

(FOR OFFICE USE ONLY)

(TENDER FEE)

NAME OF WORK: ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB

TENDER REGISTER NO: _____

DATED: _____

Paste Copy of Bid Document Fee

ISSUED TO M/S _____

BID DOCUMENTS

FOR

ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB

SINGLE STAGE TWO ENVELOPE

BID DOCUMENTS ARE PLACED IN THE FOLLOWING FOLDERS

VOLUME I:

- 1) INVITATION FOR BID**
- 2) INSTRUCTION TO BIDDERS**
- 3) BIDDING DATA**
- 4) EVALUATION/QUALIFICATION CRITERIA**
- 5) FORM OF BID AND APPENDICES TO BID**
- 6) CONTRACT FORMS**
- 7) GENERAL CONDITIONS OF CONTRACT**
- 8) PARTICULAR CONDITIONS OF CONTRACT**
- 9) SPECIAL PROVISIONS**
- 10) ADDENDA TO TECHNICAL SPECIFICATIONS**

VOLUME II: DRAWINGS

VOLUME III: TECHNICAL SPECIFICATIONS CSR (2018) GoB

VOLUME IV: PRICE BID

**INVITATION
FOR
BIDS**



**MODERNIZATION OF GADANI SHIP BREAKING AND RECYCLING
INDUSTRY AND DEVELOPMENT OF ALLIED FACILITIES,
(MUGSBRI) AT GADANI**

NOTICE INVITING TENDER

The Project Director (MUGSBRI) invites electronic bids (E-Bid) on single stage - two envelopes basis as per PPRA Rule from Firms who are well reputed, registered with PEC having valid registration in specified category for the year 2025-26 in category C2 or above for the following project;

S#	Description of Work	E/Cost
1.	<i>Establishment of Health Services (30 Bed Hospital & Trauma Center) at Gaddani, District, Hub</i>	578,581,829/-

ELIGIBILITY & MANDATORY REQUIREMENTS

The bidder must be registered with tax authorities, including: Active Taxpayers List (ATL) of FBR, National Tax Number (NTN), and Balochistan Revenue Authority (BRA). The firm/bidder shall submit an original affidavit on Rs. 100/- judicial stamp paper, duly attested, stating that the firm has not been blacklisted by any Government, Semi-Government, or Autonomous body.

Bidding / Tender Documents:-

1. Electronic Bidding Documents, containing detailed requirements, terms and conditions is available for the registered bidders on EPADS at www.eprocure.gov.pk and www.ppra.org.pk
2. Tender Fee: - Tender fee (Bank Challan) Rs.2000/- (Nonrefundable) in Account Title: Project Director MUGSBRI. Account No. 1840200000888 Askari Bank Limited Alamdar Road Branch Quetta
3. Call Deposit / earnest money: - (2%) earnest money of the estimated cost in the shape of bid security in favor of Project Director (MUGSBRI). *No cheque on this account shall be accepted.*
4. Place of Issuance, Submission, Inquiries and opening:- Address: - Project Director - MUGSBRI - Balochistan Development Authority Head office, Zarghoon Road Quetta Cantt: Telephone: 9201775.

Term & Conditions: -

Additional requirements including terms and conditions; as mentioned in Bidding Document. The Procurement shall be carried out in accordance with the Public Procurement Authority PPRA (E.PADs) Rules, 2004. The procuring agency reserves the right to may cancel the bidding process, as per provisions in PPRA rule, 2004.

1. Qualification Criteria:

Sr #	Description	CD/DCHR/CP-01
1.1	Eligibility: Valid Registration with Pakistan Engineering Council in relevant category and discipline	Category C2, Discipline CE10, CE11(IX), CE11(VII), EE01–EE06, EE11(V), ME01, ME02, ME04, ME06, AND ME07(V)
1.2	Registration with Income Tax Department	Firm must possess valid registration certificate from income tax authority (NTN)
1.3	Registration with Balochistan Revenue Authority	Firm must possess valid registration certificate from Balochistan Revenue Authority
2.1	Qualification: Similar Work with cost and complexity (two similar projects, Hospital Building, undertaken in past ten (10) years	Rs. 400 Million each
2.2	Annual Turnover Construction	Rs. 500 Million
	Average Net Worth	Rs. 300 Million
	Average Networking Capital	Rs.200 Million
2.3	Income Tax return for last three (03) years	Must meet
2.4	List of litigation (if any) their nature and status / outcomes;	Must meet
2.5	Affidavit that firm has never been blacklisted;	Must meet
3.1	Requirement of Manpower and Equipment	Provided in Bidding Documents

2. Bank Guarantee or Deposit at Call and Green Challan should be attached with Technical Proposal and must be delivered physically to mentioned office at or before 1200 hours, on **4th February 2026**, otherwise the undersigned will disqualify the firm. Technical Bids will be opened at 1300 hours on the same day, in the presence of bidder's or their representatives who choose to attend, having duly attested authority letter by public notary and original NIC.

Terms & Conditions.

- (a) Only one bid can be submitted for one package.
- (b) Under following conditions bid will be rejected:
 - (i) Conditional, electronic and telegraphic bids / tenders;
 - (ii) Bids not accompanied by Green Challan and Bid Security of required amount and form as specified in the bidding document;
 - (iii) Bids received after specified date and time;
 - (iv) Blacklisted firms.

(c) **Bid validity period: - 90 days**

Procuring Agency reserves the right to reject all or any bids subject to the relevant provisions of Public Procurement Rules

**PROJECT DIRECTOR
(MUGSBRI)**

VOLUME I

TABLE OF CONTENTS

DESCRIPTION

INVITATION FOR BIDS

INSTRUCTIONS TO BIDDERS

A General

- IB.1 Scope of Bid
- IB.2 Source of Funds
- IB.3 Eligible Bidders
- IB.4 One Bid Per Bidder
- IB.5 Cost of Bidding
- IB.6 Site Visit

B Bidding Documents

- IB.7 Contents of Bidding Documents
- IB.8 Clarification of Bidding Documents
- IB.9 Amendment of Bidding Documents

C Preparation of Bids

- IB.10. Language of Bid
- IB.11 Documents Accompanying the Bid
- IB.12 Bid Prices
- IB.13 Currencies of Bid and Payment
- IB.14 Bid Validity
- IB.15 Bid Security
- IB.16 Alternate Proposals by Bidder
- IB.17 Pre-Bid Meeting
- IB.18 Format and Signing of Bid

D Submission of Bids

- IB.19 Sealing and Marking of Bids
- IB.20 Deadline for Submission of Bids
- IB.21 Late Bids
- IB.22 Modification, Substitution and Withdrawal of Bids

E Bid Opening and Evaluation

- IB.23 Bid Opening
- IB.24 Process to be Confidential
- IB.25 Clarification of Bids
- IB.26 Examination of Bids and Determination of Responsiveness
- IB.27 Correction of Errors
- IB.28 Evaluation and Comparison of Bids

F Award of Contract

- IB.29 Award
- IB.30 Employer's Right to Accept any Bid and to Reject any or all Bids

- IB.31 Notification of Award
- IB.32 Performance Security
- IB.33 Signing of Contract Agreement
- IB.34 General Performance of the Bidders
- IB.35 Integrity Pact
- IB.36 Instructions Not Part of Contract

BIDDING DATA

EVALUATION/QUALIFICATION CRITERIA & FORMS

FORM OF BID AND APPENDICES TO BID

FORM OF BID

- Appendix-A to Bid : Special Stipulations
- Appendix-B to Bid : Foreign Currency Requirements
- Appendix-C to Bid : Price Adjustment (Under Clause 70)
- Appendix-D to Bid : Bill of Quantities
- Appendix-E to Bid : Proposed Construction Schedule
- Appendix-F to Bid : Method of Performing the Work
- Appendix-G to Bid : List of Major Equipment – Related
Items
- Appendix-H to Bid : Construction Camp and Housing
Facilities
- Appendix-I to Bid : List of Subcontractors
- Appendix-J to Bid : Estimated Progress Payments
- Appendix-K to Bid : Organization Chart of the Supervisory
Staff and Labour
- Appendix-L to Bid : Integrity Pact

FORMS

- BID SECURITY
- PERFORMANCE SECURITY
- CONTRACT AGREEMENT
- MOBILIZATION ADVANCE GUARANTEE/BOND

PART-I: GENERAL CONDITIONS OF CONTRACT

PART-II: PARTICULAR CONDITIONS OF CONTRACT

SPECIAL PROVISIONS

INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid

- 1.1 The Employer as defined in the Bidding Data 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 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 in various currencies towards the cost of the project specified in the Bidding Data 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. Appendix-A to Bid.

IB.3 Eligible Bidders

- 3.1 This Invitation for Bids is open to all bidders meeting the following requirements:
 - a. Duly licensed by the Pakistan Engineering Council (PEC) in the category relevant to the value of the Works.

IB.4 One Bid per Bidder

- 4.1 Each bidder shall submit only one bid either by himself, or as a partner in a joint venture. A bidder who submits or 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.
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.
12. Drawings.

7.2 The bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the Bidder's own risk. Pursuant to Clause IB.26, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

IB.8 Clarification of Bidding Documents

8.1 Any prospective bidder requiring any clarification (s) in respect of the Bidding Documents may notify the Employer in writing at the Employer's address indicated in the Invitation for Bids. The Employer will respond to any request for clarification which he receives earlier than 28 days prior to the deadline for submission of bids.

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

IB.9 Amendment of Bidding Documents

9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by issuing addendum.

9.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub-Clause 7.1 hereof and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer.

9.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids in accordance with Clause IB.20

C. PREPARATION OF BIDS

IB.10 Language of Bid

10.1 The bid and all correspondence and documents related to the bid exchanged by a bidder and the Employer shall be in the bid language stipulated in the Bidding Data and Particular Conditions of Contract. Supporting documents and printed literature furnished

by the bidders may be in any other language provided the same are accompanied by an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

IB.11 Documents Accompanying the Bid

11.1 Each bidder shall:

- (a) Submit a written power of attorney authorizing the signatory of the bid to act for and on behalf of the bidder;
- (b) Update the information indicated and listed in the Bidding Data and previously submitted with the application for prequalification, and continue to meet the minimum criteria set out in the prequalification documents which as a minimum, would include the following:
 - (i) Evidence of access to financial resources along with average annual Construction turnover;
 - (ii) Financial predictions for the current year and the two following years including the effect of known commitments;
 - (iii) Work commitments since prequalification;
 - (iv) Current litigation information; and
 - (v) Availability of critical equipment.

And

- (c) furnish a technical proposal taking into account the various Appendices to Bid specially the following:

Appendix-E to Bid	Proposed Construction Schedule
Appendix-F to Bid	Method of Performing the Work
Appendix-G to Bid	List of Major Equipment
Appendix-K to Bid	Organization Chart for Supervisory Staff

And other pertinent information such as mobilization program etc.

11.2 Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements:

- (a) The bid and in case of a successful bid, the Form of Contract Agreement shall be signed so as to be legally binding on all partners;
- (b) one of the joint venture partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the joint venture partners;
- (c) the partner-in-charge shall always be duly authorized to deal with the Employer regarding all matters related with and/or incidental to the execution of Works as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture;
- (d) all partners of the joint venture shall at all times and under all circumstances be liable jointly and severally for the execution of the Contract in accordance with the Contract

terms and a statement to this effect shall be included in the authorization mentioned under Sub-Para(b) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid); and

- (e) a copy of the agreement entered into by the joint venture partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the joint venture, the proportionate participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. No amendments / modifications whatsoever in the joint venture agreement shall be agreed to between the joint venture partners without prior written consent of the Employer.

11.3 Bidders shall also submit proposals of work methods and schedule, in sufficient detail to demonstrate the adequacy of the Bidders' proposals to meet the technical specifications and the completion time referred to in Sub-Clause 1.2 hereof.

IB.12 Bid Prices

12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole of the Works as described in Sub-Clause 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 reimbursed / deducted as per Sub-Clause 70.2 of the General Conditions of Contract Part-I.

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 their bids such other supporting information as required under the said Clause.

IB.13 Currencies of Bid and Payment

13.1 The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees. 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.14 Bid Validity

14.1 Bids shall remain valid for the period stipulated in the Bidding Data 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.15 Bid Security

15.1 Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data in Pak Rupees or an equivalent amount in a freely convertible currency.

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 Sub-Clause 22.1;
- (b) if the bidder does not accept the correction of his Bid Price pursuant to Sub-Clause 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; or
 - (ii) Sign the Contract Agreement.

IB.16 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 Form of Bid shall be that which represents complete compliance with the Bidding Documents.
- 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.17 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. 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 Sub-Clause 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.18 Format and Signing of Bid

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

bidder, in which case such corrections shall be initiated by the person or persons signing the bid.

18.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.

18.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS FOR SINGLE STAGE TWO ENVELOPE BIDDING PROCEDURE

IB.19 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 Sub- Clause 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;
- (b) Bear the name and identification number of the contract as defined in the Bidding Data; and
- (c) Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data.

19.3 In addition to the identification required in Sub- Clause 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.20 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.

(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.21 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.22 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 Sub-Clauses 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.23 Bid Opening

23.1 The Employer will open the bids, including withdrawals, substitution and modifications made pursuant to Clause IB.22, in the presence of bidders' representatives who choose to attend, at the time, date and location stipulated in the Bidding Data. The bidders' representatives who are present shall sign a register evidencing their attendance.

23.2 Envelopes marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause IB.22 shall not be opened.

23.3 The bidder's name, total Bid Price and price of any Alternate Proposal(s), any discounts, bid modifications, substitution and withdrawals, the presence or absence of Bid Security, and such other details as the Employer may consider appropriate, will be announced by

the Employer at the opening of bids.

- 23.4 Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with the Sub-Clause 23.3.
- 23.5 Other envelopes holding the Technical 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 presence of a Bid Security, if required; and
 - (d) Any other details as the Employer may consider appropriate.

No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with IB 21.1. Only Technical Bids read out and recorded at bid opening, shall be considered for evaluation.

23.6 Preliminary Examination of Technical Bids

The Employer shall first examine qualification and experience Data as per appendix M and N submitted by the Bidder. The technical proposal examination of those bidders only shall be taken in hand who meet the minimum requirement as mentioned in appendix M and N. Only substantially responsive qualification shall be considered for further evaluation.

- b) The Employer shall examine the Technical Bid to confirm that all the documents have been provided, and to determine the completeness of each document submitted.
- 23.7 The Employer shall confirm that all the documents and information have been provided for evaluation of Technical bid as required under these bidding documents.
- 23.8 At the end of the evaluation of the Technical Bids, the Employer will invite only those bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids.
- 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.
- 23.9 The Employer will notify Bidders in writing who have been rejected on the grounds of their Technical Bids being substantially non-responsive to the requirements of the Bidding Document and return their Price Bids unopened before inviting others, who are determined as being qualified, to attend the opening of Price Bids.
- 23.10 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`s representatives who are present shall be requested to sign a register evidencing their attendance.
- 23.11 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.

- 23.12 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.24 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.25 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.26 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; and (iv) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; or (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

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

IB.27 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 Form of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid Security shall be forfeited in accordance with Sub- Clause 15.6(b) hereof.

IB.28 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.

F. AWARD OF CONTRACT

IB.29 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 Sub-Clause 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 supplier's or contractor's capacities, may require the suppliers or contractors to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

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

IB.30 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.31 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, however, Employer may have clarification meetings to get clarify any item in the bid evaluation report.
- 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.32 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 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 Sub-Clause IB.32.1 or Clauses IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.33 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.34 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, interalia, 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.35 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.36 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

BIDDING DATA

The following specific data for the Works to be bided 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.

Instruction to Bidders, Clause Reference	Bidding Data
IB-1 1.1 1.1	Name and Address of the Employer: Project Director, MUGSBRI at the office of the Project Director (MUGSBRI) Balochistan Development Authority zarghoon Road Quetta Cantt Ph No. 9201775
1.1	Scope of Bid <ul style="list-style-type: none"> • Establishment of Health Services (30-Bed Hospital and Trauma Center) at Gaddani for the Project Titled: "Modernization of Gaddani Ship Breaking and Recycling Industry and Development of Allied Facilities (MUGSBRI) at Gaddani, District Hub
IB-2 2.1	Source of Funds Government of Balochistan The Employer has sufficient funds in Pak. Rs through Federal government PSDP No. 560 (2025-26) to cover the cost of the entire project for which these bidding documents are issued.
IB-3 3.1	Eligible Bidders 1. All firms/organizations who meet the qualification criteria provided in NIT and in Bidding Document.
3.2	Add following IB Sub-Clause 3.2 Qualification of Bidder To be qualified for award of the Contract, bidders shall provide evidence satisfactory to the Employer of their capability and adequacy of resources to carry out the Contract effectively. Bids shall include the following documentation and information on the relevant Forms provided at the end of this section "Bidding Data". <ul style="list-style-type: none"> (a) copies of original documents defining the constitution or legal status, place of registration and principal place of business; written power of attorney of the signatory of the Bid to commit the bidder; (b) total annual turnover in the civil works construction business expressed as total of payment certificates for work performed in each of the last three years; (c) performance as prime contractor, management contractor, or proportionately as member of a joint venture or subcontractor, on works of a similar nature and complexity over the last five years, and details of other work in hand and contractual commitments; (d) major items of Contractor's Equipment proposed for carrying out the Contract; (e) the qualifications and experience of key personnel proposed for administration and execution of the Contract, both on and off site; any proposals for subcontracting elements of the Works such that the total of (f) subcontracting should not be more than 30 percent of the Bid Price; (g) reports on the financial standing of the bidder including profit and loss statements, balance sheets and auditor's reports for the past three years, and an estimated financial projection for the next two years. Individual Bidder/Lead partner of JV has to submit along with his bid Audit Reports prepared by registered Chartered Accountant appearing on list of firms on ICAP directory as per International Standard on auditing (ISA's). Individual Bidder/Lead firm

of JV has to submit Audit Reports of last three years to demonstrate the current soundness of bidder's financial position and its prospective long-term profitability to evaluate.

(h) evidence of access to lines of credit and availability of other financial resources for this Contract Package;

(i) authority to seek references from the bidder's bankers;

(j) information regarding any litigation or arbitration resulting from contracts executed by the bidder in the last five years or currently under execution. The information shall include the names of the parties concerned, the disputed amount, cause of litigation, and matter in dispute;

(k) information regarding historic nonperformance and blacklisting of the bidder by government, semi government, autonomous bodies, private parties; and

(l) proposal of work methods and program, in sufficient detail to demonstrate the adequacy of the bidder's proposals to meet the technical specifications and the completion time referred to in Appendix A to bid.

Bids submitted by a joint venture of two (should not be more than 2) firms as partners shall comply with the following requirements:

(a) the Bid shall include all the information listed in Sub-Clauses 3.2 (a) to (e) and (g) to (k) above for each joint venture partner and 3.2 (f) and (l) for the joint venture;

(b) the Bid, and in case of a successful Bid, the Form of Agreement, shall be signed so as to be legally binding on all partners;

(c) one of the partners shall be nominated as being in charge, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;

(d) the partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture, and the entire execution of the Contract, including payment, shall be done exclusively with the partner in charge;

(e) all partners of the joint venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a statement to this effect shall be included in the authorization mentioned under (c) above, as well as in the Form of Bid and in the Form of Agreement (in case of a successful Bid); and

(f) a copy of the Joint Venture Agreement entered into by all partners shall be submitted with the bid. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed Agreement. In case of foreign contractor, the JV Agreement should be counter signed by the respective consulate of the country of the foreign contractor.

For the purposes of this particular Contract, bidders shall meet the minimum qualifying criteria set forth at the end of Bidding Data. Where mentioned in Evaluation & Qualification Criteria, the figures for each of the partners of a joint venture shall be added together to determine the bidder's compliance with the minimum qualifying criteria set out in this Sub-Clause 3.2 above and in Evaluation & Qualification Criteria. The qualifications, capacity, and resources of proposed subcontractors will not be taken into account in assessing those of individual or joint venture bidders, unless they are named specialist subcontractors and the scope of their specialized participation in the Works is clearly defined in the bid Refer Evaluation & Qualification Criteria provided at the end of Bidding Data, to

	<p>establish its qualifications to perform the Contract in accordance with Evaluation and Qualification Criteria the Bidder shall provide the information requested in the corresponding information forms along with information required in this Sub-Clause 3.2.</p>
<p>IB-4 4.1</p>	<p>Add new para at the end The successful bidder of this Contract Package shall not be considered for other contract packages of this Project.</p>
<p>IB-4 4.2</p>	<p>Add new Sub-Clause 4.2 Before award of the Contract to successful bidder, the Procuring Committee comprising 3 or more persons may visit the projects completed or are in progress of the successful bidders to verify the information provided by the bidder about experience, plant & equipment, key staff etc at the cost of the successful bidder.</p>
<p>IB-6 6.1</p>	<p>Site Visit Delete the text and substitute: The Bidder or his authorized representative shall visit and inspect the Site of Works including the areas and surroundings to be used for Contractor's Camp, on his own responsibility and at his own expense, and obtain all the information from his own sources which may be necessary for the purpose of preparing the bid. The Employer may assist but will not take any responsibility for the supply or correctness of the information.</p> <p>The Bidder shall, before submitting his bid, satisfy himself in all respects including the following:</p> <ol style="list-style-type: none"> a. The existing facilities in the vicinity of the Site of Work, the hydrological and climatological conditions, the form and nature of the Site of Work. b. The quantities and nature of the work and materials necessary for completion of the Works. c. The means of access to the Site of Work and exit from the Site. d. The available accommodation on land for Contractor's Camp within or outside the Site of Work. e. All necessary information as to risks, contingencies and other circumstances, which may influence or affect the bid. f. All the Facilities Mentioned in the Bid Document should be part of Contractor bid. IF Contractor Fail to Provide the Facilities mentioned in the Bidding Document to the Engineer and Employer will Penalties 3% per Month from Every IPC and Upto 10% maximum. g. The existing condition at Site. h. Traffic Management during construction etc i. During execution of the works, there are chances of obstacle/ hurdle due to shifting of electric poles, PTCL network, Shifting of Optical Fiber Lines, PHED pipe line, removal of structure from the right of way. These elements may cause of delay for which no extra payment/ escalation would be paid. <p>Each Bidder shall also enquire and satisfy himself as to the source, the quantity of supply, the sufficiency of and the means of obtaining and transporting all plant, material, labor, fuel, water, electricity, and other matters or things required for or in connection with the Works.</p> <p>In preparing the bid, Bidder shall also consider his obligation to adequately store all materials and maintain existing facilities and all Temporary Works during the period of their usage.</p> <p>The Bidder must make local inquiries as to the physical conditions prevailing at the Site and obtain his own information on all matters and things that may in any way influence him in making a bid and fixing the rates in the Bill of Quantities. He</p>

**ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT
TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED
FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB**

	<p>must also satisfy himself as to the risks, obligations and responsibilities to be undertaken in accordance to the Contract to be entered into by him should his bid be accepted.</p> <p>The Bidder shall make his own investigations, enquiries and assessments, on all matters, of all conditions of existing constructions at the site and its vicinity, to his satisfaction before submitting his bid.</p>
IB-8 8.1	<p>Clarification of Bidding Documents:</p> <p>Time Limit for Clarifications is 07 days prior to the deadline for submission of bid and after that time limit the Employer will not entertain any clarification/query etc what so ever in nature.</p>
IB-9 9.1	<p>Add following at the end “ which will also be hosted on PPRA website.”</p>
IB-10 10.1	<p>Language of Bid: English</p>
IB-11 11.1	<p>Documents Accompanying the Bid:</p> <p>Delete whole Clause 11 and replace with following The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid containing the documents listed in Clause 11.1a and the other the Price Bid containing the documents listed in Clause 11.1b, both envelopes enclosed together in an outer single envelope</p>
11.1a	<p>The Technical Bid shall comprise the following:</p> <ul style="list-style-type: none"> i. Green Challan ii. Form of Technical Bid; iii. Appendices to Bid except Appendix D and Appendix J iv. Bid Security in accordance with Clause 15; v. alternative bids, if permissible, in accordance with Clause 16; vi. written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with Clause 18; vii. documentary evidence in accordance with Clause 3.2 establishing the Bidder’s qualifications to perform the contract; viii. The Bidder shall furnish, as part of the Technical Bid, a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Appendices, in sufficient detail to demonstrate the adequacy of the Bidders’ proposal to meet the work requirements and the completion
11.1b	<p>The Price Bid shall comprise the following: i. Form of Price Bid; ii. Completed Price Bill of Quantities (Appendix D), in accordance with Clause 11.1c and Clause 12;</p>
11.1c	<p>The Forms of Technical Bid and Price Bid, and all documents listed under Clause 11.1a and 11.1b, shall be prepared using the relevant forms furnished at the end of Bidding Data and in Appendix D to L. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.</p> <p>In case any original document is in other language, translation in bid language should be provided which must be attested by the consulate of the country of the foreign bidder. The document in bid language shall prevail in case of any discrepancy.</p>

<p>IB-12 12.3</p>	<p>Bid Prices Add the following paragraphs:</p> <p>a) The Bidder, by the act of submitting a bid, acknowledges that he has inspected the Site of Works and determined the general characteristics and conditions. The Employer will not assume any responsibility for information, interpretations and deductions the bidder may make from the information furnished by the Employer. No verbal agreement or conversation with any officer, employee or agent of the Employer before, during or after the execution of the Contract, shall effect or modify any of the terms or obligations contained in the Contract.</p> <p>b) The attention of the Bidder is drawn to the fact that local regulations require special formalities to be complied with in connection with the ordering, purchasing and importing of materials from outside Pakistan. Bidder will be deemed to have obtained full information about all such matters and to have allowed in his bid for all delays, additional costs and financing charges that may arise directly or indirectly there from.</p> <p>c) Any neglect or failure on the part of the Bidder to obtain reliable information on the spot or elsewhere upon the foregoing or any other matters affecting the execution and completion of the Works, the rates, total amounts and the Contract shall not relieve the Bidder whose bid is accepted from any risks or liabilities or from the responsibility of completing and handing over the works.</p> <p>d) The rates and prices set down by the Bidder against all the items in the Bill of Quantities are to be the full inclusive value of the finished work described there under and shall be deemed to include all costs of performing the Works including all taxes (including sales tax, if applicable) and duties, profits and costs of accepting the general risks, liabilities and obligations of every kind set forth or implied in the Contract.</p>
<p>IB-13 13.1</p>	<p>Currencies of Bid and Payment: The unit rates and prices shall be quoted by the bidder entirely in Pak rupees (PKR). A bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country shall bear all costs and risks for arranging the requirements of such currencies through his own resources. All payment will be made in PKR only</p>
<p>13.2</p>	<p>Delete whole Sub-clause 13.2</p>
<p>IB-14 14.1</p>	<p>Bid Validity: Period of Bid Validity is 90 days after the date of bid opening.</p>
<p>IB-15 15.1</p>	<p>Amount of Bid Security: 02 % of estimated amount mentioned in the NIT should be attached with Technical Proposal</p>
<p>15.2</p>	<p>Delete whole Clause 15.2 and replace with following The Bid Security shall be in the form of Bank Guarantee or Deposit at Call from Scheduled Bank in favor of the Employer, valid for a period of 28 days beyond the bid Validity date.</p>
<p>IB-16 16.1 & 16.2</p>	<p>Alternate Proposals by Bidders Delete the text and substitute: Alternate proposals by Bidders are not invited. Bidders will only quote for the bid design.</p>
<p>IB-17 17.1</p>	<p>Venue, time, and date of the Pre-Bid Meeting: IF Requested by the Bidders</p>
<p>17.2</p>	<p>Add at the end of the Para following Errors, Omissions & Queries</p>

	<p>The Bidder shall notify “the Employer” of any inconsistencies, errors and omissions found in the Bid Documents, prior to the Bid opening date. Withholding of any such information which will later materially affect the contract price during construction may be considered as sufficient grounds for rejection of Bid. All queries shall be directed to:</p> <p>Project Director, MUGSBRI at the address provided in Sub-Clause 1.1 above.</p> <p>The Employer is not responsible for any verbal communications or instructions to the Bidders.</p>
<p>IB-18 18.1</p>	<p>Format and Signing of Bid: Delete Sub-Clause 18.1 and 18.2 and replace with following The Bidder shall prepare one original of the Technical Bid and one original of the Price Bid comprising the Bid as described in IB Clause 11 and clearly mark it “ORIGINAL - TECHNICAL BID” and “ORIGINAL - PRICE BID”.</p> <p>Bidders are particularly directed that the amount entered on the Form of Price Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.</p>
<p>IB-18 18.2</p>	<p>Add following</p> <p>The original and all copies of the Bid shall be typed or written in indelible ink except Price Bid which shall be hand written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified below and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid, except for un-amended printed literature, shall be signed or initialed by the person signing the bid.</p> <p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of:</p> <ul style="list-style-type: none"> (a) Power of Attorney on Judicial Paper of Rs. 100 duly attested by Notary Public; and (b) Bids submitted by an existing or intended JV shall include an undertaking signed by all parties (i) stating that all parties shall be jointly and severally liable, and (ii) nominating a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. The highest share holder shall be the Lead member of JV and the authorized representative must be from Lead Member of JV. (c) Submission of Joint Venture Agreement is obligatory. In case JV comprises foreign firms, PEC bylaws shall be applicable. (d) No any person other than the authorized representative is allowed to conduct business during bidding process including correspondence, clarification etc for and on behalf of bidder and in the event of award of the Contract during contract execution. (e) The Employer will not entertain any correspondence/clarification/query from unauthorized representative whosoever during and after bidding process.
<p>18.4</p>	<p>Format and Signing of Bid: Number of copies of the bid to be completed and returned: Original + Two (02) Copies</p>
<p>18.5</p>	<p>Delete the last sentence of this para from “All pages” the bid” and substitute with the following: All pages of the bid including appendices, addendum, corrigenda, clarifications,</p>

ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB

	<p>supplementary information as are issued shall be completed, initialed and stamped by the person or persons signing the bid.</p> <p>One (01) copy of Power of Attorney must be attached to the Bid submitted to the Employer, if this Bid is signed/executed by a person other than the President, Partner or Owner of the Bidder's Company.</p>
18.6	<p>Delete the text and substitute:</p> <p>The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Employer, or as are necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the bid. Each correction shall be separately signed and stamped. Over-writing, erasures, use of whitening fluid, correction tape for making corrections is not permitted. Noncompliance of these instructions may be construed as sufficient ground to render the bid non-responsive.</p>
18.7	<p>At the end of this para, add the following:</p> <p>Bids shall be prepared and submitted on the forms of "Technical Bid" and "Price Bid (BOQ)" provided. All blank spaces must be filled in and completed form must be without interlineations or alteration of the original wording. Bids with incomplete and/or unsigned Form of Bids may be rejected /considered Non-Responsive. The Bidder shall stamp and sign each page of Bid Documents for the purpose of identification and acknowledgement of acceptance thereof.</p> <p>The Bids must conform in all respects to the Bid Documents.</p>
IB-19 19.1	<p>Sealing & Marking of Bids:</p> <p>Delete Sub-Clause 19.1 and replace with following: Bidders may always submit their bids by mail or by hand. Procedures for submission, sealing and marking are as follows: Bidders submitting bids by mail or by hand shall enclose the original of the Technical Bid, the original of the Price Bid, and each copy of the Technical Bid and each copy of the Price Bid, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL - TECHNICAL BID", "ORIGINAL - PRICE BID" and "COPY NO... - TECHNICAL BID" and "COPY NO.... - PRICE BID." These envelopes, the first containing the originals and the others containing copies, shall then be enclosed in one single envelope per set</p>
IB-19 19.2(a)	<p>Sealing & Marking of Bids:</p> <p>Employer's address for purpose of Bid submission:</p> <p>As per Sub-clause 1.1 above.</p>
19.2(b)	<p>Name and Number of Contract:</p> <p>Establishment of Health Services (30-Bed Hospital and Trauma Center) at Gaddani for the Project Titled: "Modernization of Gaddani Ship Breaking and Recycling Industry and Development of Allied Facilities (MUGSBRI) at Gaddani, District Hub</p>
IB-20 20.1	<p>Deadline for submission of bids:</p> <p>As notified in the Invitation for Bid.</p>
IB-23 23.1	<p>Venue time and date of Bid opening:</p> <p>Delete Sub-Clause 23.1 and replace with following The Employer shall open the Technical Bids in public at the address, date and time specified in the Invitation for bids in the presence of Bidders` designated representatives and anyone who choose to attend. The Price Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening</p>
23.3	<p>Delete Sub-Clause 23.3 and replace with following All other envelopes holding the Technical 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 presence of a Bid Security and amount; (d) any other details</p>

ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB

	as the Employer may consider appropriate. Only Technical Bids and alternative Technical Bids read out and recorded at bid opening shall be considered for evaluation. No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with Clause 21.
23.4	Delete Sub-Clause 23.4 add replace with following: At the end of the evaluation of the Technical Bids, the Employer will invite bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids. 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.
23.5	Add following Sub-Clauses 23.5 to 23.8 The Employer will notify bidders in writing who have been rejected on the grounds of their Technical Bids being substantially non-responsive to the requirements of the Bidding Document and return their Price Bids unopened.
23.6	The Employer shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, in the presence of Bidders' representatives who choose to attend at the address, date and time specified by the Employer. The Bidder's 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 if permitted; and (d) any other details as the Employer may consider appropriate. Only Price Bids, discounts, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation. No Bid shall be rejected at the time of opening of Price Bids.
23.8	The Employer shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price, any discounts, and alternative offers. The Bidders' representatives who are present shall be requested to sign the record.
IB-24 24.2	Process to be Confidential Add the following sub-para: Documents submitted by Bidders in connection with the Bid for above named Works will be treated as confidential and will not be returned.
IB-26 26.1	Examination of Bids and Determination of Responsiveness Add following paragraph at the end of Sub Clause 26.1 The Employer shall examine the Technical Bid to confirm that all documents and technical documentation requested in Clause 11 have been provided, and to determine the completeness of each document submitted. The Employer shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer shall be rejected. i. Green Challan ii. Letter of Technical Bid; iii. written confirmation of authorization to commit the Bidder; iv. Bid Security, if applicable; and v. Bid Security, if applicable; and vi. Technical Proposal in accordance with IB 11

<p>IB-26.2</p>	<p>Examination of Bids and Determination of Responsiveness Add following text at the end of Sub-Clause 26.2 The Employer’s determination of a Bid’s responsiveness is to be based on the contents of the bid itself, as defined in IB 11. A substantially responsive Technical Bid is one that meets the requirements of the Bidding Document without material deviation. The Employer shall examine the technical aspects of the Bid submitted in accordance with IB 11, Technical Proposal, in particular, to confirm that all requirements of Works and Bidding Documents have been met without any material deviation. Provided that a bid is substantially responsive, the Procuring Agency may waive any non-conformity in the Bid that does not constitute a material deviation, reservation or omission. Provided that a Technical Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Technical Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the Price Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid. Provided that a Technical Bid is substantially responsive, the Employer shall rectify nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The adjustment shall be made using the method indicated in Evaluation and Qualification Criteria. The Employer shall determine to its satisfaction during the evaluation of Technical Bids whether Bidders meet the qualifying criteria specified in Evaluation and Qualification Criteria. The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to Sub Clause 3.2. An affirmative determination shall be a prerequisite for the opening and evaluation of a Bidder’s Price Bid. A negative determination shall result into the disqualification of the Bid, in which event the Employer shall return the unopened Price Bid to the Bidder</p>
<p>IB-28 28.4</p>	<p>Evaluation and Comparison of Bids In the text of sub-clause 28.4, in the sixth line, after the words, “the Employer may” add the following words: “take action under sub-clause 28.5 or may”. If the successful bidder failed to submit Performance Security of increased amount within twenty-eight (28) days of demand by the Employer, his bid shall be cancelled, and his bid security shall be forfeited</p>
<p>28.5</p>	<p>Add following Sub-Clause 28.5: Add following Sub-Clause 28.5: A bid with highly inflated or unworkable rates of any BOQ items may be considered non-conforming and rejected. The Employer may also disqualify such bidder from participating in the subsequent bids who submits such unbalanced and/or unworkable rates of major items of work. As per Government of Balochistan Public Procurement Regulatory Authority Vide Notification No. B-PPRA/Pr.Sp/Works/51/2019/5512-16 dated 26th July, 2019 the condition “the bidder will be declared non-responsive.</p>
<p>IB-29 29.2</p>	<p>Award of Contract Add the following sub-para: The Employer does not bind himself to award the Contract to the lowest or to any Bidder but will take into careful consideration the bidders’ prices and such other factors as are deemed applicable.</p>

ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB

<p>IB-31 31.5</p>	<p>Add new Sub-clause 31.5 IF Department needs. The Successful bidder shall furnish to the Employer Detailed Rate Analysis standard format schedule 2B with input or variables base rates of each items must be taken from monthly bulletin, Federal Bureau of Statistics, Government of Pakistan, applicable for Establishment of Health Services (30-Bed Hospital and Trauma Center) at Gaddani for the Project Titled: "Modernization of Gaddani Ship Breaking and Recycling Industry and Development of Allied Facilities (MUGSBRI) at Gaddani, District Hub" (105.00 Km) of all items of work within 28 days after the receipt of Letter of Acceptance.</p>
<p>IB-32 32.1</p>	<p>Performance Security: The Performance Security shall be of an amount equal to 10% of the Contract Price stated in the Letter of Acceptance. Such Security shall be in the form of (a) irrevocable, unconditional bank guarantee acceptable to the Employer from any scheduled Bank of Pakistan or (b) from a bank located outside Pakistan duly counter-guaranteed by a Scheduled Bank of Pakistan or (c) an insurance company having at-least AA rating from PACRA/JCR, in favor of Employer valid for a period 28 days after the issue of defect liability certificate.</p>
<p>IB-32 32.2</p>	<p>Delete Sub-Clause 32.2 and replace with following: Failure of the successful bidder to comply with the requirements of any of Sub-Clauses IB-31.5, IB.32.1, IB.33 and/or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.</p>
<p>IB-33 33.3</p>	<p>Add new Sub-Clause 33.3: Stamp Duty The formal Agreement between the Procuring Agency and the successful bidder shall be duly stamped at rate of 0.25% of bid price (updated from time to time) stated in Letter of Acceptance.</p>

EVALUATION/QUALIFICATION CRITERIA & FORMS

Evaluation/Qualification Criteria.

1. Evaluation/Qualification Criteria:

- a. The bidders must meet all the mandatory criteria
- b. Weightages/Marks and Passing Marks

S.NO	Weightage	Marks	Minimum Passing Marks in each Category (Mandatory)	Total Minimum Passing Marks
i.	Financial Soundness	25	50%	70%
ii.	Work Experience	30		
iii.	Work Programme	5		
iv.	Work Methodology	10		
v.	Key Personnel	15		
vi.	Plant & Equipment	15		
	Total	100		

For Technical Qualification,

If any bidder fails in any of the Mandatory Provision/Eligibility Criteria, its bid will not be considered for further evaluation.

1.1 Mandatory Provisions/Eligibility

(i) Registration with PEC:

Bidders must possess valid registration certificate of PEC in the category C-2 and in discipline (CE10, CE11(IX), CE11(VII), EE01–EE06, EE11(V), ME01, ME02, ME04, ME06, AND ME07(V))

(Attach PEC registration certificate for year 2025-26)

Single Entity: Must Meet

Joint Venture: Lead Member must meet, other members (category C2, discipline CE01, CE09, CE09, CE10,)

(Foreign firms if participating in the bidding process should strictly follow the rules stipulated in PEC bye laws for participation)

(ii) Registration with Income Tax Department:

Bidders must possess valid registration certificate from income tax authority (NTN). (Attach NTN certificate)

Single Entity: Must Meet

Joint Venture: Lead Member must meet, other members must meet

(Foreign firms if participating in the bidding process should submit NTN Certificate of their country duly attested by Consulate of their country)

(iii) Conflict of Interest:

Bidder shall not have the Conflict of Interest. The "Conflict of Interest means:

- (a) where a contractor, supplier or consultant provides, or could provide, or could be perceived as providing biased professional advice to a procuring agency to obtain an undue benefit for himself or those affiliated with him;
- (b) receiving or giving any remuneration directly or indirectly in connection with the assignment except as provided in the contract;
- (c) any engagement in consulting or other procurement activities of a contractor, consultant or service provider that conflicts with his role or relationship with the procuring agency under the contract;
- (d) where an official of the procuring agency engaged in the procurement process has a financial or economic interest in the outcome of the process of procurement, in a direct or an indirect manner;"

(Attach Affidavit on Rs. 100 Stamp paper attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country) Single Entity: Must Meet Joint Venture: Lead Member must meet, other members must meet.

(iv) Blacklisting:

Bidder is not blacklisted, Blacklisting means: "Barring a bidder, contractor, consultant or supplier from participating in any future procurement proceedings by the Pakistan Engineering Council/PPRA/any government, semi government, and autonomous body" (Attach Affidavit on Rs. 100 Stamp paper attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country)

Single Entity: **Must Meet**

Joint Venture: **Lead Member must meet, other members must meet**

(v) Litigation History:

All pending litigation shall in total not represent more than fifty (50) % of the Bidder's net worth and shall be treated as resolved against the Bidder. (Provide details or attach Affidavit in case of not applicable on Rs. 100 Stamp paper attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country). Firms will also require to certify that neither the firm nor any the directors/owners of the firm have ever entered into any Plea Bargain, Voluntary Return in any of the accountability courts in the country. Any such case found shall deem to disqualify the company ab-initio. (Provide details or attach Affidavit in case of not applicable on Rs. 100 Stamp paper attested by Notary Public).

Single Entity: **Must Meet**

Joint Venture: **Lead Member must meet, other members must meet**

(vi) History of Non-Performing Contracts

All Non-performance of a contract did not occur within the last 5 years prior to the deadline for bid submission based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract and where all appeal instances available to the applicant have been exhausted. (Provide details or attach Affidavit in case of not applicable on Rs. 100 Stamp paper attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country) The past performance of the applicant on all completed and ongoing projects may also be checked in coordination with other government departments. Also, the bidders who are already working on any Contract Package of this Project, shall submit Performance Certificate issued by the Engineer.

Single Entity: **Must Meet**

Joint Venture: **Lead Member must meet, other members must meet**

(vii) Failure to Sign Contracts:

Not being under execution of a Bid Securing Declaration for last 5 years. (Provide details or attach Affidavit in case of not applicable on Rs. 100 Stamp paper attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country)

Single Entity: Must Meet

Joint Venture: Lead Member must meet, other members must meet

(viii) Financial Situation Historical Financial Performance

a. Average Annual Construction Turnover: PKR 500 million

(Minimum average annual construction turnover as mentioned above, calculated as total certified payments received for contracts in progress or completed, within the last three (03) years, Submit Audited Balance Sheet of the Bidder)

Single Entity: Must Meet

Joint Venture: Each member as per their share in the JV (JV Agreement mentioning Lead Member name / Share and other Member's name and share should be submitted along with Technical Bid)

Foreign firms if participating in the bidding process should strictly follow the rules stipulated in PEC bye laws for participation.

b. Average Net working Capital for last 03 years: PKR 200 million

Single Entity: Must Meet

Joint Venture: Each member as per their share in the JV (JV Agreement mention Lead Member name / Share and other Member's name and share should be submitted along with Technical Bid)

Foreign firms if participating in the bidding process should strictly follow the rules stipulated in PEC bye laws for participation

c. Average Net Worth for last 03 years: PKR 300 million

(Submit Audited Balance Sheet and income tax submitted by the Bidder)

Single Entity: Must Meet

Joint Venture: Each member as per their share in the JV (JV Agreement mention Lead Member name / Share and other Member's name and share should be submitted along with Technical Bid)

Foreign firms if participating in the bidding process should strictly follow the rules stipulated in PEC bye laws for participation

d. Cash Flow Requirement: PKR 200 million

(Submit Credit Line Certificate as per format provided in form 6)

Single Entity: Must Meet

Joint Venture: Each member as per their share in the JV (JV Agreement mention Lead Member name / Share and other Member's name and share should be submitted along with Technical Bid)

Foreign firms if participating in the bidding process should strictly follow the rules stipulated in PEC bye laws for participation.

(ix) Work Experience Similar

Work with cost and complexity (two similar projects, Hospital Projects, under-taken in the past Ten (10) years: PKR 400 Million each

Single Entity: **Must Meet 100% Requirement**

Joint Venture: **Other Members should meet 50 of the requirements**

Foreign firms if participating in the bidding process should strictly follow the rules stipulated in PEC bye laws for participation.

(If any bidder fails in any of the Mandatory Provision/Eligibility Criteria, its bid will not be considered for further evaluation).

1.2 Financial Soundness

25 marks

Marks for financial soundness of the firm or JV shall be awarded on the basis of following criteria

i) Average Annual Construction Turnover for last 03 years 10 Marks (max.)

Rs. 500 Million 05 Marks

One mark for each increment of Rs. 50 Million

ii) Average Networking Capital for last 03 years 08 Marks (max.)

iii) Rs. 200 Million 05 Marks

One mark addition for each increment of Rs. 10 Million.

iii) Average Net worth for last 03 years 07 Marks (max.)

Rs. 300 Million 05 Marks

One mark addition for each increment of Rs. 15 Million

1.3 General Construction Experience

30 marks

Bidder shall be in business of construction at least for last 10 years. Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last Ten [10] years prior to the bid submission deadline. (Attach Articles of Incorporation or Documents of Constitution, and documents of registration of the legal entity. In case of JV, letter of intent to form JV or JV agreement.)

General Construction Experience **05 Marks (max.)**

For 10 Years' Experience 03 Marks

One mark for each increment of 2 years' experience.

(This requirement is applicable to all members of JV)

1.4 Specific Construction Experience

Similar assignments with cost and complexity (two similar projects, Hospital Projects under-taken in the past Ten (10) years, participation as contractor or subcontractor, with a value of the largest work of at least amount as mentioned below, that have been successfully completed (100%) and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods / technology or other characteristics.

- j. Specific Construction Experience..... 20 Marks (max.)**
 For two projects of Value Rs. 400 million..... 15 Marks
 One mark for each increment of Rs. 50 million.

1.5 Work Programme..... 05 Marks (Max.)

Detailed & Project Specific	05 Marks
Substantially Detailed & Project Specific.....	03 Marks
Sketchy.....	02 Marks
Irrelevant.....	00 Marks

1.6 Work Methodology..... 10 Marks (Max.)

Detailed & Project Specific.....	10 Marks
Substantially & Project Specific.....	05 Marks
Sketchy	03 Marks
Irrelevant	00 Marks

1.7 Key Personnel Qualification & Experience 15 Marks (Max.)

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

(All engineers must be registered with PEC, it is mandatory. Also, for Project Manager work experience of at least 10 years as Project Manager is mandatory.)

A. Project Manager.....05 Marks

Must be qualified Civil Engineer	
20 or more years' experience	05 Marks
< 20 > 15 years' experience	03 Marks
< 15 > 10 years' experience	02 marks
Less than 10 years' Experience	0 Mark

B. Planning Engineer 03 Marks

10 or more years' experience	03 Marks
< 10 > 08 years' experience	02 Marks
< 08 > 05 years' experience	01 marks
Less than 05 years' experience	0 Mark

C. Contracts Engineer 01 Marks

15 or more years' experience	01 Marks
< 15 > 10 years' experience	0.75 Marks
< 10 > 08 years' experience	0.50 marks
Less than 08 years' experience	0 Mark

D. Structural Engineer 02 Marks

15 or more years' experience	02 Marks
< 15 > 10 years' experience	1.5 Marks
< 10 > 08 years' experience	1.0 marks
Less than 08 years' experience	0 Mark

F. Material Engineer (Msc Geology/BE (Civil))02 Marks

15 or more years' experience	02 Marks
< 15 > 10 years' experience	1.5 Marks
< 10 > 08 years' experience	1.0 marks
Less than 08 years' experience	0 Mark

G. Site Engineers (2 nos)..... 02 Marks

08 or more years' experience	02 Marks
< 08 > 05 years' experience	01 Marks
Less than 05 years' experience	0 Mark

(For all Engineer's submit PEC registration certificate and Brief CVs of personnel as per form provided hereunder)

1.8 Plant & Equipment 15 Marks (Max.)

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

Sr. No.	Description of Equipment	Capacity & Horsepower	Minimum Requirement (Qty. in Nos.)	Marks
1	Excavator	0.8–1.2 m ³ bucket, 120–150 HP	1	3
2	Backhoe Loader	75–95 HP	1	2
3	Dump Truck	10–15 tons	2	2
4	Vibratory Roller / Soil Compactor	8–10 tons	1	2
5	Concrete Transit Mixer	6–8 m ³	1	2
6	Concrete Pump	25–40 m ³ /hr	1	2
7	Bar Cutting Machine	32–40 mm	1	1
8	Bar Bending Machine	32–40 mm	1	1

Notes:

1. The marks mentioned in above table are for owned/leased/rental equipment.
2. Total equipment available with the bidder is to be listed along with its current mobilization on on-going projects. The Bidder shall provide further details of proposed items of equipment using the relevant Form provided hereunder.
3. The bidder must submit ownership documents for equipment own by it.
4. For Leased/Rental equipment, the bidder must submit lease/rental agreement(s).

TECHNICAL PROPOSAL FORMS

FORMS OF TECHNICAL PROPOSAL

Form 1: Bidder Information Form

Company Profile

All individual firms and each partner of a joint venture submitting bid are requested to complete the information in this form.

1.	Name of firm (legal): (In case of Joint Venture (JV), legal name of each member)	
2.	Nature of Business: (Whether the firm is a Corporation, Partnership, Trust etc.) (In case of Consortium; whether the Lead Consortium Member is a Corporation, Partnership, Trust etc.)	
3.	Head Office address:	
4.	Telephone : Fax Number: E-mail address:	
5.	Place of Incorporation/Registration: Year of Incorporation/Registration:	
6.	Applicant's authorized representative: Telephone Fax numbers: E-mail address:	
7.	NATIONALITY OF OWNERS (Must Meet with PEC ownership record)	
	Name:	Country:
8	Company Bank Account No used for this project specific Account No: Title: Bank Name: Branch Code: Swift Code:	

Form 2: Historical Contract Non-Performance

Each Bidder or each member of a JV must fill in this form

Non-Performing Contract			
<input type="checkbox"/> Contract non-performance did not occur within the last two (02) years prior to the deadline for bid submission based on all information on fully settled disputes or litigation (Affidavit to be provided on Rs. 100 Stamp paper attested by Notary Public)			
<input type="checkbox"/> Contract non-performance during the stipulated period			
Year	Outcome as Percent of Total Assets	Contract Identification	Total Contract Amount (current value, PKR)
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	

Bid Security Declaration
<input type="checkbox"/> Bidder shall not be under execution of a Bid–Securing Declaration (Affidavit to be provided on Rs. 100 Stamp paper attested by Notary Public)

Each Bidder or each member of a JV must fill in this form

Black Listing
<input type="checkbox"/> Bidder shall not be black listed by government/semi government/autonomous/private organizations (Affidavit to be provided on Rs. 100 Stamp paper attested by Notary Public)

Pending Litigation			
<p><input type="checkbox"/> No pending litigation (A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted) (Affidavit to be provided on Rs. 100 Stamp paper attested by Notary Public)</p> <p><input type="checkbox"/> Pending litigation (All pending litigation shall in total not represent more than 50% of the Bidder's net worth and shall be treated as resolved against the Bidder)</p>			
Year	Outcome as Percent of Total Assets	Outcome as Percent of Total Assets	Total Contract Amount (PKR)
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	

Form 3: Financial Situation

Each Bidder or each member of a JV must fill in this form

Financial Data for Previous 3 Years

Information from Balance Sheet

	Year 2019-20	Year 2018-19	Year 2017-18
Total Assets			
Total Liabilities			
Current Assets			
Current Liabilities			

Information from Income Statement

Total Revenues of Construction			
Profits Before Taxes			
Profits After Taxes			

- Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three years, as indicated above, complying with the following conditions.
- All such documents reflect the financial situation of the Bidder or partner to a JV, and not sister or parent companies.
 - Historic financial statements must be audited by a certified accountant.
 - Historic financial statements must be complete, including all notes to the financial statements.
 - Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).
 - NTN certificate must be attached
 - Foreign firms if participating in the bidding process should submit NTN Certificate of their country duly attested by Consulate of their country

Form 4: Average Annual Construction Turnover, Net working capital and Average Net Worth

Each Bidder or each member of a JV must fill in this form

Annual Turnover Data for the Last 3 Years (Construction only)		Average Net working Capital for last 03 years	Average Net Worth for last 03 years
Year	Amount (PKR)	Amount (PKR)	Amount (PKR)
2019-20			
2018-19			
2018-17			

The information supplied should be the Annual Turnover (Construction only) of the Bidder or each member of a JV in terms of the amounts billed to clients for each year for work in progress or completed.

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract as indicated in the Qualification Criteria

Financial Resources		
No.	Source of financing	Amount (PKR)
1		
2		
3		

Form 6: Credit Line Certificate

CREDIT LINE CERTIFICATE

Date: _____

PROJECT DIRECTOR, MUGSBRI.

CONTRAT/PROJECT	
CONTRACTOR ADDRESS	
BANK ADDRESS	
AMOUNT	

This is to certify that the above ----- (Name of Bank) with business address indicated above, commits to provide to the Contractor, if awarded the above-mentioned Contract, a credit line in the amount specified above which shall be exclusively used to finance the performance of the above-mentioned contract subject to our terms, conditions and requirements. The credit line shall be available within fifteen (15) calendar days after receipt by the Contractor of the Letter of Acceptance and such line of credit shall be maintained until the project is completed by the Contractor. This Certification is being issued in favor of said Contractor in connection with the bidding requirement of Project Director, MUGSBRI for the above-mentioned Contract. We are aware that any false statements issued by us make us liable for perjury.

Name and Signature of Authorized Bank	
Officer : _____	
Official Designation	

Concurred By:

Name and Signature of Authorized Bank	
Officer : _____	
Official Designation	

Note: The amount committed should be machine validated.

ACKNOWLEDGMENT

SUBSCRIBED AND SWORN to before me this _____ day of _____, 21 _____, affiant exhibited to me his/her NTN _____ issued on _____ at _____, Pakistan.

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract as indicated in the Qualification Criteria

Form 7: Current Contract Commitments / Works in Progress

Bidders and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	Employer's Contact Address, Tel, Fax	Value of Outstanding Work [PKR]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [PKR/month]
1					
2					
3					
4					
5					

Form 8: Details of Contracts of Similar Nature and Complexity completed over the last 05 years

Sr. No.	1	2	3	4	5
Name of Contractor:					
Country:					
Name of Procuring Agency With Address, Tele, Fax.					
Nature of works and special features relevant to the contract for which applied:					
Contract Role (Mention: Sole, Sub Contactor or Partner in a Joint Venture).					
Value of the total contract in Pak/Rs:					
Date of Award:					
Date of Completion:					
Cost per day Index					

Form 9: Personnel Capabilities

Bidder should provide the names of suitably qualified personnel to meet the specified requirements stated in Evaluation and Qualification Criteria

Sr. No.	Title of Position	Name
1		
2		
3		
4		
5		

Form 11: Plant & Equipment

Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment whether owned/ leased/ rented listed Evaluation and Qualification Criteria.

A. Equipment Capabilities (owned by the contractor/firm)

Sr. No	Name of Equipment	Name of Manufacturer	Model and power rating	Capacity	Year of Manufacture	Current Location
1						
2						
3						
4						
5						
6						
7						
8						
9						

Note: Provide copies of ownership of equipment.

B. Equipment Capabilities (leased/rented by the contractor/firm)

Sr. No	Name of Equipment	Mention whether leased or rented	Name of Owner	Address of owner	Contact name and title with Telephone Fax & Email of the owner	Agreements Details of rental/ lease/ manufacture agreements specific to the project
1						
2						
3						
4						
5						
6						
7						
8						
9						

Note:

- i. Provide copies of Lease Agreement/ Rent Agreement
- ii. The ownership documents shall be verified/ attested by First Class Magistrate on stamp paper

FORM OF BID AND APPENDICES

FORMS OF BID AND APPENDICES

Table of Contents

FORM OF TECHNICAL BID

Appendix-A to Bid

SPECIAL STIPULATIONS

Appendix-B to Bid

FOREIGN CURRENCY REQUIREMENTS

Appendix-C To Bid

SCHEDULE OF BASIC PRICES OF SPECIFIED MATERIALS AND LABOUR WAGES

Appendix -D to Bid

BILL OF QUANTITIES

Appendix-E to Bid

PROPOSED CONSTRUCTION SCHEDULE

Appendix-F to Bid

METHOD OF PERFORMING THE WORK

Appendix-G to Bid

LIST OF MAJOR EQUIPMENT - RELATED ITEMS

Appendix-G to Bid

LIST OF MAJOR EQUIPMENT

Appendix-H to Bid

CONSTRUCTION CAMP AND HOUSING FACILITIES

Appendix-I to Bid

LIST OF SUBCONTRACTORS

Appendix-J to Bid

ESTIMATED PROGRESS PAYMENTS

Appendix-K to Bid

ORGANIZATIONAL CHART FOR THE SUPERVISORY STAFF AND LABOUR

Appendix-L to Bid

INTEGRITY PACT

Letter of Technical Bid

Date:

Bid Reference No:
(Name of Contract/Works)

To:

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (IB) 9;
- (b) We offer to execute and complete in conformity with the Bidding Documents the following Works:
- (c) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of 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;
- (d) As security for due performance of the under takings and obligations of our bid, we submit here with a Bid security, in the amount specified in Bidding Data Sheet, which is valid (at least) 28 days beyond validity of Bid itself.
- (e) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process, other than alternative offers submitted in accordance with IB16 (as applicable) .
- (f) 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.

Name

In the capacity of

Signed

.....

Duly authorized to sign the Bid for and on behalf of

Date

Address.....

SPECIAL STIPULATIONS

Sr. #	Description	Clause Conditions of Contract	Explanation
1.	Employer's name and address	1.1(a)(i)	Project Director, MUGSBRI" (105.00 Km) Establishment of Health Services (30-Bed Hospital and Trauma Center) at Gaddani for the Project Titled: "Modernization of Gaddani Ship Breaking and Recycling Industry and Development of Allied Facilities (MUGSBRI) at Gaddani, District Hub
2.	Engineer's name and address	1.1(a)(iv)	(To be notified)
3.	Notice, Consent, Approval etc	1.5	Scanned copy via e-mail and facsimile are acceptable, if the original is received within three days.
4.	Subcontracting	4.1	The aggregate amount of the Works subcontracted shall not exceed 30% of the Contract Price.
5.	Language	5.1(a)	The Language is English
6.	Law	5.1 (b)	The Law of Islamic Republic of Pakistan
7.	Amount of Performance Security	10.1	10% of Contract Price stated in the Letter of Acceptance.
8.	Time for Furnishing Program	14.1	Within 28 days from the date of receipt of Letter of Acceptance.
9.	Revised Program	14.2	Revised Program to be submitted within 14 days of the Engineer's notice.
10.	Cash Flow Estimate	14.3	Within 28 days of Signing of Agreement
11.	Insurance of Works and Contractor's Equipment	21.1	Type of cover The Works Amount of cover The sum stated in the Letter of Acceptance plus fifteen percent (15%) Type of cover Contractor 's Equipment: Amount of cover Full replacement cost plus fifteen percent (15%) Type of cover Materials Procured by the Employer pursuant to Clause 60.11. Amount of cover Full replacement cost plus fifteen percent (15%) Other cover: Contractor's All Risk Policy

**ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT
TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED
FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB**

12.	Minimum amount of Third-Party Insurance	23.2	<p>Type of cover Third Party-injury to persons and damage to property The Third Party Compensation Policy must contain following conditions of indemnification per occurrence with the number of occurrence unlimited:</p> <p>i) in case of death, Pak Rs. 1,000,000/= per person ii) in case of major injury, Pak Rs. 500,000/= per person iii) in case of minor injury, Pak Rs. 100,000/= per person iv) in case of damage to property, full amount of repair/replacement as the case may be.</p>
13.	Minimum amount of Workmen Compensation Insurance	24.2	<p>Workers: i) in case of death, Pak Rs. 1,000,000/= per person ii) in case of major injury, Pak Rs. 500,000/= per person iii) in case of minor injury, Pak Rs. 100,000/= per person</p>
14.	Time for Issue of Engineer's Notice to Commence.	41.1	Within 28 days from the date of signing of Contract.
15.	Time for Commencement	41.1	Immediately after the date of receipt of Engineer's Notice to Commence.
16.	Possession of Site	42.1	Immediately after the Notice to Commence.
17.	Time for Completion	43.1 & 48.2	36 months from the date as notified in the Engineer's Notice to Commence.
18.	Normal Working Hours	45.1	8 hours a day and 6 days a week
19.	Amount of Liquidated Damages	47.1 & 47.3	<p>0.1% of the contract price for each day of delay in completion of the Works subject to a maximum of 10% of Contract Price stated in the Letter of Acceptance. For Interim Delay damages 0.05% of the Contract price per day delay in completion of the Works subject to a maximum of 5% of Contract Price stated in the Letter of Acceptance Also, other charges mentioned in Special/Particular Conditions of Contract</p>
20.	Taking Over Certificate	48.1	<p>Only One Certificate shall be issued. The Work shall be considered completed if the whole of the work completed to the satisfaction of the Engineer, including cleaning of site. Submission of specific written request for issuance of Taking Over Certificate by the Contractor is mandatory.</p>
21.	Taking Over of Sections or Parts	48.2	Deleted

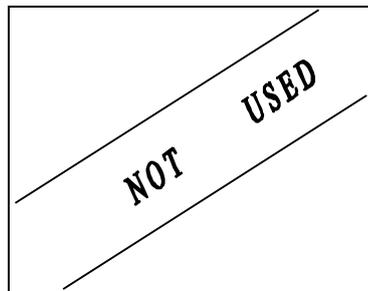
**ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT
TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED
FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB**

22.	Substantial Completions of Parts	48.3	Deleted
23.	Defects Liability Period	49.1	One (01) years calculated from the date of completion of work certified by the Engineer.
24.	Provisional Sums (PS)	58.1, 58.2, 58.3	Amount will be paid as per actual + Taxes + 5% as Contractor's Overhead & Profit for work carried out under PS.
25.	Secured Advance Against Material	60.1	Not Applicable as provision for Mobilization Advance is kept in the Contract.
26.	Minimum amount of Interim Payment Certificates (Running Bills)	60.2	The minimum amount of IPC Rs. 100 million. IF Contractor Fail to Provide General Facilities The Employe will penalties 3% of the per month for Every IPC Upto Maximum 10% of the Contract Price
27.	Time for Certification of Interim Payment Certificate by the Engineer	60.2	28 days from receipt of monthly statement from the Contractor
28.	Retention Money	60.3	10% of the amount of Interim Certificate until the amount so retained reaches the limit of Retention Money.
29.	Limit of Retention Money	60.3	10% of Contract Price stated in the Letter of Acceptance.
30.	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	60.10	28 days.
31.	Rate of interest on delayed payment	60.10	Interest on delayed payment is not payable
32.	Mobilization Advance (Interest Free)	60.12	10% of Contract Price stated in the Letter of Acceptance against a Mobilization Advance Guarantee for the full amount of the Advance in the specified from a Scheduled Bank in Pakistan OR an Insurance Company having at-least AA rating from PACRA/JCR First Installment: 50% of total Advance Payment shall be made after fulfilling all the requirements provided in Conditions of the Contract. Second Installment: Remaining 50%, on mobilization of Plant, equipment and other resources including Safety & Health Officer (duly approved by the Engineer) at site by the Contractor to the satisfaction of the Engineer
33.	Recovery of Mobilization Advance	60.12	Proportanately from each IPC starting from second IPC of work. Refer Particular Conditions of Contract.
34.	Contractor's name and address	68.1	_____ (to be completed by the Tenderer)_____

**ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT
TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED
FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB**

35.	Notice to Employer & Engineer	68.2	The Employer's Address is: Project Director, MUGSBRI BDA office, Zarghoon Road Quetta Ph: 0819201775
36.	Currency of Contract		Pak. Rs. (PKR)
37.	Increase or Decrease of Cost	70.1	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

FOREIGN CURRENCY REQUIREMENTS



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

REFER PRICE BID

BILL OF QUANTITIES
REFER PRICE BID

GENERAL ABSTRACT OF COST

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

TENDER DOCUMENTS

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

S.NO	DESCRIPTION OF WORKS	SCHEDULE 2023 ITEMS	NSR ITEMS
1	CIVIL WORKS	414533561.7	0.00
2	ELECTRICAL WORKS	19643309.4	0.00
3	PLUMBING WORKS	8854823.1	0.00
4	OVER HEAD WATER TANK	1036729.4	0.00
5	UNDER GROUND WATER TANK	1122097.3	0.00
6	SEPTIC TANK	372491.8	0.00
7	SOKAGE PIT	400408.2	0.00
8	EX: SWG WORK	216193.2	0.00
9	EX: WATER SUPPLY WORKS	158375.5	0.00
10	LAND SCAPING WORK	1215412.0	0.00
11	TUFF PAVER	10007426.8	0.00
12	VEHICAL SHED	2346641.46	0.00
13	MEDICAL EQUIPMENTS & ACCESSORIES	0.00	
TOTAL		459907469.82	
ABOVE / BELOW % ON SCHEDULE 2023 ITEMS			0.00
NSR ITEMS		0.00	
TOTAL AMOUNT			

TOTAL AMOUNT IN WORDS:

.....

SEAL & SIGNATURE

- 1 BIDDERS SHALL PRICE THE BILL OF QUANTITIES IN PAKISTANI ONLY
- WHEREVER THERE IS A CONFLIT IN QUOTED PREMIUM / RATES IN OTHER SECTION ,
- 2 THE PROVISIONS HERE IN SHALL PREVAIL

GENERAL ABSTRACT OF COST

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

eer's Estimate

BUILDING WORKS

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ENGINEER'S ESTIMATE

TOTAL COVERED AREA OF BILDING		GROUND FLOOR		37443.00				
		1st FLOOR MUMTY		342.00				
		1st FLOOR ramp roof (TRUSSES AND FIBER GLASS SHED)		1600.00				
		TOTAL SFT		39385.00				
AMOUNT IN PAK. RUPEES								
S.#	DESCRIPTION OF WORKS	SCHEDULE ITEM (RS)	NON SCHEDULE ITEM (RS)	PREMIUM %	AMOUNT (RS)	TOTAL COST (RS)	COST PER SFT (AT PAR)	COST PER SFT (WITH PREMIUM + STEEL ITEM)
A	BUILDING WORKS							
1	CIVIL WORKS	414533562	0.0	0	0.00	414533562	10525.16	10525.16
2	ELECTRICAL WORKS	19643309	0.00	0	0.00	19643309	498.75	498.75
3	PLUMBING WORKS	8854823	0.00	0	0.00	8854823	224.83	224.83
	Total	443031694	0.00		0.00	443031694	11248.74	11248.74
	Total-A					443031694		

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ENGINEER'S ESTIMATE

DESCRIPTION OF WORKS	SCHEDULE ITEMS				NSR ITEM
	CIVIL WORK	PLUMBING WORK	GAS WORKS	ELECTRICAL WORKS	
GROUND FLOOR	409180979.59	8854823.05	0.00	19643309.38	0.00
MUMTY	2609683.89	0.00	0.00	0.00	0.00
PARAPIT WALL	2742898.23	0.00	0.00	0.00	0.00
TOTAL AMOUNT	414533561.71	8854823.05	0.00	19643309.38	0.00

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

GROUND FLOOR

S NO	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
		<u>EARTH WORKS</u>				
1		Excavation in shingle or gravel formation, undressed lead upto 100 ft. (30m) by Machinery (Under water including dewatering)				
	3-9-b-iv	GROUND FLOOR	135696.75	cft	33.84	4591978.02
		<u>PCC CONCRETE WORKS</u>				
2	5-1	Dry ramming brick/ stone ballast 1-1/2" to 2" (40mm to 50mm) gauge				
		GROUND FLOOR	57186.68	cft	81.72	4673295.08
3	5-5-c	Providing and laying plain machine mixed 1:4:8 cement concrete using coarse sand and crushed aggregate having maximum size upto 1-1/2" (38mm) & down gauge in foundation including levelling, compacting and curing.				
		GROUND FLOOR	774.38	cft	333.26	258068.21
4	5-12-a	Providing and laying in situ 1:2:4 cement concrete using approved coarse sand and crushed aggregate having maximum size upto 3/4" (19mm) and down gauge in foundation including formwork using wooden braces and without wall ties, compaction, curing and removal of formwork				
		GROUND FLOOR	24015.57	cft	463.29	11126171.19
		<u>RCC CONCRETE WORKS</u>				
5	5-8-c	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) & down gauge in foundation including leveling, compacting and curing.				
		GROUND FLOOR	65525.25	cft	458.34	30032843.09
6	5-13-c	Providing & laying in situ cement concrete 1:2:4 in wall and piers etc, upto 12" (300 mm) in thickness using approved coarse sand & crushed aggregate 3/4" (19mm) & down gauge including compacting, curing, cost of formwork and its removal etc				
		GROUND FLOOR	960.00	cft	513.67	493123.20
7	5-11-a	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) & down gauge in foundation column including leveling, compacting and curing.				
		GROUND FLOOR	827.72	cft	444.22	367687.59
8	5-49-a	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm.) and down gauge in plinth band, of required shape or section including formwork and its removal, compacting and curing in basement and ground floor but excluding the cost of reinforcement.				
		GROUND FLOOR	8889.27	cft	519.07	4614155.33
9		Providing and laying in situ cement concrete 1:2:4 using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in pillars and columns of any shape in super structure including compacting, curing, cost of form-work & its removal in basement and ground floor.				
	5-15-c	GROUND FLOOR	2900.35	cft	561.62	1628894.17
10		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm.) and down gauge in door band of required shape or section including formwork and its removal, compacting and curing in basement and ground floor but excluding the cost of reinforcement.				
	5-49-b	GROUND FLOOR	1127.12	cft	530.18	597576.70
11		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in beams,lintels and cantilevers of required shape or section including formwork and its removal compacting and curing etc (ROOF BEAM)				
	5-16-a	GROUND FLOOR	7129.42	cft	548.57	3910985.38
12		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) & down gauge in stairs of any shape or section including formwork & its removal, compacting and curing				
	5-21-a	GROUND FLOOR	182.00	cft	523.29	95238.78

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

GROUND FLOOR

S NO	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
13		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in slabs including formwork and its removal, compacting and curing.Upto 6" (150 mm) thickness				
	5-17-a-i	GROUND FLOOR	21586.50	cft	560.53	12099880.85
14		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in precast shelves coping, cornices, eave boards, hood, fencing posts and manhole covers etc. including formwork & its removal, compacting and curing				
	5-27-a	GROUND FLOOR	38.50	cft	518.27	19953.40
		<u>DPC WORKS</u>				
15		Providing damp proof course on vertical surface with 3/4" (19 mm) thick cement plaster 1:3 mixed with any approved water proofing agent including curing and providing a layer of polythene sheet 0.13mm thick (500 gauge), but excluding the cost of water proofing agent.Providing a coat of bitumen emulsion at 0.50 kg per sq.m. and laying polythene sheet 0.13 mm thick on roof for water proofing laid as per instructions of the Engineer in ground floor. on walls				
	8-8-1+8-9-a+8-20-b	GROUND FLOOR	49400.66	sft	161.71	7988580.30
16		Providing and laying with 1:2:4 cement concrete Coarse Sand and crushed aggregate 1/2" (13mm) and down gauge including applying a coat of hot bitumen 80/100 or equivalent using 1.71 Kg per sq.m. and laying single layer of polythene sheet 0.13 mm thick (500 gauge) on damp proof course, including cleaning surface and spraying.with 2" (50 mm) thick damp proof course.And including the cost of Providing and laying water proof matting 3.2 mm thick on external faces of walls below ground level, under raft, basement floor, under floors, plinth and on ground floor roof top with adhesive No.70 at the rate of 0.48 Kg per Sq.m. diluted with 13% of solvent like kerosine oil including the cost of overlaps, cleaning & scraping the surface by wire brushes before applying the adhesive and laying jutoid.				
	8-6-a+8-15-a	GROUND FLOOR	5926.18	sft	251.1	1488064.43
17	5-30-a	Sulphate resisting cement	876.88	ton	6000.00	5261255.55
18	5-34-a	Providing and using concrete additives and Chemical Pudlo or similar	40153.58	kg	194.04	7791400.42
		<u>STEEL REINFORCMENT</u>				
19		Providing and fabricating and laying Tor steel grade 60 having yeild strength equal to 60000 psi reinforcement for all kind of RCC work in foundation , plinth and ground floor including the cost of straightening , removal of rust , cutting bending , binding wastage and providing such overlap as are eacht shown on the drawings , the cost of buinding wire and precast 1:2:4 cement concrete spacer block or MS chairs for binding and holding the reainforcement in position is inclusive up to 5m (14.6 ft)				
	5-65-a	GROUND FLOOR	556.70	ton	354350.42	197265323.22
		<u>BRICK / BLOCK MASONRY WORKS</u>				
20		Providing and laying 1:3:6 cement concrete block masonry using Coarse Sand and Approved crushed aggregate 3/4" (19mm) and down gauge set with cement morat ratio 1:4 in ground floor super-structure including scaffolding, raking out joints and curing 8" thick solid block masonry				
	9-6-1-iii-c	GROUND FLOOR	33263.49	cft	386.20	12846360.31
21		Providing and laying 1:3:6 cement concrete block masonry using Coarse Sand and Approved crushed aggregate 3/4" (19mm) and down gauge set with cement morat ratio 1:4 in ground floor super-structure including scaffolding, raking out joints and curing 6" (150 mm) thick solid block masonry				
	9-6-1-ii-a	GROUND FLOOR	641.06	cft	425.19	272570.60

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

GROUND FLOOR

S NO	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
		<u>PLASTER WORKS</u>				
22		3/4 inch (19mm) thick cement plaster using Coarse Sand on walls and columns in basement, plinth and ground floor including making edges, corners and curing. Extra if deep cut grooves of approved size and design are made on plastered surface of any description in any floor				
	15-4-c	GROUND FLOOR	27189.00	sft	62.54	1700400.06
23		13mm (1/2") thick Cement plaster 1:4 using Coarse Sand on soffits of ceiling, cantilever slabs, sides and soffits of beams, in basement and ground floor including making edges, corners and curing.				
	15-1-a-iii	GROUND FLOOR	44919.74	sft	60.66	2724831.43
24		13mm (1/2") thick Cement plaster 1:4 using Coarse Sand on wall , in basement and ground floor including making edges, corners and curing.				
	15-3-a-iii	GROUND FLOOR	67681.49	sft	57.95	3922142.46
		<u>FLOORING WORKS</u>				
25		Earth filling With new earth excavated from outside, lead upto 100 ft. (30m) and lift upto 5 ft. (1.5m) including royalty of Clay				
		GROUND FLOOR	174443.42	cft	10.41	1815955.98
26		Filling, watering and compacting earth under floors in layers not exceeding 8 inches in thickness.				
	3-16-a	With surplus earth from foundation etc				
		GROUND FLOOR	46136.90	cft	6.15	283741.90
27		Spraying approved anti-termite chemical mixed with water in the ratio of 1:40				
	3-69-1					
		GROUND FLOOR	39757.24	sft	15.12	601125.03
28		Providing and laying hand mixed 1:4:8 cement concrete bed under floors using graded Crushed Aggregate upto 1-1/2" (37 mm) and down gauge complete with leveling, ramming, watering and curing including the cost of Dry ramming				
	14-1-b+5-1	brick/ stone ballast 1-1/2" to 2" (40mm to 50mm) gauge				
		GROUND FLOOR	22617.37	cft	414.64	9378066.30
29		Providing and laying 2" thick 1:2:4 cement concrete floor using using crushed aggregate 3/4" (19mm) and down gauge in ground floor laid in panels including formwork, consolidation, finishing and curing.				
	14-2-a-ii	GROUND FLOOR	50.00	sft	91.02	4551.00
30		Providing and laying 1:2:4 cement concrete 3" thick floor using crushed aggregate 3/4" (19mm) and down gauge in ground floor laid in panels using glass strips but excluding the cost of glass strips including consolidation, finishing and curing.				
	14-2-b-ii	GROUND FLOOR	5162.50	sft	119.52	617022.00
31		Providing glass strips 1/4" (5 mm) thick and 1-1/2" (37.5 mm) wide for dividing the terrazo/mosaic flooring into panels. The cost of fixing is deemed to have been taken in composite rate of respective item.				
	14-43-1	GROUND FLOOR	2581.25	rft	36.22	93492.88
32		Providing and laying 1/4" to 3/8" (6mm to 9mm) thick Glazed/ Matt tiles of any colour and size in ground floor laid over 1" (25mm) thick cement sand mortar base including jointing and washing the tiles with white cement slurry of matching color by using color pigment and curing				
	14-25	GROUND FLOOR	1680.00	sft	278.29	467527.20

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

GROUND FLOOR

S NO	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
33		a) Providing and laying Vitriified/ Porcelain (Imported but not Chinese) tiles in floor with different sizes, Glazed or Matt, local or imported as directed by the Engineer-In-Charge, laid with 6mm thick layer of cement based high polymer modified quick set tile adhesive (water based) with a Base Price= Rs. 1600 per Sq.M. (It may be noted that reduction in the rate shall be made accordingly if the cost of purchase of tile is less than the base price				
	14-73-a	GROUND FLOOR	38077.24	sft	366.97	13973204.76
34		Providing and laying 3/4"(19mm) thick Granite black (local) polished tiles of any size on floor of approved design in any color, shade and pattern in ground floor over 3/8" thick base cement sand mortar 1:3 including setting the tiles with portland cement slurry over cement sand jointing and washing the tiles with cement slurry of matching color including grinding, rubbing, polishing & mortar cost.				
	14-70-a	GROUND FLOOR	35.00	sft	882.93	30902.55
35		Providing and laying super white 1" (25mm) thick, marble floor in slabs exceeding 12"x12" marble size, fine dressed on surface without winding in ground floor and laid over 1" (25mm) thick cement sand mortar 1:2 setting tiles with portland cement slurry over cement mortar, jointing and washing the tiles with white cement slurry including curing, rubbing and polishing. (for stair & steps).				
	14-15-1+14-42-a	GROUND FLOOR	252.00	sft	712.44	179534.88
36		Extra for making nosing of treads as per design and/or as per instructions of the Engineer-in charge including grinding marble/marble chips and polishing etc.				
	14-22-1	GROUND FLOOR	168.00	sft	69.02	11595.36
		<u>SKIRTING / WALL TILES WORKS</u>				
37		a) Providing and fixing 1/4" to 3/8" (6mm to 9mm) thick Ceramic Glazed/Matt tiles (Prime Quality) of any colour and size, as directed by Engineer-in-Charge in dado/skirting in ground floor over 1/2" (13mm) thick base of cement mortar 1:3, setting of tiles in slurry of grey cement over mortar base including filling the joints and washing the tiles with white cement slurry of matching color, cleaning & curing.				
	14-64-a	GROUND FLOOR	6656.00	sft	213.60	1421721.60
38		Providing and laying Vitriified/ Porcelain tiles (Imported but not Chinese) in dado/skirting on ground floor with different sizes, Glazed or Matt, local or imported as directed by the Engineer-In-Charge, laid with 6mm thick layer of cement based high polymer modified quick set tile adhesive (water based) with a Base Price= Rs. 1600 per Sq.M. (It may be noted that reduction in the rate shall be made accordingly if the cost of purchase of tile is less than the base price				
	14-74-a	GROUND FLOOR	23245.09	sft	399.79	9293153.73
39		Providing and Fixing 3/4"(19mm) thick Sand Stone (Gadab Stone) on interior and exterior wall and cladding including with cement sand mortar 1:3 complete in all respects.				
	15-55-a	GROUND FLOOR	2065.00	sft	499.54	1031550.10
		<u>DOOR FRMAE / DOOR SHUTTERS / ALUMINUM WORKS</u>				
40		Providing and fixing 37 mm thick factory made PVC Door shutter, styles and rails made of PVC hollow extruded printed and laminated section having overall including the cost of 5 mm. thick glass panes Clear glass local				
	16-99+16-86-a-i	GROUND FLOOR	80.00	sft	2389.84	191187.20
41		Providing and fixing factory made uPVC fixed or openable glazed windows/ventilators comprising of uPVC multi-chambered frame and mullion (where ever including Tinted glass local 5mm				

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

GROUND FLOOR

S NO	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
	16-100-1+16-86-a-iii	GROUND FLOOR	3786.00	sft	2440.84	9241020.24
42		Providing and fixing fixed or sliding fibre wire gauze in aluminium frame				
	28-26-b	GROUND FLOOR	3407.40	sft	648.28	2208949.27
43		Providing and fixing iron grills as per approved design including welding all sides of the section at the junction and fixing with sunk iron screws, painting with two coats of red oxide paint and fixing in masonry/concrete or wood				
	28-27-1	GROUND FLOOR	3786.00	kg	396.50	1501149.00
44		Providing and fixing plain wood work sawn, wrought planed in repair and replacement work including cost of nails and screws. Kail wood				
	16-1-a	GROUND FLOOR	2.19	cft	8459.00	18512.87
45		Providing and fixing First class Kail wood frame and panelling dolly Chowkat of required size for door using 2.5' x 2.5' vertical wooden plank at ends and horizontal plants at 1 ft apart for supports including 3/4" thick Panelling Kail wood frame and panelling for wash room				
	16-101-c	GROUND FLOOR	210.38	sft	2238.91	471010.69
46		Providing and fixing First class Kail wood frame and panelling dolly Chowkat of required size for door using 2.5' x 2.5' vertical wooden plank at ends and horizontal plants at 1 ft apart for supports including 3/4" thick Panelling Kail wood frame and panelling for wash room				
	16-101-c	GROUND FLOOR	465.63	sft	2238.91	1042503.66
47		Providing and fixing 2" (50mm) thick First class deodar wood fully panelled shutters for garrage and/or godown including cost of male and female hinges, locking arrangement and other iron fittings, cutting walls and making good the same as required.				
	16-33-1	GROUND FLOOR	1406.50	sft	1860.39	2616638.54
48		Providing and fixing quality deodar 38mm (1.5") thick fully glazed shutter with 1.5" (38 mm) thick fully glazed shutters with 1/4" (5 mm) thick plain local glass Considering a fully glazed ventilator 2'-0"x1'-6" with 2.5" x 3" single leaf top hung				
	16-10-e-i	GROUND FLOOR	139.50	sft	1514.45	211265.78
49		Providing and fixing 1.5" (38mm) thick First class deodar wood shutters fully wire gauzed with galvanized iron wire gauze 24 gauge (1.06mm) and 12 mesh to 1" (25mm) with approved S.S butt hinges and tower bolts as required.				
	16-20-1	GROUND FLOOR	714.00	sft	1633.88	1166590.32
50		Providing and fixing First class deodar wood shutters fully panelled with same wood and fixed with approved brass hinges and tower bolts. 2" thick fully panelled shutters				
	16-7-a	GROUND FLOOR	42.50	sft	2227.13	94653.03
51		Providing and fixing approved Brass sliding bolts or aldrop bolt of sizes 10" x 5/8" (250 mm x 16 mm) with screws of same metal and G.I. bolts and nuts				
	16-74-b-ii	GROUND FLOOR	26.00	each	2269.20	58999.20
52		Providing and fixing locks with brass or specially supplied screws including Door Closers and Floor Hinges of approved design including cutting wood to required shape Main door lock kwikset make				
	16-66-e	GROUND FLOOR	26.00	each	13166.41	342326.66
53		Providing and fixing locks with brass or specially supplied screws including Door Closers and Floor Hinges of approved design including cutting wood to required shape Chinese lock (for bath room)				

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

GROUND FLOOR

S NO	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
	16-66-b	GROUND FLOOR	34.00	each	3236.39	110037.26
54		Providing and fixing approved heavy duty safety Chromium plated handle with necessary screws of the same metal 5" (125 mm) size				
	16-77-c ii	GROUND FLOOR	122.00	each	564.00	68808.00
55		Providing and fixing approved tower bolts with screws of same metal. Chromium plated brass tower bolts. 9" (225 mm) size				
	16-75-a ii	GROUND FLOOR	61.00	each	465.60	28401.60
56		Providing and fixing locks with brass or specially supplied screws including Door Closers and Floor Hinges of approved design including cutting wood to required shape Hydraulic door closer, New star make				
	16-66-f	GROUND FLOOR	26.00	each	5173.20	134503.20
57		Providing and fixing of wooden moulded beading to door and window frames with iron screws, plugs; 2nd Class Teak Wood 50x12mm				
	16-89-1	GROUND FLOOR	1122.00	rft	166.01	186263.22
58		Providing and fixing hot dipped galvanized fully glazed steel door with frame single leaf galvanized steel bottom or kick rail 6" (150mm) wide and top rail 4" (100mm), width of Z-section 1.25" (30mm) at each edge using approved brass section oxidized fittings, iron lugs, including cutting holes galvanizing and cost of fabrication and making good the damages to walls.				
	28-1-1	GROUND FLOOR	21.00	sft	3384.26	71069.46
59		Providing and fixing 12 mm tempered Glass Door and partition wall supported by Stainless Steel brackets and Door supported by Floor mounted Hinges Dorma or equivalent . Aluminium Bottom and Top rail along including door Handles cutting holes cost of fabrication and making good the damages to walls.				
	28-88-1	GROUND FLOOR	60.00	sft	1253.00	75180.00
		PAINTING WORKS				
60		Painting with ICI/Berger or equivalent plastic emulsion paint of approved shade in two or more coats as per manufacturer's instructions on plastered rendered and/or concrete surface over and including the cost of priming coat, surface preparation, dusting, rubbing down smooth, filling cracks, holes removing blisters and other blisters and other imperfections in ground floor or basement. (@ atleast 1.65 Litre per 10 Sq.m)				
	17-8-1	GROUND FLOOR	44919.74	sft	67.82	3046456.77
61		Painting with ICI/Berger or equivalent plastic emulsion paint of approved shade in two or more coats as per manufacturer's instructions on plastered rendered and/or concrete surface over and including the cost of priming coat, surface preparation, dusting, rubbing down smooth, filling cracks, holes removing blisters and other blisters and other imperfections in ground floor or basement. (@ atleast 1.65 Litre per 10 Sq.m)				
	17-8-1	GROUND FLOOR	67681.49	sft	67.82	4590158.79
62		Painting with ICI/Berger or equivalent super gloss synthetic enamel paint in two or more coats as per manufacturer's instructions on steel and iron work over and including the cost of priming coat, surface preparation, removing rust, scales and dust with wire brush in ground floor or basement. (@ atleast 1.25Litre per 10 Sq.m)				
	17-7-1	GROUND FLOOR	3786.00	sft	59.85	226592.10
63		Painting with ICI/Berger or equivalent super gloss synthetic enamel paint in two or more coats as per manufacturer's instructions on wood work over and including the cost of priming coat, surface preparation, rubbing down smooth, knotted, filling cracks, holes and joints in ground floor or basement. (@ atleast 1.65 Litre per 10 Sq.m)				

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

GROUND FLOOR

S NO	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
	17-6-1	GROUND FLOOR	3353.63	sft	62.48	209534.49
64		Applying weather resistant paint coating such as ICI weather shield, Berger weather coat or equivalent to interior or exterior walls or ceiling including supplying all labour, materials, scaffoldings and removal of debris etc. @ atleast 3.50 litre per 10				
	17-69-1	GROUND FLOOR	27189.00	sft	80.77	2196055.53
65		Applying french or spirit polish of approved make on wood work Two coats (@ atleast 1.65 Litre per 10 Sq.m)				
	17-38-b	GROUND FLOOR	85.00	sft	42.59	3620.15
		<u>ALMIARHA / WARD ROBES / CABINATES</u>				
66		Providing and fixing wooden box type wardrobe 24" (600 mm) deep including 3/4" (19mm) thick boxing and shelves hanger rods, hardboard 3/16" (5mm) thick back drawers, brass fitting, locking arrangement, handles, internal bolts, shoe rods including painting. PVC Board 3/4" (19mm) High Gloss laminated thick Shutters and shelves and back with 3/4" thick plain laminated board				
	16-95-b	GROUND FLOOR	161.98	sft	1916.88	310488.55
67		Making of Kitchen Cabinet 8'x3' make up from Veneer board (MEDIUM DENSITY) Laminated on both sides, and hanging on wall, i/c all hardwares				
	16-92-1		60.00	cft	586.38	35182.80
		<u>CRUMPLE JOINTS</u>				
68		Providing and fixing 4.89 kg/sq.m. aluminium sheet covering of approved shape and design to expansion joints in walls and columns including providing clamps and fixing with screws and rawl plugs or wooden gutties including making slotted holes.				
	5-52-1	GROUND FLOOR	100.00	sft	279.46	27946.00
69		Providing and fixing 4.89 kg/sq.m. crimped copper sheet covering strips in vertical joints including punching slotted holes and fixing with wooden gutties or rawl plugs and screws.				
	5-53-1	GROUND FLOOR	45.00	sft	767.70	34546.50
		<u>GYPSUM / DAMPA CEILING / STAIR RAILING / TERRECE RAILING</u>				
70		P/L tiled false ceiling of size 595x595 mm metal grid of hot dipped galvanized steel sections. . GI Metal Ceiling Lay in plain Tegular edge Global white color tiles of size 595x595 mm with 20% area perforations				
	15-50-a	GROUND FLOOR	38077.24	sft	390.32	14862308.32
71		Providing and fixing 2'-9" high Stair hand railing comprising of 2 1/2" dia 16 gauge S.S pipe hand rail fixed with 2 1/2" dia pipe blusters at specified distance fixed at top of steps with expansion bolts, 2 Nos. of 16 gauge 1" dia S.S pipes horizontally fixed with blusters, Complete in all respects.				
	28-82-1	GROUND FLOOR	96.00	rft	3046.38	292452.48
		<u>FIBER GLASS SHED WITH TRUSSES</u>				
72	28-35-1+28-67 a	Providing and fixing M.S. Tees, angles and flat including riveting, fixing with gusset plates, bolts, hoisting and erecting in position in steel trusses, frames and towers of any approved design.	4800.00	KG	562.28	2698924.80
73	13-22-1+13-52 a	Providing and fixing corrugated 18 SWG (1.41 mm) G.I. galvanized sheet ridge G.I. sheet ridges 6 inches (150mm) girth and laps on either side with G.I. bolts, nuts, limpets and bitumen washers in ground floor 6" Lap and 18" overall width.	1600.00	sft	656.26	1050016.00
		<u>ROOF SCREENDING / ROOF TREATMENT</u>				
74		Providing and laying 1:2:4 P.C.C roof screeding using crushed stone 3/4" (19mm) including formwork, consolidation, finishing and curing 3" (75mm) nominal thick P.C.C. roof screeding				
	14-68-c	GROUND FLOOR	39385.00	sft	121.46	4783702.10
TOTAL AMOUNT						409180979.59
TOTAL AMOUNT OF NSR ITEMS						0.00

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

PLUMBING WORKS

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
1		Providing ,laying Supplying uPVC blind pipe IIL, Dadex or equivalent make registered with PSQCA .3" (75 mm) inner dia Class B				
	27-48-a-i+27-49-a-i	GROUND FLOOR	1225.00	rft	260.65	319296.25
2		Providing ,laying Supplying uPVC blind pipe IIL, Dadex or equivalent make registered with PSQCA. 4" (100 mm) inner dia.Class B				
	27-48-a-ii+27-49-a-ii	GROUND FLOOR	875.00	rft	297.68	260470.00
3		Providing and fixing CI floor trap having 100 mm (4") inlet and 100mm (4") dia out let and vent arm and CI grating of approved self cleaning desgin with CI screwed down grating with making requisite number of holes in walls plinth and floor for floor for pipe connection and making good with approved material				
	23-9-b	GROUND FLOOR	35.00	each	1407.60	49266.00
4		Providing and fixing export quality glazed earthen ware wash basin 550mm (24") light coloured with padestal manufactured by international ceramics ltd ICL Boch Karm Cera or equivaillent approved make with single hole chromium plated mixer tap 15mm (.5") piller tap 2 way deluw stop cocks CI or WI bracketes 150mm (6") built in to walls 40mm (1.5") dia malleable iron or CP brass trap with malleable iron or brass union and making requistes number of hole in walls plinth and floor for pipe connections and making good with approved material				
	23-5-b-ii+23-5-d-ii	GROUND FLOOR	30.00	each	21211.20	636336.00
5		Providing and fixing export quilty squatting type water closet indian / desi /902 with glazed eartheware trap 100m (4") light colour with integral treads manufactured by international ceramics limited ICL Boch Karam Cera approved equivalent make including cost of inlet pipe cistern and lid , cisteren kit stop cock delux and other accessories , fitting , material such as brackets PVC down pipe , rubber ring / washer making requisit number of hole in wall plinth and floor for pipe connection and making good with approved material				
	23-2-a-ii	GROUND FLOOR	15.00	each	15253.99	228809.85
6		Providing and fixing export quilty European type water closet fregate coupled / 4006 light coloured manufacture by international ceramics limited (ICL) Boch Karam Cera or approved equivalent make including cost of inlet pipe cisteren lid cisteren kit stop cock deluxe and other accessories fitting material such as bracket PVC down pipe where required rubber ring / washer making requisits number of hole in walls plinth and floor for pipe connection and making good with approved material				
	23-1-b-ii	GROUND FLOOR	15.00	each	17926.92	268903.80
7		Providing and fixing stainless steel sink Pakistan made with C.I. or W.I bracketes 6" built in wall, 1.5" (40 mm) rubber plug,C.P. brass chain, C.P. brass waste, pillar tap 2 way delux, 1.5" dia malleable iron or C.P. brass trap and unions and making requisite number of holes in walls, plinth and floor for pipe connections and making good with approved material. Stainless steel sink 33" x 18" (825 mm x 450 mm)				
	23-8-b	GROUND FLOOR	1.00	each	18260.40	18260.40
8		Providing and fixing standing shower concealed in wall with approved quality control valves, mixer unit and moveable shower head.				
	23-11-1	GROUND FLOOR	15.00	each	51063.60	765954.00
9		Providing and fixing C.P. brass telephonic shower including holder clamps, screw and bib cock.				
	23-12-1	GROUND FLOOR	15.00	each	3717.60	55764.00

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

PLUMBING WORKS

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

S.	SCHEDULE	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
10		Providing and fixing approved quality chromium plated towel rail with bracket and screws.Towel rail 30" x 3/4" (750mm x 20mm)				
	23-13-b	GROUND FLOOR	30.00	each	1486.80	44604.00
11		Providing and fixing approved quality C.P. brass toilet paper holder Master /Sonex or equivalent make.				
	23-14-1	GROUND FLOOR	30.00	each	1632.00	48960.00
12		Providing and fixing looking mirror of Belgium/ Malaysian/ Indonesian glass with chromium plated screws.				
	23-15-1	GROUND FLOOR	30.00	each	2569.20	77076.00
13		Providing and fixing shelf of standard size Glass shelf of 24" x 5" size with guard rails & C.P. brackets.				
	23-16-a	GROUND FLOOR	30.00	each	3434.40	103032.00
14		Providing and fixing soap dish Chromium plated				
	23-29-a	GROUND FLOOR	30.00	each	531.60	15948.00
16		Providing and fixing chromimum plated tee stop cock 3/4" (20 mm) dia.				
	23-32-b	GROUND FLOOR	30.00	each	531.60	15948.00
17		Providing and fixing chromimum plated tee bib cock 3/4" (20 mm) dia.				
	23-34-b	GROUND FLOOR	30.00	each	1951.20	58536.00
18		Providing and fixing Complete Bathroom set of Master Common Bath Set with noble hand shower 009/1, 010/3, 025/1, 027B/1, 085/1, 2015/1(3002) including Shower Set, Basin Mixer, bib Cock etc. complete in all respect				
	23-69	GROUND FLOOR	30.00	each	28544.40	856332.00
19		Providing, laying, cutting, jointing, testing and disinfecting PPRC pipes confirming to ISO 4427, PN-20, complete in all respects with specials and valves etc. including all fittings, connections and jointing material (15mm) 1/2" dia				
	27-47-i	GROUND FLOOR	1400.00	rft	100.39	140546.00
20		Providing, laying, cutting, jointing, testing and disinfecting PPRC pipes confirming to ISO 4427, PN-20, complete in all respects with specials and valves etc. including all fittings, connections and jointing material. 20mm .3/4" dia				
	27-47-ii	GROUND FLOOR	1050.00	rft	428.56	449988.00
21		Providing, laying, cutting, jointing, testing and disinfecting PPRC pipes confirming to ISO 4427, PN-20, complete in all respects with specials and valves etc. including all fittings, connections and jointing material. (25mm) 1" dia				
	27-47-iii	GROUND FLOOR	700.00	rft	715.35	500745.00
22		Providing, laying, cutting, jointing, testing and disinfecting PPRC pipes confirming to ISO 4427, PN-20, complete in all respects with specials and valves etc. including all fittings, connections and jointing material. (32mm) 1.25" dia				
	27-47-iv	GROUND FLOOR	525.00	rft	1177.94	618418.50
23		Providing, laying, cutting, jointing, testing and disinfecting PPRC pipes confirming to ISO 4427, PN-20, complete in all respects with specials and valves etc. including all fittings, connections and jointing material . (40mm) 1.5" dia				
	27-47-v	GROUND FLOOR	525.00	rft	1788.62	939025.50
24		Providing, laying, cutting, jointing, testing and disinfecting PPRC pipes confirming to ISO 4427, PN-20, complete in all respects with specials and valves etc. including all fittings, connections and jointing material. (50mm) 2" dia				
	27-47-vi	GROUND FLOOR	700.00	rft	2981.23	2086861.00

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

PLUMBING WORKS

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

S.	SCHEDULE	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
25	31-118-a	Supplying and installation of 1 HP electric motors with pump including all accessories				
		GROUND FLOOR	1.00	each	15270.00	15270.00
26		Providing and fixing LDPE overhead tank 500 gallons capacity manufactured by Dura or equivalent on top of any floor				
	27-44-b		1.00	each	37151.00	37151.00
27	25-2-a	Cement concrete gulley trap 6" x 6" x 4" (150 x 150 x 100 mm) with C.I. cover and frame weighing not less than 10 kg.				
		GROUND FLOOR	35.00	each	6952.05	243321.75
					Sub Total	8854823.05

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

(BASED ON COMPOSITE SCHEDULE OF RATES - 2023)

ELECTRIC WORKS

GROUND FLOOR

S. No.	DESCRIPTION OF WORKS	UNIT	QTY	CSR NO	RATE	AMOUNT
1	Light circuit concealed / open wiring with length upto 75 ft. (25m) from distribution board to point/switch with 3x2.5 Sq.mm PVC insulated single core copper conductor Pakistan Cables, Pioneer, Newage or approved equivalent cables for offices/multi storeyed buildings. (Concealed wiring with 3/4" 20 (mm) dia. PVC conduit and accessories such as bends, elbows, junction boxes etc.)					
	Ground Floor	Point	300	30-1 (a)	10,859.00	3257700.00
2	Concealed / open wiring from point to switch with length upto 30 ft. (10m) including any switch to switch wiring with 3x1.5 Sq.mm PVC insulated single core copper conductor Pakistan Cables, Pioneer, Newage or approved equivalent cables, (Concealed wiring with 3/4" 20 (mm) dia. PVC conduit and accessories such as bends, elbows, junction boxes etc.)					
	Ground Floor	Point	200	30-3 (a)	4,278.60	855720.00
3	Concealed /open wiring from point to point with length upto 10 ft. (3m) Sq.mm PVC insulated single core copper conductor with 3x1.5 Pakistan Cables, Pioneer, Newage or approved equivalent cables.					
	Ground Floor	Point	100	30-4 (a)	1,283.58	128358.00
4	Concealed/open wiring for two way light that two light points are controlled by 2 numbers two way switches and length from (12.5 m) with 3x1.5Sq.mm PVC insulated single core copper conductor Pakistan Cables, Pioneer, Newage or approved equivalent cables. switches to point is upto 40 ft.					
	Ground Floor	Point	6	30-6 (a)	7,607.16	45642.96
5	Concealed/open wiring for 5 Amp. Socket outlets from nearest available circuit with a length upto 20 ft. (6m) with 3x1.5 Sq.mm PVC insulated single core copper conductor Pakistan Cables, Pioneer, Newage or approved equivalent cables. (Concealed wiring with 3/4" -20 mm) dia. PVC conduit and accessories such as bends, elbows, junction boxes etc)					

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

(BASED ON COMPOSITE SCHEDULE OF RATES - 2023)

ELECTRIC WORKS

GROUND FLOOR

S. No.	DESCRIPTION OF WORKS	UNIT	QTY	CSR NO	RATE	AMOUNT
	Ground Floor	Point	300	30-8 (a)	3,358.32	1007496.00
6	Wiring of 5 Amps. socket outlet with 2.5 sq.mm PVC insulated single core copper conductor cable including 3/4" (20mm) dia. PVC conduit, 8.7sq.mm (10SWG) copper wire as earth continuity conductor and wiring accessories such as bends, elbows, junction boxes etc.(From DB to PPoint & Point to Point .					
	Ground Floor	R.ft.	2000	30-10	550.32	1100640.00
7	Supply and install 1-gang, 5 Amp, 250 Volt,. plate type mouldedn switch including appropriate size plastic box to be fixed recessed I wall.					
	Ground Floor	No.	12	30-11	836.04	10032.48
8	Supply and install 2-gang, 5 Amp, 250 Volt,. plate type mouldedn switch including appropriate size plastic box to be fixed recessed I wall.					
	Ground Floor	No	20	30-12	897.80	17956.00
9	Supply and install 3-gang, 5 Amp, 250 Volt,. plate type mouldedn switch including appropriate size plastic box to be fixed recessed I wall.					
	Ground Floor	No	40	30-13	1,341.04	53641.60
10	Supply and install 4-gang, 5 Amp, 250 Volt,. plate type mouldedn switch including appropriate size plastic box to be fixed recessed I wall.					
	Ground Floor	No.	60	30-14	1,548.00	92880.00
11	Supply and installation of 5 Amp. 250 Volt, moulded, two-way single pole, flush mounting type light control single switch including appropriate size plastic box to be fixed recessed in wall.					
	Ground Floor	No.	80	30-15	2,746.84	219747.20
12	Supply and install combined 2/3 pin 5 Amps, 250 Volt switch socket unit including plastic box to be fixed recessed in wall.					
	Ground Floor	No.	120	30-19	1,732.44	207892.80
13	Supply and install combined 3 pin 15 Amps. 250 Volt switch socket unit including plastic box to be fixed recessed in wall.					
	Ground Floor	No.	80	30-20	2,105.40	168432.00
14	Supply and installation of 1" (25mm) dia PVC concealed conduit including all accessories such as bends, elbows etc.					

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

(BASED ON COMPOSITE SCHEDULE OF RATES - 2023)

ELECTRIC WORKS

GROUND FLOOR

S. No.	DESCRIPTION OF WORKS	UNIT	QTY	CSR NO	RATE	AMOUNT
	Ground Floor	R.ft.	1000	30-22	74.75	74750.00
15	Supply and installation of 1.5" (40mm) dia PVC Conduit including all accessories such as bends, elbows etc.					
	Ground Floor	R.ft.	800	30-24	160.20	128160.00
16	Supply and install 6 sq.mm PVC insulated single core 600/1000V.cable with copper conductor in already concealed PVC conduit.					
	Ground Floor	R.ft.	600	30-34	306.50	183900.00
17	Supply and install 10 sq.mm PVC insulated single core 600/1000V.cable with copper conductor in already concealed PVC conduit. Green Color For E.C.C (Earth Copper Conductor)					
	Ground Floor	R.ft.	300	30-35	508.30	152490.00
18	Supply and install 25 sq.mm PVC insulated single core 600/1000V.cable with copper conductor in already concealed PVC conduit.	R.ft.	500	30-37	1,146.60	573300.00
19	Supply and install 35 sq.mm PVC insulated single core 600/1000V.cable with copper conductor in already concealed PVC conduit.	R.ft.	600	30-38	500.03	300018.00
20	Supply and install 70 sq.mm PVC insulated single core 600/1000V.cable with copper conductor in already concealed PVC conduit.	R.ft.	800	30-43	2,707.25	2165800.00
21	Supply and install surface mounted fluorescent light fixture with a 40W. Lamp TMS-140 Philips type or approved equivalent complete with ballast, power factor improvement capacitor, starter etc. and including all installation materials.					
	Ground Floor	No.	20	30-59	2,198.36	43967.20
22	Description same as in item 30- 59 but with acrylic plastic cover or louvers and four Nos. 20W. Lamps, Philips type TCS-420L or approved equivalent.					
	Ground Floor	No.	40	30-65	6,324.00	252960.00
23	Supply and install weather proof incandescent light fixture comprising die-cast aluminium body with front glass cover fixed to the body by means of stainless steel screws and neoprene gasket, G.I. Wire guard, 1 No 100W lamp, including all installation material Philips type or approved equivalent.	No.	20	30-73	10,828.20	216564.00

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

(BASED ON COMPOSITE SCHEDULE OF RATES - 2023)

ELECTRIC WORKS

GROUND FLOOR

S. No.	DESCRIPTION OF WORKS	UNIT	QTY	CSR NO	RATE	AMOUNT
24	Supply and install 56" (1.42 m) sweep ceiling fan with fan hook and dimmer complete with all accessories.					
	Ground Floor	No.	120	30-87	9,164.40	1099728.00
25	Supply and install earth connecting point of 10"x 2"x 1/4" (255mm x 50mm x 6mm) size of tinned copper bar, including brass/tinned copper bolts, nuts and washers.	No.	2	30-90	3,158.28	6316.56
26	Supply and install pair of earth electrode each comprising 24"x12" (600mm x 3mm) thick copper plate buried 13 ft (4M) deep underground in upright position in a pit and surrounded by mixture of salt and charcoal (1:3), 12" (300mm) min dia around the plate. The job also includes providing and fixing all accessories such as nuts, bolts, washers, 2x3/0 SWG (2x70mm) copper conductor earthing lead.	Job	2	30-91	312,520.88	625041.76
27	Construction of 20" x 20" (500mm x 500 mm) square inspection chamber for earth electrodes including medium duty C.I. cover and all associated civil works.	Job	2	30-97	9,753.30	19506.60
28	Supply and Install wall Mounted Split Air Conditioners invertor Energy Saver Model 1.5 Ton					
	Ground Floor	Job	10	30-108 b	244,775.21	2447752.10
29	Supply and Install wall Mounted Split Air Conditioners invertor Energy Saver Model 2 Ton					
	Ground Floor	Job	10	30-108 c	199,894.80	1998948.00
30	Wiring of bell point length upto 50 ft (15m) including supply of bell and bell push, 3x1.5 Sq.mm PVC insulated single core copper conductor cable in concealed PVC 3/4" (20mm) dia. conduit and wiring accessories such as elbows, bends, junction boxes, etc					
	Ground Floor	Each	12	30-111	5,478.90	65746.80
31	Supply and install single arm fancy wall bracket comprising brass bracket, apple white cylindrical glass shade, lamp holder with 100W lamp. (In Stair Case)					
	Ground Floor	Each	20	30-112	2,574.40	51488.00
32	Supply and install 10" (250 mm) sweep exhaust fan including plastic louvers.					

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

(BASED ON COMPOSITE SCHEDULE OF RATES - 2023)

ELECTRIC WORKS

GROUND FLOOR

S. No.	DESCRIPTION OF WORKS	UNIT	QTY	CSR NO	RATE	AMOUNT
	Ground Floor	Each	10	30-113	5,564.40	55644.00
33	Supply and install 20" (500 mm) sweep revolving bracket fan with guard.					
	Ground Floor	Each	10	30-114	8,948.40	89484.00
34	Provide, install, test and commission recessed wall mounting type distribution board fabricated from 16 SWG steel sheet, powder coated with approved color back box comprising one incoming MCCB- TP/60A and outgoing 9 single phase MCB of various capacity having overload & short circuit protection and of 6 KA braking capacity complete with internal wiring earthing, neutral link, termination blocks, phase indicating lights alongwith 500V voltmeter.					
	Ground Floor	Job	2	30-116 (a)	52,222.26	104444.52
35	Light Fixture Philips Type LED 13W, complete in all respect with allied accessories or approved equivalent. The fitting shall be approved by the Engineer. (in Office and Corridor)					
	Ground Floor	Each	60	30-124 (a)	1,178.40	70704.00
36	Light Fixture Philips Type LED Panel Lights , complete in all respect with allied accessories or approved equivalent. The fitting shall be approved by the Engineer.					
	Ground Floor	Each	200	30-124 (b)	7,564.80	1512960.00
37	Light Fixture Philips Type LED Tube Light , complete in all respect with allied accessories or approved equivalent. The fitting shall be approved by the Engineer.					
	Ground Floor	Each	40	30-124 (c)	1,178.34	47133.60
38	Supply ,Installing ,Connection of Single Pole Circuit Breaker 16 Ampere					
	Ground Floor	Each	20	31-22 (a)	2,025.12	40502.40
39	Supply ,Installing ,Connection of 3 Pole Circuit Breaker 63 Ampere					

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI**(BASED ON COMPOSITE SCHEDULE OF RATES - 2023)****ELECTRIC WORKS****GROUND FLOOR**

S. No.	DESCRIPTION OF WORKS	UNIT	QTY	CSR NO	RATE	AMOUNT
	Ground Floor	Each	30	31-22 (t)	4,995.36	149860.80
	Total Amount on Schedule 2023 CSR					19643309.38

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

FIRST FLOOR MUMTY

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY			
			FPS	UNIT	RATE	AMOUNT
		<u>STEEL REINFORCEMENT</u>				
1		Providing and fabricating and laying Tor steel grade 60 having yield strength equal to 60000 psi reinforcement for all kind of RCC work in foundation, plinth and ground floor including the cost of straightening, removal of rust, cutting bending, binding wastage and providing such overlap as are not shown on the drawings, the cost of binding wire and precast 1:2:4 cement concrete spacer block or MS chairs for binding and holding the reinforcement in position is inclusive up to 5m (14.6 ft)				
	5-65-a+f	FIRST FLOOR MUMTY	2.31	ton	357710.42	826100.02
		<u>BRICK / BLOCK MASONRY WORKS</u>				
2		Providing and laying 1:3:6 cement concrete block masonry using Coarse Sand and Approved crushed aggregate 3/4" (19mm) and down gauge set with cement mortar ratio 1:4 in ground floor super-structure including scaffolding, raking out joints and curing 8" thick solid block masonry				
	9-6-1-iii-c+9 12-i	FIRST FLOOR MUMTY	777.86	cft	413.27	321466.76
		<u>RCC CONCRETE WORKS</u>				
3		Providing and laying in situ cement concrete 1:2:4 using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in pillars and columns of any shape in super structure including compacting, curing, cost of form-work & its removal in basement and ground floor.				
	5-15-c+5-15-e	FIRST FLOOR MUMTY	119.88	cft	584.55	70075.85
4		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in door band of required shape or section including formwork and its removal, compacting and curing in basement and ground floor but excluding the cost of reinforcement.				
	5-49-b+5-49-d	FIRST FLOOR MUMTY	32.52	cft	551.82	17946.35
5		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in beams, lintels and cantilevers of required shape or section including formwork and its removal compacting and curing etc (ROOF BEAM)				
	5-16-a+5-16-b	FIRST FLOOR MUMTY	97.57	cft	570.19	55631.35
6		Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in slabs including formwork and its removal, compacting and curing. Upto 6" (150 mm) thickness				
	5-17-a-iii	FIRST FLOOR MUMTY	306.00	cft	583.35	178505.10
		<u>PLASTER WORKS</u>				
7		3/4 inch (19mm) thick cement plaster using Coarse Sand on walls and columns in basement, plinth and ground floor including making edges, corners and curing. Extra if deep cut grooves of approved size and design are made on plastered surface of any description in any floor				
	15-4-c+15-34-b	FIRST FLOOR MUMTY	1347.00	sft	82.33	110898.51
8		13mm (1/2") thick Cement plaster 1:4 using Coarse Sand on soffits of ceiling, cantilever slabs, sides and soffits of beams, in basement and ground floor including making edges, corners and curing.				

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

FIRST FLOOR MUMTY

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
	15-1-a-iii+15-34-a	FIRST FLOOR MUMTY	661.50	sft	80.45	53217.68
9		13mm (1/2") thick Cement plaster 1:4 using Coarse Sand on wall , in basement and ground floor including making edges, corners and curing.				
	15-3-a-iii+15-34-a	FIRST FLOOR MUMTY	1287.00	sft	77.74	100051.38
		FLOORING WORKS				
10		Providing and laying 1:2:4 cement concrete 3" thick floor using crushed aggregate 3/4" (19mm) and down gauge in ground floor laid in panels using glass strips but excluding the cost of glass strips including consolidation, finishing and curing.				
	14-2-a-iii +14-2c-b +5-42-c	FIRST FLOOR MUMTY	414.00	sft	138.25	57235.50
11		Providing glass strips 1/4" (5 mm) thick and 1-1/2" (37.5 mm) wide for dividing the terrazo/mosaic flooring into panels. The cost of fixing is deemed to have been taken in composite rate of respective item.				
	14-43-1	FIRST FLOOR MUMTY	207.00	rft	36.22	7497.54
		DOOR FRMAE / DOOR SHUTTERS / ALUMINUM WORKS				
12		Providing and fixing hot dipped galvanized fully glazed steel door with frame single leaf galvanized steel bottom or kick rail 6" (150mm) wide and top rail 4" (100mm), width of Z-section 1.25" (30mm) at each edge using approved brass section oxidized fittings, iron lugs, including cutting holes galvanizing and cost of fabrication and making good the damages to walls.				
	28-1-1+28-67a	FIRST FLOOR MUMTY	42.00	sft	3722.69	156352.81
13		Providing and fixing factory made uPVC fixed or openable glazed windows/ventilators comprising of uPVC multi-chambered frame and mullion (where ever including Tinted glass local 5mm				
	16-100+16-86-a-iii+16-87-a	FIRST FLOOR MUMTY	96.00	sft	2684.92	257752.70
14		Providing and fixing fixed or sliding fibre wire gauze in aluminium frame				
	28-26-b+28-67a	FIRST FLOOR MUMTY	86.40	sft	713.11	61612.53
		PAINTING WORKS				
15		Painting with ICI/Berger or equivalent plastic emulsion paint of approved shade in two or more coats as per manufacturer's instructions on plastered rendered and/or oncrete surface over and including the cost of priming coat, surface preparation, dusting, rubbing down smooth, filling cracks, holes removing blisters and other blisters and other imperfections in ground floor or basement. (@ atleast 1.65 Litre per 10 Sq.m)				
	17-8-1+17-47-a	FIRST FLOOR MUMTY	1287.00	sft	74.60	96012.77
16		Painting with ICI/Berger or equivalent plastic emulsion paint of approved shade in two or more coats as per manufacturer's instructions on plastered rendered and/or oncrete surface over and including the cost of priming coat, surface preparation, dusting, rubbing down smooth, filling cracks, holes removing blisters and other blisters and other imperfections in ground floor or basement. (@ atleast 1.65 Litre per 10 Sq.m)				

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

FIRST FLOOR MUMTY

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
	17-8-1+17-47 a	FIRST FLOOR MUMTY	661.50	sft	74.60	49349.22
17		Painting with ICI/Berger or equivalent super gloss synthetic enamel paint in two or more coats as per manufacturer's instructions on steel and iron work over and including the cost of priming coat, surface preparation, removing rust, scales and dust with wire brush in ground floor or basement. (@ atleast 1.25Litre per 10 Sq.m)				
	17-7-1+17-47 a	FIRST FLOOR MUMTY	42.00	sft	65.84	2765.07
18		Applying weather resistant paint coating such as ICI weather shield, Berger weather coat or equivalent to interior or exterior walls or ceiling including supplying all labour, materials, scaffoldings and removal of debris etc. @ atleast 3.50 litre per 10				
	17-69-1+17-47 a	FIRST FLOOR MUMTY	1347.00	sft	88.85	119676.91
		<u>ROOF SCREENDING / ROOF TREATMENT</u>				
19		Providing and laying 1:2:4 P.C.C roof screeding using crushed stone 3/4" (19mm) including formwork, consolidation, finishing and curing 3" (75mm) nominal thick P.C.C. roof screeding				
	14-68-c+14-68 d+14-68 e	FIRST FLOOR MUMTY	414.00	sft	163.13	67535.82
TOTAL AMOUNT						2609683.9

HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

CIVIL WORKS

ABSTRACT SHEET

1st floor

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
		PARAPET WALL				
		BRICK / BLOCK MASONRY WORKS				
1		Providing and laying 1:3:6 cement concrete block masonry using Coarse Sand and Approved crushed aggregate 3/4" (19mm) and down gauge set with cement morat ratio 1:4 in ground floor super-structure including scaffolding, raking out joints and curing 8" thick solid block masonry				
		FIRST FLOOR				
	9-6-1-iii-c+9 12-i		2707.96	cft	413.27	1119116.98
		PLASTER WORKS				
2		3/4 inch (19mm) thick cement plaster using Coarse Sand on walls and columns in basement, plinth and ground floor including making edges, corners and curing. Extra if deep cut grooves of approved size and design are made on plastered surface of any description in any floor				
		FIRST FLOOR				
	15-4-c+15-34 b		9485.98	sft	82.33	780980.57
		PAINTING WORKS				
3		Applying weather resistant paint coating such as ICI weather shield, Berger weather coat or equivalent to interior or exterior walls or ceiling including supplying all labour, materials, scaffoldings and removal of debris etc. @ atleast 3.50 litre per 10				
		FIRST FLOOR				
	17-69-1+17-47 a		9485.98	sft	88.85	842800.69
TOTAL AMOUNT						2742898.23

OVER HEAD WATER TANK

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ABSTRACT SHEET

Total Liters Engineer's Estimate

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
1	5-23-b	Providing and laying in situ cement concrete 1:2:4 using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in pillars and columns of any shape in super structure including compacting, curing, cost of forft-work & its removal in basement and ground floor.	22.50	cft	899.32	20234.70
2	5-23-c	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in beams,lintels and cantilevers of required shape or section including forftwork and its removal compacting and curing etc (ROOF BEAM)	84.00	cft	925.31	77726.04
3	5-23-e	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in slabs including forftwork and its removal, compacting and curing.Upto 6" (150 mm) thickness	110.88	cft	611.32	67783.16
4	5-23-d	Providing & laying in situ cement concrete 1:2:4 in wall and piers etc, upto 12" (300 mm) in thickness using approved coarse sand & crushed aggregate 3/4" (19mm) & down gauge including compacting, curing, cost of forftwork and its removal etc	270.00	cft	529.98	143094.60
5	5-23-f	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in slabs including forftwork and its removal, compacting and curing.Upto 6" (150 mm) thickness	60.00	cft	668.49	40109.40
6	5-65-a+5-65-b	Providing, fabricating and laying deforfted Grade 60 steel reinforcement (deforfted bar) for all kinds of R.C.C work in foundation, plinth and ground floor including the cost of straightening, removal of rust, cutting, bending, binding, wastage and providing such over-laps as are not shown on the drawings. The cost of binding wire and cement concrete spacer blocks or chairs for binding and holding the reinforcement in position is inclusive upto 15 ft. (5m) height overhead tanks at a height of 30 ft. (10m)	1.739	Ton	357710.42	621999.93
7	14-4-d+14-53-a	Providing and laying terrazzo/mosaic floor in ground floor over 1" (25mm) thick base of 1:2:4 cement concrete using crushed aggrgate 3/4"(19mm) and down grade laid in panels or approved pattern including forftwork, curing, cutting, removing and polishing. 3/4" (19mm) thick terrazzo topping 1:2 (one cement & 2 marble chips)	120.00	sft	170.23	20427.60
8	14-50-a+14-53-a	Providing and laying terrazzo dado/ skirting 7/8" (22mm) thick comprising 3/8" (9mm) thick topping 1:2 (one grey cement & two marble chips) in ground floor over 1/2" (13mm) thick cement sand mortar base 1:4 with grinding, rubbing, polishing & curing.	220.00	sft	165.72	36458.40
9	25-12-b	Providing and fixing step iron or foot rest in manhole chambers including setting to correct lines and levels.Angle iron 1.25" x 1.25" x 3/16" (32 mm x 32 mm x 5 mm)	5.00	each	892.80	4464.00
10	5-38-c	Providing and fixing P.V.C. ribbed waterstop in vertical or horizontal expansion joints including cutting or jointing. P.V.C. ribbed water stop 9" (225 mm) wide	20.00	rft	74.61	1492.20
11	28-7-1	Providing and fixing hot dipped Galvanised single leaf steel door with 2" x 2" x 1/4" frame fully panelled with 16 gauge (1.59mm) G.I. sheet with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls.	4.00	sft	333.56	1334.24
12	13-16-a	4 inches (100 mm) dia. shoe or bend or offset	2.00	each	802.56	1605.12
TOTAL WORKS						1036729.39

UNDER GROUND WATER TANK

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ABSTRACT SHEET

Total Liters

Engineer's Estimate

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
1	3-2-a-iv	Earth work excavation undressed, lead upto 50 ft. (15m.) Manual (For Covered area of less than 250 sft) In shingle or gravel	1000.00	cft	20.22	20220.00
2	5-4-b	Providing and laying plain hand mixed 1 : 4 : 8 cement concrete using sand approved source and crushed aggregate having maximum size upto 1-1/2" (38mm) & down gauge in foundation and plinth including leveling, compacting & curing.	25.00	cft	414.98	10374.50
3	5-22-a	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in underground tank, septic tank and underground drain including forftwork and its removal, compacting and curing. Foundation and floor slab	100.00	cft	441.42	44142.00
4	5-22-b	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in underground tank, septic tank and underground drain including forftwork and its removal, compacting and curing. in Walls	367.50	cft	494.47	181717.73
5	5-16-a	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in beams,lintels and cantilevers of required shape or section including forftwork and its removal compacting and curing etc (ROOF BEAM)	12.00	cft	548.57	6582.84
6	5-22-c	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in underground tank, septic tank and underground drain including forftwork and its removal, compacting and curing . Top slab upto 6" (150 mm) thick	72.00	cft	560.53	40358.16
7	5-65-a	Providing, fabricating and laying deforfted Grade 60 steel reinforcement (deforfted bar) for all kinds of R.C.C work in foundation, plinth and ground floor including the cost of straightening, removal of rust, cutting, bending, binding, wastage and providing such over-laps as are not shown on the drawings. The cost of binding wire and cement concrete spacer blocks or chairs for binding and holding the reinforcement in position is inclusive upto 15 ft. (5m) height	2.045	Ton	354350.42	724673.38
8	14-4-d	Providing and laying terrazzo/mosaic floor in ground floor over 1" (25mm) thick base of 1:2:4 cement concrete using crushed aggregate 3/4" (19mm) and down grade laid in panels or approved pattern including forftwork, curing, cutting, removing and polishing.3/4" (19mm) thick terrazzo topping 1:2 (one cement & 2 marble chips)	100.00	sft	260.12	26012.00
10	14-50-a+14-53-a	Providing and laying terrazzo dado/ skirting 7/8" (22mm) thick comprising 3/8" (9mm) thick topping 1:2 (one grey cement & two marble chips) in ground floor over 1/2" (13mm) thick cement sand mortar base 1:4 with grinding, rubbing, polishing & curing.	350.00	sft	165.72	58002.00
11	25-12-b	Providing and fixing step iron or foot rest in manhole chambers including setting to correct lines and levels.Angle iron 1.25" x 1.25" x 3/16" (32 mm x 32 mm x 5 mm	5.00	each	892.80	4464.00
12	5-38-c	Providing and fixing P.V.C. ribbed waterstop in vertical or horizontal expansion joints including cutting or jointing. P.V.C. ribbed water stop 9" (225 mm) wide	35.00	rft	74.61	2611.35
13	28-7-1	Providing and fixing hot dipped Galvanised single leaf steel door with 2" x 2" x 1/4" frame fully panelled with 16 gauge (1.59mm) G.I. sheet with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls.	4.00	sft	333.56	1334.24
14	13-16-a	4 inches (100 mm) dia. shoe or bend or offset	2.00	No's	802.56	1605.12
TOTAL WORKS						1122097.32

SEPTIC TANK

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ABSTRACT SHEET

Engineer's Estimate

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
1	3-2-a-iv	Earth work excavation undressed, lead upto 50 ft. (15m.) Manual (For Covered area of less than 250 sft) In shingle or gravel	560.00	cft	20.22	11323.20
2	5-4-b	Providing and laying plain hand mixed 1 : 4 : 8 cement concrete using sand approved source and crushed aggregate having maximum size upto 1 1/2" (38mm) & down gauge in foundation and plinth including leveling, compacting & curing.	20.00	cft	414.98	8299.60
3	5-22-a	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in underground tank, septic tank and underground drain including forftwork and its removal, compacting and curing. Foundation and floor slab	80.00	cft	441.42	35313.60
4	11-3-b-iii	Providing and laying first class solid burnt brick masonry (Brick Strength:1800psi-2000psi) Cement sand 1 : 4 including scaffolding, raking out joints and curing in foundation.Above 4.5" (115mm) nominal thick brickwork	230.72	cft	341.39	78765.07
5	5-16-a	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in beams,lintels and cantilevers of required shape or section including forftwork and its removal compacting and curing etc (ROOF BEAM)	7.50	cft	548.57	4114.28
6	5-22-c	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in underground tank, septic tank and underground drain including forftwork and its removal, compacting and curing . Top slab upto 6" (150 mm) thick	54.63	cft	560.53	30618.95
7	5-65-a	Providing, fabricating and laying deorfsted Grade 60 steel reinforcement (deorfsted bar) for all kinds of R.C.C work in foundation, plinth and ground floor including the cost of straightening, removal of rust, cutting, bending, binding, wastage and providing such over-laps as are not shown on the drawings. The cost of binding wire and cement concrete spacer blocks or chairs for binding and holding the reinforcement in position is inclusive upto 15 ft. (5m) height	0.510	Ton	354350.42	180894.78
8	14-2-b-ii	Providing and laying 1:2:4 cement concrete 3" thick floor using crushed aggrgate 3/4" (19mm) and down gauge in ground floor laid in panels using glass strips but excluding the cost of glass strips including consolidation, finishing and curing.	80.00	sft	119.52	9561.60
9	15-3-a-iii	13mm (1/2") thick Cement plaster 1:4 using Coarse Sand on wall , in basement and ground floor including making edges, corners and curing.	207.00	sft	57.95	11995.65
10	13-16-a	4 inches (100 mm) dia. shoe or bend or offset	2.00	each	802.56	1605.12
TOTAL WORKS						372491.85

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
1	26-1-c-i	Excavation of well in dry up to 5 feet depth below ground level and disposal soil within 30 m.	797.49	cft	31.39	25033.07
2	26-1-c-ii	Excavation of well in dry up to 5 feet to 10 feet depth below ground level and disposal soil within 30 m.	565.70	cft	32.59	18436.29
3	26-1-c-iii	Excavation of well in dry up to 10 feet to 15 feet depth below ground level and disposal soil within 30 m.	565.70	cft	33.80	19120.80
4	26-1-c-iv	Excavation of well in dry up to 15 feet to 20 feet depth below ground level and disposal soil within 30 m.	565.70	cft	35.01	19805.30
5	5-4-b	Providing and laying plain hand mixed 1 : 4 : 8 cement concrete using sand approved source and crushed aggregate having maximum size upto 1-1/2" (38mm) & down gauge in foundation and plinth including leveling, compacting & curing.	11.78	cft	414.98	4889.50
6	11-3-b-iii	Providing and laying first class solid burnt brick masonry (Brick Strength:1800psi-2000psi) Cement sand 1 : 4 including scaffolding, raking out joints and curing in foundation.Above 4.5" (115mm) nominal thick brickwork	235.65	cft	341.39	80448.55
7	5-22-c	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) and down gauge in underground tank, septic tank and underground drain including forftwork and its removal, compacting and curing . Top slab upto 6" (150 mm) thick	79.77	cft	560.53	44715.22
8	5-65-a	Providing, fabricating and laying deforfted Grade 60 steel reinforcement (deforfted bar) for all kinds of R.C.C work in foundation, plinth and ground floor including the cost of straightening, removal of rust, cutting, bending, binding, wastage and providing such over-laps as are not shown on the drawings. The cost of binding wire and cement concrete spacer blocks or chairs for binding and holding the reinforcement in position is inclusive upto 15 ft. (5m) height				
		KG CHANGE IN TO TON	0.136	Ton	354350.42	48171.79
9	19-19-1	Providing and filling brick bats into crates, the cost of crates will be paid for separately	2036.53	cft	68.64	139787.72
TOTAL WORKS						400408.23

SEWARGE WORKS

ABSTRACT SHEET

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

Engineer's Estimate

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
1	3.42-a-4	Excavation in open cutting for sewers and manholes as shown in drawings, dressing to correct sections and dimensions according to templates and levels and removing surface water in all types of soil except rock (i) The rate includes back filling after laying of sewer, which is payable separately. (ii) The rate for close/open shuttering & timbering will be as per item No. 3-43 & 3-44 where actually used at site.Upto 5 ft. (1.5 m) depth	750.00	cft	11.47	8602.50
2	25-b-i	Providing and laying R.C.C pipe with bell & spigot or tongued & grooved joint conforming to ASTM C-76 class II wall B or BS 3911 Part I class M including cost of reinforcement 9" (225 mm) inner dia	50.00	rft	504.13	25206.50
3	25-b-ii	Providing and laying R.C.C pipe with bell & spigot or tongued & grooved joint conforming to ASTM C-76 class II wall B or BS 3911 Part I class M including cost of reinforcement 12" (300 mm) inner dia	100.00	rft	833.60	83360.00
4	25-4-a	a) Providing manhole type 'A' size 24" x 18" (inside dimensions) as per approved design and specifications complete for 4" to 12" dia pipes upto 4 ft. (1.2 m) depth with 16" dia. Concrete Cover fixed in 4" thick RCC 1:2:4 slab (with 5 lbs per Cu.ft. or 80 kg/Cu.m of steel), burnt brick masonry walls 9" (225 mm) thick set in 1:3 cement sand mortar, 6" thick 1:3:6 cement concrete in foundation, 4" av. thickness 1:2:4 cement concrete in benching and 1/2" (13mm) thick cement sand plaster in 1:3 to all inside wall surfaces, channels and benching including making requisite number of main and branch channels but excluding the cost of excavation, back filling and disposal of excavated stuff.	2.00	Each	27316.05	54632.10
5	25-5-a	Providing manhole type 'B' size 36" x 30" (inside dimensions) x 48" deep as per approved design and specifications complete for 4" to 12" dia. pipe 4ft to 7'-6" depth with 18" dia (inside) Concrete Cover fixed in 6" thick RCC 1:2:4 slab with 5 lbs. per Cu.ft steel and brick masonry walls set in 1:3 cement sand mortar, 6" thick 1:3:6 cement concrete foundation, 4" av. thick 1:2:4 cement concrete in benching and 1/2" (13mm) thick cement plaster in 1:3 cement sand mortar, to all inner wall surfaces, channels and benching including providing and making requisite number of main and branch channels but excluding the cost of excavation, back filling, disposal of excavated stuff.	1.00	Each	44392.07	44392.07
					Sub Total	216193.17

WATER SUPPLY WORKS

ABSTRACT SHEET

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

Engineer's Estimate

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	TOTAL QTY	UNIT	RATE	AMOUNT
			FPS			
1	3.70-a-3	Excavation of trenches for water supply pipe lines upto 5 ft.(1.5m) depth from ground level, including trimming, dressing sides, levelling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects including cost of back filling. Shingle and Gravel	450.00	cft	18.23	8203.50
2	23.52-a-3	Providing, laying, cutting, jointing, testing and disinfecting G.I.pipe ILL make or equivalent gas line including the cost of jointing material. 1" (25 mm) inner dia.	100.00	rft	712.46	71246.00
3	23.52-a-6	Providing, laying, cutting, jointing, testing and disinfecting G.I.pipe ILL make or equivalent gas line including the cost of jointing material. 2" (50 mm) inner dia.	50.00	rft	1434.88	71744.00
4	23-39-b-iii	Providing and fixing superior quality gun-metal peet/gate valve 2" dia Class150) of approved make.	1.00	Each	4740.00	4740.00
5	23-49-b-iii	Providing and fixing superior quality gun-metal peet/gate valve 1" dia Class150) of approved make.	1.00	Each	2442.00	2442.00
Sub Total						158375.50

LAND SCAPING WORK

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ABSTRACT OF COST

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	QTY	UNIT	RATE	AMOUNT
			FPS			
1	29-6-1+29-7-1	Supplying and stacking approved garden soil (sweet earth) free from salts, pebbles and grass roots including all leads and lifts.& Spreading approved garden soil (sweet earth) in uniforft thickness including mixing and breaking clods and dressing for grassing including disposal of rubbish within 300 ft. (90m or 3 chains).				
		TOTAL QUANTITY	5000.00	cft	58.62	293100.00
2	29-1-1	Rough dressing of the area for lawn including picking stones, pebbles, stubble, grass roots and other injurious matters and breaking of clods including disposal of rubbish within 300 ft (90m or 3 chains).				
		TOTAL QUANTITY	10000.00	sft	3.12	31200.00
3	29-2-1+29-3-1	Supplying and stacking well decayed cowdung manure from approved source including all leads and lifts. & Spreading cowdung manure and mixing the same upto a depth of 4" (100mm) in the prepared bed including breaking clods,dressing for grassing including disposal of rubbish upto 300 ft (90 m or 3chains).				
		TOTAL QUANTITY	1600.00	cft	11.32	18112.00
4	29-10-1	Dressing upto depth of 4" (100 mm) and preparing the bed for final finishing including sprinkling water, raking and rubbing.				
		TOTAL QUANTITY	10000.00	sft	11.71	117100.00
5	29-11 a	a) Supplying and fixing of approved quality live local grass in shape of grass mats				
		TOTAL QUANTITY	10000.00	sft	75.59	755900.00
TOTAL						1215412.00

TUFF PAVER WORK

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ABSTRACT OF COST

S. No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	QTY	UNIT	RATE	AMOUNT
			FPS			
1	3.1- a 2	Earth work excavation undressed, lead upto a single throw of kassi, phaorah, shovel.Manual (For Covered area of less than 250 sft) In ordinary soil				
		TOTAL QUANTITY	4860.00	cft	4.85	23571.00
2	3-16-b	Earth filling With new earth excavated from outside, lead upto 100 ft. (30m) and lift upto 5 ft. (1.5m) including royalty of Clay				
		TOTAL QUANTITY	48000.00	cft	10.41	499680.00
3	14-1- b	Providing and laying hand mixed 1:4:8 cement concrete bed under floors using graded Crushed Aggregate upto 1-1/2" (37 mm) and down gauge complete with leveling, ramming, watering and curing.				
		TOTAL QUANTITY	8000.00	cft	332.92	2663360.00
4	21-60 a	Providing and laying road kerb of precast 1:2:4 cement concrete 24"x6"x12" (600mm x150mm x300mm) using crushed aggregate,forftwork and its removal, compacting and curing laid in cement mortar 1:4 & cement plaster 1:4 neatly finished including cost of excavation, backfilling of excavated stuff & its disposal within 30m				
		TOTAL QUANTITY	987.56	r.m	1,072.23	1058895.76
5	21-91- 1	Supply and Fixing of Concrete pavers on 3" thick sand cushion of different designs having thickness of 80 mm, mechnically compressed, minimum strenght of 7000 psi after laboratory testing at factory and random testiing at site as and when desired by the Engineer inchange comple in all respects. (No PCC work is premitted underneath this item of work) 60mm thick,tuff tile Cloured				
		TOTAL QUANTITY	32000.00	sft	180.06	5761920.00
					TOTAL	10007426.76

FIBER GLASS SHED WORK

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ABSTRACT OF COST

S.No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	T.QTY	UNIT	RATE	T.AMOUNT
			FPS			
1	3.1- a - 2	Earth work excavation undressed, lead upto a single throw of kassi, phaorah, shovel.Manual (For Covered area of less than 250 sft) In ordinary soil				
			114.29	cft	4.85	554.29
2	5-4-b	Providing and laying plain hand mixed 1 : 4 : 8 cement concrete using sand approved source and crushed aggregate having maximum size upto 1-1/2" (38mm) & down gauge in foundation and plinth including leveling, compacting & curing.				
			14.29	cft	287.50	4107.14
3	5-8-c	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) & down gauge in foundation including leveling, compacting and curing.				
			57.14	cft	458.34	26190.86
4	5-11-a	Providing and laying 1:2:4 cement concrete using approved coarse sand and crushed aggregate 3/4" (19mm) & down gauge in foundation column including leveling, compacting and curing.				
			48.21	cft	444.22	21417.75
5	27-62-2- c	Providing and installing M.S. blind pipe socketed seemless welded joint or hand welded joint, M.S. reducer including jointing and welding with strainer of the nominal inner diameter.3" DIA				
			207.14	rft	1040.40	215511.43
6	3-16-b	Earth filling With new earth excavated from outside, lead upto 100 ft. (30m) and lift upto 5 ft. (1.5m) including royalty of Clay				
			4000.00	cft	10.41	41640.00
7	21-91-1	Supply and Fixing of Concrete pavers on 3" thick sand cushion of different designs having thickness of 80 mm, mechanically compressed, minimum strenght of 7000 psi after laboratory testing at factory and random testiing at site as and when desired by the Engineer inchange comple in all respects. (No PCC work is premitted underneath this item of work) 60mm thick,tuff tile Cloured				
			2000.00	sft	332.92	665840.00
8	28-35-1	Providing and fixing M.S. Tees, angles and flat including riveting, fixing with gusset plates, bolts, hoisting and erecting in position in steel trusses, frames and towers of any approved design.				
			1000.00	KG	511.16	511160.00
9	15-48-1	Providing and fixing of 2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2"or3"or 6") UV Stabilized Fiber Glass Reinforced Plastic Sheet roofing upto required pitch i/c fixing J or L hooks, bolts & nuts 8 mm dia. as specified				
			2000.00	sft	418.14	836280.00

FIBER GLASS SHED WORK

BASED ON COMPOSITE SCHEDULE OF RATES - 2023

ABSTRACT OF COST

S.No	SCHEDULE ITEM #	DESCRIPTION OF WORKS	T.QTY	UNIT	RATE	T.AMOUNT
			FPS			
10	17-7-1	Painting with ICI/Berger or equivalent super gloss synthetic enamel paint in two or more coats as per manufacturer's instructions on steel and iron work over and including the cost of priming coat, surface preparation, removing rust, scales and dust with wire brush in ground floor or basement. (@ atleast 1.25Litre per 10 Sq.m)				
			400.00	sft	59.85	23940.00
TOTAL AMOUNT RS:						2,346,641

**HEALTH SERVICES (30 BED HOSPITAL & TRAUMA CENTER,) AT GADDANI
MEDICAL EQUIPMENTS & ACCESSORIES
RATE ANYLISES**

S.NO	DESCRIPTION OF WORKS	UNIT	RATE	TOTAL QTY	T.AMOUNT
1	Providing and supplying Manual hospital bed (2-function) as per standered & approved as per direction of engineer incharge etc	EACH		20.00	
2	Providing and supplying Baby cot / bassinet as per standered & approved as per direction of engineer incharge etc	EACH		2.00	
3	Providing and supplying Stretcher / Body transport trolley as per standered & approved as per direction of engineer incharge etc	EACH		2.00	
4	Providing and supplying Aluminum folding stretcher as per standered & approved as per direction of engineer incharge etc	EACH		2.00	
5	Providing and supplying Ambulance stretcher as per standered & approved as per direction of engineer incharge etc	EACH		2.00	
6	Providing and supplying Delivery table universal as per standered & approved as per direction of engineer incharge etc	EACH		2.00	
7	Providing and supplying Drip stand with wheelsl as per standered & approved as per direction of engineer incharge etc	EACH		10.00	
8	Providing and supplying Hospital steel bedside locker as per standered & approved as per direction of engineer incharge etc	EACH		20.00	
9	Providing and supplying Hospital chair/stool as per standered & approved as per direction of engineer incharge etc	EACH		20.00	
10	Providing and supplying Monitor trolley stand as per standered & approved as per direction of engineer incharge etc	EACH		20.00	
11	Providing and supplying Examining couch (manual) as per standered & approved as per direction of engineer incharge etc	EACH		20.00	
12	Providing and supplying Aluminum manual wheelchair as per standered & approved as per direction of engineer incharge etc	EACH		6.00	
13	Providing and supplying Digital X-Ray Machine as per standered & approved as per direction of engineer incharge etc	EACH		1.00	
14	Providing and supplying Ultrasound Machine as per standered & approved as per direction of engineer incharge etc	EACH		1.00	
15	Providing and supplying ECHO Cardiology Machine as per standered & approved as per direction of engineer incharge etc	EACH		1.00	
16	Providing and supplying Infusion Pump as per standered & approved as per direction of engineer incharge etc	EACH		2.00	
17	Providing and supplying Suction Machine as per standered & approved as per direction of engineer incharge etc	EACH		2.00	

18	Providing and supplying Nebulizer as per standered & approved as per direction of engineer incharge etc	EACH		4.00	
19	Providing and supplying CT Scanner as per standered & approved as per direction of engineer incharge etc	EACH		1.00	
TOTAL AMOUNT					
SAY TOTAL AMOUNT					

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 (CPM) 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)

Description

Time for Completion

Whole Works

_____ days

b) Part-A

_____ days (If applicable)

c) Part-B

_____ days (If applicable)

d)

_____ days

e)

_____ days

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.]

LIST OF MAJOR EQUIPMENT – RELATED ITEMS

[The Bidder will provide on Sheet 2 of this Appendix 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.]

Plant & Equipment

Sr. No.	Description of Equipment	Capacity & Horsepower	Minimum Requirement (Qty. in Nos.)	Marks
1	Excavator	0.8–1.2 m ³ bucket, 120–150 HP	1	3
2	Backhoe Loader	75–95 HP	1	2
3	Dump Truck	10–15 tons	2	2
4	Vibratory Roller / Soil Compactor	8–10 tons	1	2
5	Concrete Transit Mixer	6–8 m ³	1	2
6	Concrete Pump	25–40 m ³ /hr	1	2
7	Bar Cutting Machine	32–40 mm	1	1
8	Bar Bending Machine	32–40 mm	1	1

LIST OF MAJOR EQUIPMENT

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

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.).

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.

Part of Works (Give Details)	Subcontractor (With Complete Address)
1	2

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:

Quarter/ Year/ Period	Amounts (1,000 Rs.)
1	2
Ist Quarter	
2 nd Quarter	
3 rd Quarter	
4 th Quarter	
Bid Price	

PROPOSED STAFF

(Detailed CVs of following Key staff shall be provided, it is mandatory. PEC registration Certificate and qualification certificates/degrees etc. shall also be provided. It will be mandatory for successful bidder to mobilize same staff as proposed below after the approval of the Engineer. The proposed staff must be employee of the bidder)

Position	Qualification & Experience	Proposed Staff				
		Name	Qualification	PEC #	Total Exp	Relevant. Exp.
Project Manager	Qualification BE (Civil) with 20 years' experience (10 years relevant experience)					
Planning Engineer	BE (Civil) with 10 years' experience					
Contracts Engineer	BE (Civil) with 15 years' experience					
Structures Engineers	BE (Civil) with 15 years' experience with 10 years relevant experience of bridges					
Highway Engineer	BE (Civil) with 15 years' experience with 10 years relevant experience of roads					
Material Engineer	Msc (Geology) with 15 years' experience					
Site Engineers	BE (Civil), with 8 years' experience, Experience 3 bridges assignments,					
Site Engineers	BE (Civil), with 8 years' experience, Experience 3 highway assignments					

(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:

Name of Seller/Supplier:

Signature:

Signature:

[Seal]

[Seal]

FORMS

- BID SECURITY
- PERFORMANCE SECURITY
- CONTRACT AGREEMENT
- MOBILIZATION ADVANCE GUARANTEE

BID SECURITY
(Bank Guarantee)

Security Executed on _____
(Date)

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

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.

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

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

SURETY (Bank)

WITNESS:

Signature _____

1. _____
Name _____

Title _____

Corporate Secretary (Seal)
Corporate Guarantor (Seal)

2. _____

Name, Title & Address

PS-1

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

Guarantee No. _____
Executed on _____
Expiry date _____

[Letter by the Guarantor to the Employer]

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

Name of Principal (Contractor) with address: _____

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

Letter of Acceptance No. _____ Dated _____

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

PS-2

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

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

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

Guarantor (Bank)

Witness:

1. _____

Signature _____

Name

Corporate Secretary (Seal)

Title _____

2. _____

Name, Title & Address

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

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

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

NOW this Agreement 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, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Agreement, viz:
 - (a) The Contract Agreement;
 - (b) The Letter of Acceptance;
 - (c) The completed Form of Bid;
 - (d) Special Stipulations (Appendix-A to Bid);
 - (e) The Particular Conditions of Contract – Part II;
 - (f) The General Conditions – Part I;
 - (g) The Completed Appendices to Bid (B, C, E to L);
 - (h) The Drawings;
 - (i) The Special Provisions & Technical Specifications.
 - (j) The Priced Bill of Quantities (Appendix-D to Bid);
 - (k) Any other document forming part of the Contract
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed on the day, month and year first before written in accordance with their respective laws.

Signature of the Contactor

Signature of Employer

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

Witness:

(Name, Title and Address)

(Name, Title and Address)

MOBILIZATION ADVANCE GUARANTEE

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 fulfilment 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 _____ whichever is earlier.

(Date)

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)

PART 1 - GENERAL CONDITIONS

GENERAL CONDITIONS OF CONTRACT

PART I GENERAL CONDITIONS

The General Conditions shall be the Conditions of Contract for Construction for Building and Engineering Works prepared by the International Federation of Consulting Engineers (Fédération International des Ingenious-Conseils, or FIDIC), and is commonly known as the FIDIC Conditions of Contract. The used version is the **4th Edition 1987, reprinted in 1992 with further amendments.**

Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat
P.O. Box 86
1000 Lausanne 12
Switzerland
Fax: +41 21 653 5432
Telephone: +41 21 654 4411
Email: fidic.pub@fidic.org
URL: <http://www.fidic.org/bookshop>

PART II – PARTICULAR CONDITIONS

PART II - PARTICULAR CONDITIONS OF CONTRACT

1.1 Definitions

(a) (i) The Employer is
PROJECT DIRECTOR, MUGSBRI

(a) (iv) The Engineer
(To be notified)

Add the following to sub-clause 1.1(a):

(vi) **"Employer's Representative"** to be notified by the Employer in writing.

(vii) **"Engineer-In-charge"** means the same as The Engineer (to be notified)

"Engineer's Representative" (to be notified)

(viii) "Bidder or Tenderer" means any person or persons, company, corporation, firm or joint venture submitting a Bid or Tender, and

The word "Tender" is synonymous with "Bid" and the word "Tender Documents" with "Bidding Documents".

Amend Part I, Clause 1.1(b)(viii) to read as under:

Throughout Part I, the term "Appendix to Tender" shall be replaced by "Appendices to Tender"

"Appendices to Tender" means Appendix A through L, annexed to the Tender and forming a part thereof.

Add the following to sub-clause 1.1(b):

(ix) "Programme" means the programme to be submitted by the Contractor in accordance with Sub-Clause 14.1 and any approved revisions thereto.

(x) **"Addendum/ Addenda"** means interpretation of and/or changes in the Tender Documents and understood upon issuance by the Employer to become an integral part of the Bid Documents and the Contract Documents, wherever applicable.

(e) (i) The text is deleted and substituted with the following:

"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.

The Contract Price shall include all taxes (including sales tax, if applicable), duties and other charges imposed inside and/or outside the Country on the production, manufacture, sale and transport of the Contractor's Equipment, Plant, Materials and supplies to be used on or furnished under the Contract, and on the services to be performed under the Contract

Add the following to sub-clause 1.1(g):

"Approved" means approved by the Engineer in writing, including subsequent written confirmation of previous verbal approval and "approval means approval in writing, including as aforesaid.

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 in writing before taking any of the following actions specified in General Conditions of Contract Part I:

- (i) approving sub-letting of any part of the Works under Clause 4;
- (ii) certifying additional cost under Clause 6
- (iii) certifying additional cost under Clause 12
- (iv) certifying additional cost under Clause 17
- (v) certifying additional cost under Clause 20
- (vi) certifying additional cost under Clause 27
- (vii) certifying additional cost under Clause 40
- (viii) certifying additional cost under Clause 42
- (ix) determining an extension of time under Clause 44
- (x) issuing a taking over certificate (s) under Clause 48
- (xi) issuing a variation order(s) under Clause 51
- (xii) certifying additional costs and/or fixing rates or prices under Clause 52;
- (xiii) notifying acceptance of principles of claims and/or certifying additional cost under Clause-53
- (xiv) issuing instructions under Clause 58
- (xv) issuing a Defects Liability Certificate under Clause 62
- (xvi) certifying additional payment under Clause 65
- (xvii) certifying additional cost under Clause 70

2.2 Engineer's Representative

The following paragraph is added:

The Employer shall ensure that the Engineer's Representative is a professional engineer as defined in the Pakistan Engineering Council Act 1975 (V of 1976)

The following Sub-Clauses 2.7 and 2.8 are added:

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."

Add following sub clauses:

4.3 Approval of Sub-Contractors

Where a list of sub-contractors is provided by the Contractor under Appendix I to Tender, the sub-contractors in that list shall be subject to prior approval of the Employer. The acceptance of bid does not imply approval of subcontractors listed by the Contractor in Appendix I. The extent and nature of works to be subcontracted shall be subject to the approval of the Employer.

4.4 Approval of Sub-Contractors

In the event of a dispute of whatever nature arises between the Contractor and his Sub-Contractor, the Contractor and his Sub-Contractor shall indemnify the Employer and the Engineer against such inter disputes, resulting litigations and shall not nominate the Employer or his representative(s) or the Engineer or his representative(s) as "Respondent" or "Witness" in the Court of Law in the process of these litigations.

Affidavit to this effect shall be submitted by the Contractor and his Sub-Contractors as prerequisite for approval of a Sub-Contractor(s) under Clause 4.3.

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 (if completed);
- (2) The Letter of Acceptance;
- (3) The completed Forms of Bid;
- (4) The Addenda/Addendum (if any)
- (4) Special Stipulations (Appendix-A to Bid);
- (5) The Particular Conditions of Contract – Part II;
- (6) The General Conditions – Part I;
- (7) The completed Appendices to Bid (B, C, E to L);
- (8) The Drawings;
- (9) Special Provisions and Technical Specifications;
- (10) The Priced Bill of Quantities (Appendix D to Bid); and
- (11) Any other document forming part of the Contract.

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.

6.4 Delays and Cost of Delay of Drawings

Add “/or” in the end of the text appearing under (a) after the word “and”

Add “determined under sub clause 53.5” after the word “Contract Price” appearing in the end of text under (b)

The following Sub-Clauses 6.6, 6.7 and 6.8 are added:

6.6 Details to be Confidential

The Contractor shall treat the details of the Contract as private and confidential, save insofar 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. 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 Employer whose determination shall be final

6.7 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. The Engineer shall review/approve or otherwise the shop drawings within 3 days of receipt of the same from the Contractor.

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.

6.8 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.

Add following at the end of Sub-Clause 8.1:

8.1 Contractor’s General Obligations

The Contractor shall prepare and submit one complete set of "As-Built" Documents on one master CD and two complete sets of print copies of "As-Built" Documents together with the back-up of the quantity calculation to the Engineer within 28 days after the date of taking over by Employer. These “As-Built” Documents shall indicate all approved changes made during construction, superimposed on the original plans / “As-Stamped Documents”.

The final measured quantities for all pay items shall be included on all "As-Built" Documents. These "As-Built" Documents shall be prepared continuously as execution of the Works progresses and shall be submitted to the Engineer for review as sections or parts of the Project are completed. No Taking-Over Certificate for a Sector or the whole of Works shall be issued to the Contractor by the Engineer without the approved "As-Built" Documents. The preparation of the "As-Built" Documents shall be at the expense of the Contractor, payment for which is subsidiary to the pay items of the Contract.

The review and approval by the Engineer or by the Employer of the "As-Built" Documents does not relieve the Contractor of any responsibility for and/or liabilities arising out of inaccurate, false or otherwise incorrect "As-Built" Documents prepared and submitted by the Contractor. The approved "As-Built Documents" shall be reproduced by the Contractor in four (4) hard copies and one (1) soft copies and return the same to the Employer.

Shop Drawings. The Contractor shall furnish to the Engineer all Contractor's, and Subcontractor's Shop Drawings. Shop Drawings shall be deemed to include design drawings, fabrication drawings, catalogue cuts, brochures, illustrations, material lists, design calculations, reference standards and performance data which may be required by the specification necessary for the proper execution of the Work, or as otherwise required by the Engineer for assurance that there is intent to meet the requirements of the specifications. All Shop Drawings shall be in English.

The Contractor shall submit all Shop Drawings to the Engineer in the manner hereinafter described, in sufficient time to prevent delays in the delivery of materials or in the progress or completion of the work. Regardless of the source of Shop Drawings, all submissions shall be deemed to be submissions by the Contractor under the Contract.

All Subcontractors' Shop Drawings shall first be sent directly to the Contractor. The Contractor shall thoroughly check all such Shop Drawings for measurements, sizes of members, materials and all other details, to assure him that the Shop Drawings conform to the intent of the Drawings and Specifications.

The Contractor shall return to the Subcontractors for correction, such Shop Drawings that are found inaccurate or otherwise in error. After the Contractor has checked and approved such Shop Drawings he shall place thereon the date of such approval and the legible signature of the checker and shall then submit them to the Engineer for review. The Engineer may refuse to check or review any Shop Drawings that are not submitted in compliance with the foregoing requirements.

The Contractor shall submit five (5) copies of Shop Drawings plus the number that the Contractor wishes to return for his own and his Subcontractor's use.

For all Equipment, Shop Drawings shall be completed in all respects and shall show clear compliance with the Specifications. Where applicable, performance figures of equipment, finishes and reference to other relevant drawings must be noted on the Shop Drawings. Details of ancillary items being supplied with the particular equipment must be submitted. Piecemeal submissions will not be considered.

Descriptive brochures that are applicable shall be included for information. Any notation on the Shop Drawings which is on the prints and not on the original from which the prints were made shall be in GREEN INK.

The Engineer will review submitted Shop Drawings within a reasonable time and will return them stamped with "NO COMMENT", "SEE COMMENTS" or "RESUBMIT".

The Engineer may, at his discretion, require an immediate re-submission of Shop Drawings noted "SEE COMMENTS" so that he can make a further review or amendments. Drawings requiring re-submission shall be either amended and re-submitted or shall be superseded by another Shop Drawings. Comments on Shop Drawings are not orders for Extra Work.

Shop Drawings re-submitted for further review will be reviewed for response to previous notations only and the Contractor, by such re-submission shall be held to have represented that such Shop Drawings contain no other alterations, additions or deletions, unless the Contractor (in writing) directs the Engineer specific attention to the same.

Should the Contractor question, or dissent, from such notations or comments, he shall direct the Engineer's attention to the same for further clarification before re-submitting.

By reviewing Shop Drawings, the Engineer does not assume responsibility for errors or omissions and non-compliance with the Contract requirements. Such errors and omissions must be made good by the Contractor, irrespective, of the receipt, checking, or review of the Shop Drawings by the Engineer and even though the Work is done in accordance with such Shop Drawings.

Quality of Plans ("As-Built", and other Drawings for Variation). All sheets of the "As-Built" and other drawings for Variations should be of uniform size and one (1) standard size (A1) using Mylar or other quality tracing paper. The sheets must be neat and clean and without any crossed-out or voided portion. The title block should be made an integral part of the sheet plans and not merely patched-up.

Supplementary Drawings and Instructions. The Engineer shall have the authority to issue to the Contractor from time to time such supplementary drawings and instructions to the proper and adequate execution of the Works and the remedying of any defects therein. The Contractor shall carry out and be bound by the same.

The Contractor shall designate an additional set of drawings as "Record Drawings" and keep them to the site.

The Contractor shall clearly and neatly mark the Record Drawing in ink to indicate all authorized changes in the work, and also as actually constructed. These additional plans will not change the work of the Contract but will elucidate or explain it

Add the following sub-clauses 8.3 and 8.4

8.3 Temporary Works

Sufficient details, drawing and calculations pertaining to Temporary Works (including formwork design, scaffolding design etc) to demonstrate the adequacy of the Temporary Works shall be submitted by the Contractor not less than 14 days before the work or the erection of any such Temporary Works commences on the Site.

8.4 Specialists Suppliers and Sub-Contractors

Where the Works required the incorporation of proprietary articles manufactured by specialist suppliers, or portions of the work involving design or specification matters to be carried out by specialist sub Contractors, the Contractor shall be fully responsible for the outcome in the use of such proprietary articles and for such design and specification executed by specialist sub Contractors.

9.1 Contract Agreement

Substitute the word 'Employer' in the second line of this para with 'Contractor'.

And add the following at the end of Clause 9.1:

The Contractor shall provide six copies of signed Contract Agreement to the Employer in proper book form for record. The cost will be borne by the 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% (Ten percent) of the Contract Price stated in the Letter of Acceptance. Such security shall be in the form of (a) "unconditional, irrevocable and acceptable 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) an insurance company having at-least AA rating from PACRA/JCR".

The cost of complying with requirements of this Sub-Clause shall be borne by the Contractor.

10.2 Period of Validity of Performance Security

In the fifth line of this Sub-Clause, replace "14" with "28".

Add the following at the end of sub-clause

The performance security shall be valid until a date 28 days from the date of issue of the Defects Liability Certificate.

10.3 Claims under Performance Security

Delete sub-clause 10.3 in its entirety.

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.

11.1 Inspection of Site

If any data is provided by the Employer, the Contractor is solely responsible for ascertaining the correctness of such data and the Employer shall not be liable in this behalf and no claim whatsoever in nature shall be entertained by the Engineer.

11.2 Not Foreseeable Physical Obstructions or Conditions

Add "/or" in the end of the text appearing under (a) after the word "and"

Add "determined under sub clause 53.5" after the word "Contract Price" appearing in the end of paragraph 1 of text under (b)

14.1 Programme to be Submitted

The programme shall be submitted within 28 days from the date of receipt of Letter of Acceptance.

Add the following:

- (a) The program shall be submitted in the form of CPM charts. The Contractor will also have a licensed copy of the software from a reputed firm which shall be accessible to the Engineer as well as his assistants. Contractor shall organize a training program for his and Engineer's staff so that the program can be updated regularly as required. The Contractor shall pay a penalty of Rs. 200,000/- (Rupees Two Hundred Thousand only) for each day of delay in the submission of said Programme of programme. The Employer shall recover such amount from

any payment due to the Contractor under the Contract, on the Engineer's recommendations.

- (b) The Contractor shall submit the Program of Works on Primavera for the agreement of the Engineer and approval of the Employer. All items of works and activities including mobilization should be included in the Program of Works. The program shall identify and highlight those activities, which are on the Critical Path. This program of works as scheduled shall form basis of Liquidated Damages pursuant to clauses 47.1 and 47.3 of Conditions of Contract. In addition, cash flow estimates shall be supported with inputs of over drafts organized with financial institutions at various stages of the projects to meet the funding requirements of the project. The Contractor shall supply and maintain at his site office for his and Engineer's use a licensed copy of the project management computer software package namely Prima Vera or equivalent as used by the Contractor for programming, to monitor the progress. It shall be supplied complete with manuals and technical training and support for the duration of the Contract as per requirements assessed by the Engineer.
- (b) In order to assist the Engineer, the Contractor shall be required to submit at 2 weeks intervals data to the Engineer on the cost and quantities and other data relevant to the monitoring of progress according to a particular format suitable for computer processing.
- (c) The programme should identify all items of work including temporary work. Progress reporting by the Contractor should be supported on a monthly basis with an up-to-date analysis of the progress including a statement on items, which are or are about to become critical to the progress of the work along with the proposals on how the Contractor intends to alleviate the situation.
- (d) The programme should be resource based and must provide the critical resource. The programme must be drawn up on CPM.

General Requirements:

- a. Programme should be submitted (both hard and soft copy) strictly following the guidelines and format specified in this Clause.
- b. The Engineer at any time during the execution of the Works; direct the Contractor to change/modify the Programme / Schedule based on the Priority of Works.
- c. No payment shall be released to the Contractor prior to approval of the Base Line Programme by the Engineer.
- d. Submittal of Programme consists of:
 - 1. Construction Schedule (CPM);
 - 2. Progress Curve/Project Cash Flow;
 - 3. Critical Resources Usage Chart;
 - 4. Detailed Method Statement;
 - 5. Material Procurement Plan;
 - 6. Schedule of Submittals and Shop-Drawings;
 - 7. Any other details as required by the Engineer;

Construction Schedule:

- a. Construction Schedule shall be developed on the basis of Work Breakdown Structure provided or approved by the Engineer.
- b. Construction Schedule shall be detailed up to level 4 or as required by the Engineer.
- c. Durations of construction activity should be calculated practically in relation to quantity of work done and allocated resources. Any activity that demands duration greater than seven (07) calendar days should be split into number of activities to monitor the same accordingly.

- d. Construction activities of the schedule should be logically linked with preceding and succeeding activities and showed in submitted construction schedule.
- e. Critical Activities and Critical Path of the project should be highlighted with red colour in bar chart and precedence diagram. Total Float for non-critical activities should also be shown in the schedule.
- f. Appropriate quantity of direct resources (material, labour, equipment and non-consumable material) should be allocated to all activities and showed in submitted construction schedule. Labour resource should be divided according to related trades (e.g. Mason, Operator, helper etc.) Contractor should make sure that no resource is being over allocated. Indirect resources should be allocated to supervision / summary activity.
- g. BOQ amount should be loaded to each construction activity. Accrual basis should be indicated to construction activity.
- h. Construction Schedule should show Activity ID, Activity Description, BOQ Quantity, Duration, Start Date, Finish Date, Total Float, Predecessors, Resource names with quantity, BOQ Amount and timescale where the bars show start and finish dates.

Progress Curve / Projected Cash Flow:

- a. Progress Curve / Projected Cash Flow should be developed and presented on Project Management Software – Primavera Project Planner as stated above.
- b. S-Curve should be plotted between time (in weeks) and progress of work done (in % of work). The progress should be shown in cumulative percent of work done. Percent of work done should be calculated with the BOQ amount and payment terms.

Critical Resources Usage Chart:

- a. Critical Usage Chart should be developed.
- b. List of Critical Resources included Labourers, equipments, consumable/non-consumable materials and/or identified by the Engineer.
- c. Resource usage chart should show Resource Name and weekly utilization (numbers) of resources on each activity.

Detailed Method Statement:

- a. Detailed method statement should be presented in descriptive format explaining the method of carrying out works, logistics, site layout, flow of work, quality and safety measures for each activity and any other details as required by the Engineer.

Material Procurement Plan:

Material Procurement Plan for major items of purchase should be presented in a Tabular Format to be submitted to the Engineer for pre-approval. The Plan must as a minimum show the list of local & imported materials to be used, their specification reference, and planned dates for submittal to Consultant, approval process, placing of order, vendor contact, required delivery on site, status of Line of Credit (LOC) if applicable, and usage of material.

Schedule of Shop Drawings and Submittals:

- (i) Schedule of Shop Drawings and other Submittals should be presented in a Tabular Format to be submitted to the Engineer for pre-approval. Plan must as a minimum show the list of shop drawings required and their specification reference, planned dates for submittal to consultant, approval process, and usage of shop drawing.

(ii)

(iii) Cash Flow Estimates:

- (iv) The Contractor shall, within 28 days from the receipt of the Letter of Acceptance, provide to the Engineer for his information a detailed cash flow estimates 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.

(v)

(vi) Add following at end of Sub-clause 14.2

14.2 Revised Programme

The revised programme shall be submitted within fourteen (14) days of the request received from the Engineer. The Contractor shall pay a penalty of Rs.100,000/- (Rupees Hundred Thousands only) for each day of delay in the submission of said revised programme. The Employer shall recover such amount from any payment due to the Contractor under the Contract, on the Engineer's recommendations.

14.3 Cash Flow Estimate to be Submitted

The detailed Cash Flow Estimate shall be submitted within 28 days from the date of receipt of Letter of Acceptance

The following Sub-Clause 14.5 is added:

14.5 Monthly Progress Report

- (a) During the period of the Contract, the Contractor shall submit to the Engineer not later than the 8th day of the following month, 10 copies each of Monthly Progress Reports covering:
- a) A Construction Schedule indicating the monthly progress in percentage;
 - b) Description of all work carried out since the last report;
 - c) Description of the work planned for the next 56 days sufficiently detailed to enable the Engineer to determine his programme of inspection and testing;
 - d) Monthly summary of daily job record;
 - e) Photographs to illustrate progress; and
 - f) Information about problems and difficulties encountered, if any, and proposals to overcome the same.
- (b) During the period of the Contract, the Contractor shall keep a daily record of the work progress, which shall be submitted to the Engineer at the end of each day. The daily record shall include particulars of weather conditions, number of men working, deliveries of materials, quantity, location and assignment of Contractor's equipment.

The following Sub-Clauses 15.2, 15.3 and 15.4 are added:

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 authorized to exercise adequate administrative and financial powers on behalf of the Contractor so as to achieve completion of the Works as per the Contract.

15.4 Provision of In-House Design Review / Check Capabilities of the Contractor

The Contractor is required to associate qualified and experienced technical experts to ensure in-house design review capability to deal with technical problems during construction and shall give prompt notice to the Engineer of any error, omission, fault or other defects in design or specifications of the work. The final responsibility of practicality and technical adequacy of construction rests with the Contractor.

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 are 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 local staff and labor and associated sub-Contractors with appropriate qualifications and experience from Pakistan

Add following sub-clauses (d), (e), (f) and (g)

19.1 Safety, Security and Protection of Environment

- (d) The contractor, to ensure protections of the environment, shall take all necessary measures and precautions in conformity with statutory and regulatory environmental requirements enforced and amended from time to time.
- (e) The Contractor shall exercise due care to protect the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring or defacing of the natural surroundings in the vicinity of the Works, except where clearing is required for Permanent Works, Approved Temporary Works and for excavation operations. All watercourses, ponds wells trees and native vegetation shall be preserved and shall be protected from damage, which may be caused, by the Contractor's construction operations and equipment. On completion of the Works, all work areas shall be smoothed and graded in a manner to conform the natural appearance of the landscape. Where necessary, destruction, scarring, damage or defacing may occur as a result of the Contractor's operations, it shall be repaired, replaced, replanted or otherwise corrected at Contractor's expenses to the satisfaction of the Engineer and national and/or provincial Environment Protection Agency.
- (f) Borrow areas shall be located and operated so as not to detract from the future usefulness or value of the sites. Upon completion of operations, borrow areas shall be left in a safe and rightly conditions. No borrow area shall be located within 500m from the right of way, except where approved by the Engineer.
- (g) During performance of the work, the Contractor shall carryout proper and efficient measures as often as necessary to reduce the dust pollution.

The following Sub-Clauses 19.3 and 19.4 are added:

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 Work 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.

20.4 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 travelling 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:
 - (iii) prevent loss or damage to physical property from occurring by taking appropriate measures, or
- (iv) insure against.

21.1 Insurance of Work and Contractor's Equipment

In para (a) of this clause, in the first line, after the word "plant", Add the following words: "and material whether provided by the Contractor or the Employer".

Add the following words at the end of Sub-para (a) and immediately before the last word of sub-para (b) of sub-clause 21.1

"it being understood that such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred."

The insurance for works, contractor's equipment and material shall be denominated in the currency or currencies and in the proportions in which the contract is administered

21.2 Scope of Cover

Amend sub-para. (a) of Sub-Clause 21.2 by deleting the words "from the start of work at the Site" and by substituting therefore the words "from the first working day after the Commencement Date."

Add following sub-clause (c)

It shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract

Amend sub-clause 21.4

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).

25.1 Evidence and Terms of Insurances

Amend Sub-Clause 25.1 by inserting the words "as soon as practicable after the respective insurances have been taken out but in any case" before the words "prior to the start of work at the Site."

The following Sub-Clause 25.5 is added:

25.5 Insurance Company

The Contractor shall be obliged to place all insurances relating to the Contract (including but not limited to the insurances referred to in clauses 21, 23 and 24) with Insurance Company having at least AA rating from PACRA/JCR in favour of the Employer valid for a period 28 day after the expiry of Defects Liability Period.

Costs of such insurances shall be borne by the Contractor.

27.1 Fossils

Add "/or" in the end of the text appearing under (a) after the word "and"

Add "determined under sub clause 53.5" after the word "Contract Price" appearing in the end of first line of text under (b)

30.3 Transport of Material or Plant

Delete the whole text of this sub-clause and substitute as follows:

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.

The Employer shall not be liable for any costs, charges or expenses in respect of any damage occurs to any bridge or road arising from the transport of Material or Plant by the Contractor. The Contractor shall keep indemnified the Employer against all such claims. The Contractor shall negotiate the settlement of claim with the authority and pay all sums due in respect of all claims, proceeding, damages, costs, charges and expenses.

The Contractor shall notify the Engineer and Employer about the negotiations, in-respect of settlement of claim. In case of failure in payment of claimed amount by the Contractor, the Employer shall recover the amount of claim from the Contractor by making deduction from any monies due or to become due to the Contractor and shall notify the Contractor accordingly.

Add following sub clause 30.5

30.5 Extraordinary Traffic

Nothing contained above shall excuse the Contractor or any of his sub-contractor(s) from complying with state laws regulating traffic on highway and bridges.

The following Sub-Clause 31.3 is added:

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.

The following Sub-Clauses 34.2 to 34.19 are added:

34.2 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages and observe conditions of labour not less favourable 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 favourable 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, these facilities shall be handed over to the Employer or if the Employer so desires, 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, barter, or otherwise dispose of, to any person or persons, any arms or ammunition of any kind or permit or suffer the same as aforesaid except to those who are employed or hired for security of the work, Plant & Equipment, Material, Camp Sites, Offices, Housing including Employer's/Engineer's facilities, etc.

34.10 Festivals and Religious Customs

The Contractor shall in all dealings with his staff and labour have due regard to all recognised festivals, days of rest and 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 neighbourhood of the Works against the same.

34.12 Repatriation of Labour

The Contractor shall be responsible for the return to the place of recruitment or domicile of all persons recruited and employed for the purpose of or in connection with the Contract and shall maintain suitable accommodation and amenities for such persons until they have left the site.

34.13 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the Site from insect nuisance, rats, and other pests and reduce the danger to health and the general nuisance caused by the same. The Contractor shall provide his staff and labour with suitable prophylactics for the prevention of malaria and shall take steps to prevent the formation of stagnant pools of water. He shall comply with all the regulations of the local health authorities in these respects and shall in particular arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as instructed by the Engineer. The Contractor shall warn his staff and labour of the dangers of bilharzias and wild animals

34.14 Burial of the Dead

The Contractor shall make any necessary arrangements for the transport, to any place as required for burial, of any of his expatriate employees or members of their families who may die in Pakistan. The Contractor shall also be responsible, to the extent required by the local regulations, for making any arrangements with regard to burial of any of his local employees who may die while engaged upon the Works.

34.15 Supply of Foodstuffs

The Contractor shall arrange for the provision of a sufficient supply of suitable food at reasonable prices for all his staff and labour for the purposes of or in connection with the Contract

34.16 Accident Prevention Officer

The Contractor shall have on his staff at the site an officer dealing only with questions regarding the safety and protection against accidents of all staff and labour. This officer shall be qualified for this work and shall have the authority to issue instructions and shall take protective measures to prevent accidents. Adequate number of Site Safety Inspectors shall be deployed by Contractor to assist Accident Prevention Officer and ensure safety of workers in the hazardous work areas.

34.17 First Aid Facilities

The Contractor shall provide and maintain adequate First Aid Facilities convenient to the site to the approval of the Engineer.

34.18 Dangerous Materials

The Contractor and his subcontractors 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.

34.19 Compliance by Subcontractors

The Contractor shall be responsible for compliance by his Subcontractors of the provisions of this Clause.

The following Sub-Clauses 35.2 and 35.3 are added:

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.

Add the following at the end of sub clause:

36.1 Quality of Materials, Plant, Supplies and Workmanship

The place of such tests shall be situated in Pakistan and notified to the contractor whenever the need arises

36.2 Cost of Samples

Correct the clause No. from 36.1 to 36.2 Cost of Samples

36.5 Engineer's Determination where Test not provided for

Add "/or" in the end of the text appearing under (a) after the word "and"

Add "determined under sub clause 53.5" after the word "Contract Price" appearing in the end of first line of text under (b)

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.

40.2 Engineer's Determination following Suspension

Add "/or" in the end of the text appearing under (a) after the word "and"

Add "determined under sub clause 53.5" after the word "Contract Price" appearing in the end of first line of text under (b)

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.

42.2 Failure to give Possession

Possession of site within the period named in Appendix-A

Add "/or" in the end of the text appearing under (a) after the word "and"

Add "determined under sub clause 53.5" after the word "Contract Price" appearing in the end of first line of text under (b)

45.1 Restriction on Working Hours

Add the following paragraph at the end of Sub-Clause 45.1:

The Contractor shall pay overtime payment to the Engineer's Support Staff/Personnel who were required by the Contractor to perform their respective work assignment beyond the normal working hours stated in Part A – Particular Conditions (Appendix A). The payment to the Engineer's Staff shall be made in the presence of the Employer's Representative.

47.1 Liquidated Damages

The rate of liquidated damages shall be 0.1% per day of the contract price stated in Letter of Acceptance for every day of delay in which whole or part of the work(s) remained unfurnished subject to a maximum of 10% of the contract price stated in Letter of Acceptance.

Add the following at the end of the sub-clause.

"In addition to the Liquidated Damages, the Contractor shall bear all the cost/expenses related to the supervision of the works by the Project Consultants covering salaries of the Engineer and all of his Site Supervision staff including all the benefits, providing, running and maintenance of all the Engineer's Facilities up to the issuance of the Taking Over Certificate by the Employer. All the above cost/expenses will not be reimbursed/paid to the Contractor beyond the approved completion period of the works"

The following Sub-Clause 47.3 is added:

47.3 Interim Liquidated Damages

Contractor's works programme submitted under clause 14.1 of General Conditions of Contract and Conditions of Particular Applications shall be considered part of the contract

agreement. If the contractor's progress is not as per approved programme of works, the contractor shall be liable for interim liquidated damages at the rate of 0.05% of the contract price stated in Letter of acceptance for each day of delay, which shall be refunded if the progress again matches the approved programme of works during the currency of works.

The amount of interim liquidated damages deducted by the Employer from the payment of the contractor and refunded shall be taken into consideration while determining the liquidated damages for the whole of the Works under clauses 47.1 and 47.2.

If the progress of works is observed to be behind approved programme of works against three consecutive months, then the Employer may invoke clause 63.1 (Default of Contractor).

48.1 Taking Over Certificate

Add the following after the word "-----works" in the 7th line

Within 14 days of the date of receipt of contractor's notice for issuance of Taking Over Certificate the Employer shall on the written request by the Engineer constitute a committee comprising of Engineer/Engineer's Representative, Employer's and Contractor's Representatives. The Committee shall conduct a detailed inspection of the works completed by the contractor to ascertain the completion or the extent of completion to decide about the issuance of certificate.

Amend the portion of this sub-clause starting from "The Engineer shall within 21 days of delivery of such notice" with the following;

The Engineer in pursuance to the recommendations of the committee shall within 28 days of the date of delivery of the notice mentioned herein before from the contractor

48.2 Taking over of Sections or Parts

The whole of the works to be completed within the time stated in Appendix to Tender. No separate completion certificate (s) in parts will be issued for any part of the work substantially completed.

Add following paragraph before the first para

49.2 Completion of Outstanding Works and Remedying Defects

At the completion of the Defects Liability Period the Employer shall constitute a committee comprising of Engineer/Engineer's Representative, Employer's and Contractor's Representatives. The Committee shall conduct a detailed inspection of the works to ascertain the issuance of Defects Liability Certificate or otherwise

Add following sub clause 49.5

49.5 Extension of Defects Liability Period

The defects liability period for the works shall be extended by a period equal to the period during which the Works cannot be used by reason of defect or damage. If only part of the works is affected, the Defect Liability Period shall be extended only for that part. In neither case shall the Defects Liability Period extend beyond 2 years.

51.1 Variations

Add the following para at the end of this sub-clause in part I:

The approval / finalization of rates of all variations shall not relieve the Contractor of his obligations under the Contract. The Contractor shall neither stop the work nor slow down progress of the works in awaiting the approval of rates of all variations.

51.2 Instructions for Variations

At the end of the first sentence, after the word "Engineer", the words "in writing" are added.

52.1 Valuation of Variations

In the tenth line, 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."

53.3 Substantiation of Claims

Add "and approved by the Employer" in the first line after the word "Engineer"

Add "but not more than 28 days" in the end of sixth line after the word "require"

Delete the text "if required by the Engineer so to do" appearing in the second and third last lines.

Add following at the end of Sub-clause 53.4

53.4 Failure to Comply

Notwithstanding anything contained hereinabove the Contractor shall not be entitled for any extension of Time for Completion and/or additional payment in respect of the claim(s) if the Contractor fails to comply with the requirements or any of the requirement of Sub-Clauses 53.1, 53.2 and 53.3 within the time period stipulated there in the clauses above mentioned and or fails in keeping and producing necessary records whenever demanded by the Engineer

Add following paragraph at the end of sub clause

54.1 Contractor's Equipment, Temporary Works, and materials; Exclusive use for the Works

The Contractor shall forward to the Engineer at the end of each month returns showing the Construction Plant, Material, etc., on site in a form prescribed by the Engineer. In addition, the Contractor should submit details of resources (labour, plant & equipment) at the end of each day to the Engineer.

54.5 Conditions 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.

Add following sub clause

55.2 Omission of Quantities

Items of works described in the Bill of quantities for which no rate or price has been entered in the Contract shall be considered as included in other rates and prices in the Contract and will not be paid for separately by the Employer.

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 Work.

Delete sub clause 57.1 and replace with following

57.1 Method of Measurement

The measurement of the Works shall be performed on the basis of the Specifications. All work completed under the Contract shall be measured according to the metric system for all items, unless otherwise provided herein or in the Special Provisions. All longitudinal measurements for area or volume will be made horizontally along the road centerline, and no deduction will be made for individual fixtures in the pavement having an area of 1 sq. meter or less. All transverse measurements for area or volume of pavement courses will be made horizontally in accordance with the dimensions indicated on the plans, or the dimensions ordered by the Engineer. In computing volume of excavation, embankment and borrow material, the average end area method will be used. Where no items are provided in the Bill of Quantities for work required under the Contract, costs shall be deemed to be distributed among the quoted rates and prices entered for other items of work in the Bill of Quantities. The Works shall be measured net notwithstanding any general or local custom except where otherwise specifically described or prescribed in the Contract. If Contractor Fail to Provide General facilities mentioned in the Bidding document and contract agreement will be penalties upto 3% on every IPC upto 10% of the contract Price.

Add following sub clause 57.3

57.3 Copies of Payment Certificate

The Contractor will supply to the Engineer's Representative six (6) copies of the abstract of Contractor's certificate of payment every month along with two copies of detailed measurements, quality control tests and cross sections with calculations, and any other document or information which form the basis of payment

The following Sub-Clauses 59.4 & 59.5 are added:

59.4 Payments to Nominated Subcontractors

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 Certificates and Payment

Delete sub clause 60.1 and replace with following:

60.1 Monthly Statements

The Contractor shall submit six copies of the statement to the Engineer at the end of each month, 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 estimated Contract value of the Permanent Works executed up to the end of the month in question, determined in accordance with Sub-Clause 56.1, at the unit rates and prices included in the Contract;
- (b) the actual value certified for payment for the Permanent Works executed up to the end of the previous month, at the unit rates and prices included in the Contract;
- (c) the estimated Contract value at the unit rates and prices included in the Contract of the Permanent Works for the month in question, obtained by deducting (b) from (a);
- (d) the equivalent of the amount set forth in (c), expressed in the various currencies (if applicable) in which the Contract Price is payable, and calculated by applying the proportions and the exchange rates set forth in the Appendix to Bid to the amount set forth in (c);
- (e) the value of any variations executed up to the end of the month in question, less the amount certified in the previous Interim Payment Certificate, expressed in the relevant amounts of foreign (if applicable) and local currencies, pursuant to Clause 52;
- (f) amounts approved in respect of Daywork executed up to the end of the month in question, less the amount for Daywork certified in the previous Interim Payment Certificate, as determined from the Daywork Schedule of the Bill of Quantities;
- (g) amounts in local currency reflecting changes in cost and legislation, pursuant to Clause 70;
- (h) any amount to be withheld under the retention provisions of Sub-Clause 60.3, determined by applying the percentage set forth in Sub-Clause 60.3;
- (i) any amounts to be deducted as recovery of the Advance under the provisions of Sub-Clause 60.12;

- (j) adjustment of any other sum, expressed in the applicable currency or currencies, to which the Contractor may be entitled under the Contract or to be recovered from the Contractor; and
- (k) any amounts to be deducted as Withholding Tax under the provisions of Income Tax Laws and Central Board of Revenue regulations. Similarly sales tax (if applicable) shall be deducted.

60.2 Monthly Payments

Delete sub-clause 60.2 and replace with following:

The said statement shall be approved or amended by the Engineer in such a way that, in his opinion, it reflects the amount in various currencies due to the Contractor in accordance with the Contract, after deduction, other than pursuant to Clause 47, of any sums which may have become due and payable by the Contractor to the Employer. In cases where there is a difference of opinion as to the value of any item, the Engineer's view shall prevail. Within 28 days of receipt of the monthly statement referred to in Sub-clause 60.1, the Engineer shall determine the amounts due to the Contractor and shall issue to the Employer and the Contractor a certificate herein called "Interim Payment Certificate", certifying the amounts due to the Contractor.

The Engineer shall not be bound to certify any payment under this Sub-clause if the net amount thereof, after all retention and deductions, would be less than the Minimum Amount of Interim Payment Certificates stated in the Appendix A to Tender. However, in such case, the unpaid certified amount will be added to the next interim payment, and the cumulative unpaid certified amount will be compared to the minimum amount of interim payment

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 has been provided by the Contractor and approved by the Employer".

Delete text of Clause 60.3 in entirety and replace with following

60.3 Payment of Retention Money

Retention Money shall be 10% of the Contract Price. From each interim certificate of the Contractor, 10% of amounts certified under Clause 60.2 shall be retained until the amounts so retained reach 5% of the Contract Price. 100% Retention money shall be released 6 months after the final payment.

Add following paragraph at the end

60.6 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 issue to the Employer an Interim Payment Certificate for those parts of the draft final statement which are not in dispute. The dispute shall then be settled in accordance with Clause 67. The Final Statement shall be agreed upon settlement of the dispute.

60.8 Final Payment Certificate

Delete the words "other than pursuant to Clause 47" from para (b) line 2 and 3

Add the following para at the end of this sub-clause

The Contractor shall also submit the following documents with his final statement to the Engineer:

- (a) Approved final As-built drawings.
- (b) An affidavit by the Contractor that the Works have been executed according to approved specifications, drawings, designs and standard and have not concealed defects known to him.

60.10 Time for Payment

Delete the text and substitute:

The amount due to the Contractor under any interim certificate issued by the Engineer pursuant to this Clause, or to any other terms of the Contract, shall, subject to Clause 14 and 47, be paid by the Employer to the Contractor within 28 days after such interim certificate has been delivered to the Employer, or, in the case of the Final Certificate referred to in Sub Clause 60.8, within 56 days, after such Final Payment Certificate has been delivered to the Employer.

All payments to the Contractor shall be made in Pak Rupees only under the Contract. No payments in foreign currency are admissible.

Add following sub clause 60.11, 60.12 and 60.13

60.11 Place of Payment

Payments to the Contractor by the Employer shall be made in the currencies in which the Contract Price is payable into a bank account or accounts nominated by the Contractor

60.12 Financial Assistance to Contractor

Mobilization Advance Payment

- (a) Provision is made within the Contract for the Contractor to obtain an interest free Mobilization Advance. The Advance shall be limited to ten (10) percent of the sum of the Contract Price stated in Letter of Acceptance less any Provisional Sums and day works and will cover mobilization, demobilization and any costs incurred therein by the contractor.

The Mobilization Advance (if required) shall be paid in two equal parts after the following conditions have been fulfilled:

Part-1: 50% of the total amount of the Mobilization Advance

- (i) The Contractor has submitted guarantee for the full amount of the advance payment in the form of irrevocable without recourse bank guarantee or an insurance company having at-least AA rating from PACRA/JR in favour of the Employer.

- (ii) The Contractor has submitted the Performance Security in the form as stated in Sub-Clause 10.1 of the Conditions of Contract.

Part-2: Remaining 50% of the total amount of the Mobilization Advance

- (i) On mobilization of Plant, Equipment and other resources at site by the Contractor to the satisfaction of the Engineer.
- b) The bank guarantee/insurance bond must be issued by a scheduled bank in Pakistan/Insurance Company acceptable to the Employer and must be encashable in Pakistan in the same currencies as the advance payment was made. The bank guarantee/insurance bond shall remain valid and enforced until the Mobilization Advance is recovered in full.
- c) At any time, the bank guarantee/insurance bond shall be valid for an amount not less than the amount of the original Mobilization Advance less any partial repayment of that Advance which may have been affected. The Contractor shall inform the guaranteeing bank/insurance company, by letter, counter signed by the Employer, of the required amount of the guarantee from time to time. Reduction of the amount shall not be made without such authorizing letter.
- d) Recovery of the Mobilization Advance will be made from five consecutive Interim Payment Certificate (IPC) starting from first IPC in equal installments.

Deduction shall be made after the deduction of Retention Money.

Notwithstanding anything contained herein, the whole of the Mobilization Advance shall be recovered two months before issuance of Taking Over Certificate pursuant to Clause 48.1 of COC

- e) In the event that the amount of monies certified and due to the Contractor under the contract at any time is less than the total of due repayments of Mobilization Advance, the balance of the due repayments shall be paid to the Employer by the Contractor within seven days of demand by the Employer. If the balance is not so paid, the Employer shall be empowered to call in sufficient of the Mobilization Advance bank guarantee/insurance bond to cover the said balance.

The Employer shall be empowered to call in the guarantee in whole or in part(s) if the Contractor defaults in the repayment(s) for any reason(s).

60.13 Withholding of Payment

- a) The Employer may withhold the whole or a part of any payment invoiced by the contractor and certified by the Engineer if it is necessary in the opinion of the Employer to protect himself against losses on account of the following reasons.
- i. Defective work not rectified.
 - ii. Non-fulfilment of any demand regarding guaranties.
 - iii. Claims of third parties raised against the employer caused through fault of the contractor in connection with the works.
 - iv. Damages caused by the contractor or his personnel or any sub-contractor, to the Employer, or to a third party on the site.
 - v. Non-fulfilment of the contract by the contractor.
- b) After the reasons for withholding of payments have been eliminated, to the satisfaction of the Employer and the Engineer, payments to the contractor will be undertaken by the Employer without delay.

Add following as paragraph (b) (iii);

63.1 Default of Contractor

If the progress of works with respect to the Programme of Works is observed to be behind the approved program of works against three consecutive months.

Delete the last paragraph of this sub-clause and substitute with:

"then the Employer may, after giving 14 days' notice to the Contractor, enter upon the Site and expel the Contractor therefrom without thereby voiding the Contract, or releasing the Contractor from any of his obligations or liabilities under the Contract, or affecting the rights and powers 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, Plant, Temporary Works, and materials, which have been deemed to be reserved exclusively for the execution of the Works, under the provisions of the Contract, as he or they may think proper, and the Employer may, at any time, sell any of the said Contractor's Equipment, Temporary Works, and unused Plant and materials, and apply the proceeds of sale in or toward the satisfaction of any sums due or that may become due to him from the Contractor under the Contract."

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.

63.2 Valuation at Date of Termination

Modify the heading of Sub-Clause 63.2 by substituting "Valuation at Date of Expulsion" for "Valuation at Date of Termination." In Sub-Clause 63.2, delete the word "termination" on the second and fifth lines and substitute "expulsion."

63.3 Payment after Termination

Modify the heading of Sub-Clause 63.3 by substituting "Payment after Expulsion" for "Payment after Termination." In Sub-Clause 63.3, delete the words "terminates the Contractor's employment" on the first line, and substitute "shall enter and expel the Contractor."

63.4 Assignment of Benefit of Agreement

In Sub-Clause 63.4, delete the word "termination" on the second line, and substitute "expulsion".

Add following sub clause

63.5 Corrupt and fraudulent Practices

If in the judgment of the Employer the Contractor has engaged in corrupt or fraudulent practices, in competing for or in executing the contract, then the Employer may, after having given 14 days notice to the contractor, terminate the contractor's employment under the contract and expel him from the site, and the provision of clause 63 shall apply as if such expulsion had been made under sub-clause 63.1.

For the purpose of this sub-clause:

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

"Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid

prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition

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).

67.3 Arbitration

In the sixth to eight lines, delete the words "shall be finally settled"to..... "appointed under such Rules" and substitute the following:

shall be finally settled under the Rules and provisions of Arbitration Act 1940 of Islamic Republic of Pakistan enforced for the time being and as amended from time to time by one or more Arbitrators appointed in accordance with said Rules. The place of Arbitration shall be Quetta, Pakistan.

68.1 Notice to Contractor

The following paragraph is added:

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 Notice to Employer and Engineer

For the purposes of this Sub-Clause, the respective addresses are:

1. The Employer

Project Director, MUGSBRI GADDANI, DISTRICT HUB" (105.00 KM)
ESTABLISHMENT OF HEALTH SERVICES (30-BED HOSPITAL AND TRAUMA CENTER) AT GADDANI FOR THE PROJECT TITLED: "MODERNIZATION OF GADDANI SHIP BREAKING AND RECYCLING INDUSTRY AND DEVELOPMENT OF ALLIED FACILITIES (MUGSBRI) AT GADDANI, DISTRICT HUB

- (b) The Engineer
(To be notified)

69.3 Payment on Termination

Delete sentence from "but in addition to the payments..... of such termination"

69.4 Contractor's Entitlement to Suspend Work

Add "/or" in the end of the text appearing under (a) after the word "and"

Add "determined under sub clause 53.5" after the word "Contract Price" appearing in the first line of text under (b) Add the following sub-clause

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, \dots , 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, \dots , shall be one;

L_n, M_n, E_n, \dots , 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, \dots , 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.

70.2 Subsequent Legislation

If, after the date 28 days prior to the latest date for submission of bids for the Contract, there occur in Pakistan changes to any National or State Statute, Ordinance, Decree, or other Law or any regulation or by-law of any local or other duly constituted authority, or the introduction of any such State Statute, Ordinance, Decree, Law, regulation, or by-law that causes additional or reduced cost to the Contractor, other than under sub-clause 70.1 of this clause, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be certified by the Engineer and be paid by or credited to the Employer and the Contract Price adjusted accordingly.

Addition/reduction in the cost of Works due to change in the cost of the specified construction inputs in Appendix-C mentioned in paragraphs (i), (ii), (iii) and (iv) of sub clause 70.1 on account of the legislative action described hereinabove, shall not be adjusted under this sub clause as adjusted due to increase or decrease in the price of these inputs is covered by sub clause 70.1 (i), (ii), (iii) and (iv).

Any increase or decrease in the cost of the Works due to increase or decrease in the haulage, cartage of any goods/materials on account of any changes in legislation shall also not be adjusted.

Notwithstanding anything contained herein above, any increase in the rate of Income Tax or Withholding Tax levied upon the Contractor on the incomes or profits arising out of this Contract under the Income Tax Laws of Pakistan applicable in the years of currency shall not be adjusted under this or any other provision of Contract and shall be the sole responsibility of the Contractor

70.3 Adjustment for Delays and 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.

Currency and Rates of Exchange

The Sub-clauses 71.1, 72.1, 72.2 and 72.3 are deleted being not applicable for this Contract as the Currency of the Contract is Pak. Rs.

The following Sub-Clauses 73.1, 73.2, 73.3, 74.1, 75.1, 76.1, 77.1, 78.1, 79.1, 80.1, 81.1, 82.1, 83.1, 84.1, 85.1, 86.1, 87.1, 88.1, 89.1 and 90.1 are added:

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.

73.2 Cost Inclusive of Duties and Taxes

Local Taxation

The prices bid by the Contractor shall include all customs duties, import duties, business taxes, and income and other taxes that may be levied in accordance with the laws and regulations in being on the date 28 days prior to the latest date for submission of bids in the Employer's country on the Contractor's Equipment, Plant, materials, and supplies (permanent, temporary, and consumable) acquired for the purpose of the Contract and on the services performed under the Contract. Nothing in the Contract shall relieve the Contractor from his responsibility to pay any tax that may be levied in the Employer's country on profits made by him in respect of the Contract.

Foreign Taxation

The prices bid by the Contractor shall include all taxes, duties, and other charges imposed outside the Employer's country on the production, manufacture, sale, and transport of the Contractor's Equipment, Plant, materials, and supplies to be used on or furnished under the Contract, and on the services performed under the Contract.

73.3 Income Tax Provision in Sub-Contracts

Provisions to the like effect as those contained in this clause shall be incorporated by the Contractor in all sub-contracts agreement(s).

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.

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.

77.1 Joint and Several Liability

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 fulfilment 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.

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.

79.1 Quality and Safety

The Contractor shall submit a quality and safety plan to the Engineer for approval, within 14 days after commencement of work.

80.1 Coordination of Work at Site:

The Contractor shall take cognizance that during the execution of the project, other Contractors will be working concurrently on this site or adjacent to the site.

All works of his responsibility shall be coordinated by the Contractor so as to give the necessary facilities to other Contractors or their workmen or any other employees, who execute or supervise any work on the Site.

The Contractor shall ensure that the necessary safety precautions will be observed and interferences shall be avoided especially for the works executed side-by-side by different Contractors.

Due consideration must be given to permit access to sections of the work as required by other Contractors for the execution of their works. With a view to coordinate the works, the Engineer's Representative may from time to time direct the order of the work to be carried out.

Allowances for coordination of work at site shall be made by the Contractor in his prices & programming.

Add the following sub clause:

81.1 Government and other Regulations in Pakistan

The operation, proceedings and other activities in Pakistan of the Contractor and his sub-Contractors in connection with the works shall be conducted in strict accordance with the requirements and provisions of all laws, decrees, orders, rules and regulations of the Government and other Authorities from time to time in force, which are applicable to the Works.

The Contractor and his Sub-Contractors shall be at all times during the execution and maintenance of the works comply with all municipal and local bye-laws, regulations, rules and orders from time to time in force which are applicable to the works.

Add the following sub clause:

82.1 State of Emergency

In addition to his other responsibilities under the Contract the Contractor shall comply with any police or Military regulations, orders or instructions in force in the area of the Works due to a State of Emergency.

83.1 Contractor to keep Engineer fully informed

The Contractor shall keep the Engineer fully informed, as to all matters connected with the Works and the progress thereof, including any modification in the procedure for carrying out the Works, dispatch and delivery to the Site of materials and plant, moving of items of plant and such like matters.

84.1 Personal Liabilities

Neither any member of the Employer's staff, nor the Engineer nor any member of his staff, nor the Engineer's Representative shall be in any way personally liable for the act or obligations under the Contract, or answerable for any default or omission on the part of the Contractor in the observance of the provisions of the contract or performance of any of the act matters or things which are herein contained.

85.1 Freight Charges, etc.

The Contractor shall pay all freight charges and expenses in connection with the transporting of materials, Plant and other things from the port of importation to the Site and from the Site to the port of exportation.

86.1 Accidents

The Contractor shall within 24 hours of the occurrence of any accident at or about the site or in connection with the execution of the Works report such accident to the Engineer and the Employer.

87.1 Acquisition of Land and Relocation of Utilities

The acquisition of land within the Right of Way and the relocation of utilities from the Right of Way shall be the Employer's responsibility and in order to allow commencement and execution of the Work on Site in accordance with a programme approved by the Engineer sufficient "Right of Way (ROW)" shall be handed over to the Contractor clear of all encumbrances.

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 and natural gas lines, oil lines, water and sewerage mains and other utilities within the areas of his operations in connection with this contract. If any harm/ damage is done to the existing utility lines/ services because of the Contractor works, the cost thereof shall be borne by the Contractor. 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 operations or interference.

88.1 Wastage

No payment shall be made under any circumstances for wastage of materials, supplies and/or fixtures supplied by the Contractor. In all cases payment shall be made only on the basis of the net quantities of work done. It is up to the Tenderer/Contractor to calculate and make allowance for any or all such wastage (e.g. cut ends of reinforcement bars, spillage of cement and the like) in establishing the unit rates or prices for the items of works.

89.1 Weather, Flood, Seismic and Traffic Vibrations Conditions

The Contractor shall be deemed to have taken all weather, flood, inundation, seismic, traffic, vibrations conditions, arising from any cause whatsoever, into account when preparing his Tender and he shall not be entitled to extra payment by reason of the occurrence or effect of excessive traffic vibrations, rain fall, floods, temperature or humidity, high winds, earthquakes or an, other heavier flood inundation, seismic or environmental conditions.

Without limiting his liabilities under the Contract, the Contractor shall make suitable arrangements to protect the works, Including temporary Works, and Constructional Plant against the effects of weather flood inundation seismic and traffic vibrations conditions.

No work shall be performed when; in the opinion of the Engineer such work is liable to be injuriously affected by the weather, flood, inundation seismic or traffic vibrations conditions. The Contractor shall not be entitled to extra payment on account of loss alleged to have been sustained directly or indirectly by reason of the Engineers declining to permit such work to

start or continue or ordering any work damaged by the weather flood inundation seismic or traffic vibrations conditions to be made good or removed and re-executed.

The Contractor shall be responsible for obtaining and acting upon all relevant weather flood inundation and seismic information during the period of the Contract. The Contractor shall promptly supply copies of all weather flood inundation and seismic forecasts to the Engineer

90.1 Dealing with Water

The Contractor shall take all necessary measures to prevent water from the Site causing a nuisance on or, in any neighboring land or property either by causing flooding or by depositing sediment on the surface of the ground or in drains or watercourses. Wherever necessary to prevent this, the Contractor shall construct temporary drainage channels, layer sumps and traps (in addition to those shown on the Contract) discharging into existing drain, ditches or watercourses. The Contractor shall remove over all sediment, which may accumulate on any land or in any drains, ditches or watercourses or in any other property as a result of his operations.

All works including those below sub-soil standing water level shall be carried out in the dry unless specified otherwise. The Contractor's arrangements for controlling the inflow of water into the parts of the excavation being worked and during the placing of concrete and other works therein and for the collection and disposal of water shall be to the Engineer's Approval. Such arrangements may include inter alia temporary cofferdams, well-point systems, pumps; drains trenches, flumes and other recognized means. All Costs and charges in dealing with water in any way whatsoever and the effects thereof will be deemed to be included in the Contract Price and in the unit rates or prices of the Contractor for excavations.

Water flowing into excavations shall be carried by trenches, drainage layers or open jointed drains to sumps from which it shall be pumped. Such trenches drains or sumps shall generally be clear of the Permanent Works unless approved otherwise by the Engineer. If, with the said Approval of the Engineer trenches drains or sumps are excavated under or immediately adjacent the Permanent Works, these shall comprise open-jointed pipes with gravel mounds. When no longer required and when approved by the Engineer they shall be filled with a cement /sand grout injected under pressure so as to fill the pipe and all voids completely.

The Contractor shall keep all surfaces upon or against which concrete is to be deposited free from running water and no concrete shall be placed until such surfaces are properly drained. Suitable precautions shall be taken to prevent running water from washing out cement or concrete while it is setting or from injuring the Works in any other way.

Notwithstanding the Approval by the Engineer of the Contractor's methods of dealing with water, the Contractor shall be responsible for and accept all the risks and liabilities of dealing with water from whatever source and of all effects thereof.

SPECIAL PROVISIONS

Special Provisions

SP-1 NOT USED

SP-2 EMPLOYER'S & ENGINEER'S FACILITIES

2.1 SCOPE

- a) The Contractor shall provide, properly maintained and serviced, facilities for the Engineer (the " " and "Engineer's Facilities") comprising of an office, (the "Engineer's Office"), a laboratory (the "Engineer's Laboratory"), Survey Equipment (the Engineer's Survey Equipment") as specified hereinafter for the exclusive use of the Engineer during the whole Contract period.
- b) The Contractor shall provide and pay for all consumables, the consumption of electricity, gas and water, and provide and pay for all other incidental and running costs related to the Engineer's Facilities.
- c) The Engineer's Facilities shall be available and ready for use within 30 (Thirty) days of the Commencement Date during this period of thirty days the contractor shall make an interim arrangement at his own cost by hiring suitable and acceptable office/vehicles ecto to serve the purpose to the satisfaction of Engineer.
- d) The Contractor shall be responsible for and take all necessary measures to ensure the security of the Engineer's Office and Laboratory and their contents at all times and shall employ watchmen for this purpose.
- e) The Engineer's facilities shall be provided as per the requirements set forth in relevant SPs., under the pay item on the respective BOQ.
- f) All facilities shall be provided by the Contractor for entire contract period. After expiry of the contract period, all facilities shall become the property of the Employer.

2.2 SITE LOCATION/LAYOUT

- a) The location/layouts of the sites for the Engineer's Office and Laboratory are to be agreed by the Engineer and should take into account the following general requirements:
- b) Safe access from the public road.
- c) Paved areas for vehicle movement.
- d) Covered areas for vehicle parking.
- e) Dust suppression in unpaved areas.
- f) Grading of the site to provide drainage.
- g) Separate foul and surface water drainage system, with outfall and treatment as appropriate. Septic tanks being suitably distanced from and down-wind of occupied buildings.
- h) Standby electrical generating capacity located and protected to avoid noise nuisance.
- i) Suitable and convenient covered areas for storage of materials samples.
- j) Ducts, cables, pipes and sewers for services and drainage.
- k) A car washing area with a water source and proper drainage.
- l) Areas of visual amenity having trees, flower beds, shrubs and so forth, with a water source nearby.
- m) Security measures comprising perimeter fencing or walls, gates and guardhouses.

2.3 UTILITIES

- a) Back-up electrical power supply by diesel generator (with Canopy) shall be provided. The generator shall have an automatic cut-in in case of failure of the main supply. The power circuit shall be equipped with voltage regulation to protect electrical equipment from overload and to ensure proper operation of computers and the like.
- b) A continuous water supply shall be available for normal use. All kitchens shall be provided with potable water and the source shall be tested and certified by the Contractor at least monthly or at shorter intervals as directed by the Engineer.

- c) Continuous supplies of water, gas, electricity and fuel for the stand-by generator shall be provided by the Contractor who shall be responsible for and pay all costs of installation, connection, maintenance and use. Fuel stored at site shall be protected against fire.
- d) The Contractor shall take appropriate measures to discourage the presence or entry of termites, cockroaches, vermin and the like. Such measures may include chemical treatment of foundations, sealing of joints in construction and periodic fumigation.
- e) Contractor shall be responsible to do all the formalities in acquiring and installing the Gas, Telephone, Water and Electricity connection for the respective building required under this SP.

2.4 COMMUNICATIONS

1. The Contractor will be required to pay for the cost of telephone calls (Mobile Telephones) made by the Engineer and his staff up to a total cost of Rs.20,000/= (Twenty Thousand Rupees) per calendar month.

2.5 ESTABLISHMENT

1. Within 7 (Seven) days of the Commencement Date the Contractor shall submit to the Engineer the details of furniture and equipment for the Engineer's Office and Laboratory.
2. Within 7 (Seven) days of receiving the Contractor's proposals the Engineer will approve them with any necessary modifications and will instruct the Contractor to proceed with the procurement of the furnishings and equipment.
3. The Engineer's Facilities shall be available and ready for use within 30 (Thirty) days of the Commencement Date.
4. **Till such time that the Engineer's facilities are provided the contractor shall made an interim arrangement and shall bear all expenses, such as rent, communications, utilities etc. required to be provided under the provision of the relevant SPs.**
5. **The Engineer's all Facilities (Offices, Laboratory, Survey Equipment, other equipment, furniture, fixtures, fittings etc) provided as per relevant SPs shall become the property of the Employer, six months after the date of issue of the Taking-Over Certificate(s).**

SP-3 ENGINEER'S OFFICE

3.1 SCOPE

The contractor shall provide the Engineer's office building by constructing a building at location provided by the Employer.

- a) The building shall comprising six offices, a conference room, four lavatories with washing facilities, a kitchen and a tea room.
- b) The Contractor's Office will be situated adjacent to but at a reasonable distance from the Engineer's Office.
- c) The Contractor shall maintain the Engineer's Office in good condition to the satisfaction of the Engineer for as long as required for the purposes of the Contract.
- d) The Contractor shall provide the Engineer with at-least two office messengers and pay for the same.
- e) The office building shall be provided with underground and overhead water reservoirs of adequate capacity.
- f) The building shall be provided with all facilities in accordance with SP-2.
- g) The Engineer's Office fittings, equipment and furnishings shall become the property of the Employer, six months after the date of issue of the Taking-Over Certificate.

3.2 FURNITURE AND EQUIPMENT

In addition to normal stationery requirements, the Contractor shall provide for the Engineer's Office, furnishings and equipment complying at least to the following list, all to the approval of the Engineer and all for the exclusive use of the Engineer.

No.	ITEM
------------	-------------

OFFICE FURNITURE

- | | |
|---|---|
| 3 | Standard office desks with lockable drawers and glass top |
|---|---|

- 4 Small tables
- 6 Swivel type padded desk chairs with arms and castors
- 1 Secretary's desk with chair and matching computer table
- 1 Conference table for twelve persons with padded swivel chairs
- 10 Standard office chairs
- 4 Book cases with two shelves
- 1 Executive sofa set comprising one sofa, two armchairs and coffee table with glass top
- 6 Display boards
- 6 Metal waste baskets
- 7 Office clock, battery powered
- 6 Plastic trash containers, 500 mm diameter minimum by 750 mm high.
- 1 Electric water coolers
- 1 Automatic voltage stabilizer for Xerox photocopier
- 1 Paper hole punches, heavy duty
- 10 Paper hole punches, light duty
- 1 Pairs of scissors, heavy duty
- 1 Digital Camera, 35 mm single lens reflex Canon/Nikkon or similar, 35-150 mm zoom lens, electronic flash gun, carrying case, filters
- 1 Movie Camera
- 4 Fire extinguishers (carbon dioxide), wall-hung

COMPUTER EQUIPMENT

- 1 Laptop latest with all accessories.
- 3 Desktop PC latest with all accessories.
- 2 Laser Printer (A3 + A4 paper size),
- 3 Uninterruptible Power supplies, 1 KVA.
- 1 Copies of the latest versions of the following PC software
Windows 7 and latest MS Office
- Autocad (latest version)

MISCELLANEOUS

- 2 Oxford Shorter English Dictionary (Soft/Hard copy)
- 2 English – Urdu and Urdu – English dictionaries
- 20 Construction hard hats, Safety Shoos, Jackets etc
- 1 Set of relevant British Standard specifications
- 1 Set of relevant ASTM standards
- Consumables including camera film, batteries for clocks and calculators, paper, cartages and all other office supplies as required.
- Venetian blinds and cotton curtains on all windows

KITCHEN

- 1 Double stainless steel sink with drain board
- 1 Electric refrigerator, 0.50 cu.m capacity with separate freezer compartment, self defrost type
- 1 Gas stove with oven, four burners, and gas bottles as required.
- 1 Set of kitchen cabinets, lockable, with formica top
- 1 Electric kettle
- 1 Electric coffee maker
- 1 Water heater, 60 liters per minutes
- 6 Tea towels
- 2 Towel racks
- 1 Exhaust fan
- Tea pot, coffee pot, cups, saucers, glasses, spoons and serving trays for 24 persons

LAVATORIES

- 4 Hot water heaters, 6 liters per minute
- 4 Water closets, pedestal style
- 4 Wash basins with hot and cold water
- 4 Stainless steel lavatory paper holders
- 4 Paper towel dispensers
- 4 Mirrors, 400 mm x 500 mm
- 4 Ceramic urinals

3.3 MEASUREMENT & PAYMENT

The cost of providing, furnishing and equipping the Engineer's office shall be measured and paid for at the contract unit price quoted in the Bill of Quantities, which price and payment shall be full compensation for all costs of providing building, painting furnishing and providing all services, equipment, utilities, installations and access/service roads and for all materials, labour, equipment and incidentals for the proper completion of the work prescribed in these Specifications or as directed by the Engineer.

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-3a	Provide Engineer's Office	Lupm Sum
SP-3b	Equip and Furnish Engineer's Office	Lump Sum

SP-4 NOT USED

SP-5 ENGINEER'S LABORATORY

5.1 SCOPE

1. The Contractor for the duration of the Contract shall provide Engineer's Laboratory. The laboratory shall be for the exclusive use of the Engineer for testing soils, aggregate and concrete. The laboratory shall be fully equipped with all utilities, furniture, apparatus and fittings appropriate to such use.
2. The Engineer's Laboratory shall be located adjacent to the Engineer's Office. It shall consist of a hall and two offices with storage, lavatory and washing facilities. The hall shall be divided into bitumen section, a soil and aggregates section, and a concrete section.
3. Outside the laboratory water tanks shall be constructed for curing concrete samples, of a size and location approved by the Engineer.
4. The laboratory shall be provided with electricity and telephone and shall be fully air-conditioned. It shall have a regular and dependable supply of water, gas and electricity available throughout 24 hours of each day.
5. All rooms shall be provided with exhaust fans, located particularly over fume cupboards and the like.
6. To maintain the water supply the building shall be provided with underground and overhead water reservoirs of adequate capacity.
7. The lavatory shall be connected to a septic tank of adequate capacity with a 200 mm sanitary pipe and ventilation pipe stack.
8. The Contractor shall provide Four (4) nos qualified laboratory helpers as deemed necessary by the Engineer to assist in operating the laboratory. All costs necessary for the provision and upkeep of these personnel shall be the responsibility of the Contractor and shall be considered included in the payment herein specified for providing and maintaining the Engineer's Laboratory.
9. The building for laboratory shall be provided with all the facilities in accordance with SP-2.
10. The Engineer's Laboratory fittings & furnishings shall become the property of the Employer six months after the date of issue of the Taking-Over Certificate.

5.2 SAMPLING

It shall be the responsibility of the Contractor to take samples as required by the Engineer and to provide all necessary transport, labour, tools, containers, wrappings and so forth for uplifting and dispatching samples to the Engineer's Laboratory.

5.3 TESTS

- The Engineer's Laboratory shall be equipped to perform the following in-house tests:

TEST	AASHTO DESIGNATION
Moisture content test by oven drying	
Atterberg limits	T-89 & T-90
Moisture density relationship of soils (standard method)	T-99
Moisture density relationship of soils (modified method)	T-180, Method B and D
Specific gravity of soils	T-100
CBR test	T-193
Sieve analysis of soils and aggregate and mineral filler	T-88, T-27 and T-37
Specific gravity and water absorption of the fine aggregates	T-84
Specific gravity and water absorption of coarse aggregates	T-85
Unit weight of aggregates	T-19
Los/Angeles abrasion test for aggregates	T-96
Chemical tests:	
- Organic impurities for sand in concrete	T-21
- Chlorides and Sulphates in fine aggregates	ASTM-1411
- Potential alkali reactivity test	ASTM-C 289
Amount of material passing No. 200 sieve	T-11
Soundness of aggregates	T-104
Clay lumps and friable particles in aggregates	T-112
Curing concrete compressive test specimens	T-23
Compressive strength of concrete cylinder specimens	T-22
Quality of water to be used in concrete	T-26
Making and curing concrete test specimens in the laboratory	T-126
Plastic fines in graded aggregates and soils by use of sand equivalent test	T-176

- The Engineer's Laboratory shall be equipped to perform the following field tests:

TEST	AASHTO DESIGNATION
In-place density by sand cone method (with 15.25 cms and 30.5 cms cone)	T-191
In-place density of compacted base course containing large sizes of coarse aggregates	T-181

Sampling fresh concrete	T-141
Concrete slump	T-119

FURNISHING

The Contractor shall provide for the Engineer's Laboratory furnishings described in the following list to a quality approved by the Engineer. Substitution of type may be made only upon approval of the Engineer.

NO.	DESCRIPTION
3	Standard office desks
1	Swivel type padded desk chairs
7	Work tables
15	Standard office chairs
6	Small tables
3	Side racks
3	Metal filing cabinets, 4-drawer
6	Electronic calculators
4	Air conditioners (cooling and heating)
2	Electric water coolers
1	Display board
3	Desk lamps, fluorescent, 20 watts
3	Standard size staplers
1	Heavy duty stapler
2	Paper cutters
2	Paper hole punches
2	Pencil sharpeners
4	Fire extinguishers

5.4 EQUIPMENT

1. The Contractor shall provide new laboratory equipment as noted in the list *Equipment for the Engineer's Laboratory* included herein. The equipment shall be purchased from international suppliers, all to the approval of the Engineer.
2. The Contractor shall submit to the Engineer within 7 (seven) days of the Commencement Date a complete list of the equipment, apparatus and supplies he proposes to furnish for the Engineer's Laboratory. The list shall include the manufacturer's name and descriptive literature.
3. Additional equipment and materials shall be supplied by the Contractor at no additional cost as and when required by the Engineer to perform any test relevant to the Works.
4. Any damaged equipment received in the laboratory shall not be accepted by the Engineer and shall have to be replaced with new one of matching quality and other specifications of the equipment. Any equipment got damaged due to the negligence of contractor's staff during the working shall be repaired or replaced as would be convenient to the contractor such that the testing schedule in any way should not be effected. The repaired equipment shall be examined by the Engineer or his representative and approved for the use in the material testing. If repaired equipment does not come up to the satisfaction of the Engineer, the same shall have to be replaced with new one.
5. The Laboratory Equipment shall be provided by the Contractor for entire contract period. After expiry of the contract period, the Laboratory equipment shall become the property of the Employer.

5.5 MEASUREMENT AND PAYMENT

1. The cost of providing, furnishing and equipping the Engineer's Laboratory shall be measured and paid for at the contract unit price quoted in the Bill of Quantities for the respective Pay Items listed below, which price

and payment shall be full compensation for all costs of providing building, finishing, painting, furnishing and providing all services, equipment, utilities installation and access/service roads and for all materials, labour, equipment and incidentals for the proper completion of the work prescribed in these Specifications, drawings or as directed by the Engineer.

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-5a	Provide Engineer's Laboratory	Lump Sum
SP-5b	Provide Furniture for Engineer's Laboratory	Lump Sum
SP-5b	Provide New Equipment for Engineer's Laboratory	Lump Sum

EQUIPMENT FOR SITE LABORATORY

S. No.	Equipment Description	Model No./Name	Unit	Qty
1	Fully Automated Hematology Analyzer (3-Part)	Sysmex / Mindray / Equivalent	No.	1
2	Fully Automated Biochemistry Analyzer	Roche / Mindray / Equivalent	No.	1
3	Electrolyte Analyzer (Na ⁺ , K ⁺ , Cl ⁻)	Roche / Nova / Equivalent	No.	1
4	Semi-Automated Coagulation Analyzer	Erba / Stago / Equivalent	No.	1
5	Blood Gas Analyzer (ABG)	Radiometer / Siemens / Equivalent	No.	1
6	Centrifuge (Refrigerated)	Remi / Eppendorf / Equivalent	No.	2
7	Binocular Microscope	Olympus / Nikon / Equivalent	No.	2
8	Digital Microscope with Camera	Olympus / Leica / Equivalent	No.	1
9	Hot Air Oven	Memmert / Equivalent	No.	1
10	Laboratory Incubator	Binder / Equivalent	No.	1
11	Water Bath	Remi / Equivalent	No.	1
12	Autoclave (Vertical/Horizontal)	Tuttnauer / Equivalent	No.	1
13	Biosafety Cabinet (Class II)	Thermo / Esco / Equivalent	No.	1
14	Laboratory Refrigerator (2-8°C)	Haier / Panasonic / Equivalent	No.	2
15	Deep Freezer (-20°C)	Haier / Equivalent	No.	1
16	Blood Bank Refrigerator	Helmer / Equivalent	No.	1
17	Analytical Balance	Sartorius / Equivalent	No.	1
18	pH Meter	Hanna / Mettler / Equivalent	No.	1
19	Micropipette Set (Variable Volume)	Eppendorf / Equivalent	Set	2
20	ELISA Reader (if required)	BioTek / Equivalent	No.	1

SP-6 MAINTENANCE OF ENGINEER'S OFFICE AND LABORATORY

6.1 SCOPE

1. The Contractor shall maintain the Engineer's Office and Laboratory in all respects, including all repairs and replacements of any item and the supply of all consumables.
2. The Contractor shall provide all necessary janitorial services and supplies for the Engineer's Office and Laboratory. The services shall include normal domestic servicing and cleaning, including lavatories and bathrooms, washing windows and so forth. Janitorial services shall be performed on a daily basis with personnel and to a programme of work approved by the Engineer.
3. The Contractor shall maintain the Engineer's Office and Laboratory in a neat, hygienic and attractive manner and provide daily garbage collection and disposal services.

4. The Contractor shall maintain fire extinguishers and air-conditioners as recommended by their manufacturers and shall clean and replace air-conditioner air filters at regular intervals of one month, or more frequently if required by service conditions or as otherwise directed by the Engineer.
5. The Contractor shall provide guard services for the Engineer's Office and Laboratory on a twenty-four-hour basis. The suitability, number and work schedule of all guard personnel shall be approved by the Engineer.
6. The maintenance of Engineer's office and laboratory shall also include payment of all utilities bills such as Gas, Mobile Telephone, Electricity and water etc. by the contractor which shall not be paid separately and shall be deemed to be included in maintenance per month cost under the respective BOQ items of SP-6.
7. The Contractor shall provide these services from the date of acceptance of the individual facilities by the Engineer till one (for Employer's facilities) and six months (for Engineer's facilities) after the issuance of the Taking-Over Certificate.

6.2 MEASUREMENT AND PAYMENT

The maintenance and servicing of the Engineer's Office and Laboratory shall be measured and paid for at the contract unit price quoted in the Bill of Quantities for the respective Pay Items listed below, commencing from the date of occupancy of the premises by the Engineer. In case of a Contract Extension, maintenance and servicing will be paid for on the same monthly basis, provided that it has been approved by the Engineer or Employer in accordance with the conditions of contract.

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-6a	Maintain Engineer's Office	Per Month
SP-6b	Maintain Engineer's Laboratory	Per Month

SP-7 ENGINEER'S SURVEY EQUIPMENT

7.1 SCOPE

1. The Contractor shall provide and maintain survey equipment for the use of the Engineer. All the survey equipment shall be new and shall be maintained throughout the Contract and replaced by the Contractor free of charge in case of damage or loss due to any caused. The Contractor shall also arrange calibration of all surveying equipment after every three months.
2. The Contractor shall provide and pay for experienced survey helpers for the Engineer as required by the Engineer.
3. The survey equipment after the completion of the project shall become the property of the Employer.

7.2 EQUIPMENT

The Contractor shall provide and maintain the following survey equipment:

NO.	DESCRIPTION
2	Total Station survey units complete
2	Total Station accessories complete as under: <ul style="list-style-type: none"> - Interface Cable - Comms Plus Unit - Precision Wooden Tripod
2	Single Tilting Range Pole Prism complete as under: <ul style="list-style-type: none"> - Prism - Single Tilting Mount with Coaxial Target - Range Pole Telescopic Tripod with Soft Case

- 2 m Telescopic Range Pole
- Range Pole Level
- Soft Case
- 2 Single Tilting Prism with Coaxial Target complete
as under:
 - Prism
 - Single Tilting Mount with Coaxial Target
 - Simple Carrier
 - Tribrach with Optical Plummet
 - Soft
- 2 Triple Tilting Prism with Coaxial Target complete
as under:
 - Prism
 - Triple Tilting Mount with Coaxial Target
 - Simple Carrier
 - Tribrach with optical plummet
 - Soft case
- 4 Aluminum Telescopic Tripod
- 6 1 m Range Pole for Extension
- 4 Automatic Level complete
- 2 Aluminum Telescopic Tripod
- 6 Leveling Staff (local manufacture)
- 4 Range Pole Level
- 12 Steel measuring tape, 50 m long
- 12 Steel measuring tape, 20 m long
- 25 Steel measuring tape, 3 m long
- 12 Measuring rod (4 m)
- 18 Ranging rods with tripod

19 **Lidar + RGB Solution for Aerial Surveying** (Zenmuse L1 DJI Company)

The Zenmuse L1 integrates a Livox Lidar module, a high-accuracy IMU, and a camera with a 1-inch CMOS on a 3-axis stabilized gimbal. When used with Matrice 300 RTK and DJI Terra, the L1 forms a complete solution that gives you real-time 3D data throughout the day, efficiently capturing the details of complex structures and delivering highly accurate reconstructed models including all accessories and all software's.

7.3 CONSUMABLES

The Contractor shall provide adequate supplies of expendable materials, such as pencils, rubbers, inks, notebooks, drawing paper, survey pegs, brushes, paints etc. as required by the Engineer.

7.4 MEASUREMENT AND PAYMENT

The cost of providing and maintenance of surveying equipment for the exclusive use of the Engineer, including survey helpers for the duration of the contract, shall be paid for at the contract unit price quoted in the Bill of Quantities for the respective Pay Items listed below, which price and payment shall be full compensation for all costs of providing survey equipment, survey helpers, materials and its maintenance and

incidentals for the proper completion of the work prescribed in these Specifications or as directed by the Engineer.

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-7a	Provide New Survey Equipment	Lump Sum
SP-7b	Maintain Survey Equipment	Per Month

ALL THE EQUIPMENT'S ARE SOLE USE OF THE CONSULTANT AND CONSULTANT WILL OWN THE EQUIPMENT'S

SP-8 EMPLOYER'S OFFICE

8.1 SCOPE

The contractor shall provide the Employer's office building by constructing a building at location provided by the Employer.

- h) The office shall comprise two offices, two lavatories with washing facilities, a kitchen and a tea room.
- i) The Employer's Office will be situated adjacent to the Engineer's Office.
- j) The Contractor shall maintain the Employer's office in good condition to the satisfaction of the Engineer for as long as required for the purposes of the Contract.
- k) The Contractor shall provide the Employer with at-least two office messengers and pay for the same.
- l) The office building shall be provided with underground and overhead water reservoirs of adequate capacity.
- m) The building shall be provided with all facilities in accordance with SP-2.
- n) The Employer's office, fittings, equipment and furnishings shall become the property of the Employer three after the date of issue of the Taking Over Certificate.

8.2 FURNITURE AND EQUIPMENT

In addition to normal stationery requirements, the Contractor shall provide for the Engineer's Office, furnishings and equipment complying at least to the following list, all to the approval of the Engineer and all for the exclusive use of the Engineer.

No. ITEM

OFFICE FURNITURE

- 3 Standard office desks with lockable drawers and glass top
- 3 Small tables
- 3 Swivel type padded desk chairs with arms and castors
- 3 Executive desk with lockable drawers and glass top with computer table
- 3 Executive type upholstered desk chair
- 3 Secretary's desk with chair and matching computer table
- 1 Conference table for twelve persons with padded swivel chairs
- 24 Standard office chairs
- 2 Lockable metal filing cabinets for drawings (1.0 x 0.80 x 0.75) m with 4 No. Drawers
- 6 Book cases with two shelves
- 3 Executive sofa set comprising one sofa, two armchairs and coffee table with glass top
- 3 Display boards
- 3 Metal waste baskets
- 3 Office clock, battery powered
- 3 Plastic trash containers, 500 mm diameter minimum by 750 mm high.
- 1 Electric water coolers

- 3 Desk lamps, fluorescent, 20 watts
- 3 Desk lamp, executive type
- 3 Split type Air conditioners or as required
- 3 Standard size staplers
- 2 Heavy duty staplers
- 3 Paper cutters
- 2 Paper hole punches, heavy duty
- 2 Paper hole punches, light duty
- 2 Pairs of scissors, heavy duty
- 3 Pencil sharpeners, desk mounted
- 4 Calculators Scientific
- 1 Digital Camera, 35 mm single lens reflex Canon/Nikkon or similar, 35-150 mm zoom lens, electronic flash gun, carrying case, filters
- 1 Movie Camera
- 2 Fire extinguishers (carbon dioxide), wall-hung

COMPUTER & EQUIPMENT

- 3 Laptop latest with all accessories.
- 3 Desktop PC latest with all accessories.
- 4 Laser Printer (A3 + A4 paper size),
- 2 Uninterruptible Power supplies, 1 KVA.
- 1 Xerox Photocopier with enlarging and reduction capability with 55-65 copies/minute speed
- 1 Copies of the latest versions of the following PC software
Windows 7 and latest MS Office
- Autocad (latest version)

MISCELLANEOUS

- 2 Oxford Shorter English Dictionary (Soft/Hard copy)
- 2 English – Urdu and Urdu – English dictionaries
- 06 Construction hard hats, Safety Shoes, Jackets etc
Consumables including camera film, batteries for clocks and calculators, paper, cartages and all other office supplies as required.
Venetian blinds and cotton curtains on all windows

KITCHEN

- 1 Double stainless steel sink with drain board
- 1 Electric refrigerator, 0.50 cu.m capacity with separate freezer compartment, self defrost type
- 1 Gas stove with oven, four burners, and gas bottles as required.
- 1 Set of kitchen cabinets, lockable, with formica top
- 2 Electric kettle
- 1 Electric coffee maker
- 1 Water heater, 60 liters per minutes
- 2 Tea towels

- 2 Towel racks
- 1 Exhaust fan
- Tea pot, coffee pot, cups, saucers, glasses, spoons and serving trays for 24 persons

LAVATORIES

- 2 Hot water heaters, 6 liters per minute
- 2 Water closets, pedestal style
- 2 Wash basins with hot and cold water
- 2 Stainless steel lavatory paper holders
- 2 Paper towel dispensers
- 2 Mirrors, 400 mm x 500 mm
- 2 Ceramic urinals
- 2 Exhaust fan, ½ HP, 220 Volt

8.3 MEASUREMENT & PAYMENT

The cost of providing, furnishing and equipping the Employer’s office shall be measured and paid for at the contract unit price quoted in the Bill of Quantities, which price and payment shall be full compensation for all costs of providing building, painting furnishing and providing all services, equipment, utilities, installations and access/service roads and for all materials, labour, equipment and incidentals for the proper completion of the work prescribed in these Specifications or as directed by the Engineer.

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-8a	Provide Employer’s Office	Lump Sum
SP-8b	Equip and Furnish Employer’s Office	Lump Sum

SP-9 MAINTENANCE OF EMPLOYER’S OFFICE

9.1 SCOPE

1. The Contractor shall maintain the Employer’s office in all respects, including all repairs and replacements of any item and the supply of all consumables.
2. The Contractor shall provide all necessary janitorial services and supplies for the Employer Office. The services shall include normal domestic servicing and cleaning, including lavatories and bathrooms, washing windows and so forth. Janitorial services shall be performed on a daily basis with personnel and to a programme of work approved by the Engineer.
3. The Contractor shall maintain the Employer’s Office in a neat, hygienic and attractive manner and provide daily garbage collection and disposal services.
4. The Contractor shall maintain fire extinguishers and air-conditioners as recommended by their manufacturers and shall clean and replace air-conditioner air filters at regular intervals of one month, or more frequently if required by service conditions or as otherwise directed by the Engineer.
5. The Contractor shall provide guard services for the Employer’s Office on a twenty-four hour basis. The suitability, number and work schedule of all guard personnel shall be approved by the Engineer.
6. The maintenance of Employer’s office shall also include payment of all utilities bills such as Gas, Mobile Telephone, Electricity and water etc. by the contractor which shall not be paid separately and shall be deemed to be included in maintenance per month cost under the respective BOQ items of SP-9.
7. The Contractor shall provide these services from the date of acceptance of the individual facilities by the Engineer till three months after the issuance of the Taking-Over Certificate.

9.2 MEASUREMENT AND PAYMENT

The maintenance and servicing of the Employer’s Office shall be measured and paid for at the contract unit price quoted in the Bill of Quantities for the respective Pay Items listed below, commencing from the date of occupancy of the premises by the Engineer. In case of a Contract Extension, maintenance and servicing will be paid for on the same monthly basis, provided that it has been approved by the Engineer or Employer in accordance with the conditions of contract.

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
-------------	-------------	---------------------

SP-9	Maintain Employer's Office	Per Month
------	----------------------------	-----------

SP-10 PROVISION OF TRANSPORT FACILITIES FOR ENGINEER REP

10.1 SCOPE

- 10.1.1 The Contractor shall Provide 03 Number.
- 10.1.2 The Proposed Vehicle Should be not older than 2020 Model.
- 10.1.3 The Vehicles will be purely on the use of the engineer.

1.2 MEASUREMENT AND PAYMENT

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-10a	Toyota Double Cabin REVO with A/C	Each
SP-10b	Toyota Double Cabin with A/C	Each
SP-10c	Toyota Single Cabin with A/C	Each

At the End of the Project the Vehicles will be property of the Department

SP-11 PROVISION FUEL OF 03 NUMBER OF VEHICLES

1.1 SCOPE

- 11.1.1 The Contractor shall Provide 1000 Liters of Fuel per Month.
- 11.1.2 The Contract shall provide 03 Number of Drivers.
- 11.1.3 The Contractor Shall Provide Adequate Maintenance of the Vehicles including Oil Change in every Month, service forth nightly, Tyre Changes after 06 Months.

1.2 MEASUREMENT AND PAYMENT

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-11a	Toyota Double Cabin REVO with A/C	Per Month
SP-11b	Toyota Double Cabin with A/C	Per Month
SP-11c	Toyota Single Cabin with A/C	Per Month

SP-12 PROVISION OF MISSING FACILITES

1.1 SCOPE

- 11.1.1 The Contractor shall Provide messing Facilities of at least 12 Number of the Engineer Staff.
- 11.1.2 The Meet Should Include Break Fast, Lunch and Dinner with 03 Times Cup of Tea.
- 11.1.3 The Menu Should be 02 Items and with maximum 02 day of Vegetable Dish in a week.
- 11.1.4 The Dedicated Cook Needs to Provided to the Consultant Staff
- 11.1.5 The Dedicated Supporting Staff i.e Peon and Helper

1.2 MEASUREMENT AND PAYMENT

The Price should in Built within Your overhead or per Item rates of your Bid.

PAY ITEM NO	DESCRIPTION	UNIT OF MEASUREMENT
SP-12a	Mess Facilities	Per Month

SP-20 PROTECTION OF THE ENVIRONMENT

20.1 General

The Contractor shall take all necessary measures and precautions and otherwise ensure that the execution of the works and all associated operations on-site are carried out in conformity with statutory and regulatory environmental requirements of Federal/Provincial Environmental Protection Agencies (EPA's) including those prescribed elsewhere in this document.

The Contractor shall take all the measures and precautions to avoid any nuisance or disturbance arising from the execution of the works. This shall wherever possible be achieved by suppression of the nuisance at source rather than abatement of the nuisance once generated. The provision of this sub-clause shall however, be disregarded in respect of emergency work required for saving life or the safety of the works. However, after completing such works of emergent nature, suitable environmental mitigation measures will be adopted by the contractor with the approval of Engineer.

In the event of any spoil or debris or silt from the sites being deposited on adjacent land, the Contractor shall immediately remove such spoils, debris or silt and restore the affected areas to its original state to the satisfaction of both the Supervisor Engineer and the land owner.

Surplus excavation materials and topsoil shall, wherever possible, be used to reinstate quarries or borrow pits or other areas as may be approved by the Supervisor Engineer. Such materials should be spread in such a manner as to limit subsequent erosion and the site shall be re-vegetated as existing ground cover dictates.

20.2 Borrow-Pits for Embankment Construction

Borrow-pits shall not be dug in the right of way of the road. However, even outside the ROW, depending upon type of soil strata, depth of water table, ground topography and prevalent vegetation state etc, a minimum distance for such borrow areas will be pre-specified by the Supervisor Engineer. The main ruling factors for determining such distances will be the highway safety from capillary action where pore pressure may damage the pavement and the water stagnation, becoming a source of disease vector.

20.3 Quarry Operations

The Contractor shall obtain materials from licensed and government approved quarries only. The quarry operation shall be undertaken within the purview of the rules and regulations in force. 20.4 Soil Erosion and Sedimentation Control The Contractor shall carry out the works in such a manner that soil erosion is fully controlled, and sedimentation and pollution of natural watercourses, ponds, tanks and reservoirs is avoided. At suitable places sedimentation basin with impervious linings will be constructed for containing, stopping and trapping any silt run off for premature siltation of downstream watercourses and reservoirs.

20.5 Conservation of Fauna and Flora

The Contractor shall adopt all measures and take necessary precautions to avoid disturbance to fauna and flora, as far as possible. Felling of trees and removal of vegetation for fuel or other uses will not be practiced.

20.6 Fuel and Chemical Storage

All fuel and chemical storage shall be sited on an impervious base within an embanked area and secured by fencing. The storage area shall be located away from any watercourse or wetland. The base and walls of the embankment shall be impermeable and of sufficient capacity to contain

110% of the volume of tanks. Filling and re-fuelling shall be strictly controlled and subjected to formal procedures. All valves and trigger guns shall be resistant to unauthorized interference and vandalism and be turned off and securely locked when not in use. The contents of any tank or drum shall be clearly marked. Measures shall be taken to ensure that no contamination happens, or discharges enter any drain or water courses.

20.7 Water Quality

The Contractor shall prevent any interference with the supply to or abstraction from polluted water sources (including underground percolating water) as a result of execution of the works. Areas where water is regularly or repetitively used for dust suppression purposes shall be laid to fall to specially constructed settlement tanks to permit sedimentation of particulate matter. After resettlement, the water may be re-used for dust suppression. All water and liquid waste products arising on the sites shall be collected and disposed of at location outside or off site and in a manner that shall not cause nuisance or pollution. The Contractor shall not discharge or deposit any matter arising from the execution of the works into any place except with the permission of the Supervisor Engineer and the regulatory authorities concerned. The Contractor shall protect all watercourses, water ways, ditches, canals, drains, lakes and the like from pollution, silting flooding or erosion as a result of the execution of the works. The Contractor shall submit the details of his temporary drainage works system (including all surface channels, sediment traps, washing basins and discharge-pits) to the Supervisor Engineer for approval prior to commencing work on its construction.

20.8 Air Quality

The Contractor shall devise and arrange methods of working to minimize dust, gaseous or other air borne emissions and carry out the works in such a manner as to minimize adverse impacts on air quality.

Bituminous hot-mix plants and concrete batching plants shall be located sufficiently away from habitation, agricultural operations or industrial establishments.

The Contractor shall utilize effective after sprays during the delivery and handling of materials when dust is generated and dampen stored material during dry weather.

Stockpiles of materials should be sited in sheltered areas or within hoarding, away from sensitive areas. Stockpiles of friable materials shall be covered with clean tarpaulins with application of sprayed water during dry and windy weather. Stockpiles of debris shall be dampened prior to their movement, except where this is contrary to the specifications.

Any vehicle with an open load carrying area used for transport of potentially dust producing materials shall have properly fitting side and tailboards. Materials having potential to produce dust shall not be loaded to a level higher than the side and tail boards and shall be covered with clean tarpaulin in good condition. The tarpaulin should be properly secured and extended to at least 300 mm over the edges of the sideboard and tailboard.

During high wind, no dust generating operations shall be permitted within 200 m of residential areas having regard to the prevailing direction of the wind.

Construction vehicles and machinery shall be kept in good working order and engine turned off when not in use. Appropriate measures shall be taken to limit exhaust emissions from construction vehicles, machinery and plant and the Contractor shall include details of such proposed measures in the mitigation and monitoring plan to be submitted to the Supervisor.

In residential areas or other sensitive areas, such as nurseries, schools, hospitals, etc. advance warning shall be given to potentially affected persons so that some measures can be taken by them before commencement of the works.

Any open vehicle carrying a load of freshly mixed asphalt concrete for transportation and laying the pavement must have a full cover of tarpaulin sheet. In this manner its toxic fumes will be reduced against any atmospheric contamination.

20.9 Noise

The Contractor shall consider noise as an environmental concern in his planning and during execution of the works. The Contractor shall use plant and equipment conforming to international standards and directives on noise, vibrations and emissions shall include the details of measures for abating noise at source in the mitigation and the monitoring plan to be submitted to the Supervisor Engineer

20.10 TRANSMISSION OF DISEASES

Contractor shall take all necessary measures to prevent transmission of diseases between inhabitants and the labourers engaged for the works, especially with regard to sexually transmitted diseases. The Contractor shall install the necessary medical facilities for this purpose.

The Contractor shall verify that check-up for detecting the occurrence of sexually transmitted diseases amongst the labourers engaged for the works are actually being carried out and submit a certificate to that effect to the Supervisor Construction Engineer.

Preservation of Archaeological, Cultural, Religions Assets/Heritage Value and Antiquities.”

Where antiquities are shown on the drawing or otherwise identified during the course of the works, these shall be protected by means of suitable fencing and barriers to the satisfaction of the Supervisor Engineer. The Contractor shall provide and maintain access at all times for persons wishing to stop and pay their respects.

20.11 PRESERVATION OF ARCHAEOLOGICAL, CULTURAL, RELIGIOUS ASSETS/HERITAGE VALUE AND ANTIQUITIES

The Contractor shall take all necessary measures to protect any archaeological finds or antiquities as required. Where antiquities are shown on the drawing or otherwise identified during the course of the works, these shall be protected by means of suitable fencing and barriers to the satisfaction of the Supervisor Engineer.

The Contractor shall provide and maintain access at all time for persons wishing to stop and pay their respects.

20.12 ENVIRONMENT ENHANCEMENT

All existing highways and roads used by vehicle of the Contractor or any of his sub-contractors or suppliers of materials or plant, and similarly any new roads which are part of the works and which are being used by traffic, shall be kept clean and clear of all dust/mud or other extraneous materials dropped by the said vehicles or their tyres. Similarly, all dust/mud or other extraneous materials from the works spreading on these highways shall be immediately cleared by the Contractor.

Clearance shall be affected immediately by manual sweeping and removal of debris, or, if so, directed by the Engineer, by mechanical sweeping and clearing equipment, and all dust, mud and other debris shall be removed entirely from the road surface. Additionally, if so directed by the Supervisory Engineer, the road surface shall be hosed or watered using suitable equipment.

Any structural damage caused to the existing roads by the Contractor's construction equipment shall be made good without any extra cost.

On completion of the works, the Contractor shall reinstate all areas with proper vegetation to the satisfaction of the Supervisor Engineer.

The Contractor shall remove all old tyres and internal rubes from within the limits of right of way and subject to the agreement of adjacent landowners for additional areas of 75 m on either side of the road centreline. The Contractor shall dispose of all materials in a manner approved by the Supervisor Engineer.

Where directed by the Supervisor Engineer, the Contractor shall improve and reinstate the land on which informal roadside service area has been established, by removing all debris and contaminated soils, regarding to natural ground levels and re-establishing the original vegetation where appropriate. All debris and contaminated materials shall be disposed of on site as approved by the Supervisor Engineer.

20.13 MEASUREMENT AND PAYMENT

The work under clause SP-20 (Protection of the Environment) shall neither be measured nor be paid separately. The cost incurred in this respect shall be deemed to have been included in other items of work.

In case of failure of the contractor to comply with all or any provision(s) of this clause the damage(s) caused shall be attributable towards the Contractor, and the Engineer shall assess the amount of such damage(s) which shall be deducted from the monies due or to become due to the Contractor. However, the said amount may be reimbursed to the Contractor on rectification of all damage caused and subsequent certification by the Engineer that the said damage has been rectified by the Contractor at his own cost as per the requirements specified herein above.

Where directed by the Engineer, the Contractor shall improve and reinstate the land on which informal roadside service area has been established, by removing all debris and contaminated soils, regarding to natural ground levels and reestablishing the original vegetation where appropriate. All debris and contaminated materials shall be disposed of on site as approved by the Engineer.

SP-21 HEALTH & SAFETY

21.1 General HSE Requirements

21.1.1 Compliance to Laws/Regulations/Company Requirements

Contractor shall comply with all applicable Health, Safety and Environmental (HSE) laws and regulations including fire and security, which are applicable to the location where the works are being carried out. Contractor shall indemnify the Employer against all legal costs, fines and compounds imposed and claims and damages incurred as a result of breach or non-compliance with relevant laws and regulations. Contractor shall comply at all times with the requirements as set forth by the Employer in this contract. These requirements are intended to supplement any known or ought to be known laws and regulations applicable at the location where the works are being carried out. Contractor shall take all necessary HSE precautions related to or arising out of the performance of the Contract in order to protect the work, the personnel and property of the Employer, the Engineer, the Contractor, Subcontractor, all third parties and public from the hazards associated with the work.

21.1.2 CONTRACTOR Written Policy/Organization

The Contractor shall acknowledge the Employer strong commitment to HSE and affirm that it has a written HSE policy which is a standard comparable to international standards and which has been signed and is actively supported and endorsed by the Contractor's management. The Contractor shall further affirm that its HSE policy is widely disseminated and understood among the Contractor and Subcontractor's employees.

21.1.3 Protection of Employees, Public, Assets and Environment

The Contractor shall protect the safety and health of workers and people living or working near the construction activity from potential hazards created by that activity. The Contractor, without cost to the Employer, must take all necessary precautions to protect the public and minimise disturbance and inconvenience to the public resulting from performance of the work. Throughout performance of the work, the Contractor shall conduct all operations in such a way as to minimize any impact upon the natural environment including compliance with all laws, regulations and rules applicable to the site. The Contractor agrees to indemnify the Employer and the Engineer and their staff for all claims, damage costs and penalties relating to any environmental damage or loss or non-compliance with any laws or regulations arising out of the Contractor and / or Subcontractor performance of works.

21.1.4 Right to Stop Work

The Engineer or his designated representatives shall have the right to prohibit commencement of works or to stop any works in progress if the equipment, machinery, personnel or work conditions are considered to be unsafe or not to be in compliance with any applicable rules, regulations and procedures.

Stoppage of the work shall be at the Contractor's expense until the Contractor has satisfactorily rectified such unsafe acts and condition. In the event of serious or repeated infringements, the Employer may terminate the contract without compensation.

21.1.5 Maintain Equipment and Machinery in a Safe Condition

The Contractor shall ensure that all Contractor's machinery, plant & equipment, facilities and other items in any way associated with or utilised in the work are fit for use and maintained in a safe and good working condition.

21.1.6 Risk Management and Hazards Identification

The Contractor shall make an initial assessment of the HSE risks involved in the execution of the works. The focus of the assessment should be to evaluate the inherent hazards in conducting the work and the potential adverse consequence of an accident to the workforce, the public and the environment, company assets and reputation. The Contractor shall take appropriate measures to prevent incidents from occurring and to minimise the consequence of an event should it occur. The Contractor shall conduct HSE inspections and audits to ensure that such preventive measures are carried out. The Contractor shall promptly conform to all recommendations made pursuant to the said inspections and audits.

21.1.7 Competent Personnel

The Contractor shall ensure that competent personnel are fully trained and certified to carry out the task of operating all machinery, equipment, and tools. The Contractor shall provide an adequate level of technical and HSE related training conducted by a recognized training institution for all relevant personnel in connection with the work. All Contractor's supervisory personnel shall attend relevant HSE training and be competent in hazard identification. The Contractor shall ensure that all Contractor and Subcontractors personnel engaged in the works are healthy and fit, and possess the experience and skill required to perform the works.

21.1.8 HSE Awareness

The Contractor shall be responsible for maintaining and enhancing the HSE awareness among its personnel and subcontractor's personnel, including arranging safety induction, toolbox, regular HSE meetings and emergency drills. Findings of hazard identification including Job Safety Analysis shall be communicated to the Contractor's personnel. Copies of minutes of the Contractor's safety meetings shall be submitted to the Engineer.

21.1.9. Incident Reporting

The Contractor shall report to the Engineer immediately of the occurrence of any incident or accident including near misses. The Contractor shall also alert fire brigade, police and /or other authorities relevant to the incidents or accidents. The Contractor shall be responsible for reporting accidents and incidents to relevant Pakistan Authority.

All incidents or accidents that result in or have the potential to cause serious injury or property damage must be suitably investigated by the Contractor and reported to the Engineer.

The Contractor shall maintain accurate incident and injury reports and shall comply with the Engineer's requests for information relating to accidents, injury or illnesses.

21.1.10. Housekeeping

The Contractor shall ensure that good housekeeping is maintained continuously throughout the duration of the work. Due regard being paid to proper disposal of scrap material, tidiness, and clear access ways and emergency exits. Access and egress of all exits, fire and safety equipment, and work areas must be kept clear of obstructions at all times. Special attention must be given to maintaining clear walkways, removal of slippery and tripping hazards, securing or removing of loose materials at height, and proper storage of materials. Oily or chemical soaked rags must be disposed of in a proper manner. All housekeeping shall be at The Contractor's cost.

21.2. SPECIFIC HSE REQUIREMENTS

21.2.1. Site SHO/Safety Supervisor

The Contractor shall, at Contractor's cost, provide such numbers of qualified Safety and Health Officers (SHO) or supervisors who will be responsible to provide guidance and advice pertaining to Health, Safety and Environment (HSE) requirements of works. He shall guide Contractor's management on hazard assessment and measures, with equal diligence being paid to fulfillment of the contractual technical specifications. In addition to the ongoing monitoring of the site, the Contractor's SHO or supervisors shall also perform a formal inspection of the site at least once every week to identify and correct any hazardous conditions noted. A written record of all inspections and their status of action follow-ups shall be given to the Engineer. Prior to start of works, the Contractor shall submit the CV of the proposed SHO or supervisors for the Engineer's approval.

21.2.2. Project HSE Plan One week, prior to mobilization, the Contractor shall prepare and submit a project specific HSE plan to the Engineer which, as a minimum, describes the followings:

- Prevailing laws and regulations
- Contractor's HSE policy
- Contractor's organization including position for HSE manager
- HSE responsibilities of key personnel
- Hazards review including control and mitigating measures
- Description and schedule of HSE activities
- Accident/incident reporting
- Emergency response plan

The Engineer's review or comments on such plan shall not relieve nor shall such review and comments to be construed as limiting in any manner the Contractor's obligations to undertake any action which may be necessary to establish and maintain safe working conditions at the location where the works are being carried out.

21.2.3. Equipment Safety Inspections

Prior to start of works, the Contractor is required to inspect the equipment and machinery required in connection with the works including but not limited to cranes, bulldozers, trucks, tractors, rigs, dumpers, etc., to ensure that works will be performed under safe condition.

In addition, the Contractor shall maintain and perform continuous safety inspection throughout the works and shall promptly implement all recommendations made pursuant to the said inspection.

The Engineer shall have the right to conduct its own safety audit or inspection at worksite. The Contractor shall comply with all recommendations arising from such audit or inspection.

The Contractor shall ensure that all fuel powered and electrical equipment working in the vicinity of flammable vapors is equipped with proper ignition protective devices.

The Contractor shall ensure that only permitted personnel by way of previous technical training and familiarization are allowed to operate and/or maintain equipment and machinery.

21.2.4. Personal Protective Equipment (PPE)

The Contractor shall at its own cost, supply its personnel and subcontractor's personnel required in connection with the works with adequate PPE and maintain enforcement on the use of such PPE. The Contractor shall purchase PPE in accordance with the specification as per attachment - PPE STANDARDS & TECHNICAL SPECIFICATIONS.

21.2.5. Mechanical Equipment Operation

The Contractor shall upon arrival at the worksite, inspect all mechanical construction equipment that is to be utilized in the work. The equipment will include but may not be limited to the following:

- Cranes
- Dozers
- Graders
- Rollers
- Excavators
- Fork lifters
- Dumpers
- Semi-Trailers and Prime Movers
- Compressors
- Temporary Electrical Distribution Boards
- Scaffolding equipment
- Rigging equipment
- Man-cages/Personal Baskets
- Aerial Work Platforms
- etc

All equipment inspected that requires remedial work (or replacement) shall be carried out at the Contractor's cost. All equipment inspected and accepted for use on the work shall be clearly identified by a tagging system.

21.2.6. Occupational Health

The Contractor shall ensure that all its employees and subcontractor employees engaged in the work are medically fit and healthy. Any medical diseases or disabilities which the Contractor may consider will not adversely influence the employee's ability to perform his role in the work, should be reported to the Engineer prior to start of the work. The Contractor shall at no cost to the Employer be responsible for the medical welfare of its own and subcontractor employees and shall take care of arrangements for medical attendance, treatment or hospitalization if and when necessary and will arrange suitable insurance coverage for such contingencies. The Contractor shall at its own expense have a fully equipped first aid station on site and make arrangement for availability of an ambulance. This station will be manned during all working hours. The Contractor shall ensure that its personnel and subcontractor's personnel shall maintain a high standard of hygiene in connection with the performance of the work. The Contractor shall provide where necessary sufficient hygienic drinking fluids and toilet facilities to meet health regulations and all other legislated requirements.

21.2.7. Confined Space

The Contractor shall take precautions which include gas/oxygen tests, PPE requirement, respiratory equipment, isolation of connections to confined space, provide ventilation and making confine space free from fumes, place person on standby, ensure availability of rescue equipment and team. The Contractor's SHO or supervisor shall ensure that all necessary precautions and protective measures are implemented. The person(s) shall be certified medically fit before they are allowed to work in confined space.

21.2.8. Emergency Response Preparedness

The Contractor, at its own cost, shall ensure adequate provision for emergency response at site, which as a minimum, includes the following;

- fire fighting
- fire prevention

□ first aid medical facilities

The Contractor personnel shall be trained and competent in the use of firefighting equipment effectively. The Contractor shall also ensure its first aiders are trained and competent to render such services effectively.

21.2.9. Tools and Equipment

The Contractor shall ensure that all Contractor's machinery, tools and equipment, facilities, and other items associated with the works whether purchased or rented are maintained in a safe condition and to be operated by competent operators. Tools shall only be used for the job they were designed to perform. All guards must be fitted and shall be in good condition at all times. All grinding discs must be checked for correct size and speed prior to fitting. Electrically powered tools shall meet the hazardous zones requirement where applicable. All electric cables shall be industrial type. Use of domestic electric cables is prohibited. The Contractor shall repair or replace defective tools and equipment at its own cost. Appropriate personal protective equipment must be worn at all times when using any tool or equipment.

21.2.10. Compressed Gas Cylinders

The Contractor shall ensure that:

- ✓ Compressed gas cylinders are stored, transported or used shall be in an upright position and secured to some substantial object or structure by a chain or other suitable means capable of supporting the weight of the cylinder. This applies to all cylinders, whether empty or full.
- ✓ Cylinder valves shall be closed, and hoses depressurized when cylinders are not in use.
- ✓ Cylinders shall have protective valve caps in place while they are being transported/stored.
- ✓ Cylinders shall be returned promptly to a suitable storage area after use. They shall not be left at any worksite. Cylinder storage areas should be kept away from general traffic paths and must not be adjacent to vehicle paths.
- ✓ Flammable gases and oxygen cylinders must not be stored in close proximity unless separated by a non-combustible wall.
- ✓ Cylinders may only be hoisted when enclosed in an approved box or cradle within which they are securely fastened.
- ✓ Cylinders must be identified by a colour code in accordance with Malaysian or respective national standards.
- ✓ Gas welding cylinders shall have hose check valve (non-return valves), which allow gases to the blowpipe, but not back from it. Flashback arrestors shall be installed to quench flashback flames and cut off the gas flow automatically, in both oxygen and fuel gas outlet lines.

21.2.11. Welding and Cutting The Contractor shall ensure only competent, authorized workers be allowed to use welding equipment. Hard hats are not required to be worn by welders during actual process of welding if there is no immediate potential for head injury. The Contractor shall ensure suitable precautions against exposure of welding hazards such as excessive ultraviolet radiation, fire, or dusts. Welding, and/or flame cutting in the vicinity of flammable or combustible items shall only done under the control of qualified persons. The Contractor shall provide adequate number of suitable fire extinguishers at a welding site. Welders must be competent in the use of these extinguishers.

21.2.12. Grit Blasting

The Contractor shall take permit prior to grit blasting. The Contractor shall provide the blaster with an approved air mask and oil free air supply. Associated workers and any other personnel within the blasting area must wear approved respiratory protection. The blasting gun must have a 'dead man' safety device operated by the blaster. Under no circumstances the device be tied back.

The Contractor shall made efforts to minimize the exposure of the blasting grit to the surrounding environment. Protective shield shall be erected and notice board shall be posted in order to prevent exposure of the blasting grit.

21.2.13. Chemicals

The Contractor shall ensure all requirements for storage, handling and personal protection outlined in the material safety data sheet are followed. Solvents, cleaners and cleaning agents must not be stored or used in unventilated areas or in immediate proximity to any sources of ignition. Quantities of such materials greater than needed for one day's work must be stored outside the work area in a proper storage facility. Smoking is not permitted while using or in the vicinity of any such chemical.

21.2.14. Driving/Vehicle Safety

The Contractor's personnel travelling to and from worksite shall use proper means of transport. Such transport shall comply with the Pakistan Statutory Rules made under the Road Traffic. Transportation of personnel in open trucks is prohibited unless fitted with seats and certified to carry passengers. The Contractor shall be responsible to provide safe access and egress to the worksite. The Contractor shall set allowable speed limit and place suitable road signs at the worksite. The Contractor shall maintain and enhance the awareness of safe driving among its employees and its subcontractors. This includes wearing of seat belt, observing speed limit, maintain good vehicle condition, driving defensively and possess valid driving license.

21.2.15. Electrical Safety/Power Source

No part of any lifting device or any equipment operated around power lines is closer than below:

150-750 V	2.0 m
750- 50k V	3.0m
50k-250k V	4.5m
250kV	6.0m

For High Tension Lines 9.0m The above clearance applies in all directions. All overhead lines shall be identified with a highly visible sign placed 7m from both sides of the lines, 1.8m above ground. A restriction guard pole connected with ropes shall be installed to restrict clearance close to power lines.

21.2.16. Excavation

The Contractor shall ensure that all excavation works shall meet the following requirements as a minimum:

Prior to embarking excavation work, proper design and plan shall be drawn up taking into account the soil type and the weather conditions and proximity to facilities.

- ✓ Walkways between trenches should be kept clear of obstruction.
- ✓ A competent person must inspect all excavations, shafts, tunnels and earthworks of any description each day when persons are working.
- ✓ A standby person shall be made available at all times equipped with all necessary safety equipment.
- ✓ All excavation exceeding 1.5 meters shall be shored. For excavation exceeding 2 meters deep, a confined space permit shall be secured.
- ✓ No mechanical excavation within 1 meter of the existing service is allowed. All underground services must be hand exposed and identified.

21.2.17. Barricade, Platforms and Guardrails.

The Contractor shall provide adequate barricades, covers, guardrails, signal flag persons or other appropriate warning devices to protect personnel near any hazardous operations or overhead work. Temporary covers for floor openings shall be firmly fastened and clearly identified by warning signs.

All elevated work areas, walkways, platforms etc. whether permanent or temporary, shall be protected by an approved guardrail (consisting of an upper and intermediate rail and toe board) and shall provide a sturdy working space. The Contractor shall provide all the necessary signs, barriers, flag persons, etc. to protect the general public from exposure to injury from the work.

21.2.18. Scaffold

A safe means of access must be provided for any work to be carried out at a height greater than 2 meters above ground. If a suitable permanent access is not available, a well-designed, erected, inspected and maintained scaffold will provide a safe means of access and safe working areas. Additionally, safe access to scaffold work platforms by ladder must be provided. All scaffoldings shall be constructed in accordance with B.S 5973 Code of Practice for Access and Working Scaffolds and Special Scaffold Structures in Steel or its equivalent.

All scaffolding materials and components shall be as follows:

- a. Scaffold tubes All tubes must be galvanized steel 48.3mm OD and wall thickness 4mm comply to BS 1139 Part 1, 1982 and free from cracks, splits or excessive corrosion and straight. Black steel or aluminum scaffold not allowed in offshore.
- b. Coupling and fittings They must be of sound construction, comply with BS 1139, Part 2. Do not mix tubular and fittings of different standards.
- c. Board or decking All timber scaffold boards shall meet the international standards.
- d. Ladders (If Applicable) Ladders shall meet BS 1129:1982.
- e. Frame or tubular scaffold Only proprietary steel frame or tubular scaffold of sound design and construction are allowed as per manufacturer specification.
- f. Inspection (If Applicable) A scaffold inspector shall inspect all scaffold material. Any scaffold above 40 meters must be designed and endorsed by a professional structural engineer and forward to DOSH.
- g. Erection Scaffolds must only be erected, altered or dismantled by competent scaffolder under supervision of a charge and scaffolder. All inspection of any scaffold shall be done by a scaffold inspector.

21.2.19. Camp Site

The Contractor shall construct and operate the camp in accordance to the following requirements:

- Air-condition rooms
- Electrical equipment and wiring to safety standard
- Smoking in bedrooms prohibited
- All fuel lines are properly connected
- Smoke detectors in rooms
- Fire extinguishers at strategic locations
- Evacuation procedures posted

21.2.20. Office

The Contractor shall maintain comfortable working condition in office as follows:

- Temp 20-26 deg C
- Humidity 40-60%
- Adequate ventilation
- No smoking policy
- Photo copy placed away from personnel work stations
- Adequate lighting comfortable to the eyes at 400 lux
- Recommend white ceiling
- Colorful posters/picture on walls
- Office space at 6.25 sq. m per work station
- Welfare facilities e.g. toilet, eating area
- Cleaning daily
- Clear passage ways, remove tripping hazards
- Emergency plans for evacuation
- Ensure car park well-lit and control of vehicle movement
- Office chairs with 5 wheels and adjustable seat height and back rest
- Reduce VDU screen glare
- Frequent breaks for key board operator
- Gentle stretching exercise before work and after lunch
- Keep first aid box

21.2.21. Storage/Warehouse

The Contractor shall ensure an acceptable means for storing of material, chemical and fuel on sites. The requirements for storing of materials shall also include the following:

- Construction material shall be stored at the designated on site location
- Written procedures on handling and disposal for all material must be made available
- Good housekeeping must be practiced at all storage sites
- Storage areas must be located away from vehicular traffic at areas
- Storage floors and bins shall be labeled and constructed to safely support the loads that are to be imposed upon them with a posted appropriate maximum safe load limits provided
- Storage buildings and warehouses must be provided with an approved lighting, well ventilated and constructed with a fire resistance or explosion proof facilities where appropriate for the chemicals or fuel stored.
- Welding, cutting or any other operations that create sparks must be prohibited inside a warehouse or near the flammable/combustible material storage yards
- Adequate number of fire extinguishers of appropriate type shall be made available at all storage areas and warehouses.
- All personnel shall wear approved hard hats while in storage areas.
- Flammable and combustible liquids shall be stored separately preferably in storage buildings
- Storage rooms shall be constructed to meet the required fire-resistant rating for their use
- Approved safety cans/cabinets shall be used to store and transfer flammable and combustible liquids, with the name of the material clearly stamped
- "No Smoking" signs shall be posted at storage areas involving flammable and combustible liquids

21.2.22. Explosives

The Contractor shall ensure that every reasonable precaution will be taken to ensure that Contractor's personnel dealing with the explosives observe recognized industry regulations in the correct transportation, storage and usage of explosives. Similar precautions must be exercised when dealing with other potentially hazardous sources e.g. flammable substances. The Contractor

shall obtain all relevant permits and comply with the regulatory requirements for the use of explosives.

21.2.23. Transportation

Whether by land, sea or air, the Contractor is obliged to follow recognized industry guidelines for the safe transport of personnel and equipment.

21.2.24. Lifting

All cranes supplied by the Contractor shall be tested before going into service and witnessed by the Engineer and a competent person. All associated lifting equipment shall be inspected. The Contractor shall maintain cranes in a safe condition and make repair or replace unsafe crane for works. Should there be any doubt to the safety of the crane, the Contractor may be required to perform load test at the Contractor's cost. A colour coding shall be used to identify inspected lifting appliance. The Contractor shall seek approval from the Engineer on any heavy lifting of 15 tons and above. The Contractor is responsible for ensuring that a competent, authorised worker operates any lifting device and that a signaller is designated to signal the operator as necessary to properly place and control the loads. Prior to performing any lift, the operator shall determine the weight of the object being lifted and ensure that cables, lifting device and any slings, wire rope, chains etc used in the lift are of a sufficient strength to support the weight of the load. No worker shall be allowed under the load. Tag lines must be used to guide and control the load where excessive movement is possible. A competent worker shall inspect all wire rope, chains, and slings prior to performing any lift. Record of inspection shall be kept for the Engineer's review. During winch or tow, all personnel must be clear of the 'whip area' of cable under tension

21.2.25. Heavy Machinery

All Contractor's vehicles on any worksite must have proper insurance, be in safe operating condition. They must be operated by a competent, properly licensed operator. It shall be operated in a safe manner and a speed suited to the terrain and weather condition. All cranes, stringing trucks, heavy and tracked equipment and machinery, welding rigs and all vehicles except passenger vehicles must be fitted with reverse alarms. Any vehicle with restricted vision shall not operate in the vicinity of workers, except under the direction of a designated worker who is in a position to see that the way is clear and safe.

21.2.26. Security

The Contractor shall provide adequate number of security personnel and security measures to safeguard the worksite from any threat, damage or theft of properties. The Contractor's security personnel shall be equipped with communication equipment and able to contact police and other emergency units as required. The Contractor shall provide shelter, facilities and amenities to enable such functions or duties to be performed properly and to the satisfaction of safety officer.

21.2.27. Drugs and Alcohol

The use, sale, dispensing or possession of drugs, narcotics and alcoholic beverages is prohibited on the location and at any place where the work is performed

The Contractor shall ensure that its personnel do not at any time, during the performance of the work, partake, brought onto the worksite, or be under the influence of any alcoholic liquor, drug or other intoxicating substance. This prohibition also covers all legal or prescription drug which may impair an employee's ability to perform his job safely. Employees who are caught using or in possession of drugs, on the job site shall be discharged. The Employer reserves the right to

randomly require the Contractor's employee, to undergo drug test at any time. Drugs test may be used in the event of accident investigation. The Contractor undertakes that each and every person engaged by it or on its behalf to perform any element of the work (including Sub-Contractor) shall be advised of the local laws relating to the importation and/ or possession of drugs.

21.2.28. Statistics Board

The Contractor is required to install a Loss Production Scoreboard to highlight achievement/milestone for safe working hours of employees. The Contractor shall install the above at each site office. The Loss Production Scoreboard shall be of acceptable material and shall contain the following information as a minimum (in English and Urdu):

Name of CONTRACTOR_____

Date Start of Work.

Safety Target without LTA (Manhours, Year)____

Best Record Achieved (Manhours, Year)____

Current Manhours Achieved (Manhours, Year)____

Date of Last Loss Time Accident _____

Total Number of Loss Time Accidents_____

All lettering in the Safety Scoreboard shall be of suitable sizes and shall be visible from at least 10 meters distance.

21.2.29. Safety Induction

The Contractor shall implement a safety induction for the site. The Contractor shall identify its employees who will be required to attend the safety induction program. The induction briefing shall be applicable to all employees and subcontractor's employees. Briefing shall be done at site prior to the commencing of the construction activities. Each worker who has attended and completed the safety induction program shall be issued with a sticker to indicate that he has completed the safety induction course. The sticker shall be displayed on the safety hat and worn at site.

21.2.30. Toolbox HSE Meeting The Contractor shall ensure that his appointed works supervisor hold 'tool box' safety meeting for about 5-10 minutes daily or prior to each shift. Specific topics shall include hazards relevant to current work, review of accidents and near misses and deficiencies and any new equipment or machinery. The Contractor shall maintain records of attendance and submit to the Engineer as and when required.

21.2.31. HSE Meetings

The Contractor shall form a Safety Committee at work site and shall hold regular meetings, minimum monthly to create and maintain an active interest in safety. The meeting shall be attended by the Contractor management and workers representatives and chaired by the Engineer's Representative. Minutes of meeting shall be distributed to all attendees.

21.2.32. Working at Height

When working at height more than 7.5 meters, the Contractor shall provide suitable safety nets, which extends 2.5 meters beyond the edge of work level. The nets shall be sufficiently anchored using steel hooks or shackle. The net shall be inspected daily. If nets are impractical, the Contractor shall provide to the workers fall protection devices such as belts, harness etc. Fall protection is required when working above 3 meters. Personnel using fall protection shall be instructed on its use.

21.2.33. Air hose

Air hose should not be used to clean any part of the body or clothing or use to blow off dirt on the floor. 2

1.2.34. Safety Inspection/Audits

Prior to commencement of works, the Contractor is required to inspect the worksite and equipment involved to ensure that works will be performed under safe conditions. In addition, the Contractor shall maintain and perform continuous safety inspection throughout the works and shall promptly implement all recommendations made pursuant to the said inspection. The Employer/Engineer shall have the right to conduct its own safety audit/Inspection at the worksite. The Contractor shall comply with all recommendations arising from such audit/Inspection.

21.2.35. Safety Performance Target

The Contractor shall implement and establish a safety management award program to recognize the achievement and milestone for safe working performance for its employees. 21.2.36. Abrasive Wheels The Contractor shall ensure that safety protection in the form of goggles and /or shields are provided and utilized by the personnel working with grinding machines and abrasive wheels. When changing discs on a portable grinder it is imperative that a suitable replacement disc is fitted and placed in the correct manner. The Contractor shall ensure only trained and competent personnel are permitted to carry out this task.

21.2.37. CONTRACTOR HSE Performance Reports

The Contractor shall compile and maintain HSE performance records pertaining to its work. These records shall be updated and submitted to the Engineer's representative monthly or as and when required.

21.2.38. CONTRACTOR Training Records

The Contractor shall provide adequate training to all its personnel to ensure that they have sufficient knowledge and skill to undertake assigned tasks. The Contractor's training records shall be maintained and controlled.

21.2.39. Job Safety Analysis (JSA)

Prior to performance of works, the Contractor shall implement JSA as a safety precaution to eliminate or guard against hazards on a specified job. The JSA methodology shall include the following:

- Study the job and develop basic job steps
- Identify the hazards on each job step
- Identify the safety precautions to be taken against each job step
- Record the JSA and inform all workers of the hazards and precautions to be taken.

21.2.40. Incident Notifications and Investigation

The Contractor shall develop an accident/incident reporting system. Any hazardous incident involving the Employer, the Engineer, the Contractor's or any third-party personnel, plant or equipment, shall be immediately reported to the Engineer, irrespective of whether there is injury to personnel or damage to plant or equipment. All incidents that result in or have the potential to cause serious injuries or property damage must be suitably investigated by the Contractor and reported to the Engineer. The Contractor shall keep a copy of the report at site. The Contractor is required to investigate and report major accident to the concerned government department in accordance with the regulatory requirements. The investigation and report shall not preclude any

similar investigations and reports required by the governmental authority in accordance with any relevant laws and regulations and maybe handled concurrently with them. Upon completion of the work under the contract and/or on an annual basis, whichever is more frequent, the Contractor shall prepare a summary report of its HSE performance together with an accident statistic.

21.2.41. Use of Public Road

The Contractor shall keep public roads free from its debris due to vehicle movement to and from site. The Contractor shall provide washing facilities at site to clean vehicle tyres. In the event of spillage onto the road, the Contractor shall undertake the cleaning at its own cost.

1	Safety Glasses	<p>Frame: Wide vision, clear plastic eye shield with side protection which can be worn over spectacles</p> <p>Lenses: Clear polycarbonate affording BS2092 Grade 2 impact protection</p> <p>Marking: all eye shields shall be appropriately and distinctly stamped with the authentic trademarks of the Manufacturer's monogram and standards.</p> <p>Accessories: Neck strap only</p> <p>Certificate: Manufacture's Certificate of compliance to standards.</p> <p>ANSI Z 87.1-1979 ANSI ZZ 87.1-1979 AS 1337-1981 BS 2092, BS1542, BS679, DIN 4646/58211</p>
2	Safety Shoes For general use	<p>Hazard control: Crush from heavy objects (steel toe), Cuts and Puncture, Slip (oil resistant sole), Trip & Fall and Electrocution.</p> <p>ANSI Z 41.1-1967 AS 2210 EN 345</p>
	For chemical use	<p>Hazard control: Crush from heavy objects(steel toe), Slip(oil resistant sole), Trip & Fall and Chemical contact BS 1870/3 , DIN 4843</p>
3.	Coverall	<p>One-piece coverall, Long Sleeve. Flame/fire retardant material Nomex III A (DuPont Product)</p> <p>Weight : min 150 gm/m²</p> <p>Colour : Dark Green</p>
4.	Hand Protection Cotton Glove Leather Cotton Glove PVC Glove	<p>All types of gloves, cotton, leather or PVC conforming to BS 1651 are acceptable.</p> <p>Knitted Cuffs, palm, thumb and forefinger with anti-slip, PVC Dots. Overall length 250mm</p> <p>Cotton drill knitted cuffs with chrome leather palm. Overall length 250mm</p> <p>PVC over knit cotton interlock standard weight and smooth surface. Length 400 mm.</p>
5.	Hearing Protection	Adjustable all-purpose headbands

	<p>Ear muff</p> <p>Era muff on helmet</p> <p>Ear plug/insert</p>	<p>BS 6344, ANSI S 3.19</p> <p>Adjustable BS 6344, ANSI S 3.19</p> <p>Expandable Foam, Non -toxic and Nonirritant</p> <p>ANSI Z 24.22 ANSI s 3.19-74 BS 5108, ISO 4869</p>
6.	Head Protection	<p>Peak type, Chemical resistance complete with hot press branding adjustable headband, Clip and Elastic chin straps</p> <p>Material: ABS (Acrylic Butadiene Styrene Added with Nitrile)</p> <p>ANSI Z 89.2-71, ANSI Z 89.1-86 class B, AS 1808-81, BS 5240, DIN 4840</p>
7.	<p>Eye/face Protection Chemical splash goggle</p> <p>Face shield</p> <p>Welding goggles</p>	<p>Goggles with hooded ventilation - 2 (face shield (9) in combination with safety glasses - 4, 5)</p> <p>ANSI Z87.1-68</p> <p>Face shield Goggles or Safety glasses - 1,3, 4, 5 (for severe exposure face shield – 9)</p> <p>ANSI Z 89.1</p> <p>Welding goggles with tinted lenses 6, 7, 8 (for severe exposure face shield - 9)</p> <p>ANSI Z 87.1-68, ANSI Z 87.1-79</p>
8.	Safety Harness/lifebelt	<p>The harnesses shall be constructed of shock-absorbing material e.g. Webbing manufactured from synthetic fiber. Similar, safety lanyards shall also be of synthetic fibers e.g. Polyamide, nylon or polyester.</p> <p>To reduce possible injuries to the users from decelerating forces, safety harnesses, the leg and shoulder load-carrying straps at least 38mm (1.5 inches) wide.</p> <p>Each safety harness must be provided with one or more Drings suitably positioned for attachment to a safety lanyard. They shall withstand a 5000 lb (2300 kg) force without breaking or cracking. Buckles should be of a universal-friction type. Harnesses with load-bearing single-insertion type buckles are not permitted. Snap hooks for safety lanyards shall be of the self-closing type and shall be designed so that disengagement of each of the latches requires a deliberate action. All harnesses and safety lanyards shall carry test certificates or certificates of compliance to the standards to which they are manufactured. Two types of safety harnesses are recommended, and they are classified according to their intended use:- Chest Harness - Class II Body Harness - Class III AS1891, BS1397, MS707, LS 954-lanyard</p>
9	Personal floatation	It is intended as an aid to turn an unconscious person in

	Devices(PFD's) Life Jacket Work Vest	the water from a face down position to a vertical and slightly backward position which greatly increases the chance of survival. Type 1 PFD USGC(US Coast Guard) It is intended as an aid to floatation should the wearer fall into the water. Type V PFD USGC(US Coast Guard)
10.	Breathing Apparatus B	BS 4667, NIOSH
11.	Self-contained Breathing Apparatus	NIOSH, ANSI, AS, BS
12.	Other Respirator for protection from dust, vapors, etc.	BS 2091, NIOSH, EN 149
13.	Fire Fighting Suits	NFPA 1971, NBSIR 75, US OSHA CFR 1010 VOL 45

21.3. MEASUREMENT AND PAYMENT

The work under this SP-21 (Health & Safety) shall neither be measured nor be paid separately. The cost incurred in this respect shall be deemed to have been included in other items of work. In case of failure of the contractor to comply with all or any provision(s) of this SP-21, the damage(s) caused shall be attributable towards the Contractor, and the Engineer shall assess the amount of such damage(s) which shall be deducted from the monies due or to become due to the Contractor.