is not intended to describe all of the facilities to be provided under this Contract.

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### **4. GENERAL RULES OF SPECIFICATIONS**

#### **a) Specification or as Specified**

Specification” or “as specified” refers to the specifications outlined in these Documents and where no specifications are available for any work or where the same are found not applicable then the relevant applicable ASTM or BSS specifications or equivalent standards shall apply in the same order.

Any item for which no specifications are outlined but which are identified on drawings, shall be completed according to the standards as per ASTM / BSS, these include items that may be added in the future. The Employer / Employer's Representative may supplement such specifications during the progress of work. All materials and processes used for these items shall be subjected to standard testing and, if found below the pertinent ASTM / BSS standards, shall be removed from the site immediately at Contractor's expense.



**b) Standards and Codes**

Wherever reference is made in the specifications to the respective standards and codes in accordance to which goods and materials are to be furnished, and work is to be performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly set forth in the Contract.

**c) Materials and Processes**

All goods and materials to be incorporated in the Works shall be new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

**d) Equivalent Materials, Processes, etc.**

Where specific materials, processes, etc. are specified and the same are not available other alternative materials and processes which ensure an equal or higher quality than those specified will be accepted subject to the Employer / Employer's Representative's prior review and written approval. Differences between those specified and the proposed alternatives must be fully described in writing by the Contractor and submitted to the Employer / Employer's Representative at least 30 days prior to the date when the Contractor desires the Employer / Employer's Representative's approval who may give such approval after determining that the alternative proposed ensures equal or higher quality.

**e) Approved, Directed, Instructed**

Approved, directed, instructed means the approval, etc. of the Employer / Employer's Representative unless otherwise stated.

**f) Alternatives**

Where alternative materials, processes etc., are specified the selection will depend on local conditions and discretion rests with the Employer / Employer's Representative whose decision shall be final and binding.

**g) Catalogues / Standards / Manufacturer's Instructions, etc.**

Wherever the manufacturer's/supplier's instructions, manuals, guarantees and ASTM/BSS Standards are referred to in the specifications and details of Bills of Quantities; all such literature shall be submitted by the Contractor to the Employer / Employer's Representative for due checking, approval and record.

**h) Applicability**

Unless stated or specified else-where to the contrary these General Rules shall apply to all sections of work irrespective of their sequence, location and description.

**5. DRAWINGS**

**5.1. Bid Drawings**

Bid Drawings issued with the Bid Documents, called the Tender Drawings, show scope of the work to be performed by the Contractor. The Drawings are generally in sufficient detail so as to be used as a basis for construction, fabrication and for placing orders for



materials subject to corrections based on the future issue of supplementary Drawings as provided under Sub-Clause 5.2 hereof.

## **5.2. Construction Drawings, Supplementary Drawings**

After award of Contract, the Contractor shall carry out “Joint Survey” at Site of Works in pursuance to Sub-Clause 6.4, Specifications - Special Provisions. The Contractor shall submit to the Engineer “Joint Survey”, duly signed, dated and stamped by the representatives of the Employer, Consultant and Contractor.

Simultaneously, the Contractor shall submit to the Engineer detailed “Work Programme” in terms of Sub-Clause 14.1 Conditions of Contract.

After receipt of “Joint Survey” and “Work Programme” from the Contractor, the Engineer will start issuing Construction Drawings to the Contractor. The Engineer shall have authority to issue to the Contractor, from time to time, such Supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and completion of the Works and the remedying of any defects therein. The Contractor shall follow these Drawings.

The Contractor shall give notice to the Engineer regarding the part of the Drawings which in his opinion contain discrepancies or are not clear. The Engineer shall issue necessary clarifications or Supplementary Drawings in greater details as required to execute the Works. These Supplementary Drawings showing changes from the Bid Drawings, in the opinion of the Contractor, shall be reviewed by the Engineer for his determination of adjustment of the Contract Price under Clause 51 and 52 of the Conditions of Contract.

## **5.3. Definition of Term Drawings**

The term Drawings as used in the Specifications means the Drawings referred in Clauses 5.1 and 5.2 hereof.

## **5.4. Checking of Drawings**

The Contractor shall check all Drawings carefully as soon as practicable after receipt thereof, and shall promptly notify the Engineer of any errors discovered.

## **5.5. Copies of Drawings**

Drawings will be issued to the Contractor and the Employer as described below.

### **5.5.1. Bid Drawings**

One (1) set each of the Bid Drawings will be issued to the Contractor and Employer along with Bid Documents. Additional sets will be provided at cost of reproduction upon written request of the Contractor.

### **5.5.2. Construction Drawings / Supplementary Drawings**

One (1) print of each Construction Drawings / Supplementary Drawing will be issued to the Contractor and Employer free of charge. Additional sets will be provided at cost of reproduction upon written request of the Contractor.

## **5.6. Drawings to be furnished by the Contractor / As-Built Drawings**

The Contractor shall submit to the Engineer for review of such drawings as required under the Contract, sufficiently in advance of the work intended to be executed.



The Contractor shall, at all times, keep on Site a separate set of prints on which all significant changes between the work shown on the Drawings and that which is actually constructed, shall be noted neatly, accurately and promptly as the work progresses. The Subcontractor(s) for plumbing, mechanical and electrical shall, at all times, keep on Site, a separate set of prints of the drawings (showing their parts of the Works) on which all significant changes between the work shown on the Drawings and that which is actually constructed, shall be noted neatly, accurately and promptly as the work progresses. Such drawings shall show the exact physical location and configuration of the works as actually installed.

The Contractor shall, within fourteen (14) days of issuance Taking-Over Certificate for whole of the Works, furnish to the Engineer for his approval two (2) copies of such marked up drawings. One (1) copy of each of the marked up drawings approved by the Engineer shall be returned to the Contractor by the Engineer and these shall be used for the preparation of the As - Built Drawings.

The Contractor shall furnish to the Engineer six (6) complete sets of all As -Built Drawings as well as AutoCAD soft copy within thirty (30) days of receipt of drawings stated above, from the Engineer.

## **5.7 Shop Drawings & Design**

The Contractor to prepare and provide detailed shop drawings & design, for all the required items as per the instructions and approval of the Employer/ Engineer and as mentioned in Bidding documents and drawings including but not limited to Architectural, Structural, Road works, Hard & Soft Landscaping, Electrical, Water Supply, Drainage, ICT or any related electro-mechanical works apart from Bar-bending schedule, etc. All drawings should be prepared based on the rules, regulation and requirements of the concerned departments and should be prepared electronically on latest version of AutoCAD, hard copies along with soft copies on CD's shall be submitted for the approval of Engineer as per the Nos. required in Scope of Work.

Any item which is neither shown on the drawing not mentioned in the Bill of Quantities or Specification but is a pre-requisite to carryout, the contractor is required to prepare shop drawing of the missing/ required items, distributed among the rates and prices entered for the related items of works and shall be considered to be included in the contract price. The decision of the Engineer shall be final and binding on the Contractor unless before the deadline for submission of Bids, such discrepancies are to be clarified. The clarifications in either case would be sent to all bidders as an Addendum.

## **6. SETTING OUT OF WORK AND SURVEY**

### **6.1. Reference Points, Lines**

The Contractor shall establish bench marks and / or reference line at the Site in accordance with the instructions of the Engineer. The Contractor shall set out its work from these bench marks and / or lines.

### **6.2. Verification**

The Engineer and the Employer may make checks as the work progress to verify lines and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirements of the Drawings and Specifications. Such checking by the Engineer shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and Specifications and the lines and grades given therein.

### **6.3. Survey Instruments**





The Contractor shall maintain at the Site the requisite surveying instruments in perfect working conditions for the use of the Engineer's Representative to check levels and lines of the work at all times. These instruments shall include (but not limited to) One Total Station, Adequate nos. of Levels, theodolites, Tapes, etc.

#### **6.4. No work without Joint Survey**

The Contractor shall not start the excavation and / or embankment works until the Joint Survey has been done to establish the existing/ original ground levels (i.e. National Surface Level or NSL).

### **7. APPROVAL OF MATERIALS AND PLANT**

#### **7.1. Quality of Materials**

All materials, fixtures, fittings, supplies and plant furnished under the Contract shall be new and unused, standard first grade quality and of the best workmanship and design. No inferior or low-grade materials, supplies or articles will be either approved or accepted, and all work of assembly and construction shall be done in a first-class and workmanlike manner. In asking for prices for materials intended for delivery to the Site and incorporation in the Works under any portion of these Specifications, the Contractor shall provide the manufacturer or supplier with complete information as may be necessary to secure compliance to this Clause and, in every case, he shall quote this Clause in full to each such manufacturer or supplier.

The Employer will select the manufacturer of his choice and approval will be conveyed to the Engineer and Contractor.

#### **7.2. Submission of Samples and Data**

As soon as practicable after award of Contract, the Contractor shall submit for the approval of the Engineer drawings, catalogues, diagrams and other descriptive data for all mechanical, electrical, architectural and such other materials and plant designated by the Engineer subject to approval of Employer, which the Contractor proposes for use under this Contract. For certain materials and plant, data may be required to be submitted in accordance with a detail form furnished by the Engineer. Samples of materials (1 set) each shall be submitted by the Contractor to the Engineer and the Employer at Contractor's cost for approval sufficiently in advance of the materials intended to be incorporated in the Works.

#### **7.3. Testing**

Testing, except as otherwise specified herein, shall be performed by a testing agency as proposed by the Contractor and approved by the Engineer, at no extra cost to the Employer. The Engineer/ Employer may require all testing to be carried out under their supervision only.

The quality control testing shall be performed by the Contractor's competent personnel in accordance with a site testing as approved by the Engineer/ Employer.

The Contractor shall keep a complete record of all quality tests programme performed on Site.

#### **7.4. Testing Laboratory Certificates**

The Engineer may accept a certificate from a commercial testing laboratory, satisfactory to him, certifying that the product has been tested within a period acceptable to the Engineer and that it conforms to the requirements of these Specifications. The Employer may carryout testing from independent laboratory at the cost of the Contractor.



## **7.5. Inspection**

All material and Plant furnished and all work performed under this Contract will be subject to inspection by the Engineer/ Employer or Employer's Representative at all times and in all states of completion both off-Site and on-Site. The Contractor shall furnish promptly without additional charge, all facilities, labour and materials reasonably needed for performing such inspection and testing as may be required by the Engineer/ the Employer or Employer's Representative.

## **7.6. Approved Sample at Site**

The Contractor shall, at all times, keep on the Site approved samples. All such samples shall be made available to the Engineer/ Employer as and when required.

## **7.7. Site Laboratory**

The Contractor shall establish a site laboratory for the purpose of necessary testing. The cost of equipment and salaries of the manpower required will be borne by the Contractor.

# **8. CONSTRUCTION SCHEDULE**

## **8.1. Submittal Date**

The programme of Works submitted by the Contractor in accordance with Clause 14" Programme to be Submitted", of the Conditions of Contract shall be submitted in the form of a CPM schedule based on Primavera Project Planner or Microsoft Project covering all construction activities indicating critical activities with critical path, total and free float, interdependencies between the construction activities and resource scheduling for Contractor's Equipment, material and labour, within the period stated in the Appendix A to Tender. All milestones shall be clearly identified.

If the Contractor fails to submit the construction schedule indicating all the details as listed above within 30 days of Notice of Commencement a penalty of Rs 30,000/- per week will be charged on the Contractor.

## **8.2. Requirements**

The detailed submittal shall consist of schedules, network analysis tabulations and narrative descriptions of the proposed construction programme.

Each summary or detailed schedule shall consist of a bar chart and a time -scaled network. The scheduled start and finish times for all activities on the bar chart shall agree with those on the network. All inter-relationships and inter-dependencies between structures shall be clearly indicated on the schedules.

The network shall show the order and interdependence of activities planned by the Contractor, and shall be time-scaled according to calendar dates.

## **8.3. Monthly Reports**

Each month, the Contractor shall submit a report consisting of:

- Copies of the bar charts for the current phase with both actual progress and scheduled progress shown.
- Network analysis tabulations as in Sub-Clause 8.3 above, reflecting actual start and finish dates where applicable.



- A narrative report discussing any significant deviations from the schedule and, if necessary, explaining the steps proposed to be taken to maintain the approved schedule.

## **9. Not used**

## **10. SITE OFFICE AND TEMPORARY FACILITIES PROVIDED BY THE CONTRACTOR**

### **10.1. Contractor's Office, Facilities etc.**

The Contractor shall establish and maintain a Site office. The Contractor shall provide all facilities in connection with the execution, completion, of the Works, remedying defects therein and maintenance of the utilities services. The facilities shall, not be limited to, the Contractor's Site Office, labour camps, workyard and storage areas, temporary water supply, waste water disposal, temporary electricity, medical unit, temporary roads, fire protection and fire fighting equipment etc. The Contractor shall be solely responsible for arranging the facilities.

The Contractor shall arrange his labour camp, work yard, storage area, site office within the area available at the Site.

### **10.2. Notice Board**

The Contractor shall erect and maintain at the Site in a location to be approved by the Engineer, 3 Sign Boards 4.45 M height and 2 M wide for writing the name of Work, name of Employer, name of Consultants, name of Contractor and Project Cost. The notice board shall comprise of the following;

- Frame of 3" dia GI Pipe properly painted as per the direction of the Consultants/ Engineer and as per drawing.
- 2 Nos. Posts of 3" dia GI Pipe 4.45M above ground and 1M below ground embedded in 1:2:4 CC 2'x2'x4' with proper arrangements of anchorage and brasses. Pipes painted with anti-rust as directed by the Engineer.
- 4 Nos. Steel Sheets 0.6M high and 2M wide fixed on both sides with 50mm gap between each. The background of plates is of white color whereas the writing would be black or red color (as approved by the Engineer)
- White imported 3M sheet used as background. The color of monogram would be, green, red or black etc. (as approved by the Engineer)
- Alphabets of appropriate size as approved by the Engineer in 3M reflective sheet in blue/ black color.

The Contractor shall maintain the display of the notice boards at his own cost throughout the length of the project.

## **11. FACILITIES FOR ENGINEER'S & EMPLOYER PERSONNEL PROVIDED BY THE CONTRACTOR**

### **11.1 Engineer & Employer Facilities**

The Contractor shall provide, operate and maintain the following facilities within 14 days of the Engineer's Order to Commence the Works for the Engineer & Employer:

- a). Contractor shall establish a container office accommodation complex (Approx. 5000 sft) as per provided drawing. Three office containers 01 of 20 feet and 02 of 40 feet with fully Air-Conditioned and maintain the same facility for Engineer & Employer, till



the completion of the project (including) DLP, including all costs of electricity, telephone, water supply, sewerage, janitorial services, provision of stationery / consumable / supplies (as per the requirement of the Engineer & Employer).

- b). Contractor shall provide 02 Nos office boy, 02 Nos. Security Guards etc. Contractor shall be responsible for all salaries, benefits etc. of the appointed people. Cost of all the above works are deemed to be included in the contract price and no additional payment shall be made by the Employer to the Contractor under any circumstances.
- c). Contractor shall provide all tea items for use in Engineer & Employer office.
- d). **02 Nos. Desktop** - Core i7 10th Gen or Higher, 32/64 GB Ram, Latest Intel Motherboard as required by the processor & GPU, Nvidia GPU RTX 3000 Series or Higher, 1TB HDD + 256 SSD, Keyboard, Mouse, DVD Writer, 21" LED, Licensed Windows 10/11, Ms Office latest version, USB 3.0 64 GB, Latest UPS for backup.
- e). Contractor shall provide and maintain with cartridge/toner etc., **HP Color Printer (02 Nos.)** with Scanner (All in one) latest model throughout the contract period including DLC period.
- f). Contractor shall provide 17 nos. of vehicles detailed as under, to be used by the Engineer & Employer at site. The Contractor shall pay the POL maintenance and driver charges and no additional payment shall be made by the Engineer & Employer to the Contractor under any circumstances. The vehicle shall be returned to the Contractor after completion of the project on as is where is basis. Details of the vehicles are as under:
  - (i) 02 Nos. Toyota Fortuner Sigma-4 (4x4) (full options with Driver)
  - (ii) 02 Nos. Toyota Hilux Revo G-AT 4x4 Double Cabin (full options with Driver)
  - (iii) 02 Nos. Toyota Corolla Altis 1600 Cc (full options with Driver)
  - (iv) 03 Nos. Toyota Yaris / Honda City / Suzuki Swift 1300 Cc (full options with Driver)
  - (v) 03 Nos. Suzuki Cultus 1000 Cc or equivalent
  - (vi) 02 Nos. Suzuki Alto 660 Cc
  - (vii) 01 No. Toyota Hiace (full options and AC with Driver)
  - (viii) 02 Nos. Motorcycles Honda CD-70
- g). Contractor should also provide all protective gear like Helmet, goggles, safety boots to the Engineer & Employer staff at site.
- h). Providing all stationery and consumable items like pen, pencils, papers, binder cards, plastics, staples, etc. as per requirement.
- i). The Contractor shall provide an average cost of Rupees Thirty Five only (Rs. 35,000/-) each per month pertaining to mobile & telephone use for Engineer & Employer.

The above equipments shall be in use of the Engineer & Employer and shall become property of the Employer and as-such will be handed-over to the Engineer in good working condition on completion of the project.

In case of non-provision of facilities mentioned above, the same shall be arranged by the Employer / Engineer and be deducted from any monies due / becoming due to the Contractor by the Employer alongwith 10% overheads till these facilities are provided satisfactorily to the Engineer.

Cost of all above facilities are deemed to be included in the contract price and no additional payment shall be made by the Engineer to the Contractor under any circumstances.



The vehicle should be brand new and latest model. The vehicles are for the exclusive use of the Engineer & Employer / Engineer's supervision team to meet their transportation needs. The use of such transportation facilities shall be exclusively under the control of the Engineer & Employer and the contractor shall be wholly responsible for furnishing at all times above said facilities. The said facility shall be provided within 14 days of Engineer's issue of commencement letter and shall continue un-interrupted till the completion of works. The said vehicles shall be handed-over back to the Contractor on completion of work.

- a). The Contractor shall furnish, supply and provide, without specific direction of the Engineer & Employer all lubricants, tyres, other supplies, regular service and maintenance at all times for the above vehicles till the issue of the Completion Certificate of the contract.
- b). The Contractor shall provide an amount equivalent to 4500 liters, 2 x 400 liters for Toyota Fortuner Sigma-4 (4x4), 2 x 400 liters for Toyota Revo Double Cabin, 2 x 300 liters for Toyota Corolla Altis, 1x 180 liters for Toyota Yaris / Honda City, 2 x 250 liters for Toyota Yaris / Honda City Toyota Gli / Altis, 2 x 150 liters for Suzuki Cultus, 1 x 200 liters for Suzuki Cultus, 2 x 100 liters for Suzuki Alto, 1 x 800 liters for Toyota Hiace and 2 x 50 Liters for Motorcycle Honda CD-70 Petrol / diesel per month to the Engineer & Employer by 5<sup>th</sup> of each month in advance for complete duration of work including any extended period.

In case of non-provision of facilities mentioned above, the same shall be arranged by the Employer / Engineer and be deducted from any monies due / becoming due to the Contractor by the Employer alongwith 10% overheads till these facilities are provided satisfactorily to the Engineer & Employer.

Cost of all above facilities are deemed to be included in the contract price and no additional payment shall be made by the Engineer & Employer to the Contractor under any circumstances.

## **12. SAFETY**

### **12.1. Accident Prevention, Protective Equipment**

The Contractor shall comply and enforce compliance by all his Subcontractors with the highest standards of safety and accident prevention in compliance with all applicable laws, ordinance and statutory provisions.

Where overhead work is being carried out, warning signs shall be installed at ground level clearly warning of the overhead work.

All warning signs shall be in two languages, English and Urdu, and shall at all times be maintained in a clean and legible condition, to the satisfaction of the Engineer.

Trash shall be removed at frequent intervals to the satisfaction of the Engineer.

If, safety precautions/ warning signs are not installed by the Contractor, employer will charge an amount of Rs. 10,000/- per site per day for the period.

## **13. PAYMENT FOR WORK REQUIRED BY SPECIAL PROVISIONS**

Unless otherwise specifically stated in the Contract, the price of all work required by the Special Provisions shall be considered to be included in the Contract Price.

The Bided Rates shall be inclusive of all lead and lift



No alterations or additions shall be made by the Contractor in the Bill of Quantities and rates must be filled in ink or typed out both in figures and words clearly and legibly in the columns provided in the schedule of quantities. All corrections must be initialed by the contractors. Any Tender which does not comply with this condition will be liable to be summarily rejected and not taken into account when preparing comparative statement.

Materials obtained from excavations will be the property of the Employer. Serviceable materials are to be stacked in places pointed out by Engineer-in-charge. The Contractor undertakes to have the site clean and free from rubbish to the satisfaction of the Engineer. All surplus materials, rubbish, etc., will be removed to places to be fixed by the Engineer and nothing extra will be paid for this.

On completion of the work or earlier as directed by the Engineer, the Contractor shall remove all temporary structure (Godowns, site offices, etc.), erected by him at the site of work. He shall fill tanks dug out by him at site, remove all debris and other materials like surplus sand, stone ballast, rubbish, etc.; and in short, shall leave the site in a neat and tidy condition.

The contractors in the course of their works should understand that all material (e.g., stone and other materials) obtained in the work or dismantling, excavation, etc., will be considered as Employer's property and issued to the contractors (if they require the same for their own use) at rates approved by the Engineer. If the materials are not required by them they will be disposed off in the interest of Employer.

The contractor shall inspect the site of works and acquaint himself with the nature and requirements of the work, facilities of access for materials, removal of rubbish, cost of carriage, nature of strata, etc., before submitting his Bid.

The contractor shall have to make temporary approach roads, etc., at his own cost to facilitate movement of materials, such approach roads shall be aligned in a manner approved by the Engineer.

The contractor shall have to make proper arrangements for road crossing barriers during working hours in the day time as well as in the night when danger lights will have to be provided on either ends at his own cost and no extra cost will be paid. Sufficient barricades and red lights will be provided by the Contractor where required to avoid the chances of accidents. In case an accident occurs for failure on the part of the contractor, he shall be entirely responsible for the consequences.

The Contractor shall have to make arrangements for diversions for traffic wherever necessary and shall have to provide diversion and caution boards as per directions of the Engineer at his own cost for which no extra cost will be paid. The diversion shall be watered and consolidated as per directions of the Engineer.

No material shall be removed from the site without the written permission of the Engineer.

Dewatering including shoring wherever so required for any foundation area, pumping, bailing out water, drainage of water within plot areas if any shall be deemed to have been included in the rates quoted by the bidders and no extra payment will be made. The rates shall be deemed inclusive of such incidental charges.

The Contractors shall execute all works at their own cost for diversion of water away from the plot as per site requirements to have full satisfaction of Engineer and no additional payment will be made on this account.

The Engineer, subject to approval of the Employer, reserves the right to select all materials and the type, grade, heating capacity and quantity of proportion of any or all





materials as required for a particular work. The decision of Employer in this respect shall be final and binding on the Contractor. The rejects on materials must be carted at his own cost. If the rejected materials are not re moved within one month of its rejection the materials will become the property of the Employer or will be removed at Contractors cost.

#### **14. ATTENDANCE OF MEETINGS**

The Contractor shall attend and shall cause his Sub-Contractors to attend any or all meetings when called by the Employer or the Engineer or his Representative to discuss progress of the work and other matters related to the work and the Contract, without any compensation from the Employer.

The Contractor shall bear all expenses of the Employer and his agents and representatives and the Engineer, his agents and representatives if requested by the Contractor for any meetings, instructions and approvals away from the Site.

The proceedings of the meetings shall be recorded by the Engineer which shall be circulated to all the participants including those of the Contractor. All decisions taken in the meetings shall be binding on the Contractor and shall form part of the Contract.

#### **15. DOCUMENTS NOT TO BE ALTERED OR MUTILATED**

No alteration or mutilation (other than filling in all the blanks intended to be filled in) shall be made in the form of Bid or in any of the documents attached to it. Any comments which it is desired to make shall not be placed on any of the documents attached hereto, but shall take the form of a separate statement which shall be as brief as possible and referenced to items, clauses and pages of the annexed documents.

Such statements shall not qualify the acceptance of the Bid based upon a proposed change or changes in the annexed documents, nor shall be binding upon the Employer in any way in making the award. Alterations of already written prices must be signed in the place of alteration by the Bidder or his legally authorized representative.

#### **16. PERSONAL LIABILITY OF PUBLIC OFFICIALS OR ENGINEER**

In carrying out any of the provisions of these specifications, or in exercising any power of authority granted to them by or within the scope of the Contract, there shall be no liability upon the Employer or his authorized representatives or the Engineer or his authorized representatives their personally or in their official capacity, it being understood that in all matters they act solely as agents and representatives of the Employer.

#### **17. ACCESS AND EXISTING ROADS**

If the Contractor finds it necessary or elects to use existing roads, the Contractor shall make all necessary arrangements and obtain all permits from the relevant departments for travel over and use of such roads. The Contractor shall observe all rules regulations of the concerned department regarding the use of said roads. The cost of maintaining all necessary safety measures and temporary structures and making any necessary repairs, replacements or similar operations and all or any other costs required by reason of his use of such roads shall be borne by the Contractor and the Contractor shall save harmless and indemnify the Employer in respect of all claims, demands proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any such operation or interference.

#### **18. FIRST AID FACILITIES**



The Contractor shall provide and maintain adequate First Aid Facilities at all times, convenient to the Site to the approval of the Employer.

## **19. FINAL HAND-OVER**

At the end of the Defect Liability Period stipulated in the contract, the Employer and the Engineer on application of the Contractor, shall decide the members of the final hand over committee and announce the same to the Contractor. The committee, after inspection of Work, if satisfied that there are no deficiencies or defects due to work of the Contractor shall certify the final hand-over, and the Employer will then issue a final Certificate of Completion of Work within thirty (30) calendar days thereafter.

Once completion has been formalized and endorsed both by the contractor as well as controlling officer, the work will be regarded as completed for all purpose as per contract agreement although the accounts may not have been settled, no further new works will be authorized against the sanctioned project and not further supplementary estimates or claims may be accepted.

## **20. EMPLOYER AND ENGINEER NOT PERSONALLY LIABLE**

No member or officer of the Government or the Employer or the Employer's Representative or the Engineer or his representatives or any one of their respective staffs or their employees shall be in anyway personally bound or liable for the acts or obligations of the contractor under the contract or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein, contained.

## **21. PROGRESS PHOTOGRAPHS**

The contractor shall furnish to the Employer and to the Engineer every two weeks at least six photographs to clearly show the progress of construction. The photographs shall be submitted in glossy prints 20 cm x 20 cm. Each print shall be marked on the back with the date and serial number. There shall be no writing, lettering or marking on the face of the photographs. The set of photographs of the Engineer should accompany respective negatives.

## **22. SITE ORDER BOOK**

The Contractor shall maintain site order book {of triplicate leaves} at the Site, for taking down instructions of the Engineer and/ or the Employers, with out any obligation and charges to the Employer / Engineer.

## **23. REPORT ON PROGRESS OF WORK AND PHOTOGRAPHS**

The Contractor shall, during the execution of the work, submit to the Employer (3 copies) and Engineer (2 copies) so as to reach them in the first week of every calendar month, a report on the actual progress of the works attained by him during the preceding month fully supported with colour photographs of (5" x 7") size, at least 15, depicting the complete stages of the works. Each photograph should be properly pasted on A-4 size paper, indicating the location and other relevant information of the area photographed. The report will be submitted on the standard format to be supplied later on. In case the Supervision Engineer are different from the Design Engineer, one copy each of photographs should be sent to both the Engineer.

The set of photographs for the Design Engineer should be submitted with respective negatives.





# **LIST OF APPROVED** **MANUFACTURERS**

### **CIVIL & ARCHITECTURE VENDOR'S LIST**

S.No.	Description	Manufacturer as Per Design Specifications	Local Representative / Vendor
1	Cement	M/s. DG Cement	Mr. Ammar (0323-3212322)
		M/s. Attock Cement	
		M/s. Power Cement	Mr. Taha (0333-3036434)
		M/s. Lucky Cement	Mr. Umair Khan (0321-2821837)
		Or other equivalent approved by the Consultant / Engineer	
2	Steel Reinforcement	M/s. Amreli Steels	Mr. Naveed Ansari (0324-5979184)
		M/s. Agha Steels	
		M/s. Union Steel	Mr. Zain (0331-8753823)
		M/s. Faizan Steel	Mr. Khurram (0333-4934931)
		Or other equivalent approved by the Consultant / Engineer	
3	Porcelain & Ceramic Tiles (Flooring & Dado)	M/s. Master Tiles	Mr. Hammad (0330-6277222)
		M/s. Shabbir Tiles	Mr. Hassan (0301-8262553)
		M/s. White Horse	Mr. Waqas (0332-2498637)
		M/s. City Tiles	Mr. Yasir Taqi (0324-2043171)
		M/s. Granitto Tiles	Mr. Hassan (0321-9222863)
		M/s. Benitoz Homes	Mr. Abdul Qadir (0300-8211840)
		M/s. H & H Ceramics	Mr. Danish (0321-2491656)
		Or other equivalent approved by the Consultant / Engineer	
4	Marble / Granite / Stone (Flooring, Wall Cladding, Kitchen & Vanity Countertop etc.) - type and sourcing of marble / granite / stone as per finishing schedule	M/s. Inexterior	Mr. Fahad (0340-1118887)
		M/s. Marble World	Mr. Hasham Farooq (0340-7866381)
		M/s. Stone City	Mr. Muneeb Haque (0340-1118886)
		Or other equivalent approved by the Consultant / Engineer	
5	Carpet Tiles & Wooden Flooring	M/s. Pak Carpet Industries	Mr. Imran (0333-3802017)
		M/s. Seenqaaf Industrial Co.	
		Or other equivalent approved by the Consultant / Engineer	
6	FibreGlass Chairs	M/s. Techno FRP Services	Mr. Shahid Hussain (0321-9252436)
		M/s. Hasan Trading Co.	Mr. Hassan (0336-2707272)
		Or other equivalent approved by the Consultant / Engineer	
7	UPVC & Aluminum Doors, Windows, Ventilators etc.	M/s. Explore Interior	Mr. Navaid Farooqui (0300-2284822)
		M/s. Maptech	Mr. Khalid Hussain (0333-6699955)
		M/s. Hitech Engineering Services	Mr. Adil Kushtiwala (0300-8200506)
		M/s JAGW AlucoGlass System	Mr. Nadeem (0335-1371047)
		Or other equivalent approved by the Consultant / Engineer	
8	ACP Cladding	M/s. Hitech Engineering Services	Mr. Adil Kushtiwala (0300-8200506)
		M/s JAGW AlucoGlass System	Mr. Nadeem (0335-1371047)
		Or other equivalent approved by the Consultant / Engineer	
9	Termite Proofing	Mirage	Mr. Badar Jamal (0336-6822155)
		Agenda 25 EC	Mr. Arif Akhtar (0300-8939992)
		Termicure 25 EC	Mr. Arif Akhtar (0300-8939992)
		Or other equivalent approved by the Consultant / Engineer	
10	Solid & Hollow Blocks	M/s. BES Block	Mr. Shahid (0300-2307353)
		M/s. Megnacrete	Mr. Abdullah Shahid (0300-2019122)
		M/s. Envicrete	Mr. Rasheed (0331-2356101)
		M/s. Banu Mukhtar	Mr. Kamran Tola (0300-8270087)
		M/s. Caracrete Industries	Mr. Adeel (0321-2696795)
		Or other equivalent approved by the Consultant / Engineer	
11	Bricks, Brick Tiles and Brick Jali	M/s. Tasneem Bricks	Mr. Shakil (0307-2824771)
		M/s. Al-Nasir Bricks	Mr. Liaquat Malik (0303-7733567)
		Or other equivalent approved by the Consultant / Engineer	
12	Water Proofing (Bitumen, Torch Applied Membrane, Crystalline, Cementitious, Floor Hardner, Waterstopper)	M/s. Fospak	Mr. Faheem (0300-8250632)
		M/s. Sika	Mr. Mansoor Raza (0300-8430092)
		M/s. Aqaufin	Ms. Kashmala (0301-8283272)
		M/s. Mitchell Construction Chemicals	Mr. Usman (0342-2839291)
		M/s. Ressichem	Mr. Hussain Zulfikar (0309-7772464)



### **CIVIL & ARCHITECTURE VENDOR'S LIST**

S.No.	Description	Manufacturer as Per Design Specifications	Local Representative / Vendor
		M/s. Pak Hy-Oils Limited	Mr. Samad (0332-2900799)
		M/s. Mega Sealers	Ms. Mantasha Khan (0318-3880161)
		M/s. Professional Sealers	Mr. Fahad A. Khan (0321-1110475)
		Or other equivalent approved by the Consultant / Engineer	
13	Geotextile and Geomembranes (Typer Geotextile, PVC Geomembrane, Needle Punched Geotextile etc.)	M/s. Matrix	Mr. Babar Farid (0300-2038112)
		M/s. Fospak	Mr. Faheem (0300-8250632)
		M/s. Sika	Mr. Mansoor Raza (0300-8430092)
		M/s. Mega Sealers	Ms. Mantasha Khan (0318-3880161)
		Or other equivalent approved by the Consultant / Engineer	
14	Polypropylene Fibre	M/s. Matrix	Mr. Babar Farid (0300-2038112)
		M/s. Fospak	Mr. Faheem (0300-8250632)
		M/s. Sika	Mr. Mansoor Raza (0300-8430092)
		M/s. Mega Sealers	Ms. Mantasha Khan (0318-3880161)
		Or other equivalent approved by the Consultant / Engineer	
15	Acrylic Base / Weather Shield / Reflective Paint (Local)	M/s. Akzo Nobel	Mr. Raza Aziz (0300-0606867)
		M/s. Nippon	
		M/s. Jotun	Mr. Usama Amir (0345-8475791)
		M/s. Berger	
		M/s. Gobis	
16	Gypsum / MR Boards	M/s. United Gypsum	Mr. Ayaz Saleem (0300-0566855)
		M/s. Lodhia Gypsum Industries Pvt. Ltd.	Mr. Kamran Sheikh (0301-8734684)
		M/s. Thermec Engineering Company	Mr. Saad (0300-8238934)
		Or other equivalent approved by the Consultant / Engineer	
17	Glass Partition (Plain & Tempered)	M/s. Ghani Glass	Mr. Kashif (0300-8251049) Mr. Ahmed (0302-9257887)
		M/s. Tariq Float Glass	
		Or other equivalent approved by the Consultant / Engineer	
18	Fibre Reinforce Polymer Sheet (Corrugated Double Sided Finish)	M/s. Master Composite	Mr. Waqas Ahmed (0345-2030093)
		Or other equivalent approved by the Consultant / Engineer	
19	GRC (Glass Fibre Reinforced Concrete) Mesh	M/s. Cara Tiles	Mr. Ataulah (0309-3338673)
		Or other equivalent approved by the Consultant / Engineer	
20	C.C. Tiles, Pavers, Kerbstone, Terracota Tiles, Kaprail & C.C Coping etc.	M/s. Envicrete	Mr. Rasheed (0331-2356101)
		M/s. Magnacrete	Mr. Abdullah Shahid (0300-2019122)
		M/s. Cara Tiles	Mr. Ataulah (0309-3338673)
		M/s. Caracrete Industries	Mr. Adeel (0321-2696795)
		M/s. Matrix	Mr. Irfanuddin (0300-2038114)
		M/s. Banu Mukhtar	Mr. Kamran Tola (0300-8270087)
		M/s. First Floor	Mr. Usman Elahi Faruqi (0300-8293156)
		M/s. Rockerete	Ms. Laiba Sajid (0330-2241281)
		M/s. Pak Tiles	Mr. Shahzad (0300-4617715)
21	Keystone	Or other equivalent approved by the Consultant / Engineer	
		M/s. Envicrete	Mr. Rasheed (0331-2356101)
		M/s. Caracrete Industries	Mr. Adeel (0321-2696795)
22	Ready Mix Concrete	M/s. Allied Materials (Private Limited)	Mr. Humayun Shamsi (0346-2425828)
		M/s. King Enterprises	Mr. Arif (0333-2288537)
		Or other equivalent approved by the Consultant / Engineer	
23	Gazebo's & Wood Works	M/s. Sindh Wood Works Enterprises Pvt. Ltd.	Mr. Irfan Khan (0334-3237281)
		Or other equivalent approved by the Consultant / Engineer	
24	Prefabricated Security Cabin	M/s. Porta Cabin	Mr. Riaz (0300-4577603)
		Or other equivalent approved by the Consultant / Engineer	
25	Fabrication Works (MS, S.S, C.I, G.I etc)	M/s. Fancy Iron Grill Works	Mr. Rasheed (0333-2644422)
		M/s. Junaid Casting Iron Works	Mr. Zahid Khilji (0300-8299756)
		M/s. The Protectors	Mr. Zafar Rehmatullah (0300-8284740)
		Or other equivalent approved by the Consultant / Engineer	



### **CIVIL & ARCHITECTURE VENDOR'S LIST**

S.No.	Description	Manufacturer as Per Design Specifications	Local Representative / Vendor
26	Tensile Fabric Canopy	M/s. Urban Objects	Mr. Sohail Raees (0333-2158844)
		M/s. The Protectors	Mr. Zafar Rehmatullah (0300-8284740)
		Or other equivalent approved by the Consultant / Engineer	
27	Asphalt Batching Plant	M/s. King Enterprises	Mr. Saleem (0300-8217994)
		M/s. Bakhri Ahmed Khan	Mr. Haji Abdul Majeed (0300-2019513)
		Or other equivalent approved by the Consultant / Engineer	
28	Concrete Admixture	M/s. Sika	Mr. Mansoor Raza (0300-8430092)
		M/s. Fospak	Mr. Faheem (0300-8250632)
		M/s. Ressichem	Mr. Hussain Zulfikar (0309-7772464)
		M/s. Mega Sealers	Ms. Mantasha Khan (0318-3880161)
		M/s. Aquafin	Ms. Kashmala (0301-8283272)
		Or other equivalent approved by the Consultant / Engineer	
29	Horticulture Works (Sweet Earth, Cow Dung, Ground Covers, Trees, Shurubs, Plants, Flowers, Grass, Planters etc.)	M/s. Greenland Services	Mr. Munir Nauroz (0332-2149962)
		M/s. Rohan and Co.	Mr. Amjad (0300-2366102)
		M/s. Green Concepts	Mr. Khalid Zubari (0321-8292580)
		Or other equivalent approved by the Consultant / Engineer	
30	Road Signs, Lane Markings, Studs, Cateyes, Speed Breakers etc.	M/s. S.K Associate	Mr. Sahir Khan (0312-2818168)
		M/s. NH Enterprises	Mr. Nadeem (0333-3516881)
		Or other equivalent approved by the Consultant / Engineer	
31	Bridges & Buildings Expansion Joints (Local / Imported)	M/s. Pioneer Techniques	Mr. Sheraz Ahmed Siddiqui (0300-9279057)
		M/s. HRM Associates (Arfen Tukey)	Ms. Fahmina (0309-3331738)
		Or other equivalent approved by the Consultant / Engineer	
32	Bearing Pads	M/s. Pioneer Techniques	Mr. Sheraz Ahmed Siddiqui (0300-9279057)
		M/s. HRM Associates (Arfen Tukey)	Ms. Fahmina (0309-3331738)
		Or other equivalent approved by the Consultant / Engineer	
33	FRP Gratings & Manhole Cover (Local / Imported)	M/s. HRM Associates (Kompozit Kimya)	Ms. Fahmina (0309-3331738)
		M/s. Mentor Building Materials	Mr. Shahid Ali Khan (0321-2595775)
		M/s. Fibre Craft Industries	Mr. Nadeem Asghar (0300-8403969)
		Or other equivalent approved by the Consultant / Engineer	



### LIST OF APPROVED VENDORS FOR ELECTRICAL WORKS

IMPORTANT NOTES:- Consultant Engineer has the right to select any vendor from the list of approved vendors

Approved Manufacturer/Supplier					
LV Circuit Breakers	Terasaki(Japan)	Schneider (Europe)	ABB (Europe)		Or other equivalent approved by consultant Engineer
PVC/PE Pipe and Conduits	Dadex	Galco	Jeddah	Civic Pipes	Or other equivalent approved by consultant Engineer
MV Power Cables	Fast Cables	Pakistan Cables	Pioneer Cables	GM Cables and Pipes Pvt. Ltd.	Or other equivalent approved by consultant Engineer
LV Cables	Fast Cables	Pakistan Cables	Pioneer Cables	GM Cables and Pipes Pvt. Ltd.	Or other equivalent approved by consultant Engineer
MV/LV Cables Terminations	Raychem (USA)	3M (USA)	Secam (France)		Or other equivalent approved by consultant Engineer
Switches and Socket	Clipsal	Legrand	Schneider	Pakistan Cables	Or other equivalent approved by consultant Engineer
Numerical Relays	Fanox	Schneider	ABB		Or other equivalent approved by consultant Engineer
MV Circuit Breakers	Shneider	Westinghouse	ABB		Or other equivalent approved by consultant Engineer
LV Switchgears	IMS Electric	Electric gears	HRA		Or other equivalent approved by consultant Engineer
Oil type Transformer	PEL	Transfopower	Hammad Engineering		Or other equivalent approved by consultant Engineer
Pad Mounted Unit	PEL	Transfopower	Validus		Or other equivalent approved by consultant Engineer
Ring Main Units (outdoor type)	Lucy	Siemens	ABB		Or other equivalent approved by consultant Engineer
Synchronisation Modules	ComAp	Deepsea	-		Or other equivalent approved by consultant Engineer
Lighting Fitures	NVC (USA)	Osram (Germany)	Luceco (UK)	Signify	Or other equivalent approved by consultant Engineer
Rubber Insulation Mat	Imported	-	-		Or other equivalent approved by consultant Engineer
CTs/PTs	FICO	Metelex	PEL		Or other equivalent approved by consultant Engineer
Diesel Generators	Cummins (UK)	Caterpillar (USA)	FG Wilson (UK)	MTU	Or other equivalent approved by consultant Engineer
GI Conduit	IIL	Steelex	-		Or other equivalent approved by consultant Engineer
Back Boxes/Junction Boxes	Hussain & Co.	Clipsal	Master		Or other equivalent approved by consultant Engineer
Lighting poles	Jamal Pipe	Solid Industries	Bashir Pipe		Or other equivalent approved by consultant Engineer
Earthing	Furse (UK)	LPI (Australia)	Wallis (UK)		Or other equivalent approved by consultant Engineer
Control Relays	Finder	GE	-		Or other equivalent approved by consultant Engineer



# **LIST OF APPROVED MAKE & MANUFACTURERS FOR ACMV EQUIPMENT**

IMPORTANT NOTE: ALL MATERIAL SHALL BE OF CLASS 1 QUALITY, PURCHASED FROM APPROVED AUTHORIZED DEALER

ITEM	MAKE & ORIGIN	AUTHORIZED DEALER	CONTACT NO.
• SINGLE SPLIT UNITS	DAIKIN, THAILAND	MS/. MIA CORPORATION	021- 3431 0082 ~ 4
	LG, KOREA	M/S. ICE BERG INDUSTRIES	021- 3539 1871 ~ 5
	GREE, CHINA	M/S. DWP TECHNOLOGIES	021- 3432 2341 ~ 2
	HAIER, CHINA	M/S. HAIER PAKISTAN	021- 3565 6607
• COPPER PIPE INSULATION	AEROFLEX, THAILAND	M/S KATYS	021-34520916/ 34385898
• COPPER PIPE AND FITTINGS	MUELLER, USA	M/S CRESCENT CORPORATION	042 3764 3162

TECHNICAL SUBMITTALS / SAMPLES OF ALL EQUIPMENT SHALL BE APPROVED BY THE CONSULTANT BEFORE ORDERING.



## LIST OF APPROVED MAKE & MANUFACTURERS FOR ACMV WORKS

IMPORTANT NOTE: ALL MATERIAL SHALL BE OF CLASS 1 QUALITY, PURCHASED FROM APPROVED AUTHORIZED DEALER

Sr.#	ITEM	MAKE / MANUFACTURER	AUTHORIZED DEALER	CONTACT NO.
1	SINGLE SPILT UNITS	GREE, CHINA	M/S. DWP TECHNOLOGIES	021- 3432 2341 ~ 2
		HAIER, CHINA	M/S. HAIER PAKISTAN	021- 3565 6607
2	VENTILATION FANS	BVN, TURKEY	M/S. IDEAS ASSOCIATES	021- 3418 3859
		SODECA, SPAIN	M/S. KHURSHED ENGINEERING	042- 35446335
		CASALS, SPAIN	M/S. CRESCENT CORPORATION	042- 3764 3162
3	REFRIGERANT / COPPER PIPES & FITTINGS	MUELLER, USA	M/S. CRESCENT CORPORATION	042- 3764 3162
4	REFRIGERANT / COPPER PIPE INSULATION	AEROFLEX, THAILAND	M/S. KATYS	021- 3452 0916 / 3438 5898
5	ALUMINUM TAPE (3" WIDTH)	ABRO, USA	M/s. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		DIMOND, UAE	M/s. GLOBAL TECHNOLOGIES & SERVICES	021- 34389077, 34381949
6	FLEXIBLE RUBBERIZED DUCT CONNECTOR	AFS, UAE	M/S. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		AERODUCT, UAE	M/S. M.M STEEL CORPORATION	051- 5750 594
7	M.S SCHEDULE. 40 SEAMLESS PIPES	BAOLAI, CHINA	M/S. CRESCENT CORPORATION	042- 3764 3162
		PROTEK, CHINA	M/S. PIONEER STEEL	021-32216151 ~ 7
8	M.S PIPE FITTINGS (AS PER APPROVED SAMPLE AFTER LAB. TEST)	NEFIT / BIS (Threaded)	M/S. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		NEFIT, NETHERLANDS (Welded)		
		MUELLER, CHINA (Threaded)	M/S. CRESCENT CORPORATION	042- 3764 3162
9	WELDING ROD	JINTAI, CHINA (Welded)		
		BOC, PAKISTAN	LOCAL MARKET	-----
10	POLYURETHANE INSULATION	ZODIAN, PAKISTAN	LOCAL MARKET	-----
		ISLAMUDDIN & SONS	M/S. ISLAM UDDIN & SONS	021- 3273 3650
11	THERMAPORE INSULATION	UNITED INSULATION	M/S. UNITED INSULATION PAKISTAN	021-34688326, 0333-2108832
		ISLAMUDDIN & SONS	M/S. ISLAM UDDIN & SONS	021- 3273 3650
		UNITED INSULATION	M/S. UNITED INSULATION PAKISTAN	021-34688326, 0333-2108832



## LIST OF APPROVED MAKE & MANUFACTURERS FOR ACMV WORKS

IMPORTANT NOTE: ALL MATERIAL SHALL BE OF CLASS 1 QUALITY, PURCHASED FROM APPROVED AUTHORIZED DEALER

Sr.#	ITEM	MAKE / MANUFACTURER	AUTHORIZED DEALER	CONTACT NO.
12	ROCK WOOL INSULATION	ISLAMUDDIN & SONS	M/S. ISLAM UDDIN & SONS	021- 3273 3650
		UNITED INSULATION	M/S. UNITED INSULATION PAKISTAN	021-34688326, 0333-2108832
13	FIBER GLASS INSULATION	AFICO, KSA	M/S. IQBAL SONS	021- 3453 3122 ~ 3
		KNAUF, UAE	M/s. UNIQUE TOOLS & MILL STORE	021- 3455 1400
14	RUBBER FOAM INSULATION (XLPE)	AEROFOAM, UAE	M/s. GLOBAL TECHNOLOGIES & SERVICES	021- 34389077, 34381949
15	SOUND LINER ADHESIVE	AEROFOAM, UAE	M/s. GLOBAL TECHNOLOGIES & SERVICES	021- 34389077, 34381949
		THERMOBREAK, THAILAND	M/S. S. FAZAL ELAHI & SONS	042- 3766 6895
16	AIR CURTAINS	IMPORTED MAKE	IMPORTED MAKE AS PER APPROVED SAMPLE	-----
17	CHEMICAL FOR CHILLED / COOLING & HOT WATER SYSTEM	ARCO CHEMICALS	M/S. ARCO CHEMICALS	021- 3438 9923 ~ 5
		PHENOCHEM	M/S. PHENOCHEM	021- 494 4089
18	BALL VALVES	RUB, ITALY	M/S. PIONEER STEEL	021-32216151 ~ 7
19	OTHER VALVES	WATTS, CHINA	M/S. KHAN BROTHERS	021- 3452 60025
		RUB, ITALY	M/S. PIONEER STEEL	021-32216151 ~ 7
		GALA, CHINA	M/S. CRESCENT CORPORATION	042- 3764 3162
			M/S. PIONEER STEEL	021-32216151 ~ 7
			M/S. FAKHRI BROTHERS	021- 3588 6201 ~ 5
20	MOTORIZED / MODULATING VALVE WITH ACTUATOR	SCHNEIDER, USA	M/S. I&MS	021- 3431 3196 ~ 7
		HONEY WELL, USA	M/S. ACCRESCENT ENGINEERS	021- 3438 0254
		JOHNSON CONTROLS, USA	M/S. SHAN CONTROLS	021- 3506 9297 ~ 9
21	FLEXIBLE PIPE CONNECTOR	TOZAN, JAPAN	M/S. SHERAZ CORPORATION	021- 3241 6259
		WATTS, CHINA	M/S. KHAN BROTHERS	021- 3452 60025





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Sr.#	ITEM	MAKE / MANUFACTURER	AUTHORIZED DEALER	CONTACT NO.
22	AUTO AIR VENT	TACO, USA	M/s. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		ITT BELL & GOSSETTE		
		WATTS, CHINA	M/S. KHAN BROTHERS	021- 3452 60025
23	FLOW SWITCH	HONEYWELL, CHINA	M/s. FAKHRI BROTHERS	021- 3588 6201 ~ 5
			M/S. TARIQ AUTOMATION	021- 3262 4460
		WATTS, ITALY	M/S. KHAN BROTHERS	021- 3452 60025
24	PRESSURE GAUGE (Glycerin Filled)	WEISS, CHINA	M/s. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		WATTS, BULGARIA	M/S. KHAN BROTHERS	021- 3452 60025
25	THERMOMETER	WEISS, CHINA	M/s. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		WATTS, BULGARIA	M/S. KHAN BROTHERS	021- 3452 60025
26	FLEXIBLE DUCT	AERODUCT, UAE	M/S. M.M STEEL CORPORATION	051-5750594
		DUCTMATE, USA	M/S. IQBAL SONS	021- 3453 3122 ~ 3
		AFS, TURKEY	M/S. FAKHRI BROTHERS	021- 3588 6201 ~ 5
27	PRE-INSULATED DUCT / SHEETS	PAL, UAE (KINGSPAN)	M/S. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		EUROPAN, ITALY	M/S. NEOTECH ENGINEERING	042- 3594 8136
28	G.I. & M.S SHEETS	ISL, PAK (as per approved sample)	M/S. ISL (IIL PIPES)	021- 111 019 019
			M/S. LOKHANDWALA	021- 3273 0738
29	UPVC PIPE & FITTING (SCH. 40 & 80)	AGM, KSA	M/S. MALIK CORPORATION	021- 3524 1666
		BINA PLASTIC, MALAYSIA	M/S. CHAMAN TRADERS	021- 3493 7866
30	G.I PIPE	IIL, PAKISTAN	M/S. IIL PIPES	021- 111 019 019
		ISL, PAK	M/S. ISL PIPES	



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Sr.#	ITEM	MAKE / MANUFACTURER	AUTHORIZED DEALER	CONTACT NO.
31	G.I FITTING	HE / TG CHINA		
32	DRAIN PIPE INSULATION	AEROFLEX, THAILAND	M/S. KATYS	021- 3452 0916 / 3438 5898
		DURKEE, CHINA	M/S. CRESCENT CORPORATION	042- 3764 3162
		AEROFOAM, UAE	M/s. GLOBAL TECHNOLOGIES & SERVICES	021- 34389077, 34381949
		SUPERLOAN, MALAYSIA	M/S. IQBAL SONS	021- 3453 3122 ~ 3
33	ELECTRICAL PANELS (MCC & DBs)	A TO Z ELECTRONICS	M/S. A TO ZEE ENGINEERING	021- 3512 1798
		HUSSAIN & COMPANY	M/S. HUSSAIN & COMPANY	021- 3634 1930
		BILAL SWITCH GEARS	M/S. BILAL SWITCH GEARS	042- 3630 5462
		SOUTH ASIAN ELECTRIC CONCERN	M/S. SOUTH ASIAN ELECTRIC CONCERN	042- 3653 0000 ~ 2
34	CABLES & WIRES	PAKISTAN CABLES	M/S. PAKISTAN CABLES	021- 111 222 537
		PIONEER CABLES	M/S. PIONEER CABLES	021- 3241 6511 ~ 4
35	VAV & CAV BOX	BARCOL, NETHERLAND	M/S. I&MS	021- 3431 3196 ~ 7
		RUSKIN TITUS, UAE	M/S. SHAN CONTROLS	021- 3506 9297 ~ 9
		E.H. PRICE, CANADA	M/s. AL FALAH ENGINEERS	021- 3482 2241
36	VFD WITH CONTROLS	DANFOSS, EU / USA	M/S. KHAN BROTHERS	021- 3452 60025
		ABB, EU / USA	M/S. I&MS	021- 3431 3196 ~ 7
37	INTEGRATED BUILDING CONTROL	SCHNEIDER, USA	M/S. I&MS	021- 3431 3196 ~ 7
		HONEY WELL, USA	M/S. ACCRESCENT ENGINEERS	021- 3438 0254
			M/S. EZZI ENGINEERING	021- 3583 2540
		JOHNSON CONTROLS, USA	M/S. SHAN CONTROLS	021- 3506 9297 ~ 9
38	ELECTRICAL COMPONENTS	SCHNEIDER, USA	LOCAL MARKET	-----
		M&G, USA	AS PER APPROVED SAMPLES	
39	RTU / WATER METER	DIEHL, EU	M/S. I&MS	021- 3431 3196 ~ 7



**LIST OF APPROVED MAKE & MANUFACTURERS  
FOR ACMV WORKS**

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Sr.#	ITEM	MAKE / MANUFACTURER	AUTHORIZED DEALER	CONTACT NO.
55	DTG / WATER METER	WATT, EU	M/S. KHAN BROTHERS	021- 3452 60025



## LIST OF APPROVED MAKE & MANUFACTURERS FOR ACMV WORKS

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Sr.#	ITEM	MAKE / MANUFACTURER	AUTHORIZED DEALER	CONTACT NO.
40	PRESSURE BOOSTING PUMPS	WILO, CHINA	M/S. WILO PAKISTAN	0345-2185138
		GRUNDFOS, CHINA	M/S. ORIENT ENERGY SYSTEM	021- 111 507 507
		CALPEDA, ITALY	M/S. NKR ENGINEERING	021- 3452 0103 ~ 4
41	AIR DEVICES (Or Equivalent, as per approved samples)	AIR GUIDE	M/S. AIR GUIDE	021- 3452 3256
		STEEL CRAFT	M/S. STEEL CRAFT	051- 3547 4761
		SHAN INDUSTRIES	M/s. SHAN INDUSTRIES	021- 3501 9865 ~ 9
		ENGATECH	M/S. ENGATECH INTERNATIONAL	021- 3498 2605
		E.A.P AIR DEVICES	M/S. ENGINEERING AIR PRODUCTS	042- 35299448
42	SUPPORTS, HANGERS	NORM, TURKEY	M/S. UNIQUE TOOLS & MILL STORE	021- 3455 1400
		INDEX, SPAIN	M/s. M.M STEEL CORPORATION	051-5750594
		FISCHER, GERMANY	M/S. H.S Ahmed Ally	051- 5511 748
		HILTI, GERMANY	M/S. HILTI PAKISTAN / VPL LTD.	021- 111 875 875
43	CONCRETE FASTENERS	INDEX, SPAIN	M/S. M.M STEEL CORPORATION	051- 575 0594
		FISCHER, GERMANY	M/S. H.S Ahmed Ally	051- 5511 748
		HILTI, GERMANY	M/S. HILTI PAKISTAN / VPL LTD.	021- 111 875 875
		RAWALPLUG, GERMANY	M/S. INGENIOUS ENG. PRODUCTS	021- 3432 6894
44	GASKITS	IMPORTED MAKE (as per approved sample)	LOCAL MARKET AS PER APPROVED SAMPLES	-----
45	KITCHEN HOOD	MOON STEEL, LOCAL / PAK	M/s. MOON STEEL	021- 3512 1145
		PRESTIGE, LOCAL / PAK	M/S. PRESTIGE	
		COMFORTECH, LOCAL / PAK	M/S. COMFORTECH ENGINEERING	021 - 3454 2198
46	ELECTRIC MOTORS	SIEMENS	M/S. SEIMENS PAKISTAN	021- 3587 6391
47	VAPOUR BARRIER COATING	FOSTER, USA	M/S. FAKHRI BROTHERS	021- 3588 6201 ~ 5
		ZAHABIYA, PAKISTAN	M/S. ZAHABIYA CHEMICAL INDUSTRIES	021- 3508 2323
48	WHITE GLUE	HOECHST, PAKISTAN	LOCAL MARKET	-----
		MOVILITH, GERMANY	AS PER APPROVED SAMPLES	
49	DUCT SEALANT	GREENMAN, ENGLAND	M/S. M.M STEEL CORPORATION	051-5750594
		LAG IT, USA	M/S. IQBAL SONS	021- 3453 3122 ~ 3
		ZAHABIYA, PAKISTAN	M/S. ZAHABIYA CHEMICAL INDUSTRIES	021- 3508 2323
50	PVC CONDUIT	GALCO	M/s. MAHMOOD INDUSTRIES	021- 32412252
		BETA	M/s. BETA PIPES	042- 35172410 ~ 1



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Sr.#	ITEM	MAKE / MANUFACTURER	AUTHORIZED DEALER	CONTACT NO.
51	VIBRATION ISOLATORS	TARIQ CORPORATION (as per approved sample)	M/S. TARIQ CORPORATION	021- 3453 8128
52	STEEL MEMBERS	AMRELI STEELS (Or approved equivalent)	M/s. AMRELI STEELS	021-111 267 354
53	PAINTS	ICI PAINT JOTUN PAINT	M/S. ICI PAKISTAN M/S. JOTUN PAKISTAN	021- 3231 3717 ~ 9 021- 3512 1491 ~ 3

- > TECHNICAL SUBMITTALS / SAMPLES OF ALL ITEMS SHALL BE APPROVED BY THE CONSULTANT BEFORE ORDERING.
- > CONTRACTOR SHOULD HIGHLIGHT / MENTIONED THE MAKE OF EACH & EVERY ITEM WHICH HAS BEEN QUOTED IN BOQ.



## MECHANICAL & PLUMBING VENDOR'S LIST

S.#	NAME	MANUFACTURERS / BRANDS	COUNTRY OF ORIGIN	COUNTRY OF MANUFACTURING	LOCAL REPRESENTATIVE(S)		
					COMPANY NAME	CONTACT PERSON	CONTACT NUMBER
	MECHANICAL, PLUMBING & DRAINAGE WORKS						
1	PLUMBING FIXTURES	PORTA	CHINA	CHINA	M/s. CHAND SANITARY	MR. ATIQ	0331-2494134
		ZILVER	TURKEY	TURKEY	M/s. KARACHI TILE MART	MR. MUHAMMAD IBRAHIM SIRAJ	0301-8244314
		GROHE	GERMANY	GERMANY	M/s. S.ABDULLAH HOMES	MR. HARIS	0343-8863525
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
2	TOILET ACCESSORIES	PORTA	CHINA	CHINA	M/s. CHAND SANITARY	MR. ATIQ	0331-2494134
		ZILVER	TURKEY	TURKEY	M/s. KARACHI TILE MART	MR. MUHAMMAD IBRAHIM SIRAJ	0301-8244314
		GROHE	GERMANY	GERMANY	M/s. S.ABDULLAH HOMES	MR. HARIS	0343-8863525
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
3	FAUCETS & TRIMS	PORTA	CHINA	CHINA	M/s. CHAND SANITARY	MR. ATIQ	0331-2494134
		ZILVER	TURKEY	TURKEY	M/s. KARACHI TILE MART	MR. MUHAMMAD IBRAHIM SIRAJ	0301-8244314
		GROHE	GERMANY	GERMANY	M/s. S.ABDULLAH HOMES	MR. HARIS	0343-8863525
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
4	UPVC PIPES & FITTINGS (PRESSURE PIPES, SCHEDULE 40 & 80 etc.)	DADEX	PAKISTAN	PAKISTAN	M/s. DADEX	MR. ZUBAIR SIDDIQUI	0345-3099156
		CIVIC PIPES	PAKISTAN	PAKISTAN	M/s. PELIKAN PIPE INDUSTRIES	MR. MOHSIN NAQVI	0300-3945580
		JEDDAH POLYMER	PAKISTAN	PAKISTAN	M/s. JEDDAH POLYMER	MR. MURTAZA	0300-2929079
		AGM	SAUDI ARABIA	SAUDI ARABIA	M/s. MALIK CORPORATION	MR. ABDUL MATEEN	0345-9997722
		BINA PLASTIC	MALAYSIA	MALAYSIA	M/s. CEMENTATION COMFORTS	MR. KHALID	0332-2326969
					M/s. ALFAH TRADERS		
					M/s. NATIONAL HDPE & UPVC PIPES		
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
5	CPVC PIPES & FITTINGS	NEROPLAST	SAUDI ARABIA	SAUDI ARABIA	M/s. BUILDCON	MR. TARIQ SHARIF	0300-0225947
		ZENT					
		AGM	SAUDI ARABIA	SAUDI ARABIA	M/s. MALIK CORPORATION	MR. ABDUL MATEEN	0345-9997722
		BAHRAIN	KINGDOM OF BAHRIAN	KINGDOM OF BAHRIAN	M/s. CEMENTATION COMFORTS	MR. KHALID	0332-2326969
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
6	PPR-C PIPES & FITTINGS	DADEX	PAKISTAN	PAKISTAN	M/s. DADEX	MR. ZUBAIR SIDDIQUI	0345-3099156
		CIVIC PIPES	PAKISTAN	PAKISTAN	M/s. PELIKAN PIPE INDUSTRIES	MR. MOHSIN NAQVI	0300-3945580
		RAKTHERM	UAE	UAE	M/s. MALIK TRADERS	MR. SABIR KHAN	0321-8211686
		Q-THERM	UAE	UAE	M/s. MALIK CORPORATION	MR. ABDUL MATEEN	0345-9997722
			UAE	UAE	M/s. MALIK CORPORATION	MR. ABDUL MATEEN	0345-9997722
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
7	HDPE PIPES & FITTINGS	DADEX	PAKISTAN	PAKISTAN	M/s. DADEX	MR. ZUBAIR SIDDIQUI	0345-3099156
		PAK ARAB	PAKISTAN	PAKISTAN	M/s. PAK ARAB	MR. FAIZAN KHAN	0345-8289318
					M/s. NATIONAL HDPE & UPVC PIPES		
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
8	M.S SCHEDULE 40 SEAMLESS PIPES	BAOLAI	CHINA	CHINA	M/s. CRESCENT CORPORATION	MR. ATIF MUNAWAR	0302-8443780
		PROTEK	CHINA	CHINA	M/s. SAEED SONS	MR. SAAD HUMAYUN	0320-2111305
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
9	M.S FITTINGS	MUELLER (Threaded) JINTAI (Welded) (AS PER APPROVED SAMPLE AFTER LAB TEST)	CHINA	CHINA	M/s. CRESCENT CORPORATION	MR. ATIF MUNAWAR	0302-8443780
		NEFT / BIS (Threaded) NEFFT (Welded) (AS PER APPROVED SAMPLE AFTER LAB TEST)	CHINA	CHINA	M/s. FAKHRI BROTHERS	MR. MUSTAFA MAJAL	0321-8297941
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					



## MECHANICAL & PLUMBING VENDOR'S LIST

S.#	NAME	MANUFACTURERS / BRANDS	COUNTRY OF ORIGIN	COUNTRY OF MANUFACTURING	LOCAL REPRESENTATIVE(S)		
					COMPANY NAME	CONTACT PERSON	CONTACT NUMBER
10	VALVES & ACCESSORIES 1/2" to 2" Brass Body 2-1/2" to above C.I Body	GALA	CHINA	CHINA	M/s. CRESCENT CORPORATION	MR. ATIF MUNAWAR	0302-8443780
		RUB	ITALY	ITALY	M/s. SAEED SONS	MR. SAAD HUMAYUN	0320-2111305
		HATTERSLEY	CHINA	CHINA	M/s. KHAN BROTHERS	MR. ASIM	0334-3369488
			PAKISTAN	PAKISTAN	M/s. REHMAN ENGINEERING WORKS	MR. MUBASHIR	0322-2762222
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
11	R.C.C PIPES	RAZIA PIPES	PAKISTAN	PAKISTAN	M/s. PAKISTAN PIPE & CONSTRUCTION COMPANY (PRIVATE) LIMITED		0327-8430358
			PAKISTAN	PAKISTAN	M/s. BALOCHISTAN R.C.C PIPE FACTORY	MR. ZAMAN	0300-2616660
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
12	G.I PIPES	I.I.L PIPE	PAKISTAN	PAKISTAN	M/s. INTERNATIONAL INDUSTRIES LTD.	MR. AZFAR FAROOQI	0335-6600611
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
13	G.I FITTINGS	H.E/T.G	CHINA	CHINA	M/s. SATTAR & SONS	MR. ASAD	0331-1391530
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
14	PUMPS	LOWARA	ITALY	ITALY	M/s. FLUID SYSTEMS INTERNATIONAL PVT. LTD.	MR. AADIL KHAN	0307-2230774
		WILO	GERMANY	GERMANY	M/s. ZARA ENGINEERS	MR. MIFTAH ALI	0322-2887225
		GRUNDFOS	EU	EU	M/s. ORIENT ENERGY SYSTEMS	MR. HASSAN KHAN	0346-2112200
		KSB	PAKISTAN	PAKISTAN	M/s. IDEA	MR. ZAID FAREED	0300-8203317
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
15	C.I COVERS, GRATINGS & S.S CLEANOUT PLUGS	JAWS	PAKISTAN	PAKISTAN	M/s. JAWS TECHNICAL EXPERTS	MR. ASGHAR REHMAN	0321-5138520
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
16	RAIN WATER GRATINGS, FLOOR DRAINS, GULLY TRAPS & PARKING DRAINS	DADEX	PAKISTAN	PAKISTAN	M/s. DADEX	MR. ZUBAIR SIDDIQUI	0345-3099156
		DACTA (BY HEPWORTH)	UAE	UAE	M/s. BUILD CON	MR. TARIQ SHARIF	0300-0225947
		FLOWTECH	UAE	UAE	M/s. SANITARY SOLUTIONS	MR. RAHEEM KHATRI	0334-2311786
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
17	ELETRIC HOT WATER HEATERS WORKING PRESSURE 30 TO 60 PSI	ARISTON	ITALY	ITALY	M/s. A.M GHANCHI COMPANY	MR. IRFAN GHANCHI	0332-8262751
		ISRA	PAKISTAN	PAKISTAN			
		SINGER	PAKISTAN	PAKISTAN	M/s. SINGER PAKISTAN	MR. ARSALAN	
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
18	VALVE & SPECIAL VALVES (PVC)	ASTRAL	SPAIN	SPAIN	M/s. NETWORKLD	MR. JAVED KHAN	0300-8287787
					M/s. ANNUA OLYMPIC POOL	MR. SHAHID MAHMOOD	0300-8051022
					M/s. ORIENT POOL	MR. AMIR ALI	0300-8268517
		PENTAIR	USA	USA	M/s. ANNUA OLYMPIC POOL	MR. SHAHID MAHMOOD	0300-8051022
					M/s. ORIENT POOL	MR. AMIR ALI	0300-8268517
		HAYWARD	USA	USA			
OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER							
19	UPVC SCHEDULE 80 PIPES & FITTINGS	DADEX	PAKISTAN	PAKISTAN	M/s. DADEX	MR. ZUBAIR SIDDIQUI	0345-3099156
		CIVIC PIPES	PAKISTAN	PAKISTAN	M/s. CIVIC PIPES	MR. MOHSIN NAQVI	0300-3945580
		JEDDAH POLYMER	PAKISTAN	PAKISTAN	M/s.JEDDAH POLYMER	MR. MURTAZA	0300-2929079
		AGM	SAUDI ARABIA	SAUDI ARABIA	M/s. MALIK CORPORATION	MR. ABDUL MATEEN	0345-9997722
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					
20	VALVE & SPECIAL VALVES (BRASS, C.I)	GALA	CHINA	CHINA	M/s. CRESCENT CORPORATION	MR. ATIF MUNAWAR	0302-8443780
		RUB	ITALY	ITALY	M/s. SAEED SONS	MR. SAAD HUMAYUN	0320-2111305
		HATTERSLEY	CHINA	CHINA	M/s. KHAN BROTHERS	MR. ASIM	0334-3369488
		OR OTHER EQUIVALENT APPROVED BY THE CONSULTANT / ENGINEER					

