

BIDDING DOCUMENTS

FOR

**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY
PACKAGE 1 - SEWERAGE SYSTEM**



**Local Government &
Community Development
Government of the Punjab**

February 2024

MC OKARA

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INVITATION FOR BIDS

TENDER NOTICE

Municipal Committee, Okara (MC Okara) (hereinafter referred to as the “client”), invites the sealed bids from Contractors / firms / Manufacturer / Authorized dealers registered with **FBR & PRA (NTN and PNTN)**. The scope of work is as under:

S. #	Description	Estimated Cost (Rs.)	Bid Security (Rs.)	PEC Category and Specialization	Date and time of closing	Date and time of opening
COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY						
1	Package 1- Sewerage System	922,094,999	18,441,891	C2 & Above with CE-09	27.02.2024 10:00 A.M	27.02.2024 10:30 A.M
2	Package 2 - Construction of Waste Water Treatment Plant	704,296,999	14,085,940	C2 & Above with CE-09	27.02.2024 11:30 A.M	27.02.2024 12:00 P.M
3	Package 3 – Supply of Liquid waste Machinery	44,323,999	886,480	Not Applicable, STRN is Applicable	27.02.2024 1:00 P.M	27.02.2024 1:30 P.M
4	Package 4 – Providing and Fixing of RPC Manhole Cover	14,372,322	287,446	Not Applicable, STRN is Applicable	27.02.2024 02:30 P.M	27.02.2024 03:00 P.M

2. Each applicant may apply in one or all projects by rendering a separate request for every project and submission of unique / non-identical requisites against each project, required in bidding documents. (Same working experience, financial soundness and other resources for all projects will not be acceptable).

3. The bidding documents are available immediately after publication (2014 Punjab Procurement Rule 25(1)) at the office of **Municipal Officer (I&S), Municipal Committee Okara** and a complete set of Bidding Documents can be obtained on submission of written application along with deposited slip of Bank of Punjab in the favour of Municipal Committee Okara for Rs.10,000/- (non-refundable fee) for every project. Bidding documents shall be issued to owner of the firm by showing original CNIC and / or to Authorized representative of firm having authority letter with specimen signature of representative of firm along with original CNIC.

4. Single stage two envelopes bidding procedure will be adopted. The Bids (**Technical & Financial**) prepared in accordance with the instructions given in the Bidding Documents must be accompanied by a Bid Security **given above** in shape of CDR / Bank Guarantee from any Scheduled Bank in Pakistan in the name of the Chief Officer, Municipal Committee Okara. Last date for purchase of bidding documents is **26-02-2024**. The Bids (**Technical & Financial**) must be delivered in the office of Chief Officer, Municipal Committee Okara. The Technical bids will be opened on **27-02-2024** in presence of the bidder / bidder's representatives who choose to present.

5. Only technically responsive bidder(s) will be qualified for opening of financial bid(s). Financial bid(s) of bidder(s) found technically nonresponsive shall be returned unopened to the bidder(s).

6. The procuring Authority may reject all bids or proposals at any time prior to the acceptance of a bid or proposal under Punjab Procurement Rules 2014 (**Rule-35**).

7. Conditional tender will not be accepted.

8. Tendered rates and amount should be filled in figures as well as in words and tenders should be signed as per general directions given in the tender documents.

9. In case the total tendered amount is equal to or less than 5% of the approved estimated (DNIT) amount, the lowest bidder will have to deposit quality assurance security equal to the amount difference between approved DNIT amount and the quoted bid amount from

the Scheduled Bank within 15 days of issuance of notice or within expiry period of bid, whichever is earlier.

10. The bids will be valid for 120 days.

11. In case, the last date of bid submission falls in / within the official holiday(s), the last date for submission of the bids shall be the next working day.

12. A pre-bid meeting will be held on **Feb 15, 2024** at **11:00 AM, 12:00 PM, 1:00 PM and 2:00 PM**, or any other date and time which may separately be notified by the Client to clarify any queries and to answer any questions on matters related to the bidding documents.

**Chief Officer
Municipal Committee
Okara**

**Administrator
Municipal Committee
Okara**

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid

The Client “Chief Officer MC Okara” intends “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE 1 - SEWERAGE SYSTEM**”

Identification and number of Contract is: _____

IB.2 Source of Funds

2.1 The Source of fund is mentioned in bidding data.

IB.3 Eligible Bidders

3.1 The bidder (Firm/ Joint Venture) must fulfill the basic eligibility criteria as per Appendix – M to Bid.

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 Bidder 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 would be free to visit site for the purpose of such inspection, but only upon the express condition that the Bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BID DOCUMENTS

IB.7 Documents Comprising the Bid

7.1 The Bid Documents are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.

1. Instructions to Bidders
2. Bidding Data Sheet
3. Special Stipulations

4. Form of Bid & Appendices to Bid
5. Bill of Quantities (Appendix-D to Bid)
6. Form of Bid Security
7. Form of Contract Agreement
8. Forms of Performance Guarantee and Mobilization Advance Guarantee and Form of Indemnity Bond for Secured Advance
9. Special Provisions
10. Environmental and Social Management and Monitoring Plan

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 Bidders own risk. Pursuant to Clause IB.26, Bids which are not substantially responsive to the requirements of the Bid Documents will be rejected.

IB.8 Clarification of Bid 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 7 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 Bid 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 Bid Documents by issuing addendum.

9.2 Any addendum thus issued shall be part of the Bid Documents pursuant to IB 7.1 hereof and shall be communicated in writing to all purchasers of the Bid Documents. Prospective Bidders shall acknowledge receipt of each addendum in writing to the Employer.

9.3 To give 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

10.1 The Bid and all correspondence and documents related to the Bid exchanged by a Bidder and the Employer shall be in the bid language stipulated in the Bidding Data Sheet and conditions of Particular Application. 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 English language, in which case, for purposes of evaluation of the Bid, the English translation shall prevail.

IB.11 Documents Accompanying the Bid

11.1 The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid and the other the Financial Bid, containing the documents listed in Bidding Data Sheet under the heading of IB 11.1 A & B respectively. Both envelopes to be enclosed together in an outer single envelope called the Bid. Each bidder shall furnish all the documents as specified in Bidding Data Sheet 11.1 A& B

11.2 Bids submitted by a JV shall include a copy of the Joint Venture Agreement (in line with PEC JV modalities) entered into by all partners. 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 line with PEC JV modalities). The role to be played by each partner to be specified therein. Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements: -

- (a) In case of a successful bid, the Form of JV Agreement shall be signed so as to be legally binding on all partners within 7 days of the receipt of letter of acceptance failing which the contract and the letter of acceptance shall stand void and redundant.
- (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 JV Agreement 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 JV Agreement (in case of a successful bid); and
- (e) A copy of JV agreement shall be submitted before signing of the Contract, stating the conditions under which JV 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. The JV Agreement shall be made part of the contract. 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 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 Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time referred to in Sub-Clause 1.2 hereof.

IB.12 Bid Prices

12.1 Unless stated otherwise in the Bid Documents, the Contract shall be for the whole of the Works as described in IB 1.1 hereof, based on the unit rates and / or prices submitted by the Bidder.

12.2 The Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a Bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.

12.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, throughout the duration of the Contract except PRA, shall be included in the rates and prices and the total Bid Price submitted by a bidder.

IB.13 Currencies of Bid and Payment

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

IB.14 Bid Validity

14.1 Bids shall remain valid for the period stipulated in the Bidding Data Sheet after the Date of Bid Opening specified in sub-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 or 180 days whichever is more. 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 Sheet in Pak Rupees.

15.2 The Bid Security shall be, at the option of the bidder, in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan 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/Earnest money shall be rejected by the Employer as non-responsive.

15.4 The Bid security of unsuccessful bidder will be returned by adopting the following mechanism:

- a) Written request certifying that bidder has no objection or grievance against the Procurement process.
- b) Time for grievance period as provided by Punjab Procurement Rules-2014 has expired.
- c) If he filed a grievance and same is dismissed by the Grievance Committee.

15.5 The Bid Security of the successful Bidder will be returned when the Bidder has furnished the required Performance Guarantee and signed the Agreement.

15.6 The Bid Security may be forfeited:

- (a) If the bidder withdraws his bid except as provided in IB 22.1;
- (b) If the Bidder does not accept the correction of his Bid Price pursuant to IB 27.2 hereof; or
- (c) In the case of successful Bidder, if he fails within the specified time limit to:
 - (i) Furnish the required Performance Guarantee, or
 - (ii) Sign the Agreement.
 - (iii) Furnish the required JV agreement within 7-days of the receipt of letter of acceptance.

IB.16 Alternate Proposals by Bidder

Not Applicable

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 Bid Documents. The date, time and venue of pre-bid meeting, if convened, is as stipulated in the Bidding Data Sheet. All prospective Bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 17.2 The Bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than one week before the proposed pre-bid meeting.
- 17.3 Minutes of the pre-bid meeting in shape of response to queries or suggestions of the bidders, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bid documents. Any modification of the Bid documents listed in IB 7.1 hereof which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a Bidder.
- 17.5 All the concerned teams of client and consultant including Environmental and Social Management Team will be present to attend the queries / questions / clarifications of the bidders.

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 Bid 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 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 in the Bidding Data Sheet 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.
- 18.6 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

- 18.7 Bidders shall indicate in the space provided in the Letter of Technical and Financial Bids, their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.
- 18.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS FOR SINGLE STAGE TWO ENVELOPE 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.
 - (c) The technical bid should comprise of documents listed in IB11.1 (A) & the Financial Bid should comprise of documents listed in IB 11.1 (B) which shall be placed in separate envelopes in accordance with IB 11.1.
- 19.2 The inner and outer envelopes shall;
- (a) Be addressed to the Employer at the address provided in the Bidding Data Sheet.
 - (b) Bear the name and identification number of the contract as defined in the Bidding Data Sheet, and;
 - (c) Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data Sheet.
- 19.3 In addition to the identification required in IB 19.2 hereof, the inner envelope shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared "late" pursuant to Clause IB.21
- 19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

IB.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 Sheet
- (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the Bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of Bids. No claims will be entertained for refund of such expenses.
 - (c) Where delivery of a Bid is by mail and the Bidder wishes to receive an acknowledgment of receipt of such Bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed Bid package.

- (d) Upon request, acknowledgment of receipt of Bids will be provided to those making delivery in person or by messenger.

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

IB.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 and Withdrawal of Bids

22.1 Any Bidder may modify or withdraw his Bid after Bid submission provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of Bidders.

22.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.

22.3 No Bid may be modified by a Bidder after the deadline for submission of Bids except in accordance with IB 22.1 and 27.2.

22.4 Withdrawal of a Bid during the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified in the Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.15.

E. BID OPENING AND EVALUATION SINGLE STAGE TWO ENVELOPE PROCEDURE

IB.23 Bid Opening

23.1 The Employer will open the Technical Bids in public at the address, date and time specified in the Bidding Data Sheet in the presence of Bidders' designated representatives and anyone who choose to attend. The Financial Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening.

23.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out at bid opening.

23.3 Second, outer envelopes marked "SUBSTITUTION" shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Financial Bid shall be

exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Financial Bid will remain unopened in accordance with IB .23.1. No envelope shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening

- 23.4 Next, outer envelopes marked “MODIFICATION” shall be opened. No Technical Bid and/or Financial Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Financial Bids, both Original and Modification, will remain unopened in accordance with IB 23.1. The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 23.5 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 IB21.1. Only Technical Bids read out and recorded at bid opening, shall be considered for evaluation

- 23.6 Pre-liminary Examination of Technical Bids
- (a) 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 Financial Bids. The date, time, and location of the opening of Financial Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Financial 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 Financial Bids unopened before inviting others, who are determined as being qualified, to attend the opening of Financial Bids.

23.10 The Employer shall conduct the opening of Financial Bids of all Bidders who submitted substantially responsive Technical Bids, publicly 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 Financial 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 Financial Bids and discounts, read out and recorded during the opening of Financial Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Financial 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 ten (10) 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; (iv) Includes signed Integrity Pact where required as per clause IB.35 and (v) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Only substantially responsive bid shall be considered for further evaluation.
- 26.3 If a bid is not substantially responsive, it may not subsequently be made responsive by correction or withdrawal of the non-conforming material deviation or reservation. The Employer may, however, seek confirmation/ clarification in writing or by email which shall be responded accordingly.

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

IB.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.
 - (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 imbalanced 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 Guarantee set forth in 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 IB 29.2.
- 29.2 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in Bidder's capacities, may require the bidders to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

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

IB.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, the lowest evaluated bidder may further reduce the Bid Price voluntarily without compromising the quality/ quantity.

- 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 Guarantee, the Employer will promptly notify the other bidders that their Bids have been unsuccessful. No bid security can be returned without exhausting the grievance period or without finally disposing off the complaint of the non-responsive bidder. However, bid security may be returned earlier if any bidder submits affidavit that he is satisfied with the proceedings and hence his bid security may be returned.

IB.32 Performance Guarantee

- 32.1 The successful bidder shall furnish to the Employer a Performance Guarantee in the form and the amount stipulated in the Bidding Data Sheet and the Conditions of Contract within a period of 15 days after the receipt of Letter of Acceptance.
- 32.2 Failure of the successful bidder to comply with the requirements of IB.32.1 or IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.33 Signing of Agreement

- 33.1 Upon furnishing of acceptable Performance Guarantee under the Conditions of Contract, formal Agreement between the Employer and the successful bidder shall be executed.

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, inter-alia, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

The Successful Contractor/Joint Venture shall comply with and acquire all consents, approvals, permits and licenses applicable under the laws of Pakistan in relation to the performance of the work & services.

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 / Provincial 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

Submission of bids shall be construed as evidence that the bidder has admitted all provisions of the instruction to the bidder.

IB.37 PPRA Act, 2009 and PPR-14 will have over-riding effect

PPRA Act, 2009 and PPR-14 as amended upto date will supersede and will have an over-riding effect in case in case of any contradiction with these Instructions, the Contract, or any other part of the Bidding Documents.

BIDDING DATA SHEET

BIDDING DATA SHEET

The following specific data for the Works 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

Clause IB-1:

Sub-Clause: 1.1 Name and address of the Employer

Chief Officer,

Municipal Committee Okara

Email: info@mcokara.lgpunjab.org.pk

Phone: 044-9330011

Summary of Works

SN	Description
1.	Replacement of Sewer Lines
2.	Desilting of Existing Sewer Lines
3.	New Sewer Lines and Manholes
4.	Construction of gully grating chambers and ventilating shafts and allied provisions
5.	Environmental & Social Management & Monitoring Plan (ESMMP) Cost

Clause IB-2: Source of Funds

Sub-Clause 2.1

The Project is funded by Government of the Punjab through World Bank.

Clause IB-10: Language of Bid

Sub-Clause 10.1

English

Clause IB-11: Documents Accompanying the Bid

Sub-Clause 11.1:

A) The Bidder shall submit with its Technical Bid the following documents:

(a) Letter of Technical Bid

(b) Bid Security

(IB.15)

(c) Written confirmation authorizing signatory of the bid to commit the Bidder.

(IB 18.5)

(d) Pending litigation information.

(e) Special Stipulations

Appendix-A

(f) Proposed Construction Schedule	Appendix-E
(g) Method of Performing the work	Appendix-F
(h) Availability of Critical Equipment	Appendix-G
(i) Construction Camp and Housing Facilities	Appendix-H
(j) List of Sub-Contractor	Appendix-I
(k) Organization Chart for Supervisory Staff	Appendix-K
(l) Integrity Pact	Appendix-L
(m) Eligibility Criteria	Appendix-M
(n) Qualification Criteria	Appendix-N

B) The Bidder shall submit with its Financial Bid the following documents:

(o) Letter of Financial Bid	
(p) Bid Security	
(q) Bill of Quantities	Appendix-D
(r) Estimate Progress Payment	Appendix-J

Clause IB-13: Currency of Bid and Payment:

Sub-Clause 13.1

The unit rates and the prices shall be quoted by the Bidder entirely in Pakistani Rupees and likewise payments will also be made entirely in Pakistani Rupees.

Clause IB-14 Bid Validity:

Sub-Clause 14.1 Period of Bid Validity

120 Days

Clause IB-15 Bid Security

2% of the Estimated Cost of Rs. 922,094,999/- i.e (18,441,891/-)

The bids must be accompanied with Bid Security for the Project in the form of CDR/Bank Guarantee of amount Specified above in the name of the undersigned from a Scheduled Bank of Pakistan. No bid security in cash will be accepted. **Bid security should be attached with the technical bid, otherwise the bid will not be taken into account for evaluation and it will be rejected straight forward.**

Clause IB-16 Alternate Proposals by Bidders

NOT APPLICABLE

Clause IB-17 Pre-Bid Meeting

The pre bid meeting with bidders and their authorize representatives will be held on **Feb 15, 2024** at **11:00 AM** in the office of Chief Officer, Municipal Committee Okara or in any other office specified by Client to clarify the issues and to answer any questions on matters related to bid documents

Clause IB-18 Format and Signing of Bid

Sub-Clause 18.4 Format and Signing of Bid

One Original & Three Copies (Two hard and one electronic in USB/DVD) of **Technical Bid** whereas One original and Two copies for **Financial Bid**.

Clause IB-19 Sealing and Making of Bid

Sub-Clause 19.2 (a) Employer's address for the purpose of Bid Submission is as follows:-

Municipal Committee Okara
Email: info@mcokara.lgpunjab.org.pk
Phone: 044-9330011

19.2 (b) Name and Number of the Contract is as follows: -

Contract No. _____

Clause IB-20 Deadline for submission of Bid:

Sub-Clause 20.1 (a)

Venue: Chief Officer, Municipal Committee Okara
Time: 10.00 AM,
Date: February 27th, 2024

Clause IB-23 Bid Opening:

Sub-Clause 23.1 (a) Venue, Time and Date of Bid Opening

Venue: Chief Officer, Municipal Committee Okara
Time: 10:30 AM
Date: February 27th, 2024

Clause IB-32 Performance Guarantee:

Sub-Clause 32.1

Delete the text sub-clause 32.1 and substitute with the following: -

The Performance Guarantee shall be 05% of **Contract Amount** (work being greater than 50 Million) mentioned in the Letter of Acceptance on the prescribed form [PS-1] in shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.

Add at the end of **Sub-Clause 32.2:**

Next lowest Bidder

In the event, the Performance Guarantee is not provided by the lowest bidder, and the award is annulled, the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and technically accepted and is determined by the Employer to be qualified to perform the Contract satisfactorily.

Clause IB-36 Instructions not part of Contract:

Fraud and Corrupt Practices:

Bidders and their sub-contractors under contracts must observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Employer:

- a) Defines, for the purposes of this provision, the terms set forth below are defined as follows:

- “Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party.
 - “Fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation
 - “Coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - “Collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.
 - “obstructive practice” means (a) deliberately destroying· falsifying· altering· or concealing of evidence material to an investigation by the Employer; making false statements to investigators in order to materially impede an investigation by the Employer; (c) failing to comply with requests to provide information· documents· or records in connection with an office of Anticorruption investigation; (d) threatening· harassing· or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (e) materially impeding the Employer’s contractual rights of audit or access to information
 - “Integrity violation” is any act which violates the Government’s Anticorruption Policy· including (i) to (v) above and the following: abuse, conflict of interest· violations of the Government sanctions, retaliation against whistleblowers or witnesses· and other violations of the Government’s Anticorruption Policy including failure to adhere to the highest ethical standard.
- b) will reject any Bid/proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
- c) will cancel the contract if it determines at any time that its representatives or those of the Bidder were engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the selection process or the execution of the Contract; and
- d) will sanction bidders or its successor including declaring ineligible, either indefinitely or for a stated period of time, to participate in bidding activities in Pakistan if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing Contract
- e) Will have the right to require that consultants permit the Government or its appointed agent to inspect their accounts and records and other documents relating to the submission of proposals and contract performance and to have them audited by auditors appointed by the government.

**FORM OF BID
AND
APPENDICES TO BID**

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;

We offer to execute and complete in conformity with the Bidding Documents the following Works:
"COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-1 SEWERAGE SYSTEM"

- (a) Our Bid consisting of the Technical Bid and the Financial Bid shall be valid for a period of 120 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;
(b) 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) 30 days beyond validity of Bid itself.
(c) 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).
(d) 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.....

Letter of Financial 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) The total price of our Bid, excluding any discounts offered in item (c) below is:

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

(d) Our Bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(e) If our Bid is accepted, we commit to obtain a Performance Guarantee and Quality Assurance Security in accordance with the Bidding Documents;

(f) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.

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

(h) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.

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

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Address.....

SPECIAL STIPULATIONS**Clause****Conditions of Contract**

1.	The Engineer's (Consultant) Authority to issue Variation in emergency	2% of the Contract Price stated in the Letter of Acceptance with the written approval of client.
2.	Law applicable	The relevant laws applied in the Province of Punjab.
3.	Amount of Performance Guarantee	The Performance Guarantee shall be 05% of Contract Amount mentioned in the Letter of Acceptance on the prescribed form [PS-1] in the shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.
4.	Time for Furnishing Work Programme	Within 14 days from the date of receipt of Letter of Acceptance.
5.	Minimum amount of Third-Party Insurance	The amount of insurance taken out by the Contractor per occurrence with number of occurrences unlimited shall be as follows: a. Bodily injury (any one person) PKR 0.5 (Half Million (Max)) b. Fatal Case (any one person) PKR 01 (one million (Minimum)) c. Property Damages Depending upon nature of loss (100% of the Damage)
6.	Time for Commencement	Within 7 days from the date of receipt of Engineer's Notice to Commence which shall be issued within 14 days after signing of Contract Agreement.
7.	Time for Completion	09 Months from the date of Commencement of the Project.
8.	a) Amount of Liquidated Damages	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.
	b) Amount of Bonus for early completion	Not Applicable.
9.	Defects Liability Period	365 days from the effective date of Taking Over Certificate.
10.	Percentage of Retention Money	10 % on the amount of work done up to Rs. 5 million and 5 % on the amount of work done beyond 5 million
11.	Limit of Retention Money	05% of Contract Price stated in the Letter of Acceptance.
12.	Minimum amount of Interim Payment Certificates (Running Bills)	Greater than PKR. Fifteen Million (15 Million) except last 2 IPC's
13.	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	30 days
14.	List of material	NOT USED
15.	Mobilization Advance (Interest Free)	Not Applicable

16	Environment, Health & Safety	Contractor will be bound to comply the Environmental & Social Management and Monitoring Plan (ESMMP) and Environmental Health Safety SOPs for Labor/Construction Workers including Women Workers to fulfill ESMMP safeguards compliance otherwise 1 % of contractual amount will be forfeited upon Engineer's report from last IPC
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Appendix-A1 to Bid

NAME OF ELIGIBLE COUNTRIES

All countries of the World with whom Islamic Republic of Pakistan has commercial trade relations.

FOREIGN CURRENCY REQUIREMENTS

NOT APPLICABLE

PRICE ADJUSTMENT

Price adjustment / variation for the materials specified by the Government of Punjab will be paid as per rates issued by Finance department Government of Punjab from time to time and in the line with Punjab Local Government works Rules.

BILL OF QUANTITIES**D. Preamble**

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract (in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the contract include all costs of contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the contract. Furthermore, all duties, taxes and other levies payable by the contractor under the contract, or for any other cause, as on the date 14 days prior to dead line for submission of Bids in case of ICB/NCB respectively, shall be included in the rates and prices and the total bid price submitted by the bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities and shall not be paid separately.
5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the works.
6. General directions and description of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the bidding documents shall be made before entering prices against each item in the priced Bill of Quantities.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance
8. Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to

be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend for approval one of them or as contractor for other than those manufacturers proposed in shape of submittal by contractor for someone else on equivalency basis.

9. The contractor will also provide the submittals of imported items as stated above. Pre-shipment inspection of the selected manufacturer's equipment will be carried out as per by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site.

10. Work program of level three must be submitted to Engineer/employer along with submittal.

BILL OF QUANTITIES
SUMMARY
ABSTRACT OF TENDER PRICE

Sr. No.	Description	Amount (Rs)
Part-A		
1	Replacement of Sewer Lines	N/A
2	Desilting of Existing Sewer Lines	
3	New Sewer Lines and Manholes	
4	Construction of gully grating chambers and ventilating shafts and allied provisions	
5	Environmental & Social Management & Monitoring Plan (ESMMP) Cost	
Total Amount (Rs)		N/A
Note: These rates are exclusive of PRA charges		

Note: All Provisional Sums are to be expended in whole or in part at the direction and discretion of the Engineer in-charge

PROPOSED CONSTRUCTION SCHEDULE

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 his Construction Schedule in the Bar Chart form 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 program 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 issue of Engineer’s Notice to Commence (Bidder to attach sheets as required for the specified form of Construction Schedule):

<u>Description</u>	<u>Time for Completion</u>
a) Whole Works	_____ days
b) Part-A	_____ days
c) Part-B	_____ days
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 at site of works, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for Storage, communications, security and other services to be used.
3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.
4. Quality control/ Quality assurance measures to be adopted including procedures to be followed for carrying out all tests required under specifications.
5. Production of Authorization from Original Equipment Manufacturer.
6. Pre-shipment inspection at the factory premises shall be carried out by an independent Third-Party Firm having specialization in the task and possess the relevant professionals of the field. Third Party Validation Firm (TPV) shall be engaged by the Chief Engineer / D.G. (O&M) if required. The expenses in this connection shall be borne by the Contractor.
7. The Contractor should submit appropriate plans detailing how they intend to coordinate the Works with the ongoing system so that the existing system is not disturbed in any manner, and how they will ensure that the necessary facilities are available to enable it.

Note

- The Bidder shall provide the methods for performing the work in such manner that the works falling under the Construction must be in compliance with the Technical Specifications. These shall form part of and be included at the relevant appendix in the respective Contracts.
- Import documents like bill of lading, custom clearance, Air-way bill, port of shipment etc. will be provided by the contractor to the consultant/employer for verification of imported plants & equipment prior to submit the bill invoice of the same.

Appendix-G to Bid

LIST OF MAJOR EQUIPMENT – RELATED ITEMS

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

LIST OF MAJOR EQUIPMENT

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 CAMPS 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 Tenderer 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 sub-contractors. In my/our opinion, the sub-contractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of sub-contractors, 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)	Sub-Contractor (With Complete Address)
1	2

ESTIMATED PROGRESS PAYMENTS

Note: Appendix – J duly filled by the Contractor should only be included in the **Financial Proposal/Financial Bid**.

Month	Amounts (Million Rs.)
1	2
1 st	
2 nd	
3 rd	
4 th	
5 th	
6 th	
Bid Price	

ORGANIZATION CHART
FOR THE
SUPERVISORY STAFF AND LABOUR

(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 owned or controlled by GoP through any 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 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 from GoP.

Name of Employer:.....

Name of Contractor:.....

Signature:.....

Signature:

Seal/Stamp.....

Seal/Stamp.....

Eligibility Criteria

The Bidders (Firm/ Joint Venture) fulfilling the following basic eligibility criteria shall only be considered for further evaluation. (Relevant documents to be attached):

- a) Duly licensed by the Pakistan Engineering Council (PEC) in the category **C2 & Above** with relevant code **CE-09**. In case of Joint Venture, the Lead partner must be registered in the category **C2 & Above** with the relevant code and the other member/s should at least have registration from PEC. No foreign Firm(s) is allowed to participate whether as Single entity or Lead member of JV.
- b) A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be non-Responsive. The bidder must submit affidavit with these points mentioned in the affidavit:
 - a. The firm has no conflict of interest with one or more parties in this Bidding process.
 - b. The firm is not associated or have been associated, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design and other documents to be used.
 - c. The firm doesn't have controlling shareholders in common with one or more parties in this Bidding process.
 - d. The firm hasn't received or have received any direct or indirect subsidy from one or more parties in this Bidding process.
 - e. The firm has not the same legal representative, as that of, one or more parties in this Bidding process, for purposes of this Bid.
 - f. The firm doesn't have a relationship with one or more parties in this Bidding process, directly or through common third parties, that puts it in a position to have access to information about or influence on the Bid of another Bidder or influence the decisions of the Procuring Agency regarding this Bidding process.
- c) Valid legal entity of the bidder / firm/ company e.g. Certificate of registration from SECP or registrar of firms etc.
- d) Certificate of registration with active Income Tax & active Sales Tax under Relevant Authority.
- e) Affidavit on Non-Judicial Stamp paper for No litigation OR submission of Litigation History of last 10 years.
- f) Affidavit declaring "Neither the firms nor its Directors, Stakeholders, as a whole or as a part of the firm have ever been black listed/ defaulted by any government agency / department / organization / Donors or settled dispute in plea bargain or Volunteer recovery".

Un-signed and un-stamped bids will be rejected.

Note: In case of Joint Venture, all the members have to meet in full the afore-mentioned basic eligibility criteria.

Qualification Criteria

Technical Evaluation will be based on the criteria given in succeeding paras regarding the Bidder's General Experience, Specific Experience, Personnel Capabilities and Equipment Capabilities as demonstrated by the Bidder's responses in the forms attached. The Procuring Agency reserves the right to waive minor deviations, if these don't materially affect the capability of a Bidder to perform the contract. Sub-contractor's experience and resources shall not be taken into account in determining the Bidder's compliance with the qualifying criteria. However, Joint Venture experience & resources shall be considered. Consortium or Association of Contractors will be considered for similar treatment as in case of Joint Venture. The detailed qualification criteria for Technical Evaluation is provided as follows:

Sr. No.	Category	Weightage/Marks
1.	Financial Soundness	30
2.	General & Relevant Experience	45
3.	Personnel Capabilities	15
4.	Equipment Capabilities	10
	Total:	100

The applicants must score total 65 marks and at least 50 % marks in each category, to qualify.

SUB CATEGORY A: FINANCIAL SOUNDNESS

For financial soundness, Letter from Banks and audited financial statements for *last five financial years shall be submitted. if Bank statement (In case of Cash), letter from Banks (In case of Credit Line) & audited financial statements of last five financial years are not attached, no consideration will be given to bidder.*

Sr. No.	Description	Maximum Marks
i)	<p>Available Cash / Bank Credit Line Limit (or combination of both)</p> <p>A= Available Cash/Bank Credit Line limit or combination of both (in PKR Million)</p> <p>(15 - Marks)</p>	<ul style="list-style-type: none"> ● Full Marks will be given if “A” is PKR 400 Million or above. ● For ‘A’ less than PKR 400 Million, marks will be awarded as: (A/400) *15 ● No Marks will be given if “A” is less than PKR 200 Million. <p><u>No marks shall be allotted if Bank statement (In case of Cash) & letter from Bank (In case of Credit Line as proof of Credit Line) is not attached.</u></p>
ii)	<p>Average Working Capital in last Five financial years.</p> <p>A= Average Working Capital in last five financial years (in PKR Million)</p> <p>(15 - Marks)</p>	<ul style="list-style-type: none"> ● Full Marks will be given if “A” is PKR 400 Million or above. ● For ‘A’ less than PKR 400 Million, marks will be awarded as: (A/400) *15 ● No Marks will be given if “A” is less than PKR 200 Million. <p><u>No marks shall be allotted if audited financial statements of last five financial years are not attached.</u></p>
	Sub-total:	30

SUB-CATEGORY B: EXPERIENCE RECORD

Bidder must meet following criteria for evaluation of the experience of the Firm/JV.

Sr. No.	Description	Max. Marks
i)	<p>Projects of General Nature completed over last 05 years.</p> <p>a. Max 03-projects having minimum cost Rs. 400 Million each.</p> <p>(General nature project includes buildings, roads, bridges water supply, water/sewerage treatment etc.)</p> <p>Each project having the above-said minimum cost bracket; will have equal marks. (i.e. 3*5=15)</p>	15
ii)	<p>Projects of similar nature and complexity</p> <p>a. Max 02-projects of Sewerage System and allied works having Min Cost Rs. 300 Million each (completed over last 05 years) (2*5=10)</p> <p>b. Max 02-projects of Sewerage System and allied works having Min Cost Rs. 300 Million each (in hand) (2*5=10)</p> <p>Each project having above-said minimum cost bracket; will have equal marks. (i.e. 4*5=20)</p>	20
iii)	<p>Any construction project with satisfactory completion certificates granted by the departments for the other projects enlisted at Sr. no. i & ii. (02-projects)</p>	10
	Sub-total:	45

SUB-CATEGORY C: PERSONNEL CAPABILITIES

The following key experts at a minimum shall be evaluated:

No personnel will be considered for evaluation if declaration of Professional Staff Employment & availability for this Project (**Form T11-12-13**) **duly signed by authorized signatory** is not attached. Bidder will also provide **affidavit of employee** on judicial stamp paper.

Bidders will submit the detailed particular of his experts considering that all staff **will serve at site full time during execution of works** In case bidder fails to appoint full time Project Manager at site, a penalty of PKR 100,000 will be imposed on monthly basis and in case bidder fails to appoint full time other supporting staff (all personnel or partly) mentioned below (other than Project Manager) at site, a penalty of Rs. 100,000/- will be imposed on monthly basis.

Sr. No.	Description	Maximum Points
i)	Engineers in employment of the contractor & Registered with PEC a) Number of Engineers (Min 3 No. Civil) b) Experience of Civil Engineer (Minimum 07 years)	6 3
ii)	Number of Diploma Engineers in Employment of the Contractor a) Number of Sub Engineers having Diploma in Associate Engineering (Min 4-No Civil) b) Experience of Engineers in number of Years (Minimum 05 -years)	3 3
Sub-total:		15

Bidders will provide **short CVs**, showing details of experts are desired by highlighting the name of expert, qualification, year of graduation or other degree(s), general experience, specific experience, designation, time of association with this firm. Experience certificates, affidavit of employee on judicial stamp paper. No marks if required documents are not attached.

SUB-CATEGORY D: EQUIPMENT CAPABILITIES

The following Equipment shall be evaluated:

Declaration of ownership/lease of Equipment (Form T- 15) duly signed by authorized signatory shall be attached.

Form T-14 shall be filled along with manufacturer authorization.

Sr. No	Equipment Type	Maximum Marks
1	Surveying Equipment (Total Station) (02 Set)	1
2	Dump Truck 2-Ton (01 No.)	0.5
3	Excavator (03 No.)	3
4	Motor Grader (01 No.)	0.5
5	Roller (01 No.)	0.5
6	Tractor Trolley [02 No]	1
7	Asphalt Mixing Plant (01 No)	0.5
8	Water Bowser (01 No.)	1
9	Generator (50/100 KVA, 01 No)	0.5
10	Wheel Loader (01 No.)	0.5
11	Dewatering set	1
	Sub-total:	10

Bidder will provide evidence of ownership in case of his purchased equipment or Lease paper in case of any rented equipment OR Affidavit on his letter head that he will arrange the following equipment subject to award the work.

Joint Venture (JV)

Joint Venture must comply with the following requirements: -

- a) Minimum qualification requirements: -
 - i) The lead partner shall meet not less than 50 percent of all qualifying criteria given in paras A to D heretofore.
 - ii) The joint venture must collectively satisfy the criteria of paras A to D, for which purpose the relevant figures for each of the partners shall be added together to arrive at the JV's total capacity.
- b) Any change in a qualified JV after qualification, shall be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval may be denied if:-
 - i) Partner(s) withdrawn from a JV and remaining partners do not meet the qualifying requirements;
 - ii) The new partners to a JV are not qualified individually or as another JV; or
 - iii) In the opinion of the Employer, a substantial reduction in competition would result.

- c) Bid shall be signed by all members in the JV so as to legally bind all partners, jointly and severally, and any bid shall be submitted with a copy of the JV agreement providing the joint and several liability with respect to the contract.

Conflict of Interest

The Bidder (including all members of a JV) must not be associated, nor have been associated in the past, with the consultant or any other entity that has prepared the design, specifications, and other prequalification and bidding documents for the project, or was proposed as Engineer for the contract, over the last Ten years. Any such association may result in disqualification of the Bidder.

Form -T-1

General Information

Bidder (or each Member of a Joint Venture) applying for qualification is required to complete the information in this form.

1.	Name of Firm:	
2.	Head Office Address:	
3.	Telephone:	
4.	Email:	
5.	Type of Organization:	
6.	Place of Incorporation/Registration:	Year of incorporation/registration:
7.	PEC Registration Category: PEC Registration No:	Validity:
8.	NTN#	
9.	Name, Designation, email and Mobile Number of Firm's Representative	

Detail of Owners/ Directors

	Name	Designation	Nationality
1.			
2.			
3.			
4.			
5.			

Financial Soundness

Name of Bidder (Lead Member of a Joint Venture, in case of JV)
--

Bidder (Lead Member of a Joint Venture, in case of JV) applying for qualification is required to provide financial information to demonstrate that they meet the requirements of Evaluation Criteria. If necessary, use separate sheets to provide complete information. A copy of the audited financial statements of the past five (5) financial years must be attached.

Bidder's Legal Name: _____ Date: _____

JV Members Legal Name: _____

Information Balance Sheet

	Year-1	Year-2	Year-3	Year-4	Year-5	Overall Average
Total Assets (TA)						
Total Liabilities (TL)						
Net Worth (TA-TL)						
Current Assets (CA)						
Current Liabilities (CL)						
		Average Annual Turnover (AATO)				
Average Annual Turnover						
		Financial Resources				
Cash/Bank Balance						
Credit Line Limit						

Form -T-4

Details of Similar Nature Projects Completed

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-03.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a) Sole Contractor (b) Sub-Contractor (c) Member in JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____ Years _____ Months

Form -T-6

Details of Similar Nature Projects in hand

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Letter of Award/ Agreement indicating Cost of Project) shall be provided for each project in Form T-5.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a) Sole Contractor (b) Sub-Contractor (c) Member in a JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Planned Date of Completion

Form -T-8

Details of General Nature Projects Completed in Last 5 Years

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-07.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a) Sole Contractor (b) Sub-Contractor (c) Member in a JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____ Years _____ Months

Form -T-9

Summary of Fast Track Project Completed

Name of Bidder or Member of a Joint Venture

Bidder and each Member of a Joint Venture applying for qualification is required to complete the information in this form.

Use a separate sheet for each Member of a Joint Venture.

Project Name	Year of Completion	Location	Value in PKR (Million)	Completion Duration



Details of Fast Track Similar Nature Projects Completed in Last Ten (10) Years

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-09.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employment Type
4.	...
5.	Contract Type (a) Sole member in a JV
6.	Value of contract (in local currencies) at completion, or at date of award for PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____ Years _____ Months

NOT USED

List of Proposed Staff

Name of Bidder:

(Bidder or Member of Joint Venture)

1	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	
2	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	

Candidate Summary

Name of Bidder: _____
(Bidder or Member of Joint Venture)

Position	Candidate	
	Prime	Alternate
Candidate Information	Name of Candidate	Date of Birth
	Professional Qualification:	
PEC Registration No. (Only for Engineer)		
Present Employer	Name of Employer:	
	Address of Employer	
	Telephone:	Fax:
	Job Title of Candidate	Years with Present Employer

Summarize professional experience in reverse chronological order.

From	To	Company	Project	Position	Relevant Technical & Management Experience

--	--	--	--	--	--

Form -T-13

DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT

[To be submitted on Company Letterhead]

**TO WHOM IT MAY
CONCERN**

PROJECT: _____

***SUBJECT: DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT &
AVAILABILITY***

We hereby certify that the personnel nominated in Form-T-11 are employed by our firm and are available for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Equipment Detail

Name of Bidder or Member of Joint Venture

Bidder and each Member of Joint Venture is required to provide adequate information to demonstrate clearly that it has the sufficient capability to undertake the Project. A separate form shall be prepared for each item of equipment listed in the Evaluation Criteria.

Item of Equipment		
Equipment information	1. Name of manufacturer	2. Model and power rating
	3. Capacity	4. Year of manufacture
Current status	5. Current location	
	6. Details of current commitments	
Source	7. Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased	

Omit the following information if it is owned by the Bidder or Member of JV.

Owner	8. Name of owner	
	9. Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreement	Details of rental/lease specific to the Project.	

Affidavit of ownership/Availability of Equipment

PROJECT: _____

SUBJECT: DECLARATION OF OWNERSHIP/ LEASE OF EQUIPMENT

We hereby certify that the equipment nominated in T-14 is owned by/Leased by our firm and is available in Pakistan for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Litigation History for the last Ten (10) Years**Name:***(Bidder or Member of Joint Venture)*

Description of Contract	Year	Name of Client, Cause of litigation and matter in dispute	Disputed amount (Current value in PKR or US\$ equivalent)	Award FOR or AGAINST Bidder	Remarks by Bidder

Attach Affidavit/undertaking that non-performance of a contract did not occur within the last ten years based on information on all settled disputes or litigation.

AFFIDAVIT FOR CORRECTNESS OF INFORMATION

(To be printed on PKR 100 Stamp Paper)

Name: _____
(Bidder or member of Joint Venture)

I, the undersigned, do hereby certify that all the statements made in the Forms and in the supporting documents are true, correct and valid to the best of my knowledge and belief and may be verified by employer if the Employer, at any time, deems it necessary.

The undersigned hereby authorize and request the bank, person, firm or corporation to furnish any additional information requested by the Employer deemed necessary to verify this statement regarding my (our) competence and general reputation.

The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the Employer. Employer undertakes to treat all information provided as confidential.

Signed by an authorized Officer of the firm

Title of Officer

Name of Firm

Date

POSSESSION OF SITE HANDING / TAKING OVER

Name of Sub-Project / Contract Name:

Name of Contractor / Contracting Firm:

Date of Award of Work:

Date of Contract Agreement:

Contract number:

The sub-project (Name of subproject) which pertains to the sites as shown in drawings are integral part of this Contract is hereby handed over to the Contractor M/s _____ on (Date, day, year) in presence of witness.

(Plan attached list of sites being handed over / taken over)

Handed over by

Name:

Designation: Chief Officer MC _____

Cell:

Stamp:

CNIC No:

taken over by (Contractor / Firm)

Name:

Designation:

Cell No:

Stamp:

CNIC No:

PEC No:

Witness (MOI)

Name:

Designation:

I, hereby take over the sites as marked in the plan attached as Annexure-A of this document

Witness:

Designated approved Site Engineer of Contracting Firm

FORMS

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

**BID SECURITY
(Bank Guarantee)**

Security Executed on _____
(Date)

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

Name of Principal (Bidder) with Address _____

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

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at their quest 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, 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 Guarantee, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Guarantee 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 Guarantee 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.

WITNESS:	SURETY (Bank)
	Signature _____
1. _____	Name _____
_____	Title _____
Corporate Secretary (Seal)	Corporate Guarantor (Seal)

2. _____

 Name, Title & Address

**FORM OF PERFORMANCE GUARANTEE
(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.

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 _____

Corporate Secretary (Seal)

Name _____

Title _____

2. _____

Name, Title & Address

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

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

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

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda / Clarification as agreed or otherwise, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract, viz:
 - a. The Contract Agreement;
 - b. The Letter of Acceptance;
 - c. The completed Form of Bid;
 - d. Special Stipulations (Appendix-A to Bid);
 - e. Contract form for execution of work;
 - f. The priced Bill of Quantities (Appendix-D to Bid);
 - g. The completed Appendices to Bid (B, C, E to O);
 - h. Special Provisions;
 - i. The Drawings;
 - j. The Specifications;
 - k. Work Schedule;
 - l. (any other)
3. The contractor will have to complete the work within the stipulated period, according to specifications as mentioned in the acceptance letter and Contract Agreement to the entire satisfaction of the engineer in-charge
4. 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.
5. 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.

6. That if the contractor fails to comply with any of the conditions of the contract, he will be held liable for the consequences thereof which shall be either in the form of liquidated damages or allotment of work at his risk and cost or both. The damages so incurred shall be recovered from the contractor, either from his security money or his running/outstanding bills. Further, if any information/ document submitted by contractor/ firm, founds false, fabricated, materially incorrect at any stage, he/firm will be liable for blacklisting.

7. 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

(Seal)

Signature of Employer

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

(Name, Title and Address)

Witness:

(Name, Title and Address)

MOBILIZATION ADVANCE GUARANTEE/BOND

Guarantee No. _____ Date _____

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

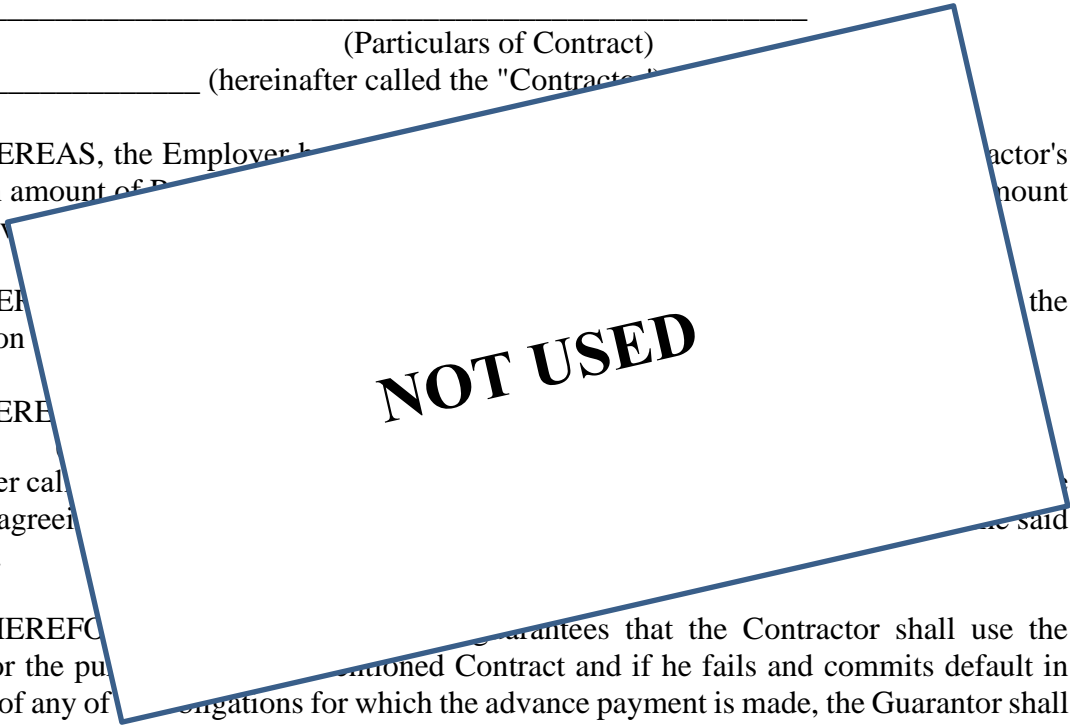
_____ (Particulars of Contract)

with _____ (hereinafter called the "Contractor")

AND WHEREAS, the Employer has requested, an amount of _____ (Contractor's amount) shall be advanced to the Contractor for the purpose of the

AND WHEREAS, the Contractor has requested mobilization of the advance for the purpose of the

AND WHEREAS, the Contractor has requested mobilization of the advance for the purpose of the
(Hereinafter called the "Contractor")
Employer agrees to issue the said
Guarantee.



NOW, THEREFORE, the Contractor guarantees that the Contractor shall use the advance for the purpose of the said 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)

**INDEMNITY BOND
FOR SECURED ADVANCE
AGAINST MATERIALS BROUGHT AT SITE**

(ON RS.40 NON JUDICIAL STAMP PAPER)

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

Whereas _____ (hereinafter called the Employer) has paid the Secured Advance against the cost of material through any Bank or like institution or by any other method by virtue of the terms of the contract existing between _____ details of the material and their price for which secured advance has been provided for the period _____ material is as

under:-

- 1. _____
- 2. _____
- 3. _____
- 4. _____

NOT USED

THEREFORE I/We _____ do hereby declare that we will not remove, sell, pilferage any of the materials against which M/s _____ has paid us such a secured advance and will not pledge the same with any Bank, Finance Corporation, Firm, Company, Individual or the like agency or create any change whereon in any from what so ever. I/We _____ shall indemnify _____ against any or all claims for damages arising out of or resulting to the said material.

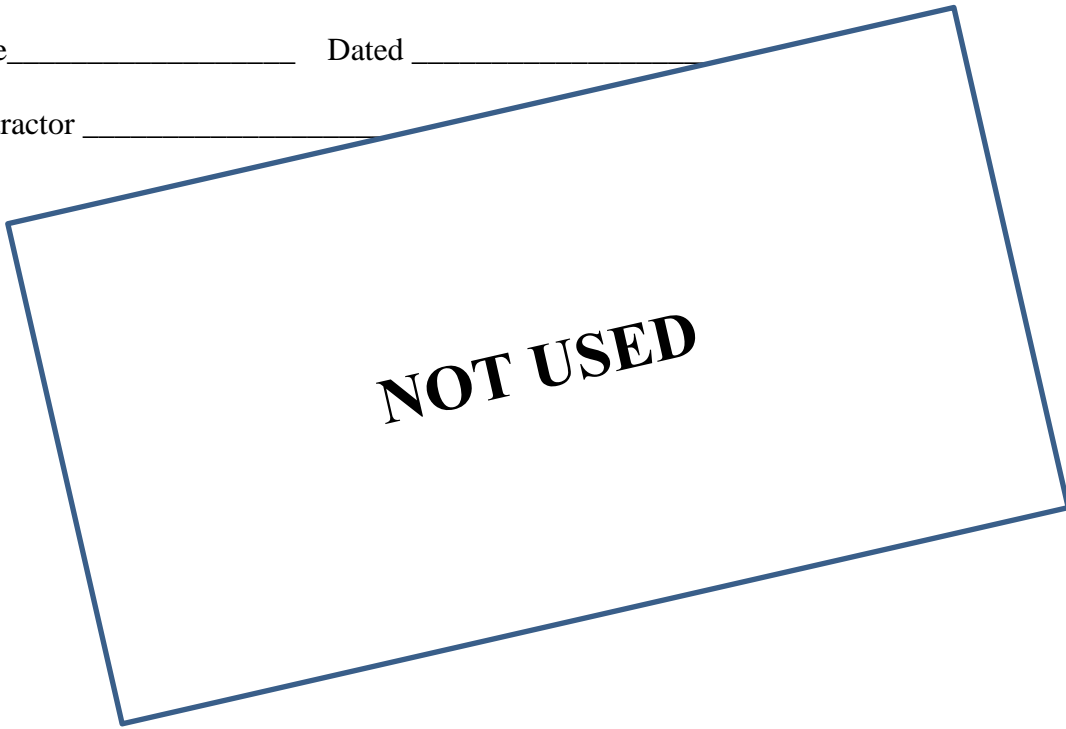
I/We _____ further declare that we will faithfully abide by the above declaration and solemnly affirm that we will not remove, sell, pilferage any of the materials against which M/s _____ has paid us such a secured advance and will not pledge the same with any Bank, Finance Corporation, Firm, Company,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

_____ will be entitled to forfeit all such material and also proceed against me/us according to the relevant clause pertaining to breach of contract and further invoke the power or seek any remedies secured of _____ under the contract Agreement signed with us or otherwise

available under law.

Place _____ Dated _____

Contractor _____



GENERAL / PARTICULAR CONDITIONS OF CONTRACT FOR WORKS

GOVERNMENT OF THE PUNJAB

CONTRACT FORM FOR EXECUTION OF WORK

(To be procured by the Contractor)

Copies of the Contract Form for Execution of Work can be obtained from Finance Department Punjab's Website as well as from the Employer.

SPECIAL PROVISIONS

SPECIAL PROVISIONS (CIVIL WORKS)

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SPECIFICATIONS - SPECIAL PROVISIONS (CIVIL WORKS)

Okara is about 127km to the south-west of Lahore on the National Highway and on the main Lahore-Karachi railway track. Okara spreads between latitudes of 30°18' to 30°08' North, and the longitudes of 73°14' to 74°09' East. The current population of the city is 466,852 and the projected population by the year 2032 is 764,459.

Okara sewerage system covers about 70% population. The existing system consists of lateral sewers, mains, trunk sewers and disposal stations. No waste water treatment plant (WWTP) exists in Okara city.

Punjab Municipal Development Fund Company (PMDFC) has proposed the establishment of a waste water treatment plant (WWTP) at Okara city with the financial support of the World Bank (WB). The treatment facility will receive the municipal waste water generated from southern part of Okara City through a main sewer line and after treatment will dispose it of in the Sukhera Drain. The project will be supervised by Municipal Committee Okara. **“COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE – 1 SEWERAGE SYSTEM”**

The Project aims at improvement of infrastructure of municipal services for sewerage system.

The Project has the following objectives;

1. Improvement of service delivery level of the municipal services in the served areas of the city or provision of better basic urban services for improved livability of the citizen.
2. Reduction in annual O&M charges of the infrastructure due to reduced repairs in the forthcoming years because of repair or replacement of infrastructure components.
3. Reduction and prompt addressal of the public complaints regarding municipal service delivery.
4. Reduction in surcharging and overflowing of sewers thus reducing waste water ponding in the city

SP-2 DESCRIPTION OF THE WORKS

2.1 The work included in this Contract are as follows but not limited to these items only:

SN	Description
1.	Replacement of Sewer Lines
2.	Desilting of Existing Sewer Lines
3.	New Sewer Lines and Manholes
4.	Construction of gully grating chambers and ventilating shafts and allied provisions
5.	Environmental & Social Management & Monitoring Plan (ESMMP) Cost

SP-3 SITE OF WORKS

The work mainly comprising of “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-1 SEWERAGE SYSTEM**”

SP-4 SETTING OUT

Setting out data and control points for the construction of the road and allied works will be provided by the Engineer following the Notice to Commence but, in any case, prior to start of work.

SP-5 CLIMATOLOGICAL DATA

Not used.

SP-6 UTILITIES

The Contractor shall directly enquire from the utility companies about availability of connections of electric power supply and telephone lines for his use at the Site. In case of non-availability of electric power supply from national grid to meet his requirements the Contractor shall provide at his own cost electric power generators as necessary for supply of power for the various parts of the Works including his camps, offices, stores, workshops and other installations as well as for the Engineer’s Site office provided under Sub-Clause SP 20.1. The Contractor shall bear all costs for constructing, operating and maintaining the generation system, including the standby generation system, and distribution system including providing diesel, oil or other consumables and all services and necessary attendance to ensure uninterrupted power supply at all times.

The Contractor shall make his own investigations and arrangements for supply of water of acceptable quality for construction requirements and safe drinking water for his staff and workmen and for the staff of the Engineer.

No separate payment will be made to the Contractor for works performed under this Clause and the costs thereof shall be deemed to be included in the rates and prices of the various items in the Bill of Quantities.

SP-7 TOPOGRAPHY AND GEOLOGY OF THE SITE

The details of Topography is with the Employer / Engineer.

SP-8 EXTENT OF WORK

The Contractor shall remove all debris and unsuitable construction to the Engineer's satisfaction with no additional cost.

The Contractor shall construct the Works in accordance with the Drawings and Specifications and as directed by the Engineer. The Contractor shall procure, furnish, provide and arrange all the necessary construction materials, equipment, transportation, fuel, electric power, water and services; be responsible for the construction and maintenance of the construction camps, offices, workshops and warehouses that he may require, and perform all other work necessary for completion of the Works described herein, in complete conformity with the Contract.

SP-9 DRAWINGS

9.1 Bidding Drawings

The Drawings provided as separate volume of Bid Documents and hereinafter referred to as Bid Drawings show the scope of the work to be performed by the Contractor. The Bid Drawings shall not be used as a basis for fabrication or construction, but may be used as the basis for planning, scheduling and placing preliminary orders for materials, subject to corrections based on future issue of Construction Drawings. Any other Drawings if issued through Addenda, before opening of Tenders, shall become part of the Bid Drawings.

9.2 Construction Drawings

After award of Contract, Bidding Drawings will be replaced by Drawings issued by the Engineer for Construction, with such modifications as may be necessary. The Drawings Issued for Construction will include Bid Drawings re-issued, Bidding Drawings modified and additional Drawings as required to develop in greater detail the construction required and shall be referred to hereinafter as "Construction Drawings". The Construction Drawings that show changes from the Tender Drawings and Specifications, will be reviewed by the Engineer for determination of adjustments, if any, of the Contract Price in accordance with the provisions of Clause 51.1, Variations, of the Conditions of Contract. The work shall be executed in conformity with the Construction Drawings.

The Engineer and Contractor shall jointly prepare a schedule for issuance of Drawings Issued for Construction of the various parts of the Works based on a list of drawings provided by the Engineer.

9.3 Checking of Drawings

The Contractor shall carefully check all Construction Drawings as soon as practicable after receipt thereof, and shall promptly advise the Engineer of any errors if discovered.

SP-10 RIGHT TO CHANGE

The Engineer may find it desirable to change location, alignment, dimensions or design

of one or more of the features of the Works to conform to the newly disclosed conditions. Toward this end, the Engineer reserves the right to make such reasonable changes, and the Contractor's operations shall be conducted so as to accommodate any such changes in the Works.

SP-11 DRAWINGS/DATA TO BE FURNISHED BY EMPLOYER /ENGINEER

11.1 Procedure for Submittal of Contractor's Drawings

All drawings showing construction details shall be provided by the Employer/Engineer.

11.2 Other Drawings

Other drawings additional to those referred to herein-above required by the Specifications showing proposed methods of constructing Temporary Works and all bar bending schedules shall be submitted by the Contractor to the Engineer for approval.

11.3 Ownership of Drawings etc.

All the drawings, details, and any other information or documents furnished by the Engineer shall become the property of the Employer.

SP-12 COOPERATION WITH OTHER CONTRACTORS

The Contractor shall cooperate and coordinate his work with that of the other contractors working at the Site, to whatever extent may be necessary to complete the Works in accordance with the approved programme and the Engineer's instructions.

SP-13 QUALITY OF MATERIALS

All materials, fixtures, fittings, and supplies furnished under the Contract shall be new and unused, of standard first grade quality and of the best workmanship and design. No inferior or low grade materials and supplies will be either approved or accepted, and all work of assembly and construction shall be done in a first class and workmanlike manner. In asking for prices of materials intended for delivery to the Site and incorporation in the Works under any portion of these Specifications, the Contractor shall provide the manufacturer or supplier with complete information as may be necessary to secure compliance with these requirements and, in every case, he shall quote this Clause in full to each such manufacturer or supplier.

Prior to procurement, the Contractor shall furnish to the Engineer, for his approval, the names of the manufacturers of all equipment and materials which he contemplates incorporating in the Works. With this information, the Contractor shall also furnish such pertinent information as to capacities, efficiencies and sizes, and such other information as may be required by the Engineer. Samples of materials shall be submitted to the Engineer for approval unless waived of by the Engineer. Equipment, materials, supplies and articles installed or used without the Engineer's approval shall be at the risk of subsequent rejection.

The Contractor shall use non-reactive aggregates from suitable quarries for concrete work. The Contractor shall use deformed steel reinforcement bars rolled from Pakistan Steel Mills billet or equivalent from re-rolling mills proposed by the Contractor and approved by the Engineer.

SP-14 INSPECTIONS AND TESTS

14.1 Inspection

All equipment and materials furnished under the Contract and all work performed in connection therewith under the Contract shall be subject to inspection and testing by the Engineer or his authorized agent at all times and in all stages of completion. Inspection at the manufacturer's plant may be made to determine that the equipment and materials meet the requirements of these Specifications. The Contractor shall notify the Engineer not less than 05 days in advance of the date and place that the equipment or materials will be available for inspection and testing. No equipment or materials shall be transported until inspection at the manufacturer's plant has been made. Acceptance of equipment and materials or the waiving of inspection and testing thereof shall in no way relieve the Contractor of the responsibility for furnishing equipment and materials meeting the requirements of the Contract Documents. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items or Items to be imported for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend for approval one of them or as contractor for other than those manufacturer proposed in shape of submittal by contractor for someone else on equivalency basis. Pre-shipment inspection of the selected manufacturer's equipment will be carried out by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

14.2 Testing

The Engineer will make such tests on concrete, aggregates, fill materials, reinforcing steel and other materials as he may from time to time select, and the Contractor shall provide at his own cost such samples or assistance in sampling materials at the Site as the Engineer may reasonably require. Testing by the Engineer shall in no way relieve the Contractor of his responsibility to test materials to ensure that they meet all the specified requirements and to control their quality. The Engineer may accept that items manufactured away from the Site meeting the specified requirements without further testing subject to the Contractor furnishing satisfactory proof of compliance with these Specifications in one or more of the ways described below.

The Contractor shall provide free of charge such material testing equipment, labour, materials, electricity, fuel, water, stores, apparatus and feedstock as may be reasonably required by the Employer to carry out the Tests as per the required frequency. Further contractor shall make all kind of arrangements for third party inspection/ Witnessing of Factory Acceptance Tests of major components of manufacturing factory whether located in Pakistan/abroad for four officials (02 from Employer and 02 from Engineer-In-charge side). All expanses regarding air tickets, visa in case of abroad, boarding/lodging, food, transport, hoteling etc. will be borne by the Contractor and no extra/additional payment will be made to contractor. Contractor shall quote his prices

keeping in view of such expanses.

Manufacturer's Certificate of Compliance

In the case of standard labelled stock products of standard manufacture which have a record of satisfactory performance in similar work over a period of not less than five years, the Engineer may accept a notarised statement from the approved manufacturer certifying that the product conforms to the applicable specifications.

Mill Certificates

Regarding materials for which such practice is usual, the Engineer may accept the approved manufacturer's certified mill and laboratory certificates.

Testing Laboratory Certificates

The Engineer may accept a certificate from a renowned commercial testing laboratory, satisfactory to him, certifying that the product has been tested within a period acceptable to the Engineer and that it conforms to the requirements of these Specifications.

Service Record

If a demonstrable satisfactory service record for a period not less than five (05) years is available for a material, certain specified tests may be waived off by the Engineer.

14.3 Cost

The cost of any laboratory, field and shop tests required from any agency of compliance with under Specifications shall be borne by the Contractor.

SP-15 CONSTRUCTION PROGRAMME

15.1 General

The Contractor shall submit his programme for execution of the Works in accordance with Clause 14.1 [*Programme to be Submitted*], under the Conditions of Contract, to the Engineer for approval. The programme may contain adjustments if any, to the CPM (Critical Path Method) based Bar Chart submitted with the Bid. The completion date, milestones, and key targets indicated in Appendix-E to Bid, or dates earlier than the said milestone and key target dates, shall be shown on the construction programme to be submitted by the Contractor. Other dates including rates of progress for various parts of the Works in the construction programme may be changed by the Contractor and submitted for approval. The operations under each section of the programme submitted by the Contractor shall be broken down in greater detail than those shown on the Schedule submitted with the Bid.

The programme shall also show the timing of provision of any facilities the Contractor is required to supply for use by the Employer and the Engineer, in such manner that these shall be available as stipulated in the Contract and instructed by the Engineer.

15.2 Submittals

(a) The initial submittal of network analysis shall include a description of the major

items of construction equipment planned to be used. The description of the equipment shall include the type, number of units, their capacity, etc. The forecast shall include the estimated dates on which each major item of construction equipment will be on the job. The Bar Chart and the Network Analysis shall be submitted within 14 days after receipt of the Letter of Acceptance.

The submittal shall consist of:

- (i) 4 copies of the Bar Chart.
- (ii) A narrative summary of the construction plan.
- (iii) A backup of the schedule files on re-writable CD disks or pen drive.

The Engineer will review the construction schedule and the approved initial submittal will be the Project Baseline Schedule by which the performance of the Contractor will be measured

- (b) Monthly submittals shall show completed progress of each activity during the past month, with forecast for the coming month. Hammock networks shall be incorporated on the Base Line Schedule of activities. Each monthly submittal shall contain:
 - (i) 4 copies of the Bar Chart.
 - (ii) 4 copies of a time scaled logic diagram for the next three months.
 - (iii) A narrative summary of the schedule related issues and status. The narrative shall include discussion of pending schedule changes submitted to the Engineer in the past month.
 - (iv) A backup of the schedule files on rewritable CDs or pen drive.
- (c) The successful bidder shall submit the supervision plan in respect of Environmental Health Safety SOPs and Environmental & Social Management & Monitoring Plan on monthly basis along-with other deliverables manifesting the progress activities as per schedule.

15.3 Progress Schedule

Both the bar charts and network analysis schedules shall be continuously monitored and kept current and updated by the Contractor throughout the work, and at least on every milestone date and submitted for approval. The Contractor's schedules shall be available for examination during normal business hours. All revisions shall be accompanied by a detailed explanation of the reasons for the changes and describing any new or modified construction procedure proposed and, if applicable, any steps being taken to improve progress to achieve completion within the Time for Completion.

SP-16 LAY OUT OF WORKS

16.1 Reference Points, Lines and Levels

The Engineer will lay out a reference line or lines in the field with accompanying points and/or bench-marks to enable the Contractor to establish there from survey control for construction.

16.2 Verification

The Engineer may make checks as the work progresses to verify lines, levels and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirements of the Specifications and the Drawings. Shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and Specifications and the lines, levels and grades given therein.

16.3 Primary Control Points

Based upon the Engineer's basic control, the Contractor shall provide his own primary control points, as needed for the Works, and shall preserve and maintain them until otherwise authorized.

The Contractor shall be responsible for maintaining all survey markers/monuments, and property corners. If any markers/monuments are disturbed or destroyed by the Contractor, the Contractor shall arrange, at his own cost, to retrace and replace them to the entire satisfaction of the Engineer. If a monument cannot be replaced in its original position, the Contractor shall install a witness corner. The Contractor shall complete and file monument reference cards on all monuments as per instructions of the Engineer.

16.4 Construction Surveyors

The Contractor shall provide experienced construction surveyor/s with adequate experience in the construction surveys similar in nature as required by this Contract.

16.5 Basic Control Monument

Based upon the Engineer's established basic control monuments, the Contractor shall establish all lines and grades necessary to control the Works, and shall be responsible for all measurements that may be required for execution of the Works to the tolerance prescribed in Sub-Clause 16.7 below.

16.6 Surveys and Computations

The Contractor shall perform such surveys and computations as are necessary to determine quantities of work performed or placed during each progress payment period, and shall also perform all surveys required by the Engineer to determine final quantities of work in place. The Engineer will determine final quantities based on original ground levels determined by the Contractor and agreed by the Engineer.

The Contractor shall notify the Engineer at least 24 hours before performing a quantity survey and, unless specifically waived, quantity surveys shall be performed in the presence of and agreed by an authorized representative of the Engineer.

16.7 Tolerances

Degree of accuracy for the survey works shall satisfy the following specified tolerances:

- (a) Alignment of tangents and curves shall be within 0.1 foot for 1,000 feet i.e., an accuracy of 1:10,000.
- (b) Structure points shall be set within 0.01 foot accuracy from point to point, except

where tighter tolerances are required.

- (c) Cross-section points shall be located within 0.10 foot, horizontally and 0.01 foot vertically.
- (d) Permissible closing error for a levelling line meant for establishing Temporary Bench Mark (TBMs) shall not exceed $0.045 \times \sqrt{M}$ foot, where M is in miles. The permissible closing error shall be duly adjusted.

16.8 Material and Equipment

The Contractor shall provide all materials, equipment and labour required for work.

SP-17 STANDARDS AND SPECIFICATIONS

Except as otherwise provided by these Specifications or the Drawings all materials, equipment and fabrication and testing thereof shall conform to the latest applicable Standards and Specifications contained in the following list or to equivalent applicable Standards and Specifications. Copies of these Standards and Specifications may be purchased from the indicated agency, which publishes them:

- | | | |
|---|--|------|
| - | British Standard | BS |
| - | American Concrete Institute | ACI |
| - | American Society for Testing and Materials | ASTM |

Where relevant Standards and Codes of Practice now quote metric units only, these are to be interpreted as required to the nearest equivalent imperial (foot/pound) unit for the purposes of this Contract.

All materials and workmanship not fully specified herein or covered by an approved Standard shall be of such a kind as is used in first class work and suitable to the climate in the Project Area.

If the Contractor, at any time and for any reason, wishes to deviate from the above standards or desires to use material or equipment not covered by the above standards, he shall state the exact nature of the changes, the reason for making the change and shall submit complete specifications of the materials and equipment to the Engineer for approval.

SP-18 ACCESS TO SITE

18.1 Right of Way for Access and Haul Routes

The Contractor shall be responsible for providing and maintaining access routes for the Works. The right of way for access to the Works from existing roads will be provided by the Employer. The Contractor shall make his own investigations of the condition of available public or private roads and of clearances, restrictions, bridge load limits and other limitations that affect or may affect transportation and ingress and egress at the job sites. The repair and reinstatement of roadways, drain and canal banks if damaged during operation shall be the responsibility of the Contractor without any additional cost to the Employer. The Employer controlled right of way shall be the Right of Way (ROW) available to the Contractor for carrying out the Works.

18.2 Restoration of Site

On completion of the Works, the Site shall be restored by the Contractor to its original conditions as far as practicable and left in tidy condition.

SP-19 FACILITIES TO BE PROVIDED BY THE CONTRACTOR AT SITE

19.1 Contractor's Camps

The Contractor is required to arrange the facility of housing in nearby area of the project for the labour through portable containers or house on rent in compliance with PMDFC SOPs for labour / construction worker including women worker. In case of failure and on lodging of complaint by the labour to the Engineer will result in fining of Rs. 5000 / day. Preference shall be given to utilization of local labour / construction workers.

19.2 Temporary Sanitary Facilities

- (a) The Contractor shall provide adequate temporary sanitary conveniences for the use of his employees and persons engaged on the work, including the Engineer and his employees. He shall ensure that his employees and labour make proper use of the latrines and do not foul the Site.
- (b) In addition to toilet facilities, suitable and adequate washing facilities shall be provided.
- (c) Sanitary facilities shall be located as directed or approved by the Engineer and shall be maintained in a clean and sanitary condition during the entire course of the work.
- (d) The septic tank and/or temporary holding tank(s) shall be kept pumped out at such intervals that the tank(s) will not overflow and contaminate the ground, flowing streams or surface drainage.
- (e) On completion of the Works, sanitary facilities shall be properly disinfected and all evidence of same including temporary buried tanks and foundations removed from the Site.

19.3 Medical Facilities

The Contractor shall arrange provision of adequate medical facilities for his employees.

Adequately equipped dispensary/ies with qualified and experienced staff shall be provided by the Contractor at his camps. In addition suitably equipped first aid stations manned by trained staff shall be provided at strategic locations, to administer first aid treatment at all times free of charge to all persons on the Site, including personnel of the Engineer and the Employer. The nature, number and location of facilities furnished and the Contractor's staff for administering first-aid treatment shall meet the requirements of the Health Services of the Government of Pakistan.

19.4 Operation and Maintenance of the Camps and Facilities

For the purpose of operation and maintenance of the camps and facilities provided as above, the Contractor shall comply with all applicable provisions of the Pakistani Labour Laws and specifically to the following requirements:

- (a) Camp areas shall be kept dry and free from dense vegetation. Measures shall be taken to control dust within the camp area, by water or oil spraying or other approved means.
- (b) Any ponded water around a camp shall be sprayed weekly with oil or other approved anti-malaria liquid.
- (c) The Contractor shall provide garbage collection and disposal services for his construction camps and the Engineer's office. Disposal shall be by burial (landfill) and/or incineration. Disposal area shall be located a sufficient distance away and downwind from camp facilities and offices so as not to create objectionable odours or health hazards. Equipment, methods of collection and disposal and location of disposal areas shall be submitted to the Engineer for approval.
- (d) The interior walls and ceilings of buildings shall be lime washed or painted. The whole of the open spaces around the buildings shall be swept each day and all rubbish removed. The living areas shall be suitable for the climatic conditions. Roof height shall not be less than 10.5 ft. and adequate number of ceiling fans shall be provided.
- (e) Adequate sanitary conveniences, including washing and bathing places shall be maintained at each of the camps. All sanitary fixtures, receptacles, toilet rooms, lavatories and wash rooms shall be cleaned and disinfected at least once every day.

19.5 Drainage

The ground around the buildings shall be graded to slope away from building perimeters so as to provide adequate drainage and shall be thoroughly compacted. Excavated material shall be disposed of by filling in low areas or as otherwise directed by the Engineer.

19.6 Water Supply

The Contractor shall arrange for the water supply for his staff residences, labour camps, site offices, work yards, workshops, and various camp facilities. Construction of pumps, storage tanks, overhead tank, distribution system, and their proper running and maintenance shall be his responsibility. Water shall be supplied to the camps 24 hours a day. Adequate supply of water, cooled in summer, shall be ensured in camps and sites of work. Water samples shall be tested periodically to ensure that it is fit for human consumption.

19.7 Electricity Supply

The Contractor shall provide electricity required for the Works including labour camps, staff residences, offices including the Engineer's Site office and various camp facilities. The Contractor shall also provide sufficient standby electricity supply arrangements for his needs.

19.8 Utility Lines

The Contractor Shall conduct his operations, make necessary arrangements, take suitable precautions and perform all required work incidental to the protection of and

avoidance of interference with power, telephone, water and other utilities within the areas of his operations in connection with the Contract. No separate payment shall be made for such incidental work. In case the utility lines are required to be relocated the Contractor shall arrange their relocation with the concerned departments and organizations. The Contractor shall obtain cost estimates for relocation of utilities for the Engineer/Employer's approval before execution of the Work. The Contractor shall be reimbursed the actual approved cost carried in by him.

19.9 Handing Over/Removal after Completion

Upon completion of the Works, the Contractor shall remove all the Contractor's camps, labour and staff accommodation, site office, other installations and buildings constructed and all facilities provided by the Contractor under this Clause, and the Site cleared and reinstated to the satisfaction of the Engineer.

19.10 Measurement and Payment

Except as provided in SP-19.8 no separate payment will be made for the work included under the Clause SP-19; the cost thereof is deemed to be included in the rates and prices of other items entered in the Bill of Quantities. The contractor is bound to comply with all the instructions stated in SP-19 and in case of otherwise or if any complaint lodged by the labour to the Engineer / Client, the contractor will be penalized for amounting to Rs. 5000 / day.

SP-20 PROVISION OF FACILITIES FOR THE ENGINEER (FOR CONSULTANT STAFF) /EMPLOYER

20.1 Facilities for Engineer/Employer's Staff:

(a) **Site offices:**

One furnished portacabin with all the requisite accessories for the Engineer / Employer

20.2 Ownership of Site facilities

All facilities/utilities provided by the contractor as stated above in Clause-20.1 will be property of Engineer In charge after successful handing taking over of project and expiration of defect liability period considering that the said amount is included in all items listed in Bill of Quantities.

20.3 Measurement and Payment

No extra/separate payment will be made to Contractor considering that Contractor has quoted his bid keeping in view of such expanses.

SP-21 PROGRESS PHOTOGRAPHS

The Contractor shall furnish to the Engineer every month, for the site of Fifteen colour photographs on CD or pen drive and 4 colour prints of each photograph taken with a digital camera to clearly show the progress of construction. Each photograph shall be submitted in four prints of size 20 cm x 25 cm. Each print shall be marked on the back side with the caption of the activity, date and serial number. There shall be no writing, lettering or marking on the face of the photograph. Progress photographs shall be submitted from the month, following the month in which Notice to Commence is issued

and continued till completion of the Works.

No separate payment will be made for the work specified herein and the cost thereof shall be deemed to be included in the other items of the Bill of Quantities.

SP-22 SITE FACILITIES TO BE PROVIDED BY THE EMPLOYER

22.1 General

Without prejudice to the generality of the various clauses of the Contract and except for the facilities referred to hereinafter, particular attention is drawn to the obligations of the Contractor to make his own arrangements for providing, maintenance and furnishing of labour camps, staff residences, offices, workshops, stores watching and guarding thereof.

The Contractor shall submit his written demand of his requirements of land for his Site Facilities as herein specified, at least 28 days in advance.

22.2 Area for Storage and Workshop

The contractor will arrange an open area of adequate size for the facilities listed in Appendix-H to Tender and approved by the Engineer, for use as storage, and workshop areas. The Contractor shall provide and maintain at his own cost, all fencing, any necessary clearing, land levelling, foundations and above ground structures for sheds, covered areas, workshops, electricity, telephone, water distribution and waste water disposal etc, as he may need to meet his requirements.

SP-23 SAFETY MEASURES AT CONSTRUCTION SITE

- a) Pursuant to the provisions of Sub-Clause, for Safety Measures the Contractor shall observe high standards of safety for men and machines at all times and with regard to safety.
- b) The Contractor shall take all possible measures to protect his personnel from harm. In case of any casualty or injury to any person due to the Contractor's operations, the Contractor shall ensure quality medical treatment and payment of due compensation.
- c) The Contractor shall not permit casual observers to come close to the sites where excavation and other hazardous operations are being performed.

SP-24 ENVIRONMENTAL PROTECTION

The Contractor shall exercise 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 the Permanent Works, approved construction roads and the Temporary Works, and for excavation operations, all 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 to the natural appearance of the landscape. Where unnecessary destruction, scarring, damage or defacing may occur as a result of the Contractor's operations, it shall be repaired, replanted, or otherwise corrected as directed by the Engineer at no additional cost to the Employer.

Contractor will get appreciation/performance certificate from Engineer in charge and reward of Rs. 200,000/- upon compliance with ESMMP attributes at the last IPC on recommendation of DPO-ESM to engineering in charge

Contract may be terminated upon serving of 4th ESMMP Non-Compliance notice from the DPO-ESM to Engineer in charge.

Contractor will hire services of a Qualified Environmentalist before the commencement of construction activities under the Sub-Project. (CV to be shared for approval to DPO-ESM)

The Environmental Health Safety SOPs for Labour / Construction Workers including Women workers and Environmental & Social Management and Monitoring Plan are attached with this bidding document as **Annexure-1** and **Annexure-II**

Comprehensive Sewerage System in Okara City

Package I: Sewer Lines and Manholes

Main Summary

Part - A

Package	Description	Cost (Rs.)
A	Sewer Lines and Manholes	
B	ESMMP Cost	
	Grand Total Cost	

Comprehensive Sewerage System in Okara City

Sub Summary (Part-A)

Sub-Head	Description	Amount (PKR)
Part-A-1	Replacement of Sewer Lines	
i	Replacement of Sewer lines 27" i/d from Harniaya wala chowk to sabzi Mandi Akbar Road	
ii	Replacement of Sewer from Islam building to Dipalpur Chowk 12" and 24" i/d	
iii	Replacement of sewer line 42" i/d and from Chungi No. 6 to Chungi No. 7 along Okara Multan road	
iv	Restoration of Road (for Replacement of Sewer)	
	Sub Total A-1:-	
Part-A-2	Desilting of Existing Sewer Lines	
i	Desilting of 18"i/d RCC blocked/choked existing sewer	
ii	Desilting of 21"i/d RCC blocked/choked existing sewer	
iii	Desilting of 24"i/d RCC blocked/choked existing sewer	
iv	Desilting of 27"i/d RCC blocked/choked existing sewer	
v	Desilting of 30"i/d RCC blocked/choked existing sewer	
vi	Desilting of 36"i/d RCC blocked/choked existing sewer	
	Sub Total A-1:-	
Part-A-3	New Sewer Lines and Manholes	
i	Main Sewer Line 66" i/d and Manholes	
ii	Main Sewer Line 60" i/d and Manholes	
iii	Main Sewer Line 54" i/d and Manholes	
iv	Main Sewer Line 42" i/d and Manholes	
v	Main Sewer Line 36" i/d and Manholes	
vi	Main Sewer Line 33" i/d and Manholes	
vii	Main Sewer Line 30" i/d and Manholes	
viii	Main Sewer Line 27" i/d and Manholes	
ix	Main Sewer Line 21" i/d and Manholes	
x	Main Sewer Line 18" i/d and Manholes	
xi	Main Sewer Line 15" i/d and Manholes	
xii	Lateral Sewer Line 12" i/d and manholes	
xiii	lateral Sewer Line 9" i/d and manholes	
xiv	Making Connection of Existing Sewer Line to New Sewer Line	
xv	Restoration of Road (for Laying of Sewer)	
	Sub Total A-2:-	

Part-A-4	Construction of gully grating chambers and ventilating shafts	
i	Construction of gully grating chambers size 3'x2½' with 9" i/d Rcc connection pipe	
ii	Construction of gully grating chambers size 12"x12" with C.I gully trap with 9" i/d Rcc connection pipe	
iii	Construction of ventilating shafts & its foundation for sewer lines.	
	Sub Total A-3:-	
	Grand Total of Part-A	

Carried over to the Main Summary

Comprehensive Sewerage System in Okara City

Part	A	Sewer Lines and Manholes												
	A	i	Replacement of Sewer lines 27" i/d from Harniaya wala chowk to sabzi Mandi Akbar Road											
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA														
Sr. No.	MRS Reference		Description of Items	Quantity	Unit	Rate	Amount							
	Ch	It:No												
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).											
			= Total =	3,479.67	Cft	100								
2	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock.											
			(i) 0 to 7.0 ft Depth	= 7.00	ft.									
			100% x 949 x 4.583 x 6.60	= 28702	Cft	=	28,702.00							
			Total =	28,702.00	Cft	1000								
			(ii) 7.01 ft to 15.0 ft Depth	= 8.00	ft.									
			100% x 949 x 4.583 x 0.5988	= 2604	Cft	=	2,604.00							
			Total =	2,604.00	Cft	1000								
3	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.											
			27"i/d = 1000 - 6 No x 6.50 ft =	961.00	Rft									
			Total =	961.00	Rft									
			(i) Crush bajri for pipe bedding.											
			1 x 961 x 4.583 x 2.094 =	9222	Cft	=								
			Deductions of 1/2 od pipe											
			3.143 x 961 x (2.792) ² x 0.500 =	2942	Cft									
			4 Net Total =	6280	Cft	=	6,280.00	Cft	100.00					
4	21	3	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II , Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-											
			vi) 690 mm (27") i/d											
			Pipe length = 1000 ft - 6 No x 5.00 ft =	970	Rft		970.00	Rft	1					
5	Non MRS Rate		Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preperation of surface,application of primer .Complete in all respet to the entire satisfaction of the Engineer incharge											
			27" i/d sewer pipe.											
			3.143 x 2.25 x 970.00 =	6859.286	Rft		6859.29							
			Total	6859.29	Sft	1								
6	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).											
			Qty as per item No. 2 (i) =	31306	Cft									
			Deductions											
			As per sand filling Item No. 7 =	13214	Cft									
			As per Crushed stone bedding It.No. 3 (i) =	6280	Cft									
			Pipe valumn											
			3.143 x 961 x (2.792) ² x 0.250 =	5885	Cft									
			Total deductions =	25379	Cft									
			Balance quantity. = 31306 (-) 25379 =	11812	Cft									
			Lead upto a single throw of Kassi, phaorah or shovel = 100% =	11812	Cft	=	11,812.00	Cft	1000					
7	10	3	Supplying and filling sand under floor; or plugging in wells.											
			(i) Sand filling at trench top											
			1 x 961.00 x 4.583 x 3.00 =	13213.75	Cft	=								
			Total =	13213.75	Cft	=	13,213.75	Cft	100					
8	3	25	Compaction of earthwork c) Ramming earthwork (all types of soil).											
			Qty as per item No. = 6 =	11812.25	Cft	=	11,812.25	Cft	1000					
			26 35 Bailing out water:- b)by pump											
			2 x 8 x 3600 x 0.5 x 35 =	1008000			1008000.00	Cft	1000					
9	3	17-a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile											
			a)upto ¼ mile(400 m)=											
			b)for every 330 ft.(100 m)additional lead or part thereof,beyond ¼ mile (400m)upto one mile(1.6 Km)											

Sr. No.	MRS Reference		Description of Items	Quantity	Unit		Rate	Amount
	Ch	It:No						
			for every ¼ mile(400 m)additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).					
			Quantity of deductions of item No. 6 = 25379 Cft =					
			Take 20% = 25379 x 0.20 = 5075.75 Cft =	5,075.75	Cft	1000		
							Total:-	
			Total Cost of RCC Sewer				Total:-	
			Total Cost of Gully Grating Chamber (RA-10 Attached) = 2 x 2 = 6 No. 4 Rft =	5.00	No.	1		
			Total Cost of Man holes (RA-06 Attached) = 5.0 i/d = 6 No. 8 Rft =	6.00	No.	1		
							G.Total:-	
Carried over to the Sub Summary A-1 (i)								

Comprehensive Sewerage System in Okara City

Part	A	Sewer Lines and Manholes																	
	A	ii Replacement of Sewer from Islam building to Dipalpur Chowk 12" and 24" i/d																	
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA																			
Sr. No.	MRS Reference		Description of Items										Quantity	Unit	Rate	Amount			
	Ch	It:No																	
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).																
			12" i/d	=	2297	-	24 No	x	8.33 ft	=	2096.684	Rft							
			100%	x	2096.68	x	3.125	x	1	=	6552.1	Cft	=	6,552.14					
			24" i/d	=	1969	-	11 No	x	9.33 ft	=	1865.926	Rft							
			100%	x	1865.93	x	4.292	x	1	=	8007.9	Cft	=	8,007.93					
									=	Total		=	14,560.07	Cft	100	Rs.			
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock.																
			(i)	0 to 7.0 ft Depth										=	7.00	ft.			
			12" i/d	=	2296.7	-	24 No	x	8.33 ft	=	2096.684	Rft							
			100%	x	2097	x	3.125	x	6.00	=	39313	Cft	=	39,313.00					
			24" i/d	=	1968.6	-	11 No	x	9.33 ft	=	1865.926	Rft							
			100%	x	1866	x	6.292	x	6.00	=	70439	Cft	=	70,439.00					
									=	Total		=	109,752.00	Cft	1000	Rs.			
			(ii)	7.01 ft to 15.0 ft Depth										=	8.00	ft.			
			12" i/d	=	2297	-	24 No	x	8.33 ft	=	2096.684	Rft							
			100%	x	2097	x	3.125	x	3.2500	=	21294	Cft	=	21,294.00					
			24" i/d	=	1969	-	11 No	x	9.33 ft	=	1865.926	Rft							
			100%	x	1866	x	4.292	x	8.0000	=	64063	Cft	=	64,063.00					
									=	Total		=	85,357.00	Cft	1000	Rs.			
			(iii)	Above 15.0 ft Depth										=	16.625	ft.			
			24" i/d	=	1969	-	11 No	x	9.33 ft	=	1865.926	Rft							
			100%	x	1866	x	4.292	x	1.625	=	13013	Cft	=	13,013.00					
									=	Total		=	13,013.00	Cft	1000	Rs.			
6	21	24	Providing and laying sand under and around the sewer pipe, including leveling, manual compaction, complete in all respect.																
			12" i/d	=	2297	-	24 No	x	6.33 ft	=	2,144.68	Rft							
			1	x	2,145	x	24.000	x	1.000	=	51472	Cft							
									=	Total		=	51,472.00	Cft	100.00	Rs.			
7	21	23	Providing and laying crushed stone aggregate of 1/4" to 1" gauge under and around the sewer pipe, including leveling, manual compaction, complete in all respects.																
			24" i/d	=	1969	-	11 No	x	7.33 ft	=	1,887.93	Rft							
									=	Total		=	1,887.93	Rft					
			(i)	Crush bajri for pipe bedding.															
			1	x	1,888	x	6.292	x	1.875	=	22272	Cft	=						
			Deductions of 1/2" od pipe																
			3.143	x	1,888	x	(2.500) ²	x	0.500	=	4636	Cft							
							4		=	Net Total		=	17,636	Cft	=	17,636.00	Cft	100.00	Rs.
8	21	3	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II , Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-																
			i) 310 mm (12") i/d																
			Pipe length	=	2297 ft	-	4 No	x	4.00 ft	=	2280.7	Rft	2,280.70	Rft	1	Rs.			
			v) 610 mm (24") i/d																
			Pipe length	=	1969 ft	-	11 No	x	5.00 ft	=	1913.6	Rft	1,913.60	Rft	1	Rs.			
			AOR Left in Place Shuttering (Using Eucalypts Wood) Excavation of Trench Will be Paid Without Timbering etc																
			3	x	64.00	x	1.00			=	192.00	Cft	192.00	Cft	1				
9	Non MRS Rate		Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface, application of primer. Complete in all respect to the entire satisfaction of the Engineer in charge. (Analysis attached)																
			24" i/d sewer pipe.																
			3.142857143	x	2.00	x	1913.60			=	12028.343	Rft	12028.34						
									=	Total		12028.34	Sft	1					
9	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).																
			Qty as per item No.		5	(i)			=	208122	Cft								
			Deductions																

Sr. No.	MRS Reference		Description of Items							Quantity	Unit	Rate	Amount									
	Ch	It:No																				
			As per sand filling Item No.							10		=	44413	Cft								
			As per bedding It.No.							7	(i)	=	69108	Cft								
			Pipe valumn																			
			3.143	x	2,145	x(	1.333	)² x	0.250	=	2996	Cft								
			3.143	x	1887.926	x(	2.500	)² x	0.250	=	9271	Cft								
			Total deductions									=	125788	Cft								
			Balance quantity.							208122	(-)	125788	=	94601	Cft							
			a) Lead upto a single throw of Kassi, phaorah or shovel							=	100%	=	94601	Cft	=	94,601.00	Cft	1000		Rs.		
10	10	3	Supplying and filling sand under floor; or plugging in wells.																			
		(i)	Sand filling at trench top																			
			1	x	2144.68	x	3.125	x	3.00	=	20106.41	Cft	=									
			1	x	1887.93	x	4.292	x	3.00	=	24307.05	Cft	=									
			Total							=	44413.46	Cft	=	44,413.46	Cft	100		Rs.				
11	3	25	Compaction of earthwork c) Ramming earthwork (all types of soil).																			
			Qty as per item No.							=	9	=	94600.54	Cft	=	94,600.54	Cft	1000		Rs.		
	26	35	Bailing out water:- b)by pump																			
			2	x	8	x	3600	x	0.5	x	47	1353600	1353600.00	Cft	1000							
17	3	17-a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile																			
			a)upto ¼ mile(400 m)=																			
			b)for every 330 ft.(100 m)additional lead or part thereof,beyond ¼ mile (400m)upto one mile(1.6 Km)																			
			for every ¼ mile(400 m)additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).																			
			Quantity of deductions of item No.							9	=	125788	Cft	=								
			Take 20%							=	125788	x	0.20	=	25157.69	Cft	=	25,157.69	Cft	1000		Rs.
			Total Cost of RCC Sewer																	Total:-	Rs	
			Total Cost of Man holes (RA-11 Attached)							=	4.0 i/d	=	24 No.	4 Rft	=	24.00	No.	1		Rs		
			Total Cost of Man holes (RA-12 Attached)							=	5.0 i/d	=	11 No.	5 Rft	=	11.00	No.	1		Rs		
																				G.Total:-	Rs	

Carried over to the Sub Summary A-1 (ii)

Comprehensive Sewerage System in Okara City

Part	A	Sewer Lines and Manholes													
	A	iii	Replacement of sewer line 42" i/d and from Chungi No. 6 to Chungi No. 7 along Okara Multan road												
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA															
S No	MRS, Reference		Description of Items							Quantity	Unit	Rate	Amount		
	Ch	It:No													
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).												
			MH17-25	=	900	-	4 No	x	11.50 ft	=	854	Rft			
			80%	x	854.00	x	8.042	x	0.83	=	4560.1	Cft	= 4560.08		
			MH26-S/C	=	1242	-	5 No	x	12.250 ft	=	1180.75	Rft			
			80%	x	1180.75	x	8.042	x	0.83	=	6304.8	Cft	= 6304.81		
										=	Total		= 10864.89		
												Cft	100	Rs.	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.												
			MH17-25	=	900	-	4 No	x	11.50 ft	=	854	Rft			
			10%	x	854.0	x	6.042	x	0.5	=	258.0	Cft	= 257.98		
			MH26-S/C	=	1242	-	5 No	x	12.25 ft	=	1180.75	Rft			
			10%	x	1180.75	x	6.042	x	0.5	=	356.7	Cft	= 356.68		
										=	Total		= 614.66		
												Cft	100	Rs.	
3	4	19-d	Dismantling cement concrete with brick aggregate.												
			MH17-25	=	900	-	4 No	x	11.50 ft	=	854	Rft			
			5%	x	854.0	x	6.042	x	0.5	=	129.0	Cft	= 128.99		
			MH26-S/C	=	1242	-	5 No	x	12.25 ft	=	1180.75	Rft			
			5%	x	1180.75	x	6.042	x	0.5	=	178.3	Cft	= 178.34		
										=	Total		= 307.33		
												Cft	100	Rs.	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.												
			Pipe length	=	900 ft	-	4 No	x	11.50 ft	=	854	Rft			
			5%	x	854	x	8.042	x		=	343.38	Sft	= 343.38		
			MH26-S/C	=	1242	-	5 No	x	12.25 ft	=	1180.75	Rft			
			5%	x	1180.75	x	8.042	x		=	474.76	Sft	= 474.76		
										=	Total		= 818.14		
												Sft	100	Rs.	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-												
			(i)	0 to 7.0 ft Depth									7.00	ft.	
			MH17-25	=	900	-	4 No	x	11.50 ft	=	854	Rft			
			80%	x	854	x	8.042	x	6.17	=	33898	Cft	= 33898.00		
			10%	x	854	x	8.042	x	6.000	=	4121	Cft	= 4121.00		
			5%	x	854	x	8.042	x	6.625	=	2275	Cft	= 2275.00		
			5%	x	854	x	8.042	x	6.625	=	2275	Cft	= 2275.00		
			MH26-S/C	=	1242.00	-	5 No	x	12.25 ft	=	1180.75	Rft			
			80%	x	1180.75	x	8.042	x	6.17	=	46868	Cft	= 46868.00		
			10%	x	1180.75	x	8.042	x	6.000	=	5697	Cft	= 5697.00		
			5%	x	1180.75	x	8.042	x	6.625	=	3145	Cft	= 3145.00		
			5%	x	1181	x	8.042	x	7.000	=	3323	Cft	= 3323.00		
										=	Total		= 101602.00		
												Cft	1000	Rs.	
			(ii)	7.01 ft to 15.0 ft Depth									8.00	ft.	
			MH17-25	=	900	-	4 No	x	11.50 ft	=	854	Rft			
			80%	x	854	x	6.042	x	8.00	=	33021	Cft	= 33021.00		
			10%	x	854	x	6.042	x	8.000	=	4128	Cft	= 4128.00		
			5%	x	854	x	6.042	x	8.000	=	2064	Cft	= 2064.00		
			5%	x	854	x	6.042	x	8.000	=	2064	Cft	= 2064.00		
			MH26-S/C	=	1242.00	-	5 No	x	12.25 ft	=	1180.75	Rft			
			80%	x	1180.75	x	6.042	x	8.00	=	45656	Cft	= 45656.00		
			10%	x	1180.75	x	6.042	x	8.000	=	5707	Cft	= 5707.00		
			5%	x	1180.75	x	6.042	x	8.000	=	2853	Cft	= 2853.00		
			5%	x	1181	x	6.042	x	8.000	=	2853	Cft	= 2853.00		
										=	Total		= 98346.00		
												Cft	1000	Rs.	
			(iii)	Above 15.0 ft Depth									20.528	ft.	
			MH17-25	=	900	-	4 No	x	11.50 ft	=	854	Rft			
			80%	x	854	x	4.042	x	5.528	=	15263	Cft	= 15263.00		
			10%	x	854	x	4.042	x	5.528	=	1908	Cft	= 1908.00		
			5%	x	854	x	4.042	x	5.528	=	954	Cft	= 954.00		
			5%	x	854	x	4.042	x	5.528	=	954	Cft	= 954.00		
			MH26-S/C	=	1242.00	-	5 No	x	12.25 ft	=	1180.75	Rft			
			80%	x	1180.75	x	4.042	x	6.768	=	25837	Cft	= 25837.00		
			10%	x	1180.75	x	4.042	x	6.768	=	3230	Cft	= 3230.00		
			5%	x	1180.75	x	4.042	x	6.768	=	1615	Cft	= 1615.00		
			5%	x	1181	x	4.042	x	6.768	=	1615	Cft	= 1615.00		
										=	Total		= 51376.00		
												Cft	1000	Rs.	
6	21	23	Providing and laying crushed stone aggregate of 1/4" to 1" gauge under and around the sewer pipe, including leveling, manual compaction, complete in all respects.												
			MH17-25	=	900	-	4 No	x	9.50 ft	=	862	Rft			
			MH26-S/C	=	1242.00	-	5 No	x	10.25 ft	=	1190.75	Rft			
										=	Total		= 2052.75		
			(i)	Crush bajri for pipe bedding.											

S No	MRS, Reference		Description of Items										Quantity	Unit	Rate	Amount				
	Ch	It:No																		
			1	x	2052.75	x	8.042	x	3.188	=	52618	Cft	=							
			Deductions of 1/2 od pipe																	
			3.143	x	2052.75	x	4.250	)² x	0.500	=	14566	Cft	=						
						4			Net Total	=	38052	Cft	=	38052.00	Cft	100	Rs.			
7	21	3-x	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-79, Class III, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-																	
			x) 1070 mm (42") i/d																	
			Pipe length	=	2142 ft	-	9 No	x	6.50 ft	=	2083.5	Rft	=	2083.50	Rft	1	Rs.			
8		Non MRS Rate	Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface,application of primer .Complete in all respect to the entire satisfaction of the Engineer incharge.(Analysis attached)																	
			42" i/d sewer pipe.																	
			3.142857143	x	3.50	x	2083.50	x		=	22918.500	Sft	=	22918.50	Sft	1	Rs.			
9	3	13-a.b	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).																	
			Qty as per item No.		5	(i)	(ii)	(iii)	=	251324	Cft	=								
			Deductions																	
			As per sand filling Item No.		10	(i)			=	49088	Cft	=								
			As per Crushed stone bedding It.No.		6	(i)			=	38052	Cft	=								
			Pipe valumn																	
			3.143	x	2052.75	x	4.250	)² x	0.250	=	29133	Cft	=						
			Total deductions						=	116273	Cft	=								
			Balance quantity.				251324	(-)	116273	=	164184	Cft	=							
			a) Lead upto a single throw of Kassi, phaorah or shovel						=	50%	=	82092	Cft	=	82092.00	Cft	1000	Rs.		
			b) Upto a lead of 50 ft. (15 m).						=	50%	=	82092	Cft	=	82092.00	Cft	1000	Rs.		
10	10	3	Supplying and filling sand under floor; or plugging in wells.																	
		(i)	Sand filling at trench top																	
			1	x	854.00	x	8.042	x	3.00	=	20602.75	Cft	=							
			1	x	1180.75	x	8.042	x	3.00	=	28485.59375	Cft	=							
									Total	=	49088.34375	Cft	=	49088.34	Cft	100	Rs.			
11	3	25	Compaction of earthwork c) Ramming earthwork (all types of soil).																	
			Qty as per item No.						=	9	=	164184.00	Cft	=	164184.00	Cft	1000	Rs.		
12	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12 (Re-Laying)																	
			5%	x	2035	x	6.04	x	0.50	=	307.33	Cft	=	307.33	Cft	100	Rs.			
13	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4																	
			5%	x	2035	x	6.04	x	0.50	=	307.33	Cft	=	307.33	Cft	100	Rs.			
14	3	13-a	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any othermeans owned by the contractor.(Lead table attached)																	
			Lead upto		170	K.m from Karana quarry Sargodha District .														
			Quantity as per Item No.						=	13	=	307.33	Cft	=						
			Quantity of bajri.						=	307.33	x	0.88	Cft	=	270.45	Cft	100	Rs.		
15	10	10	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.																	
			5%	x	2035	x	4.00	x	0.00	=	502.50	Sft	=	502.50	Sft	100	Rs.			
16	26	35	Bailing out water:- b)by pump																	
			2	x	8	x	3600	x	1	x	42	2419200	=	2419200.00	Cft	1000				
17	3	17-a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile																	
			a)upto ¼ mile(400 m)=																	
			b)for every 330 ft.(100 m)additional lead or part thereof,beyond ¼ mile (400m)upto one mile(1.6 Km)																	
			for every ¼ mile(400 m)additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).																	
			Quantity aof deductions of item No.																	
									=	9	=	116273	Cft	=						
			Take 20%						=	116273	x	0.20	=	23254.67	Cft	=	23254.67	Cft	1000	Rs.
			Total:- Rs																	
18		Material	Deduct cost of old material (Stone balast)																	

S No	MRS. Reference		Description of Items							Quantity	Unit	Rate	Amount			
	Ch	It:No														
	input Rate		Quantity as per item No.			1		=	10864.89	Cft						
158	6.003		Quantity take 80% after deducting the dust stone used as blinding layer.													
			Quantity	=	10865	x	80	/	100	=	8692	Cft				
			Wastage	=	8692	x	15	/	100	=	1304	Cft				
			Input material rate as per item No.06.003						Net Total	=	7388	Cft	7388.12	Cft	100	Rs.
			Total Cost of RCC Sewer					=	42 "i/d	=	2142 Rft	Depth	=			Total:- Rs
			Total Cost of M.H.Chambers (RA-07 Attached)					=	6.5 i/d	=	4 No	19.09	=	x 4 No		Rs
			Total Cost of Man holes (RA-09 Attached)					=	6.5 i/d	=	5 No	20.33	=	x 5 No		Rs
																G.Total:- Rs

Carried over to the Sub Summary A-1 (iii)

Restoration of Roads (Trunk Sewer Rute)

Sr. No:	Description of items	Quantity	Rate	Unit	Amount
2	Re-Laying of Sub Base Course by using old material (received through dismantling of road crust, compacted up to 100% modified AASHO dry density complete in all respect. (Labour Rate only)18/3a-II	24,190.63		P.% Cft	
3	Providing and laying of road edging of 3" wide and 9" deep brick on end complete in all respect. 18/5	13,957.80		P.Rft	
4	Providing & Laying (Water Bound macadam) Base Course of crushed stone aggregate form Kirana quarry of required thickness of approved quality and grade, and supply and spreading of stone screening , including placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHO dry density, including carriage of all materials to site of work, complete in all respect. 18/4a	24,190.63		P.% Cft	
5	Providing and Laying bitumenious priming coat, using 10 Lbs kerosin oil and 10 lbs binder per 100 Sft or 0.5 Kg Kerosene and 0.5 Kg binder per square metre.C-18/6	37,926.50		P.% Sft	
6	Providing ana laying Plant Premixed bitumenious carpt i/c compaction and finishing to required grade camber and density with 4.5 % bitumen 2" thick. (AWC)	37,926.50		P.% Sft	

Total

Carried over to the Sub Summary Part A-1 (iv)

Desilting of Existing Sewer Lines

Sub-Head Part-A-2		Desilting of RCC blocked/choked existing sewer																						
		Length of Line	=	2,250	Rft	Dia of sewer line					18 "i/d sewer													
Rates as per		MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT Okara																						
S.No	MRS 2/2023		Description of item								Quantity	Unit	Rate	Amount (PKR)										
	Ch.	Item																						
1	Non MRS		Desilting ,cleaning of blocked/choked existing sewer line by applying mechanical venching machine along with all requisit T & p ,labour charges,all accessories require at site.Complete in all to the entire satisfaction of the Engineer Incharge.																					
			18 "i/d sewer								=	2250.00	Rft	=	2250.00	Rft	1							
2	3	17.a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m) (lead upto 3.0 mille																					
			a) upto ¼ mile (400 m).								=													
			b) for every 330 ft. (100 m) additional lead or part thereof,beyond ¼ mile(400 m)upto one mile.(1.6 Km.)								=													
			c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).								=													
			Silt from 30" i/d sewer.								3.143	x	1.500	x	1.50	x	0.25	x	1575.00	=	2784.38	Cft	=	
			Take 80% to be transported								=	2227.50	Cft	=	2227.50	Cft	1000							
													Total											

Carried over to the Sub Summary A-2 (i)

Desilting of Existing Sewer Lines

Sub-Head Part-A-2		Desilting of RCC blocked/choked existing sewer																					
		Length of Line	=	1,750	Rft	Dia of sewer line					21 "i/d sewer												
Rates as per			MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT Okara																				
S.No	MRS 2/2023		Description of item							Quantity	Unit	Rate	Amount (PKR)										
	Ch.	Item																					
1	Non MRS		Desilting ,cleaning of blocked/choked existing sewer line by applying mechanical venching machine along with all requisit T & p ,labour charges,all accessories require at site.Complete in all to the entire satisfaction of the Engineer Incharge.																				
			21 "i/d sewer						=	1750.00	Rft	=	1750.00	Rft	1								
2	3	17.a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m) (lead upto 3.0 mille																				
			a) upto ¼ mile (400 m).							=													
			b) for every 330 ft. (100 m) additional lead or part thereof,beyond ¼ mile(400 m)upto one mile.(1.6 Km.)							=													
			c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).							=													
			Silt from 30" i/d sewer.							3.143	x	1.750	x	1.75	x	0.25	x	1225.00	=	2947.66	Cft	=	
			Take 80% to be transported							=	2358.13	Cft	=	2358.13	Cft	1000							
											Total												

Carried over to the Sub Summary A-2 (ii)

Desilting of Existing Sewer Lines

Sub-Head Part-A-2		Desilting of RCC blocked/choked existing sewer																						
		Length of Line	=	1,500	Rft	Dia of sewer line					24 "i/d sewer													
Rates as per			MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT Okara																					
S.No	MRS 2/2023		Description of item								Quantity	Unit	Rate	Amount (PKR)										
	Ch.	Item																						
1	Non MRS		Desilting ,cleaning of blocked/choked existing sewer line by applying mechanical venching machine along with all requisit T & p ,labour charges,all accessories require at site.Complete in all to the entire satisfaction of the Engineer Incharge.																					
			24 "i/d sewer								=	1500.00	Rft	=	1500.00	Rft	1							
2	3	17.a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m) (lead upto 3.0 mille																					
			a) upto ¼ mile (400 m).								=													
			b) for every 330 ft. (100 m) additional lead or part thereof,beyond ¼ mile(400 m)upto one mile.(1.6 Km.)								=													
			c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).								=													
			Silt from 30" i/d sewer.								3.143	x	2.000	x	2.00	x	0.25	x	1050.00	=	3300.00	Cft	=	
			Take 80% to be transported								=	2640.00	Cft	=	2640.00	Cft	1000							
												Total												

Carried over to the Sub Summary A-2 (iii)

Desilting of Existing Sewer Lines

Sub-Head Part-A-2		Desilting of RCC blocked/choked existing sewer																							
		Length of Line	=	1,500	Rft	Dia of sewer line					27 "i/d sewer														
Rates as per			MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT Okara																						
S.No	MRS 2/2023		Description of item								Quantity	Unit	Rate	Amount (PKR)											
	Ch.	Item																							
1	Non MRS		Desilting ,cleaning of blocked/choked existing sewer line by applying mechanical venching machine along with all requisit T & p ,labour charges,all accessories require at site.Complete in all to the entire satisfaction of the Engineer Incharge.																						
			27 "i/d sewer								=	1500.00	Rft	=	1500.00	Rft	1								
2	3	17.a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m) (lead upto 3.0 mille																						
			a) upto ¼ mile (400 m).								=														
			b) for every 330 ft. (100 m) additional lead or part thereof,beyond ¼ mile(400 m)upto one mile.(1.6 Km.)								=														
			c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).								=														
			Silt from 30" i/d sewer.								3.143	x	2.250	x	2.25	x	0.25	x	1050.00	=	4176.56	Cft	=		
			Take 80% to be transported								=	3341.25	Cft	=	3341.25	Cft	1000								
												Total													

Carried over to the Sub Summary A-2 (iv)

Desilting of Existing Sewer Lines

Sub-Head Part-A-2		Desilting of RCC blocked/choked existing sewer																							
		Length of Line	=	925	Rft	Dia of sewer line					30 "i/d sewer														
Rates as per		MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT Okara																							
S.No	MRS 2/2023		Description of item								Quantity	Unit	Rate	Amount (PKR)											
	Ch.	Item																							
1	Non MRS		Desilting ,cleaning of blocked/choked existing sewer line by applying mechanical venching machine along with all requisit T & p ,labour charges,all accessories require at site.Complete in all to the entire satisfaction of the Engineer Incharge.																						
			30 "i/d sewer								=	925.00	Rft	=	925.00	Rft	1								
2	3	17.a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m) (lead upto 3.0 mille																						
			a) upto ¼ mile (400 m).								=														
			b) for every 330 ft. (100 m) additional lead or part thereof,beyond ¼ mile(400 m)upto one mile.(1.6 Km.)								=														
			c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).								=														
			Silt from 30" i/d sewer.								3.143	x	2.500	x	2.50	x	0.25	x	647.50	=	3179.69	Cft	=		
			Take 80% to be transported								=	2543.75	Cft	=	2543.75	Cft	1000								
											Total														

Carried over to the Sub Summary A-2 (v)

Desilting of Existing Sewer Lines

Sub-Head Part-A-2		Desilting of RCC blocked/choked existing sewer																						
		Length of Line	=	800	Rft	Dia of sewer line					36 "i/d sewer													
Rates as per			MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT Okara																					
S.No	MRS 2/2023		Description of item								Quantity	Unit	Rate	Amount (PKR)										
	Ch.	Item																						
1	Non MRS		Desilting ,cleaning of blocked/choked existing sewer line by applying mechanical venching machine along with all requisit T & p ,labour charges,all accessories require at site.Complete in all to the entire satisfaction of the Engineer Incharge.																					
			36 "i/d sewer								=	800.00	Rft	=	800.00	Rft	1							
2	3	17.a.b.c	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m) (lead upto 3.0 mille																					
			a) upto ¼ mile (400 m).								=													
			b) for every 330 ft. (100 m) additional lead or part thereof,beyond ¼ mile(400 m)upto one mile.(1.6 Km.)								=													
			c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).								=													
			Silt from 30" i/d sewer.								3.143	x	3.000	x	3.00	x	0.25	x	560.00	=	3960.00	Cft	=	
			Take 80% to be transported								=	3168.00	Cft	=	3168.00	Cft	1000							
											Total													

Carried over to the Sub Summary A-2 (vi)

Comprehensive Sewerage System in Okara City

Part-A-3			New Sewer Lines and Manholes											
	A	i	Main Sewer Line 66" i/d and Manholes											
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA														
S No	MRS, Ref. Ch	It:No	Description of Items								Quantity	Unit	Rate	Amount (Pak Rs.)
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).											
			5,625.00	-	13 No.	x	14.50 ft	=	5436.50 ft					
			55%	x	5436.50	x	12.375	x	0.83	=	30711.81			
									Total	=	30711.81	Cft	100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.											
			5,625.00	-	13 No.	-	14.50 ft	x	5436.50 ft					
			3%	x	5436.5	x	12.375	x	0.50	=	1009.15			
									Total	=	1009.15	Cft	100	
3	4	19-d	Dismantling cement concrete with brick aggregate.											
			5,625.00	=	13 No.	-	14.50 ft	x	5436.50 ft					
			3%	x	5436.5	x	12.375	x	0.50	=	1009.15			
									Total	=	1009.15	Cft	100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-											
			(i)	0 to 7.0 ft Depth				=	7.0					
			5625	-	13	-	14.50	x	5436.50 ft					
			55%	x	5437	x	12.375	x	6.17	=	228303.44			
			3%	x	5437	x	12.375	x	6.000	=	12109.80			
			0%	x	5437	x	12.375	x	6.625	=	0.00			
			42%	x	5437	x	12.375	x	7.000	=	197793.46			
									Total	=	438206.70	Cft	1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0					
			5625	-	13	-	14.50	x	5436.50 ft					
			55%	x	5437	x	10.375	x	8.00	=	248176.23			
			3%	x	5437	x	10.375	x	8.00	=	13536.89			
			0%	x	5437	x	10.375	x	8.00	=	0.00			
			42%	x	5437	x	10.375	x	8.00	=	189516.39			
									Total	=	451229.50	Cft	1000	
			(iii)	Above 15.0 ft Depth				=						
			5625	-	13	-	14.50	x	5436.50 ft					
			55%	x	5437	x	8.375	x	7.88	=	197434.34			
			3%	x	5437	x	8.375	x	7.88	=	10769.15			
			0%	x	5437	x	8.375	x	7.88	=	0.00			
			0%	x	5437	x	8.375	x	7.88	=	0.00			
									Total	=	208203.49	Cft	1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.											
			5625	-	13	x	12.50	)=	5462.50 ft				
			Crush bajri	=	5462.500	x	12.375	x	4.938	=	333767.29			
			D/d 1/2o/d pip	x	3.142857143	x	6.583	)² x	5462.5	=	93007.46		
			Net Total		2	x	4	=	Net balance	=	240759.82	Cft	100	
7	21	5xiv)	Providing and laying R.C.C. pipe sewers, moulded with cement concrete conforming to ASTM Specification C-76-20, Class IV, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring,cutting pipes where necessary, testing, etc. complete:-											
			xiv) 1680 mm (66") i/d											
			2814 Rft	-	6.00	x	8.00	=	2766	=	2766.00	Rft	1	

S No	MRS, Ref.		Description of Items	Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It:No						
8	21	4.xv	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class III, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-					
			xiv) 1680 mm (66") i/d					
			2811 Rft - 7.00 x 8.00 = 2755 =	2755.00	Rft	1		
9		Non MRS Rate	Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface, application of primer. Complete in all respect to the entire satisfaction of the Engineer incharge. (Analysis attached)					
			6'6" i/d sewer pipe.					
			Total pipe =	5521.0 ft				
			3.1429 x 5521.00 x 5.50 =	95434.43	Sft	1		
10	10	3	Supplying and filling sand under floor; or plugging in wells.					
		(i)	Sand filling at trench top					
			5521.00 - 7.00 x 9.5 =	5454.5				
			Qty. of sand = 5454.50 x 12.375 x 3.00 =	202498.31				
			Total =	202498.31	Cft	100		
11	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).					
			Qty as per item No. 5 (i) =	438206.70				
			Qty as per item No. 5 (ii) =	451229.50				
			Qty as per item No. 5 (iii) =	208203.49				
			Total =	1097639.69				
			Deductions					
			As per sand filling Item No. 10 =	202498.31				
			Crushed stone as per It.No. 6 =	240759.82				
			Pipe valumn					
			5454.500 x 0.785714286 x (6.583) ² x	185742.500				
			Total deductions	629000.64				
			Balance qty = 1097639.7 (-) 629001 =	468639				
			a) Lead upto a single throw of Kassi, phaorah or shovel = 468639 x 50% =	234319.53	Cft	1000		
			b) Upto a lead of 50 ft. (15 m). = 468639 = 50% =	234319.53	Cft	1000		
12	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).					
			Qty as it.No. 11 = 234319.53 + 234319.53 =	468639.06	Cft	1000		
14	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12					
			Quantity .as per item.No. 3.00 = 1009.15 =	1009.15	Cft	100		
15	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4					
			Quantity .as per item.No. 2.00 = 1009.15 =	1009.15	Cft	100		
16	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Lead table attached)					
			Lead upto 170 K.m from Karana quarry Sargodha District .					
			Quantity as per Item No. 15 = 1009.15 =					
			Quantity of bajri. = 1009.15 x 0.88 =	888.05	Cft	100		

S No	MRS, Ref.		Description of Items	Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No					
17	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile				
		a)	a)upto ¼ mile(400 m) =				
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =				
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=				
			Quantity as per d/d item No. 11 = 629000.64				
			Take 20% = 629000.64 x 20% = 125800	Cft	1000		
							Total
			Total Cost of RCC Sewer 66 "i/d = 2755 Rft =			Net	Total:-
			Total Cost of M.Holes (RA-14 Attached) 8 ft.dia = 22.88 ' depth = 13 No. x				
							Total:-
							G.Total:-

Carried over to the Sub Summary A-3 (i)

Comprehensive Sewerage System in Okara City

Part-A-3			New Sewer Lines and Manholes										
	A	ii	Main Sewer Line 60" i/d and Manholes										
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA													
S No	MRS, Ref. Ch	Ref. It:No	Description of Items							Quantity	Unit	Rate	Amount (Pak Rs.)
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).										
			6,689.00	-	11 No.	x	15.25 ft	=	6521.25 ft				
			55%	x	6521.25	x	11.792	x	0.83	=	35103.21		
									Total	=	35103.21	Cft 100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.										
			6,689.00	-	11 No.	-	15.25 ft	x	6521.25 ft				
			10%	x	6521.3	x	11.792	x	0.50	=	3844.82		
									Total	=	3844.82	Cft 100	
3	4	19-d	Dismantling cement concrete with brick aggregate.										
			6,689.00	=	11 No.	-	15.25 ft	x	6521.25 ft				
			10%	x	6521.3	x	11.792	x	0.50	=	3844.82		
									Total	=	3844.82	Cft 100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-										
			(i)	0 to 7.0 ft Depth				=	7.0				
			6689	-	11	-	15.25	x	6521.25 ft				
			55%	x	6521	x	11.792	x	6.17	=	260947.95		
			10%	x	6521	x	11.792	x	6.000	=	46137.84		
			0%	x	6521	x	11.792	x	6.625	=	0.00		
			35%	x	6521	x	11.792	x	7.000	=	188396.20		
									Total	=	495481.99	Cft 1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0				
			6689	-	11	-	15.25	x	6521.25 ft				
			55%	x	6521	x	9.792	x	8.00	=	280957.19		
			10%	x	6521	x	9.792	x	8.00	=	51083.13		
			0%	x	6521	x	9.792	x	8.00	=	0.00		
			35%	x	6521	x	9.792	x	8.00	=	178790.94		
									Total	=	510831.25	Cft 1000	
			(iii)	Above 15.0 ft Depth				=					
			6689	-	11	-	15.25	x	6521.25 ft				
			55%	x	6521	x	7.792	x	14.79	=	413325.38		
			10%	x	6521	x	7.792	x	14.79	=	75150.07		
			0%	x	6521	x	7.792	x	14.79	=	0.00		
			0%	x	6521	x	7.792	x	14.79	=	0.00		
									Total	=	488475.45	Cft 1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.										
			6689	-	11	x	13.25	)=	6543.25 ft			
			Crush bajri	=	6543.250	x	11.792	x	4.500	=	347201.20		
			D/d 1/2o/d pipe	x	3.1428571	x	6.000	)² x	6543.3	=	92540.25	
			Net Total		2	x	4	=	Net balance	=	254660.95	Cft 100	
7	21	5xiii)	Providing and laying R.C.C. pipe sewers, moulded with cement concrete conforming to ASTM Specification C-76-20, Class IV, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-										
			xiii) 1520 mm (60") i/d										
			6689 Rft	-	11.00	x	8.00	=	6601	=	6601.00	Rft 1	
8	Non MRS Rate		Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface,application of primer .Complete in all respect to the entire satisfaction of the Engineer incharge.(Analysis attached)										
			60" i/d sewer pipe.										

S No	MRS, Ref.		Description of Items						Quantity	Unit	Rate	Amount (Pak Rs.)	
	Ch	It:No											
			Total pipe	=				=	6601.0 ft				
			3.1429	x	6601.00	x	5.00	=	103730.00	Sft	1		
9	10	3	Supplying and filling sand under floor; or plugging in wells.										
		(i)	Sand filling at trench top										
			3987.00	-	11.00	x	13.3	=	3841.25				
			Qty.of sand	=	3841.25	x	11.792	x	3.00	=	135884.22		
									Total	=	135884.22	Cft 100	
10	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).										
			Qty as per item No.		5	(i)	=	495481.99					
			Qty as per item No.		5	(ii)	=	510831.25					
			Qty as per item No.		5	(iii)	=	488475.45					
						Total	=	1494788.70					
			Deductions										
			As per sand filling Item No.			9	=	135884.22					
			Crushed stone asper It.No.			6	=	254660.95					
			Pipe valumn										
			3841.250	x	0.7857143	x	(6.000)	x	108652.500				
			Total deductions										
									499197.67				
			Balance qty.	=	1,494,789	(-)	499198	=	995591				
			a) Lead upto a single throw of Kassi, phaorah or shovel	=	995591	x	50%	=	497795.51	Cft	1000		
			b) Upto a lead of 50 ft. (15 m).	=	995591	=	50%	=	497795.51	Cft	1000		
11	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).										
			Qty as it.No.		10	=	497795.51	+	497795.51	=	995591.03	Cft 1000	
13	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12										
			Quantity .as per item.No.			3.00	=	3844.82	=	3844.82	Cft	100	
14	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4										
			Quantity .as per item.No.			2.00	=	3844.82	=	3844.82	Cft	100	
15	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)										
			Lead upto		170	K.m from Karana quarry Sargodha District .							
			Quantity as per Item No.			14	=	3844.82	=				
			Quantity of bajri.	=	3844.82	x	0.88	=	3383.44	Cft	100		
16	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile										
		a)	a)upto ¼ mile(400 m) =										
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =										
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=										
			Quantity as per d/d item No.										
			Take 20%	=	0.00	x	20%	=	0	Cft	1000		
			Total Cost of RCC Sewer						60 "i/d	=	6601 Rft	=	
			Total Cost of M.Holes (RA-15 Attached)						8 ft.dia	=	29.79 ' depth	=	11 No. x
												Total:-	
												G.Total:-	

Carried over to the Sub Summary A-3 (ii)

S No	MRS, Ref.		Description of Items	Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It.No					
8	Non MRS Rate		Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface,application of primer .Complete in all respect to the entire satisfaction of the Engineer incharge.(Analysis attached)				
			54" i/d sewer pipe.				
			Total pipe = 368.0 ft				
			3.1429 x 368.00 x 4.50 = 5204.57		Sft	1	
9	10	3	Supplying and filling sand under floor; or plugging in wells.				
		(i)	Sand filling at trench top				
			384.00 - 2.00 x 13.3 = 357.5				
			Qty.of sand = 357.50 x 11.208 x 3.00 = 12020.94				
			Total = 12020.94		Cft	100	
10	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).				
			Qty as per item No. 5 (i) = 24707.94				
			Qty as per item No. 5 (ii) = 26041.17				
			Qty as per item No. 5 (iii) = 30140.11				
			Total = 80889.21				
			Deductions				
			As per sand filling Item No. 9 = 12020.94				
			Crushed stone asper It.No. 6 = 12157.62				
			Pipe valumn				
			357.500 x 0.785714 x(5.417) ² x 8241.474				
			Total deductions 32420.03				
			Balance qty. = 80889.21 (-) 32420 = 48469				
			a) Lead upto a single throw of Kassi, phaorah or shovel = 48469 x 50% = 24234.59		Cft	1000	
			b) Upto a lead of 50 ft. (15 m). = 48469 = 50% = 24234.59		Cft	1000	
11	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).				
			Qty as it.No. 10 = 24234.59 + 24234.59 = 48469.19		Cft	1000	
13	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12				
			Quantity .as per item.No. 3.00 = 198.11 = 198.11		Cft	100	
14	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4				
			Quantity .as per item.No. 2.00 = 198.11 = 198.11		Cft	100	
15	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)				
			Lead upto 170 K.m from Karana quarry Sargodha District .				
			Quantity as per Item No. 14 = 198.11 =				
			Quantity of bajri. = 198.11 x 0.88 = 174.33		Cft	100	
16	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile				
		a)	a)upto ¼ mile(400 m) =				
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =				
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=				
			Quantity as per d/d item No. 10 = 32420.03				
			Take 20% = 32420.03 x 20% = 6484		Cft	1000	

S No	MRS, Ref.		Description of Items							Quantity		Unit	Rate	Amount (Pak Rs.)	
	Ch	It:No													
													Total		
			Total Cost of RCC Sewer				54 "i/d	=	368 Rft	=			Net	Total:-	
			Total Cost of M.Holes (RA-16 Attached)				8 ft.dia	=	28.14 ' depth	=	2 No.	x			
													Total:-		
													G.Total:-		

Carried over to the Sub Summary A-3 (iii)

Comprehensive Sewerage System in Okara City

Part-A-3			New Sewer Lines and Manholes										
	A	iv	Main Sewer Line 42" i/d and Manholes										
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA													
S No	MRS, Ref. Ch	It:No	Description of Items							Quantity	Unit	Rate	Amount (Pak Rs.)
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).										
			2,447.00	-(	8 No.	x	12.25 ft	)=	2349.00 ft			
			45%	x	2349.00	x	10.042	x	0.83	=	8810.07		
									Total	=	8810.07	Cft 100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.										
			2,447.00	-(	8 No.	-	12.25 ft	)=	2349.00 ft			
			10%	x	2349.0	x	10.042	x	0.50	=	1179.39		
									Total	=	1179.39	Cft 100	
3	4	19-d	Dismantling cement concrete with brick aggregate.										
			2,447.00	-(	8 No.	-	12.25 ft	)=	2349.00 ft			
			10%	x	2349.0	x	10.042	x	0.50	=	1179.39		
									Total	=	1179.39	Cft 100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.										
			2,447.00	-(	8 No.	-	12.25 ft	)=	2349.00 ft			
			5%	x	2349	x	10.042	x		=	1179.39		
									Total	=	1179.39	Sft 100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-										
			(i)	0 to 7.0 ft Depth				=	7.0				
			2447	-(	8	-	12.25	)=	2349.00 ft			
			45%	x	2349	x	10.042	x	6.17	=	65491.73		
			10%	x	2349	x	10.042	x	6.000	=	14152.73		
			5%	x	2349	x	10.042	x	6.625	=	7813.48		
			40%	x	2349	x	10.042	x	7.000	=	66046.05		
									Total	=	153503.99	Cft 1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0				
			2447	-(	8	-	12.25	)=	2349.00 ft			
			45%	x	2349	x	8.042	x	8.00	=	68003.55		
			10%	x	2349	x	8.042	x	8.00	=	15111.90		
			5%	x	2349	x	8.042	x	8.00	=	7555.95		
			40%	x	2349	x	8.042	x	8.00	=	60447.60		
									Total	=	151119.00	Cft 1000	
			(iii)	Above 15.0 ft Depth				=					
			2447	-(	8	-	12.25	)=	2349.00 ft			
			45%	x	2349	x	6.042	x	11.108	=	70936.31		
			10%	x	2349	x	6.042	x	11.11	=	15763.63		
			5%	x	2349	x	6.042	x	11.11	=	7881.81		
			5%	x	2349	x	6.042	x	11.11	=	7881.81		
									Total	=	102463.56	Cft 1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.										
			2447	-(	8	x	10.25	)=	2365.00 ft			
			Crush bajri	=	2365.000	x	10.042	x	3.188	=	75698.48		
			D/d 1/2o/d pipe	x	3.142857	x(	3.188	)² x	2365.0	=	9439.87	
			Net Total		2	x	4	=	Net balance	=	66258.60	Cft 100	
7	21	5.xv	Providing and laying R.C.C. pipe sewers, moulded with cement concrete conforming to ASTM Specification C-76-20, Class III, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-										
			x) 1070 mm (42") i/d										

			2447 Rft	-	(	8.00	x	6.50	)=	2395	=	2395.00	Rft	1		
8		Non MRS Rate	Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preperation of surface,application of primer .Complete in all respet to the entire satisfaction of the Engineer incharge. (Analysis attached)													
			42" i/d sewer pipe.													
			Total pipe	=					=	2395.0 ft						
			3.1429	x	2395.00	x	3.50		=	26345.00	Sft	1				
9	10	3	Supplying and filling sand under floor; or plugging in wells.													
		(i)	Sand filling at trench top													
			2447.00	-	(	8.00	x	8.0	)=	2383						
								Total	=	2383						
			Qty.of sand	=	2383.00	x	10.042	x	3.00	=	71787.88					
								Total	=	71787.88	Cft	100				
10	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).													
			Qty as per item No.		5	(i)	=	153503.99								
			Qty as per item No.		5	(ii)	=	151119.00								
			Qty as per item No.		5	(iii)	=	102463.56								
						Total	=	407086.56								
			Deductions													
			As per sand filling Item No.		9	=	71787.88									
			Crushed stone asper It.No.		6	=	66258.60									
			Pipe valumn													
			2383.000	x	0.785714	x	(	3.188	)² x	19023.441						
			Total deductions							157069.92						
			Balance qty.	=	407086.56	(-)	157070	=	250017							
			a) Lead upto a single throw of Kassi, phaorah or shovel	=	250017	x	50%	=	125008.32	Cft	1000					
			b) Upto a lead of 50 ft. (15 m).	=	250017	=	50%	=	125008.32	Cft	1000					
11	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).													
			Qty as it.No.		10	=	125008.32	+	125008.32	=	250016.64	Cft	1000			
13	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12													
			Quantity .as per item.No.		3.00	=	1179.39	=	1179.39	Cft	100					
14	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4													
			Quantity .as per item.No.		2.00	=	1179.39	=	1179.39	Cft	100					
15	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)													
			Lead upto		170.00	K.m from Karana quarry Sargodha District .										
			Quantity as per Item No.		14	=	1179.39	=								
			Quantity of bajri.	=	1179.39	x	0.88	=	1037.87	Cft	100					
16	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.													
			Quantity as per Item No.	=	4.00	=	1179.39	=	1179.39	Cft	100					
17	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile													
		a)	a)upto ¼ mile(400 m) =													

		b)	for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =									
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=									
			Quantity as per d/d item No.	10	=	157069.92						
			Take 20%	=	157069.92	x	20%	=	31414	Cft	1000	
												Total
			Total Cost of RCC Sewer	42 "i/d	=	2395 Rft	=			Net		Total:-
			Total Cost of M.H.Chambers (RA-17 Attached)	6.5 ft.dia	=	26.11 ' depth	=	8 No.	x			
												Total:-
												G.Total:-

Carried over to the Sub Summary A-3 (iv)

Comprehensive Sewerage System in Okara City

Part-A-3			New Sewer Lines and Manholes										
A v			Main Sewer Line 36" i/d and Manholes										
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA													
S No	MRS, Ref. Ch	Ref. It:No	Description of Items							Quantity	Unit	Rate	Amount (Pak Rs.)
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).										
			2,247.00	-(	8 No.	x	12.25 ft	)=	2149.00 ft			
			55%	x	2149.00	x	5.458	x	0.83	=	5354.73		
									Total	=	5354.73	Cft 100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.										
			2,247.00	-(	8 No.	-	12.25 ft	)=	2149.00 ft			
			10%	x	2149.0	x	5.458	x	0.50	=	586.50		
									Total	=	586.50	Cft 100	
3	4	19-d	Dismantling cement concrete with brick aggregate.										
			2,247.00	-(	8 No.	-	12.25 ft	)=	2149.00 ft			
			10%	x	2149.0	x	5.458	x	0.50	=	586.50		
									Total	=	586.50	Cft 100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.										
			2,247.00	-(	8 No.	-	12.25 ft	)=	2149.00 ft			
			5%	x	2149	x	5.458	x		=	586.50		
									Total	=	586.50	Sft 100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-										
			(i)	0 to 7.0 ft Depth				=	7.0				
			2247	-(	8	-	12.25	)=	2149.00 ft			
			55%	x	2149	x	5.458	x	6.17	=	39805.61		
			10%	x	2149	x	5.458	x	6.000	=	7037.98		
			5%	x	2149	x	5.458	x	6.625	=	3885.55		
			30%	x	2149	x	5.458	x	7.000	=	24632.91		
									Total	=	75362.05	Cft 1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0				
			2247	-(	8	-	12.25	)=	2149.00 ft			
			55%	x	2149	x	5.458	x	8.00	=	51611.82		
			10%	x	2149	x	5.458	x	8.00	=	9383.97		
			5%	x	2149	x	5.458	x	8.00	=	4691.98		
			30%	x	2149	x	5.458	x	8.00	=	28151.90		
									Total	=	93839.67	Cft 1000	
			(iii)	Above 15.0 ft Depth				=					
			2247	-(	8	-	12.25	)=	2149.00 ft			
			55%	x	2149	x	5.458	x	8.12	=	52385.99		
			10%	x	2149	x	5.458	x	8.12	=	9524.73		
			5%	x	2149	x	5.458	x	8.12	=	4762.36		
			5%	x	2149	x	5.458	x	8.12	=	4762.36		
									Total	=	71435.45	Cft 1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.										
			2247	-(	8	x	6.50	)=	2195.00 ft			
			2247 Rft		8 No		Total		2195.00 ft				
			Crush bajri	=	2195.000	x	5.458	x	2.750	=	32947.86		
			D/d 1/2o/d pipe	x	3.142857	x(	3.667	)² x	2195.0	=	11593.43	
			Net Total		2	x	4	=	Net balance	=	21354.43	Cft 100	
7	21	5.xv	Providing and laying R.C.C. pipe sewers, moulded with cement concrete conforming to ASTM Specification C-76-20, Class III, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-										
			ix) 910 mm (36") i/d										
			2247 Rft	-(	8.00	x	6.50	)=	2195	=	2195.00	Rft 1

S No	MRS, Ref.		Description of Items	Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No					
8	Ion	MRS Rat	Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface,application of primer .Complete in all respect to the entire satisfaction of the Engineer incharge.(Analysis attached)				
			36" i/d sewer pipe.				
			Total pipe =	2195.00			
			3.1429 x 2195.00 x 3.00 =	20695.71	Sft	1	
9	10	3	Supplying and filling sand under floor; or plugging in wells.				
		(i)	Sand filling at trench top				
			2247.00 -(8.00 x 8.00)=	2183			
			Total =	2183			
			Qty.of sand =	2183.00 x 5.458 =	35746.63		
			Total =	35746.63	Cft	100	
10	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).				
			Qty as per item No. 5 (i) =	75362.05			
			Qty as per item No. 5 (ii) =	93839.67			
			Qty as per item No. 5 (iii) =	71435.45			
			Total =	240637.16			
			Deductions				
			As per sand filling Item No. 9 =	35746.63			
			Crushed stone asper It.No. 6 =	21354.43			
			Pipe valumn				
			2183.000 x 0.785714 x(3.667) ² x	23060.103			
			Total deductions	80161.16			
			Balance qty. =	240637.16 (-) 80161 =	160476		
			a) Lead upto a single throw of Kassi, phaorah or shovel =	160476 x 50% =	80238.00	Cft	1000
			b) Upto a lead of 50 ft. (15 m). =	160476 =	80238.00	Cft	1000
11	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).				
			Qty as it.No. 10 =	80238.00 + 80238.00 =	160476.00	Cft	1000
13	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12				
			Quantity .as per item.No. 3.00 =	586.50 =	586.50	Cft	100
14	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4				
			Quantity .as per item.No. 2.00 =	586.50 =	586.50	Cft	100
15	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)				
			Lead upto 170.00 K.m from Karana quarry Sargodha District .				
			Quantity as per Item No. 14 =	586.50 =			
			Quantity of bajri. =	586.50 x 0.88 =	516.12	Cft	100
16	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.				
			Quantity as per Item No. =	4.00 =	586.50 =	586.50	Cft 100
17	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile				
		a)	a)upto ¼ mile(400 m) =				
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =				
		c)	c) for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=				

S No	MRS, Ref.		Description of Items						Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No										
			Quantity as per d/d item No.	10	=	80161.16						
			Take 80%	=	80161.16	x	80%	=	64129	Cft	1000	
											Total	
18			Deduct cost of old material (Stone balast)						=			
			Quantity as per item No.		=	5354.73						
	Input 6.003		Quantity take 80% after deducting the dust stone used as blinding layer.									
				=	5354.73	x	80%	=	4283.78			
			D/d 10% wastage	=	4283.78	x	10%	=	428.38			
						Net Quty	=	3855.40	=	3855.40	Cft 100.00	
			Total Cost of RCC Sewer						=			Net Total:-
			Total Cost of M.H (RA-18 Attached)		6.5 ft.dia	=	21.87' depth	=	8 No.	x		
											Total:-	

Carried over to the Sub Summary A-3 (v)

Comprehensive Sewerage System in Okara City

Part-A-3			New Sewer Lines and Manholes									
	A	vi	Main Sewer Line 33" i/d and Manholes									
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA												
S No	MRS, Ref. Ch	It:No	Description of Items						Quantity	Unit	Rate	Amount (Pak Rs.)
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).									
			2,516.00	-(	10 No.	x	11.50 ft	)=	2401.00 ft		
			80%	x	2401.00	x	5.167	x	0.83	=	8237.03	
									Total	=	8237.03	
										Cft	100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.									
			2,516.00	-(	10 No.	-	11.50 ft	)=	2401.00 ft		
			10%	x	2401.0	x	5.167	x	0.50	=	620.26	
									Total	=	620.26	
										Cft	100	
3	4	19-d	Dismantling cement concrete with brick aggregate.									
			2,516.00	-(	10 No.	-	11.50 ft	)=	2401.00 ft		
			10%	x	2401.0	x	5.167	x	0.50	=	620.26	
									Total	=	620.26	
										Cft	100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.									
			2,516.00	-(	10 No.	-	11.50 ft	)=	2401.00 ft		
			5%	x	2401	x	5.167	x		=	620.26	
									Total	=	620.26	
										Sft	100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-									
			(i)	0 to 7.0 ft Depth				=	7.0			
			2516	-(	10	-	11.50	)=	2401.00 ft		
			80%	x	2401	x	5.167	x	6.17	=	61231.90	
			10%	x	2401	x	5.167	x	6.000	=	7443.10	
			5%	x	2401	x	5.167	x	6.625	=	4109.21	
			5%	x	2401	x	5.167	x	7.000	=	4341.81	
									Total	=	77126.02	
										Cft	1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0			
			2516	-(	10	-	11.50	)=	2401.00 ft		
			80%	x	2401	x	5.167	x	8.00	=	79393.07	
			10%	x	2401	x	5.167	x	8.00	=	9924.13	
			5%	x	2401	x	5.167	x	8.00	=	4962.07	
			5%	x	2401	x	5.167	x	8.00	=	4962.07	
									Total	=	99241.33	
										Cft	1000	
			(iii)	Above 15.0 ft Depth				=				
			2516	-(	10	-	11.50	)=	2401.00 ft		
			80%	x	2401	x	5.167	x	3.6463	=	36185.87	
			10%	x	2401	x	5.167	x	3.65	=	4523.23	
			5%	x	2401	x	5.167	x	3.65	=	2261.62	
			5%	x	2401	x	5.167	x	3.65	=	2261.62	
									Total	=	45232.34	
										Cft	1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.									
			2516	-(	10	x	9.50	)=	2421.00 ft		
			Crush bajri	=	2421.000	x	5.167	x	2.531	=	31662.14	
			D/d 1/2o/d pipe	x	3.142857	x	(3.375) ²	x	2421.0	=	10833.70	
			Net Total		2	x	4	=	Net balance	=	20828.44	
										Cft	100	
7	21	4 viii)	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 4000 psi conforming to ASTM Specification C-76-20, Class III, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-									

			viii) 840 mm (33") i/d												
			2516 Rft	-	(10.00	x	6.50	)=	2451	=	2451.00	Rft	1		
8			Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface,application of primer .Complete in all respect to the entire satisfaction of the Engineer incharge.(Analysis attached)												
			33" i/d sewer pipe.												
			Total pipe	=				=	2451.0 ft						
			3.1429	x	2451.00	x	2.75			=	21183.64	Sft	1		
9	10	3	Supplying and filling sand under floor; or plugging in wells.												
			(i) Sand filling at trench top												
			2516.00	-	(10.00	x	8.0	)=	2436						
							Total	=	2436						
			Qty.of sand	=	2436.00	x	5.167	x	3.00	=	37758.00				
							Total	=	37758.00			Cft	100		
10	3	13-a	Rehanding of earthwork: b) Upto a lead of 50 ft. (15 m).												
			Qty as per item No.		5	(i)	=	77126.02							
			Qty as per item No.		5	(ii)	=	99241.33							
			Qty as per item No.		5	(iii)	=	45232.34							
						Total	=	221599.69							
			Deductions												
			As per sand filling Item No.		9	=	37758.00								
			Crushed stone asper It.No.		6	=	20828.44								
			Pipe valumn												
			2436.000	x	0.785714	x	(3.375	)² x	21801.656						
			Total deductions						80388.09						
			Balance qty.	=	221599.69	(-)	80388	=	141212						
			a) Lead upto a single throw of Kassi, pharaoh or shovel	=	141212	x	50%	=	70605.80			Cft	1000		
			b) Upto a lead of 50 ft. (15 m).	=	141212	=	50%	=	70605.80			Cft	1000		
11	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).												
			Qty as it.No.		10	=	70605.80	+	70605.80	=	141211.60	Cft	1000		
13	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12												
			Quantity .as per item.No.		3.00	=	620.26	=	620.26			Cft	100		
14	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4												
			Quantity .as per item.No.		2.00	=	620.26	=	620.26			Cft	100		
15	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)												
			Lead upto		170.00	K.m from Karana quarry Sargodha District .									
			Quantity as per Item No.		14	=	620.26	=							
			Quantity of bajri.	=	620.26	x	0.88	=	545.83			Cft	100		
16	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.												
			Quantity as per Item No.	=	4.00	=	620.26	=	620.26			Cft	100		
17	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile												
			a) upto ¼ mile(400 m) =	1	x	4932	=	4932.20							

	b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =	12	x	37.95	=	455.40						
	c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=	8	x	360.50	=	2884.00						
					Total	=	8271.60						
		Quantity as per d/d item No.	10			=	80388.09						
		Take 80%	=	80388.09	x	80%	=	64310	Cft	1000			
												Total	
18		Deduct cost of old material (Stone balast)				=							
		Quantity as per item No.	1			=	8237.03						
	Input 6.003	Quantity take 80% after deducting the dust stone used as blinding layer.											
			=	8237.03	x	80%	=	6589.62					
		D/d 10% wastage	=	6589.62	x	10%	=	658.96					
					Net Quty	=	5930.66	=	5930.66	Cft	100.00		
		Total Cost of RCC Sewer	33 "i/d	=	2451.00	Rft	=			Net	Total:-		
		Total Cost of M.H.Chambers (RA-19 Attached)	6.5 ft.dia	=	17.49 ' depth	=	10 No.	x					
												Total:-	

Carried over to the Sub Summary A-3 (vi)

Comprehensive Sewerage System in Okara City

Part-A-3			New Sewer Lines and Manholes											
A			vii Main Sewer Line 30" i/d and Manholes											
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA														
S No	MRS, Ref.		Description of Items							Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It:No												
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).											
			3,729.00	-(	17 No.	x	10.00 ft	)=	3559.50 ft				
			30%	x	3559.50	x	8.875	x	0.83	=	7866.05			
									Total	=	7866.05	Cft	100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.											
			3,729.00	-(	17 No.	-	10.00 ft	)=	3559.50 ft				
			10%	x	3559.5	x	8.875	x	0.50	=	1579.53			
									Total	=	1579.53	Cft	100	
3	4	19-d	Dismantling cement concrete with brick aggregate.											
			3,729.00	-(	17 No.	-	10.00 ft	)=	3559.50 ft				
			10%	x	3559.5	x	8.875	x	0.50	=	1579.53			
									Total	=	1579.53	Cft	100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.											
			3,729.00	-(	17 No.	-	10.00 ft	)=	3559.50 ft				
			5%	x	3560	x	8.875	x		=	1579.53			
									Total	=	1579.53	Sft	100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-											
			(i)	0 to 7.0 ft Depth				=	7.0					
			3729	-(	16.95	-	10.00	)=	3559.50 ft				
			30%	x	3560	x	8.875	x	6.17	=	58474.13			
			10%	x	3560	x	8.875	x	6.000	=	18954.34			
			5%	x	3560	x	8.875	x	6.625	=	10464.37			
			55%	x	3560	x	8.875	x	7.000	=	121623.67			
									Total	=	209516.51	Cft	1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0					
			3729	-(	16.95	-	10.00	)=	3559.50 ft				
			30%	x	3560	x	6.875	x	8.00	=	58731.75			
			10%	x	3560	x	6.875	x	8.00	=	19577.25			
			5%	x	3560	x	6.875	x	8.00	=	9788.63			
			55%	x	3560	x	6.875	x	8.00	=	107674.88			
									Total	=	195772.50	Cft	1000	
			(iii)	Above 15.0 ft Depth				=						
			3729	-(	16.95	-	10.00	)=	3559.50 ft				
			30%	x	3560	x	4.875	x	0.49	=	2563.84			
			10%	x	3560	x	4.875	x	0.49	=	854.61			
			5%	x	3560	x	4.875	x	0.49	=	427.31			
			5%	x	3560	x	4.875	x	0.49	=	427.31			
									Total	=	4273.07	Cft	1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.											
			3729	-(	16.95	x	8.00	)=	3593.40 ft				
			Crush bajri	=	3593.400	x	8.875	x	2.313	=	73748.92			
			D/d 1/2o/d pipe	x	3.142857	x(	3.083	)² x	3593.4	=	13420.89		
			Net Total		2	x	4	=	Net balance	=	60328.03	Cft	100	
7	21	5.xv	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-											
			vii) 760 mm (33" i/d											
			3729 Rft	-(	16.95	x	5.00	)=	3644.25	=	3644.25	Rft	1

S No	MRS, Ref.		Description of Items	Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No					
8	Non MRS	Rate	Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preparation of surface,application of primer .Complete in all respet to the entire satisfaction of the Engineer incharge.(Analysis attached)				
			30" i/d sewer pipe.				
			Total pipe = 3644.3 ft				
			3.1429 x 3644.25 x 2.50 = 28633.39		Sft	1	
9	10	3	Supplying and filling sand under floor; or plugging in wells.				
		(i)	Sand filling at trench top				
			3729.00 -(16.95 x 8.0)= 3593.4				
			Qty.of sand = 3593.40 x 8.875 x 3.00 = 95674.28				
			Total = 95674.28		Cft	100	
10	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).				
			Qty as per item No. 5 (i) = 209516.51				
			Qty as per item No. 5 (ii) = 195772.50				
			Qty as per item No. 5 (iii) = 4273.07				
			Total = 409562.08				
			Deductions				
			As per sand filling Item No. 9 = 95674.28				
			Crushed stone asper It.No. 6 = 60328.03				
			Pipe valumn				
			3593.400 x 0.785714 x(3.083) ² x 26841.771				
			Total deductions 182844.08				
			Balance qty. = 409562.08 (-) 182844 = 226718				
			a) Lead upto a single throw of Kassi, phaorah or shovel = 226718 x 50% = 113359.00		Cft	1000	
			b) Upto a lead of 50 ft. (15 m). = 226718 = 50% = 113359.00		Cft	1000	
11	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).				
			Qty as it.No. 10 = 113359.00 + 113359.00 = 226718.00		Cft	1000	
13	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12				
			Quantity .as per item.No. 3.00 = 1579.53 = 1579.53		Cft	100	
14	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4				
			Quantity .as per item.No. 2.00 = 1579.53 = 1579.53		Cft	100	
15	3	13-a	Carriage of 100 Cft.(2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)				
			Lead upto 170.00 K.m from Karana quarry Sargodha District .				
			Quantity as per Item No. 14 = 1579.53 =				
			Quantity of bajri. = 1579.53 x 0.88 = 1389.98		Cft	100	
16	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.				
			Quantity as per Item No. = 4.00 = 1579.53 = 1579.53		Cft	100	
17	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile				
		a)	a)upto ¼ mile(400 m) = 1 x 4932 = 4932.20				
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) = 12 x 37.95 = 455.40				

S No	MRS, Ref.		Description of Items	Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It:No						
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=	8	x 360.50	=	2884.00	
					Total	=	8271.60	
			Quantity as per d/d item No.	10		=	182844.08	
			Take 20%	=	182844.08	x	20%	=
						=	36569	Cft 1000
								Total
18			Deduct cost of old material (Stone balast)			=		
			Quantity as per item No.		1	=	7866.05	
	Input 6.003		Quantity take 80% after deducting the dust stone used as blinding layer.					
				=	7866.05	x	80%	=
						=	6292.84	
			D/d 10% wastage	=	6292.84	x	10%	=
						=	629.28	
					Net Quty	=	5663.56	=
						=	5663.56	Cft 100.00
			Total Cost of RCC Sewer	30 "/i/d	=	3644 Rft	=	Net Total:-
			Total Cost of M.H.Chambers (RA-20 Attached)	5 ft.dia	=	15.49 ' depth	=	17 No. x 0
			Total Cost of Man holes					Total:-
								Total:-
								G.Total:-

Carried over to the Sub Summary A-3 (vii)

Comprehensive Sewerage System in Okara City

Part-A-3			New Sewer Lines and Manholes									
A	viii	Main Sewer Line 27" i/d and Manholes										
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA												
S No	MRS, Ref. Ch	It:No	Description of Items						Quantity	Unit	Rate	Amount (Pak Rs.)
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of by products upto one chain lead (30 metre).									
			2,366.00	-(	12 No.	x	10.00 ft	)=	2246.00 ft		
			30%	x	2246.00	x	6.583	x	0.83	=	3681.76	
			0.00	-(	12 No.	x	9.25 ft	)=	-111.00 ft		
			30%	x	-111.00	x	6.583	x	0.83	=	-181.96	
									Total	=	3499.80	
										Cft	100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.									
			2,366.00	-(	12 No.	-	10.00 ft	)=	2246.00 ft		
			25%	x	2246.0	x	6.583	x	0.50	=	1848.27	
			0.00	-(	12 No.	x	9.25 ft	)=	-111.00 ft		
			25%	x	-111.00	x	6.583	x	0.5	=	-91.34	
									Total	=	1756.93	
										Cft	100	
3	4	19-d	Dismantling cement concrete with brick aggregate.									
			2,366.00	-(	12 No.	-	10.00 ft	)=	2246.00 ft		
			25%	x	2246.0	x	6.583	x	0.50	=	1848.27	
			0.00	-(	12 No.	-	9.25 ft	)=	-111.00 ft		
			25%	x	-111.0	x	6.583	x	0.50	=	-91.34	
									Total	=	1756.93	
										Cft	100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.									
			2,366.00	-(	12 No.	-	10.00 ft	)=	2246.00 ft		
			5%	x	2246	x	6.583	x		=	739.31	
			0.00	-(	12 No.	-	9.25 ft	)=	-111.00 ft		
			5%	x	-111	x	6.583	x		=	-36.54	
									Total	=	702.77	
										Sft	100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-									
			(i)	0 to 7.0 ft Depth			=	7.0				
			2366	-(	12	-	10.00	)=	2246.00 ft		
			30%	x	2246	x	6.583	x	6.17	=	27369.19	
			25%	x	2246	x	6.583	x	6.000	=	22179.25	
			5%	x	2246	x	6.583	x	6.625	=	4897.92	
			40%	x	2246	x	6.583	x	7.000	=	41401.27	
									Total	=	95847.63	
										Cft	1000	
			(ii)	7.01 ft to 15.0 ft Depth			=	8.0				
			2366	-(	12	-	10.00	)=	2246.00 ft		
			30%	x	2246	x	4.583	x	6.45875	=	19946.23	
			25%	x	2246	x	4.583	x	6.46	=	16621.86	
			5%	x	2246	x	4.583	x	6.46	=	3324.37	
			40%	x	2246	x	4.583	x	6.46	=	26594.98	
									Total	=	66487.45	
										Cft	1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.									
			2366 Rft	-(	12 No.	x	8.00	)=	2270.00 ft		
			0 Rft	-(	12 No.	x	7.25	)=	-87.00 ft		
			2366 Rft		24 No.		Total		2183.00 ft			
			Crush bajri	=	2183.00	x	6.583	x	2.094	=	30090.15	
			D/d 1/2o/d pipe	x	3.143	x	(2.792) ² x	2183.0	=	6683.68
			Net Total		2	x	4	=				
					Total	=	30090.15	-	6683.678	=	23406.48	
										Cft	100	
7	21	5.xv	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 4000 psi conforming to ASTM Specification C-76-20, Class II, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-									
			v) 610 mm (27") i/d									

S No	MRS, Ref.		Description of Items							Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It.No												
			2366 Rft	-	12.00	x	5.00	)=	2306	=	2306.00			
							Total	=	2306	=	2306.00	Rft	1	
8		Non MRS Rate	Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preperation of surface,application of primer .Complete in all respet to the entire satisfaction of the Engineer incharge.(Analysis attached)											
			27" i/d sewer pipe.											
			Total pipe	=				=	2306.0 ft					
			2306.00	x	3.14	x	2.25			=	16306.71	Sft	1	
9	10	3	Supplying and filling sand under floor; or plugging in wells.											
		(i)	Sand filling at trench top											
			2366.00	-	12.00	x	6.5	)=	2288					
							Total	=	2288					
			Qty.of sand	=	2288.00	x	6.583	x	3.00	=	45188.00	Cft	100	
10	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).											
			Qty as per item No.			5	(i)	=	95847.63					
			Qty as per item No.			5	(ii)	=	66487.45					
							Total	=	162335.08					
			Deductions											
			As per sand filling Item No.			9		=	45188.00					
			Crushed stone asper It.No.			6		=	23406.48					
			Pipe valumn											
			2288.000	x	0.7857143	x	2.792	)x	14010.312					
			Total deductions								82604.79			
			Balance qty.	=	162335.08	(-)	82605	=	79730					
			a) Lead upto a single throw of Kassi, phaorah or shovel	=	79730	x	50%	=	39865.15	Cft	1000			
			b) Upto a lead of 50 ft. (15 m).	=	79730	=	50%	=	39865.15	Cft	1000			
11	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).											
			Qty as it.No.		10	=	39865.15	+	39865.15	=	79730.29	Cft	1000	
13	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12											
			Quantity .as per item.No.			3.00	=	1756.93	=	1756.93	Cft	100		
14	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4											
			Quantity .as per item.No.			2.00	=	1756.93	=	1756.93	Cft	100		
15	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)											
			Lead upto		170.00	K.m from Karana quarry Sargodha District .								
			Quantity as per Item No.			14	=	1756.93	=					
			Quantity of bajri.	=	1756.93	x	0.88	=	1546.10	Cft	100			
16	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.											
			Quantity as per Item No.	=	4.00	=	702.77	=	702.77	Cft	100			
17	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile											
		a)	a)upto ¼ mile(400 m) =	1	x	4932	=	4932.20						
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =	12	x	37.95	=	455.40						
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=	8	x	360.50	=	2884.00						
						Total	=	8271.60						
			Quantity as per d/d item No.			10	=	82604.79						
			Take 20%	=	82604.79	x	20%	=	16521	Cft	1000			
			Total											

S No	MRS, Ref.		Description of Items	Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No					
18			Deduct cost of old material (Stone balast)	=			
			Quantity as per item No.		1	=	3499.80
	Input 6.003		Quantity take 80% after deducting the dust stone used as blinding layer.				
				=	3499.80	x	80%
				=	2799.84		
			D/d 10% wastage	=	2799.84	x	10%
				=	279.98		
					Net Quty	=	2519.86
				=	2519.86	Cft	100.00
			Total Cost of RCC Sewer		27 "i/d	=	
			Total Cost of M.H.Chambers (RA-21 Attached)		5 ft.dia	=	12.49 ' depth
				=	12 No.	x	
			Total Cost of Man holes				
							Total:-
							Total:-
							G.Total:-

Carried over to the Sub Summary A-3 (viii)

Comprehensive Sewerage System in Okara City

Part-A-3		New Sewer Lines and Manholes										
A		viii Main Sewer Line 21" i/d and Manholes										
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA												
S No	MRS, Ref. Ch	It:No	Description of Items						Quantity	Unit	Rate	Amount (Pak Rs.)
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).									
			1,528.00	-(	8 No.	x	10.00 ft	)=	1448.00 ft		
			40%	x	1448.00	x	4.000	x	0.83	=	1922.94	
									Total	=	1922.94	
											Cft 100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.									
			1,528.00	-(	8 No.	-	10.00 ft	)=	1448.00 ft		
			35%	x	1448.0	x	4.000	x	0.50	=	1013.60	
									Total	=	1013.60	
											Cft 100	
3	4	19-d	Dismantling cement concrete with brick aggregate.									
			1,528.00	-(	8 No.	-	10.00 ft	)=	1448.00 ft		
			35%	x	1448.0	x	4.000	x	0.50	=	1013.60	
									Total	=	1013.60	
											Cft 100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.									
			1,528.00	-(	8 No.	-	10.00 ft	)=	1448.00 ft		
			15%	x	1448	x	4.000	x		=	868.80	
									Total	=	868.80	
											Sft 100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-									
			(i)	0 to 7.0 ft Depth				=	7.0			
			1,528.00	-(	8	-	10.00	)=	1448.00 ft		
			40%	x	1448	x	4.000	x	6.17	=	14294.66	
			35%	x	1448	x	4.000	x	6.000	=	12163.20	
			15%	x	1448	x	4.000	x	6.625	=	5755.80	
			10%	x	1448	x	4.000	x	7.000	=	4054.40	
									Total	=	36268.06	
											Cft 1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0			
			1528	-(	8	-	10.00	)=	1448.00 ft		
			40%	x	1448	x	4.000	x	4.37	=	10127.31	
			35%	x	1448	x	4.000	x	4.37	=	8861.40	
			15%	x	1448	x	4.000	x	4.37	=	3797.74	
			10%	x	1448	x	4.000	x	4.37	=	2531.83	
									Total	=	25318.28	
											Cft 1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" gauge under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.									
			1528 Rft	-(	8 No.	x	8.00	)=	1464.00 ft		
			Crush bajri	=	1464.00	x	4.000	x	1.656	=	9699.00	
			D/d 1/2o/d pipe	x	3.143	x	(2.208)²	x	1464.0	=	2804.82	
			Net Total		2	x	4	=				
					Total	=	9699.00	-	2804.820	=	6894.18	
											Cft 100	
7	21	5.xv	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 4000 psi conforming to ASTM Specification C-76-20, Class II, Wall B, including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:-									
			v) 610 mm (21" i/d									
			764 Rft	-(	8.00	x	5.00	)=	724	=	724.00
					Total	=	724	=	724.00		Rft 1	
8	Non MRS Rate		Providing and applying Epoxy coating of approved quality with coverage @ 0.32 kg./m ² of approved brand by the competent authority internal surface of RCC sewer pipe including preperation of surface,application of primer .Complete in all respet to the entire satisfaction of the Engineer incharge.(Analysis attached)									

					Net Qty	=	1384.52	=	1384.52	Cft	100.00		
			Total Cost of RCC Sewer		21 "i/d	=	#REF!	=			Net		Total:-
			Total Cost of M.H.Chambers Total Cost of M.H.Chambers (RA-22 Attached)		5 ft.dia	=	10.59 ' depth	=	8 No.	x			
			Total Cost of Man holes										Total:-
													Total:-
													G.Total:-

Carried over to the Sub Summary A-3 (ix)

Comprehensive Sewerage System in Okara City

		A	New Sewer Lines and Manholes							
Sub Head	A.1									
Sub Head	A.1.12	Main Sewer Line 18" i/d and Manholes								
i	Size & length of sewer line	18 "i/d	=	2198 Rft	=	No. of MH	=	22 No.	Average Cunet depth	= 11.54
	Av.depth of excav.of trench	Depth	=	11.54	=	W.Thickness	=	0.2083	bedding	0.479 = 12.23
	Dia of man hole		=	4.0 ft	=	Dia	=	Wall Thickness of M.H	1.125 ft to	0.75 ft
ii	Size & length of sewer line	18 "i/d	=	2966 Rft	=	No. of MH	=	30 No.	Average Cunet depth	= 07.70
	Av.depth of excav.of trench	Depth	=	7.70	=	W.Thickness	=	0.2083	bedding	0.479 = 08.39
	Dia of man hole		=	4.0 ft	=	Dia	=	Wall Thickness of M.H	1.125 ft to	0.75 ft

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS, Ref.		Description of Items						Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No										
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).									
			2,198.00	-(	22 No.	x	8.25 ft	)=	2016.67 ft		
			20%	x	2016.67	x	5.708	x	0.83	=	1910.96	
			2,966.00	-(	30 No.	(-)	8.25 ft	)=	2721.31 ft		
			20%	x	2721.31	x	3.708	x	0.83	=	1675.19	
								Total	=	3586.15	Cft	100
2	4	19-c	Dismantling cement concrete 1:2:4 plain.									
			2,198.00	-(	22 No.	-	8.25 ft	)=	2016.67 ft		
			70%	x	2016.7	x	5.708	x	0.50	=	4029.13	
			2,966.00	-(	30 No.	(-)	8.25 ft	)=	2721.31 ft		
			70%	x	2721.31	x	3.708	x	0.50	=	3532.03	
								Total	=	7561.16	Cft	100
3	4	19-d	Dismantling cement concrete with brick aggregate.									
			2,198.00	-(	22 No.	-	8.25 ft	)=	2016.67 ft		
			70%	x	2016.7	x	5.708	x	0.50	=	4029.13	
			2966	-(	30 No.	-	8.25 ft	)=	2721.31 ft		
			70%	x	2721.31	x	5.708	x	0.50	=	5436.94	
								Total	=	9466.07	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.									
			2,198.00	-(	22 No.	-	8.25 ft	)=	2016.67 ft		
			5%	x	2017	x	5.708	x		=	575.59	
			2966	-(	30 No.	-	8.25 ft	)=	2721.31 ft		
			5%	x	2721.31	x	5.708	x		=	776.71	
								Total	=	1352.30	Sft	100
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-									
			(i)	0 to 7.0 ft Depth			=	7.0				
			2198	-(	21.98	-	8.25	)=	2016.67 ft		
			20%	x	2017	x	5.708	x	6.17	=	14205.56	
			70%	x	2017	x	5.708	x	6.000	=	48349.54	
			5%	x	2017	x	5.708	x	6.625	=	3813.28	
			5%	x	2017	x	5.708	x	7.000	=	4029.13	
			2966.00	-(	30 No.	-	8.25	)=	2721.31 ft		
			20%	x	2721.3	x	3.708	x	6.17	=	12452.92	
			70%	x	2721	x	3.708	x	6.000	=	42384.33	
			5%	x	2721	x	3.708	x	6.625	=	3342.81	
			5%	x	2721	x	3.708	x	7.000	=	3532.03	
								Total	=	132109.59	Cft	1000
			(ii)	7.01 ft to 15.0 ft Depth			=	8.0				
			2198	-(	21.98	-	8.25	)=	2016.67 ft		
			20%	x	2017	x	3.708	x	8.00	=	11965.55	
			70%	x	2017	x	3.708	x	8.00	=	41879.41	
			5%	x	2017	x	3.708	x	8.00	=	2991.39	
			5%	x	2017	x	3.708	x	8.00	=	2991.39	
			2966.00	-(	30 No.	-	8.25	)=	2721.31 ft		
			20%	x	2721.3	x	3.708	x	1.39	=	2800.56	

S No	MRS, Ref.		Description of Items							Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It:No												
			70%	x	2721	x	3.708	x	1.388	=	9801.98			
			5%	x	2721	x	3.708	x	1.388	=	700.14			
			5%	x	2721	x	3.708	x	1.388	=	700.14			
									Total	=	73830.55	Cft	1000	
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.											
			2198	-	21.98	x	6.25	)=	2060.63					
			2966.00	-	30 No.	x	6.25	)=	2780.63					
							Total	=	4841.25					
			Crush bajri	=	4841.25	x	5.708	x	1.438	=	39725.99			
			D/d 1/2o/d pipe	x	3.142857	x	1.917	)² x	4841.3	=	6986.91			
			Net Total		2	x	4	=	Net balance	=	32739.07	Cft	100	
7	21	5.xv	Providing and laying R.C.C.pipe sewers,moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II. Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring,cutting pipes where necessary, testing, etc., complete.											
			iii) 460 mm (18") i/d											
			2198 Rft	-	21.98	x	4.00	)=	2110.08	=	2110.08			
			2966 Rft	-	29.66	x	4.00	)=	2847.36	=	2847.36			
							Total	=	4957.44		Rft	1		
8	10	3	Supplying and filling sand under floor; or plugging in wells.											
			(i) Sand filling at trench top											
			2198.00	-	21.98	x	6.3	)=	2060.625					
			Qty.of sand	=	2060.63	x	5.708	x	3.00	=	35288.20			
							Total	=	35288.20		Cft	100		
9	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).											
			Qty as per item No.		5	(i)	=	132109.59						
			Qty as per item No.		5	(ii)	=	73830.55						
						Total	=	205940.15						
			Deductions											
			As per sand filling Item No.		8	=	35288.20							
			Crushed stone asper It.No.		6	=	32739.07							
			Pipe valumn											
			2060.625	x	0.785714	x	1.917	)² x	5947.806					
			Total deductions					73975.08						
			Balance qty.		=	205940.15	(-)	73975	=	131965				
			a) Lead upto a single throw of Kassi, phaorah or shovel		=	131965	x	50%	=	65982.53	Cft	1000		
			b) Upto a lead of 50 ft. (15 m).		=	131965	=	50%	=	65982.53	Cft	1000		
10	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).											
			Qty as it.No.		9	=	65982.53	+	65982.53	=	131965.06	Cft	1000	
12	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12											
			Quantity .as per item.No.			3.00	=	9466.07	=	9466.07	Cft	100		
13	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4											
			Quantity .as per item.No.			2.00	=	9466.07	=	9466.07	Cft	100		
14	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)											
			Lead upto		160	K.m from Karana quarry Sargodha District .								
			Quantity as per Item No.			13	=	9466.07	=					
			Quantity of bajri.		=	9466.07	x	0.88	=	8330.14	Cft	100		

S No	MRS, Ref.		Description of Items	Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It:No						
15	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.					
			Quantity as per Item No.	=	4.00	=	1352.30	=
					1352.30	Cft	100	
16	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile					
		a)	a)upto ¼ mile(400 m) =					
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =					
		c)	c) for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=					
			Quantity as per d/d item No.	9	=	73975.08		
			Take 20%	=	73975.08	x	20%	=
							14795	Cft 1000
								Total
17			Deduct cost of old material (Stone balast)					
			Quantity as per item No.		1	=	3586.15	
	Input 6.003		Quantity take 80% after deducting the dust stone used as blinding layer.					
			Available qty.	=	3586.15	x	80%	=
			D/d wastage	=	2868.92	x	10%	=
							2582.03	=
							2582.03	Cft 100.00
			Total Cost of RCC Sewer	18 "i/d	=	2110 Rft	=	Net Total:-
			Total Cost of M.H.Chambers (RA-23 Attached)	4 ft.dia	=	12.23 ' depth	=	22 No
			Total Cost of M.H.Chambers (RA-24 Attached)	4 ft.dia	=	8.39 ' depth	=	30 No
			Total Cost of Man holes					Total:-
								G Total:-
								G.Total:-

Carried over to the Sub Summary A-3 (x)

Comprehensive Sewerage System in Okara City

	Sub Head	A	New Sewer Lines and Manholes							
	Sub Head	A.1	Main Sewer Line 15" i/d and Manholes							
	Sub Head	A.1.13	#REF!							
i	Size & length of sewer line	15 "i/d	=	3285 Rft	=	No. of MH	=	42 No.	Average Cunet depth	= 10.34
	Av.depth of excav.of trench	Depth	=	10.34	=	W.Thickness	=	0.1875	bedding	0.406 = 10.93
	Dia of man hole		=	4.0 ft	=	Dia	=	Wall Thickness of M.H	1.125 ft to	0.75 ft
ii	Size & length of sewer line	15 "i/d	=	2012 Rft	=	No. of MH	=	26 No.	Average Cunet depth	= 05.16
	Av.depth of excav.of trench	Depth	=	5.16	=	W.Thickness	=	0.1875	bedding	0.406 = 05.76
	Dia of man hole		=	4.0 ft	=	Dia	=	Wall Thickness of M.H	0.750 ft to	0.75 ft

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS, Ref.		Description of Items							Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No											
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).										
			3,285.00	-(	42 No.	x	8.25 ft	)=	2937.55 ft			
			80%	x	2937.55	x	3.417	x	0.83	=	6664.32		
			2,012.00	-(	26 No.	(-)	7.50 ft	)=	1818.54 ft			
			80%	x	1818.54	x	3.417	x	0.83	=	4125.66		
									Total	=	10789.97	Cft 100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.										
			3,285.00	-(	42 No.	-	8.25 ft	)=	2937.55 ft			
			10%	x	2937.5	x	3.417	x	0.50	=	501.83		
			2,012.00	-(	26 No.	(-)	7.50 ft	)=	1818.54 ft			
			10%	x	1818.54	x	3.417	x	0.50	=	310.67		
									Total	=	812.50	Cft 100	
3	4	19-d	Dismantling cement concrete with brick aggregate.										
			3,285.00	-(	42 No.	-	8.25 ft	)=	2937.55 ft			
			10%	x	2937.5	x	3.417	x	0.50	=	501.83		
			2012	-(	26 No.	-	7.50 ft	)=	1818.54 ft			
			10%	x	1818.54	x	3.417	x	0.50	=	310.67		
									Total	=	812.50	Cft 100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.										
			3,285.00	-(	42 No.	-	8.25 ft	)=	2937.55 ft			
			5%	x	2938	x	3.417	x		=	501.83		
			2012	-(	26 No.	-	7.50 ft	)=	1818.54 ft			
			5%	x	1818.54	x	3.417	x		=	310.67		
									Total	=	812.50	Sft 100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-										
			(i)	0 to 7.0 ft Depth				=	7.0				
			3285	-(	42.11538	-	8.25	)=	2937.55 ft			
			80%	x	2938	x	3.417	x	6.17	=	49540.77		
			10%	x	2938	x	3.417	x	6.000	=	6021.97		
			5%	x	2938	x	3.417	x	6.625	=	3324.63		
			5%	x	2938	x	3.417	x	7.000	=	3512.82		
			2012.00	-(	26 No.	-	7.50	)=	1818.54 ft			
			80%	x	1818.5	x	3.417	x	6.17	=	30669.04		
			10%	x	1819	x	3.417	x	6.000	=	3728.00		
			5%	x	1819	x	3.417	x	6.625	=	2058.17		
			5%	x	1819	x	3.417	x	7.000	=	2174.67		
									Total	=	101,030.08	Cft 1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0				
			3285	-(	42.11538	-	8.25	)=	2937.55 ft			
			80%	x	2938	x	3.417	x	8.00	=	64234.38		
			10%	x	2938	x	3.417	x	8.00	=	8029.30		
			5%	x	2938	x	3.417	x	8.00	=	4014.65		
			5%	x	2938	x	3.417	x	8.00	=	4014.65		
			2012.00	-(	26 No.	-	7.50	)=	1818.54 ft			
			80%	x	1818.5	x	3.417	x	-1.24	=	-6171.94		
			10%	x	1819	x	3.417	x	-1.242	=	-771.49		

S No	MRS, Ref.		Description of Items							Quantity		Unit	Rate	Amount (Pak Rs.)	
	Ch	It:No													
			5%	x	1819	x	3.417	x	-1.242	=	-385.75				
			5%	x	1819	x	3.417	x	-1.242	=	-385.75				
									Total	=	72578.05	Cft	1000		
6	21	23	Providing and laying crushed stone aggregate of 1/4"to1" guage under and around the sewer pipe , including leveling ,manual compaction, complete in all respects.												
			3285	-(	42.11538	x	6.25	)=	3021.78 ft					
			2012.00	-(	26 No.	x	5.50	)=	1870.13 ft					
							Total	=	4891.91 ft						
			Crush bajri	=	4891.91	x	3.417	x	1.219	=	20370.21				
			D/d 1/2o/d pipe	x	3.142857	x(	1.625	)² x	4891.9	=	5074.81			
			Net Total		2	x	4	=	Net balance	=	15295.40	Cft	100		
7	21	3.xv	Providing and laying R.C.C.pipe sewers,moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II. Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring,cutting pipes where necessary, testing, etc., complete.												
			ii) 380 mm (15") i/d												
			3285 Rft	-(	42.12	x	4.00	)=	3116.53846	=	3116.54			
			2012 Rft	-(	25.79	x	4.00	)=	1908.82051	=	1908.82			
			5297 Rft				Total	=	5025.36			Rft	1		
8	10	3	Supplying and filling sand under floor; or plugging in wells.												
			(i) Sand filling at trench top												
			3285.00	-(	42.12	x	6.25	)=	3021.77885					
			2012.00	-(	25.79	x	5.50	)=	1870.12821					
			5297.00				Total	=	4891.90705						
			Qty.of sand	=	4891.91	x	3.417	x	3.00	=	50142.05				
							Total	=	50142.05			Cft	100		
9	3	13-a	Rehanding of earthwork: b) Upto a lead of 50 ft. (15 m).												
			Qty as per item No.		5	(i)	=	101030.08							
			Qty as per item No.		5	(ii)	=	72578.05							
						Total	=	173608.13							
			Deductions												
			As per sand filling Item No.		8	=	50142.05								
			Crushed stone asper It.No.		6	=	15295.40								
			Pipe valumn												
			4891.907	x	0.785714	x(	1.625	)² x	10149.615					
			Total deductions						75587.06						
			Balance qty.	=	173608.13	(-)	75587	=	98021						
			a) Lead upto a single throw of Kassi, phaorah or shovel		=	98021	x	50%	=	49010.54	Cft	1000			
			b) Upto a lead of 50 ft. (15 m).		=	98021	=	50%	=	49010.54	Cft	1000			
10	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).												
			Qty as it.No.		9	=	49010.54	+	49010.54	=	98021.07	Cft	1000		
12	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12												
			Quantity .as per item.No.			3.00	=	812.50	=	812.50	Cft	100			
13	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4												
			Quantity .as per item.No.			2.00	=	812.50	=	812.50	Cft	100			
14	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)												
			Lead upto		160 K.m from Karana quarry Sargodha District .										
			Quantity as per Item No.			13	=	812.50	=						

S No	MRS, Ref.		Description of Items	Quantity		Unit	Rate	Amount (Pak Rs.)					
	Ch	It:No											
			Quantity of bajri.	=	812.50	x	0.88	=	715.00	Cft	100		
15	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.										
			Quantity as per Item No.	=	4.00	=	812.50	=	812.50	Cft	100		
16	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile										
		a)	a)upto ¼ mile(400 m) =										
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =										
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=										
			Quantity as per d/d item No.	=		=	75587.06						
			Take 20%	=	75587.06	x	20%	=	15117	Cft	1000		
													Total
17			Deduct cost of old material (Stone balast)					=					
			Quantity as per item No.		1	=	10789.97						
	Input 6.003		Quantity take 80% after deducting the dust stone used as blinding layer.										
			Available qty.	=	10789.97	x	80%	=	8631.98				
			D/d wastage	=	8631.98	x	10%	=	863.20				
							Net Qty	=	7768.78	=	7768.78	Cft	#####
			Total Cost of RCC Sewer		15 "i/d	=	3117 Rft	=				Net	Total:-
			Total Cost of M.H.Chambers (RA-25 Attached)		4 ft.dia	=	10.93 ' depth	=	42	No	1		
			Total Cost of M.H.Chambers (RA-26 Attached)		4 ft.dia	=	5.76 ' depth	=	26	No	1		
			Total Cost of Man holes									Total:-	
												G Total:-	
												G.Total:-	

Carried over to the Sub Summary A-3 (xi)

Comprehensive Sewerage System in Okara City

Sub Head	A	New Sewer Lines and Manholes					
Sub Head	A.1	Lateral Sewer Line 12" i/d and manholes					
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA							
S No	MRS, Ref.		Description of Items	Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No					
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).				
			4,750.00	-(61 No. x 24.00 ft)=	3288.46 ft		
			20%	x 3288.46 x 3.125 x 0.83 =	1705.89		
			3,409.00	-(44 No. (-) 24.00 ft)=	2360.08 ft		
			20%	x 2360.08 x 3.125 x 0.83 =	1224.29		
					Total =	2930.18	Cft 100
2	4	19-c	Dismantling cement concrete 1:2:4 plain.				
			4,750.00	-(61 No. - 24.00 ft)=	3288.46 ft		
			60%	x 3288.5 x 3.125 x 0.50 =	3082.93		
			3,409.00	-(44 No. (-) 24.00 ft)=	2360.08 ft		
			60%	x 2360.08 x 3.125 x 0.50 =	2212.57		
					Total =	5295.50	Cft 100
3	4	19-d	Dismantling cement concrete with brick aggregate.				
			4,750.00	-(61 No. - 24.00 ft)=	3288.46 ft		
			10%	x 3288.5 x 3.125 x 0.50 =	513.82		
			3409	-(44 No. - 24.00 ft)=	2360.08 ft		
			10%	x 2360.08 x 3.125 x 0.50 =	368.76		
					Total =	882.58	Cft 100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.				
			4,750.00	-(61 No. - 24.00 ft)=	3288.46 ft		
			5%	x 3288 x 3.125 x 0.50 =	513.82		
			3409	-(44 No. - 24.00 ft)=	2360.08 ft		
			5%	x 2360.08 x 3.125 x 0.50 =	368.76		
					Total =	882.58	Sft 100
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-				
			(i) 0 to 7.0 ft Depth = 7.0				
			4750	-(60.89744 - 24.00)=	3288.46 ft		
			20%	x 3288 x 3.125 x 6.17 =	12681.13		
			60%	x 3288 x 3.125 x 6.000 =	36995.19		
			5%	x 3288 x 3.125 x 6.625 =	3404.07		
			15%	x 3288 x 3.125 x 7.000 =	10790.26		
			3409.00	-(44 No. - 24.00)=	2360.08 ft		
			20%	x 2360.1 x 3.125 x 6.17 =	9101.05		
			60%	x 2360 x 3.125 x 6.000 =	26550.87		
			5%	x 2360 x 3.125 x 6.625 =	2443.05		
			15%	x 2360 x 3.125 x 7.000 =	7744.00		
					Total =	109709.62	Cft 1000
			(ii) 7.01 ft to 15.0 ft Depth = 8.0				
			4750	-(60.89744 - 24.00)=	3288.46 ft		
			20%	x 3288 x 3.125 x 1.25 =	2569.11		
			60%	x 3288 x 3.125 x 1.42 =	8755.53		
			5%	x 3288 x 3.125 x 0.80 =	408.49		
			15%	x 3288 x 3.125 x 0.42 =	647.42		
			3409.00	-(44 No. - 24.00)=	2360.08 ft		
			20%	x 2360.1 x 3.125 x 1.25 =	1843.81		
			60%	x 2360 x 3.125 x 1.250 =	5531.43		
			5%	x 2360 x 3.125 x 1.250 =	460.95		
			15%	x 2360 x 3.125 x 1.250 =	1382.86		
					Total =	21599.59	Cft 1000
6	21	24	Providing and layings and under and around the sewer pipe, including leveling, manual compaction, complete in all respect.				
			4750	-(60.89744 x 22.00)=	3410.26 ft		

S No	MRS, Ref.		Description of Items							Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It:No												
			3409.00	-	(44 No.	x	22.00)=	2447.49 ft					
							Total	=	5857.74 ft					
			Crush bajri	=	5857.74	x	3.125	x	1.000	=	18305.45			
			D/d 1/2o/d pipe	x	3.142857	x	(1.333) ²	x	5857.7	=	4091.12			
			Net Total		2	x	4	=	Net balance	=	14214.33	Cft	100	
7	21	5.xv	Providing and laying R.C.C.pipe sewers,moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II. Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring,cutting pipes where necessary, testing, etc., complete.											
			ii) 380 mm (12") i/d											
			4750 Rft	-	(60.90	x	4.00)=	4506.41026	=	4506.41			
			3409 Rft	-	(43.71	x	4.00)=	3234.17949	=	3234.18			
			8159 Rft				Total	=	7740.59		Rft	1		
8	10	3	Supplying and filling sand under floor; or plugging in wells.											
			(i) Sand filling at trench top											
			4750.00	-	(60.90	x	22.00	)=	3410.25641				
			3409.00	-	(43.71	x	22.00	)=	2447.48718				
			8159.00				Total	=	5857.74359					
			Qty.of sand	=	5857.74	x	3.125	x	3.00	=	54916.35			
							Total	=	54916.35		Cft	100		
9	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).											
			Qty as per item No.		5	(i)	=	109709.62						
			Qty as per item No.		5	(ii)	=	21599.59						
						Total	=	131309.22						
			Deductions											
			As per sand filling Item No.		8	=	54916.35							
			Crushed stone asper It.No.		6	=	14214.33							
			Pipe valumn											
			5857.744	x	0.785714	x	(1.333) ²	x	8182.245					
			Total deductions											
							77312.92							
			Balance qty.	=	131309.22	(-)	77313	=	53996					
			a) Lead upto a single throw of Kassl, phaorah or shovel	=	53996	x	50%	=	26998.15		Cft	1000		
			b) Upto a lead of 50 ft. (15 m).	=	53996	=	50%	=	26998.15		Cft	1000		
10	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).											
			Qty as it.No.		9	=	26998.15	+	26998.15	=	53996.30	Cft	1000	
12	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12											
			Quantity .as per item.No.		3.00	=	882.58	=	882.58		Cft	100		
13	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4											
			Quantity .as per item.No.		2.00	=	882.58	=	882.58		Cft	100		
14	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)											
			Lead upto		160	K.m from Karana quarry Sargodha District .								
			Quantity as per Item No.		13	=	882.58	=						
			Quantity of bajri.	=	882.58	x	0.88	=	776.67		Cft	100		
15	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.											
			Quantity as per Item No.	=	4.00	=	882.58	=	882.58		Cft	100		

S No	MRS, Ref.		Description of Items	Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No					
16	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile				
		a)	a)upto ¼ mile(400 m) =				
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =				
		c)	for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=				
			Quantity as per d/d item No. 9 = 77312.92				
			Take 20% = 77312.92 x 20% = 15463	Cft	1000		
							Total
17			Deduct cost of old material (Stone balast) =				
			Quantity as per item No. 1 = 2930.18				
	Input 6.003		Quantity take 80% after deducting the dust stone used as blinding layer.				
			Available qty. = 2930.18 x 80% = 2344.14				
			D/d wastage = 2344.14 x 10% = 234.41				
			Net Qty = 2109.73 = 2109.73	Cft	100.00		
			Total Cost of RCC Sewer 12 "i/d = 4506 Rft =			Net	Total:-
			Total Cost of M.H.Chambers (RA-27 Attached) 4 ft.dia = 8.75 ' depth = 61	No	1		
			Total Cost of M.H.Chambers (RA-28 Attached) 4 ft.dia = 8.25 ' depth = 44	No	1		
			Total Cost of Man holes				Total:-
							G Total:-
							G.Total:-

Carried over to the Sub Summary A-3 (xii)

Comprehensive Sewerage System in Okara City

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023)DISTRICT OKARA											
Sub Head		A.1 lateral Sewer Line 9" i/d and manholes									
S N	MRS, Ref.		Description of Items					Quantity	Unit	Rate	Amount (Pak Rs.)
	Ch	It:No									
1	4	46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).								
			9,500.00	-(	190 No.	x	7.50 ft	)=	8075.00 ft	
			10%	x	8075.00	x	2.833	x	0.83	= 1898.97	
									Total	= 1898.97	
										Cft 100	
2	4	19-c	Dismantling cement concrete 1:2:4 plain.								
			9,500.00	-(	190 No.	-	7.50 ft	)=	8075.00 ft	
			80%	x	8075.0	x	2.833	x	0.50	= 9151.67	
									Total	= 9151.67	
										Cft 100	
3	4	19-d	Dismantling cement concrete with brick aggregate.								
			9,500.00	-(	190 No.	-	7.50 ft	)=	8075.00 ft	
			10%	x	8075.0	x	2.833	x	0.50	= 1143.96	
									Total	= 1143.96	
										Cft 100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.								
			9,500.00	-(	190 No.	-	7.50 ft	)=	8075.00 ft	
			5%	x	8075	x	2.833	x		= 1143.96	
									Total	= 1143.96	
										Sft 100	
5	3	42	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:-								
			(i)	0 to 7.0 ft Depth				=	7.0		
			9500	-(	190	-	7.50	)=	8075.00 ft	
			10%	x	8075	x	2.833	x	6.17	= 14116.45	
			80%	x	8075	x	2.833	x	6.000	= 109820.00	
			5%	x	8075	x	2.833	x	6.625	= 7578.72	
			5%	x	8075	x	2.833	x	7.000	= 8007.71	
									Total	= 139522.88	
										Cft 1000	
			(ii)	7.01 ft to 15.0 ft Depth				=	8.0		
			9500	-(	190	-	7.50	)=	8075.00 ft	
			10%	x	8075	x	2.833	x	8.00	= 18303.33	
			80%	x	8075	x	2.833	x	8.00	= 146426.67	
			5%	x	8075	x	2.833	x	8.00	= 9151.67	
			5%	x	8075	x	2.833	x	8.00	= 9151.67	
									Total	= 183033.33	
										Cft 1000	
6	21	24	Providing and layings and under and around the sewer pipe,includingleveling, manual compaction, complete in all respect.								
			9500	-(	190	x	5.50	)=	8455.00 ft	
									Total	= 8455.00 ft	
			Crush bajri	=	8455.00	x	2.833	x	0.781	= 18715.49	
			D/d 1/2o/d pipe	x	3.1428571	x(	1.042	)² x	8455.0	= 3604.17
			Net Total		2	x	4	=	Net balance	= 15111.32	
										Cft 100	
7	21	5.xv	Providing and laying R.C.C.pipe sewers,moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II. Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring,cutting pipes where necessary, testing, etc., complete.								
			ii) 225 mm (9") i/d								
			9500 Rft	-(	190.00	x	4.00	)=	8740	= 8740.00
			9500 Rft						Total	= 8740.00	
										Rft 1	
8	10	3	Supplying and filling sand under floor; or plugging in wells.								
			(i) Sand filling at trench top								
			9500.00	-(	190.00	x	5.50	)=	8455	

S N	MRS, Ref.		Description of Items							Quantity	Unit	Rate	Amount (Pak Rs.)	
	Ch	It:No												
			Qty.of sand	=	8455.00	x	2.833	x	2.00	=	47911.67			
									Total	=	47911.67	Cft	100	
9	3	13-a	Rehandling of earthwork: b) Upto a lead of 50 ft. (15 m).											
			Qty as per item No.		5	(i)	=	139522.88						
			Qty as per item No.		5	(ii)	=	183033.33						
						Total	=	322556.21						
			Deductions											
			As per sand filling Item No.		8	=	47911.67							
			Crushed stone asper It.No.		6	=	15111.32							
			Pipe valumn											
			8455.000	x	0.7857143	x	(1.042) ² x		7208.349					
			Total deductions									70231.34		
			Balance qty.	=	322556.21	(-)	70231	=	252325					
			a) Lead upto a single throw of Kassi, phaorah or shovel	=	252325	x	50%	=	126162.44	Cft	1000			
			b) Upto a lead of 50 ft. (15 m).	=	252325	=	50%	=	126162.44	Cft	1000			
10	3	24-c	Compaction of earthwork c) Ramming earthwork (all types of soil).											
			Qty as it.No.		9	=	126162.44	+	126162.44	=	252324.88	Cft	1000	
12	6	2	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:- (d) Ratio 1: 6:12											
			Quantity .as per item.No.		3.00	=	1143.96	=	1143.96	Cft	100			
13	6	5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4											
			Quantity .as per item.No.		2.00	=	1143.96	=	1143.96	Cft	100			
14	3	13-a	Carriage of 100 Cft.(2.83 cu.m)of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber,by truck or by any othermeans owned by the contractor. (Lead table attached)											
			Lead upto		160	K.m from Karana quarry Sargodha District .								
			Quantity as per Item No.		13	=	1143.96	=						
			Quantity of bajri.	=	1143.96	x	0.88	=	1006.68	Cft	100			
15	21	10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.											
			Quantity as per Item No.	=	4.00	=	1143.96	=	1143.96	Cft	100			
16	3	17	Transportation of earth all types when the total distance,including the lead covered in the item of work,is more than 1000 ft.(300 m) Lead upto 3 mile											
		a)	a)upto ¼ mile(400 m) =	1	x	4932	=	4932.20						
		b)	b)for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile (400m)upto one mile(1.6 Km) =	12	x	37.95	=	455.40						
		c)	c) for every ¼ mile(400 m) additional lead or part thereof, beyond one mile(1.6 Km)upto 5 mile(8 Km).=	8	x	360.50	=	2884.00						
						Total	=	8271.60						
			Quantity as per d/d item No.	9		=	70231.34							
			Take 20%	=	70231.34	x	20%	=	14046	Cft	1000			
17			Deduct cost of old material (Stone balast)							=				
			Quantity as per item No.		1	=	1898.97							
		Input 6.003	Quantity take 80% after deducting the dust stone used as blinding layer.											
			Available qty.	=	1898.97	x	80%	=	1519.18					
			D/d wastage	=	1519.18	x	10%	=	151.92					
						Net Quty	=	1367.26	=	1367.26	Cft	100.00		
			Total Cost of RCC Sewer							9 "i/d	=	8740 Rft	=	
											Net		Total:-	

S N	MRS, Ref.		Description of Items						Quantity		Unit	Rate	Amount (Pak Rs.)
	Ch	It:No											
			Total Cost of M.H.Chambers (RA-29 Attached)	4 ft.dia	=	5.84 ' depth	=	190.00	No	1			
												G Total:-	
												G.Total:-	

Carried over to the Sub Summary A-3 (xiii)

Comprehensive Sewerage System in Okara City

Making Connection of Existing Sewer Line to New Sewer Line

S #	Ref. CSR P/Item	Description	Unit	Quantity	Rate	Amount
	N.S	Making connections of sewer line with manhole of existing sewer line complete in all respect.				
		(i) 9" dia with 21" to 30" dia	- Job	42.00		-
		(iii) 12" dia with 21" to 36" dia	- Job	19.00		-
		(iv) 15" dia with 21" to 36" dia	- Job	7.00		-
		(v) 18" dia with 21" to 36" dia	- Job	7.00		-
		(v) 24" dia with 27" to 36" dia	- Job	2.00		-
		(v) 30" dia with 30" to 36" dia	- Job	2.00		-
		(v) 18" dia with 60" dia	- Job	1.00		-

Total:- Rs. -

Say:- Rs. -

Carried over to the Sub Summary A-3 (xiv)

**Comprehensive Sewerage System in Okara City
Restoration of Roads (Trunk Sewer Rute)**

Sr. No:	Description of items	Quantity	Rate	Unit	Amount
2	Re-Laying of Sub Base Course by using old material (received through dismantling of road crust, compacted up to 100% modified AASHO dry density complete in all respect. (Labour Rate only)18/3a-II	87602.34		P.% Cft	
3	Providing and laying of road edging of 3" wide and 9" deep brick on end complete in all respect. 18/5	37172.70		P.Rft	
4	Providing & Laying (Water Bound macadam) Base Course of crushed stone aggregate form Kirana quarry of required thickness of approved quality and grade, and supply and spreading of stone screening , including placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHO dry density, including carriage of all materials to site of work, complete in all respect. 18/4a	87602.34		P.% Cft	
5	Providing and Laying bitumenious priming coat, using 10 Lbs kerosin oil and 10 lbs binder per 100 Sft or 0.5 Kg Kerosene and 0.5 Kg binder per square metre.C-18/6	138714.25		P.% Sft	
6	Providing ana laying Plant Premixed bitumenious carpt i/c compaction and finishing to required grade camber and density with 4.5 % bitumen 2" thick. (AWC)	138714.25		P.% Sft	
Total					

Carried over to the Sub Summary A-3 (xv)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 5' DIA 7' AVERAGE MASONRY DEPTH FOR 21" DIA SEWER RA-06

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023)DISTRICT OKARA

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 1.00 = 56.76785714 Cft	56.77	Cft	100	
2	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth				
			i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0 Ft.Depth				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 6.00 = 340.6071429 Cft				
			Total = 340.6071429 Cft	340.61	Cft	1000	
			ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 15.0 Ft.Depth				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 1.85 = 104.7745417 Cft				
			Total = 104.7745417 Cft	104.77	Cft	1000	
3	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.				
			Brick.ballast 1 x 3.143 x 8.50 x 8.50 x 0.25 x 1.00 = 56.76785714 Cft	56.77	Cft	100	
4	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):				
			Ratio1.4.8 1 x 3.143 x 7.500 x 7.500 x 0.25 x 0.67 = 29.46428571 Cft	29.46	Cft	100	
5	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)				
			1st.step 1 x 3.143 x 5.750 x 2.583 x 0.750 x 3.68 = 49.86358929 Cft				
			Dome 1 x 3.143 x 5.750 + 2.583 x 0.75 x 3.50 = 34.375 Cft				
			2.000 Total = 84.23858929 Cft				
			D/d pipe 2 x 3.143 x 2.20833 x 2.208 x 0.25 x 0.750 = 5.747581845 Cft				
			Net Total = 78.49100744 Cft	78.49	Cft	100	
7	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.				
			Quantity as per item No 5.00 Total = 78.49 Cft	78.49	Cft	100	
8	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4				
			Benching 1 x 3.143 x 5.000 x 5.000 x 0.25 x 2.25 = 44.19642857 Cft				
			Top Pcc 1 x 3.143 x 2.583 x 2.583 x 0.25 x 0.50 = 2.621775794 Cft				
			Total = 46.81820437 Cft				
			D/d 1/2 pipe 1 x 0.786 x 1.75 x 1.75 x 0.50 x 0.750 = 0.90234375 Cft				
			Above 1/2 pipe 1.0000 x 1.75 x 0.875 x 0.750 = 1.1484375 Cft				
			Net Total = 44.76742312 Cft	44.77	Cft	100	
9	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish.				
			benching top 1 x 3.143 x 5.000 x 5.000 x 0.25 x 0.50 = 19.64285714 Sft				
			Pipe shape portion 1 x 3.143 x 5.000 x 1.750 x 0.50 x 0.00 = 13.75 Sft				
			Rectag.sides 1 x 2.000 x 5.000 x 0.875 x 0.00 x 0.00 = 8.75 Sft				
			Total = 42.14285714 Sft				
			D/d Top 1 x 1.000 x 5.000 x 1.75 x = 8.75 Sft				
			Net Total = 33.39 Sft	33.39	Sft	100	
10	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels .				
			Step Nos 1 x 7.68 - 2.25 = 5.43 / 1 = 3.0 No	3.00	No	1	
11	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)				
			Out side and Inner Side the man hole				
			1st.step 1 x 3.143 x 6.50 x 3.68 = 75.16 Sft				
			(Dome) 1 x 3.143 x(6.500 + 3.333)x 3.50 = 54.08 Sft				
			2 Total = 129.24 Sft				
			D/d pipe area 2 x 3.143 x 2.208 x 2.208 x 0.25 x 2.00 = 15.33 Sft				
			Net Total = 113.91 Sft	113.91	Sft	100	
12	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).				
			Out side man hole chamber.				
			Quantity as per item No 11.00 = 129.24 Sft				
			Total = 129.24 Sft	129.24	Sft	100	
13	11	18.a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-a) ratio 1:2				
			In side the man hole				
			Inside walls of M.H chamber = 1.00 x 3.143 x 5.00 x 7.179 = 112.81 Sft				
			Total = 112.81 Sft	112.81	Sft	100	
13	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).				
			1 x 1.0 = 1.0 No	1.00	No	1	

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
14	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.				
			Lead upto 170 K.m from Karana quarry Sargodha District Sargodha.				
			PCC 1: 4: 8 qty.as per item No. 4.00 = 74.23 x 94.77 / 100 = 70.349 Cft				
			PCC 1:2.4 qty. as per item No. 8.00 = 44.77 x 88.0 / 100 = 39.395 Cft				
			Net Total = 109.745 Cft = 109.74 Cft			100	
15	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel				
			Arround 1.4.8 1 x 3.14286 x 8.50 - 7.50 x 0.67 = 2.095 Cft				
			Arround 1st step 1 x 3.14286 x 8.50 - 6.50 x 3.68 = 23.125 Cft				
			Arround dome 1 x 3.14286 x 6.92 - 6.50 + 3.33 x 0.50 = 3.140 Cft				
			2.00 Total = 28.36 Cft = 28.36 Cft			1000	
16	10	3	Supplying and filling sand under floor; or plugging in wells.				
			(Dome) 1 x 3.14286 x 6.92 - 6.50 + 3.33 x 3.00 = 18.841 Cft = 18.84 Cft			100.00	
			2				
17	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile				
		a.	a) upto ¼ mile (400 m). = Rs.				
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.) = Rs.				
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km). = Rs.				
			Quantity as per item No 2 = 445.38 Cft				
			Deduct quantity rehandalled as item No. 15 = 28.36 Cft				
			Deduct quantity of sand as item No. 16 = 18.84 Cft				
			Balance quantity . = 398.18 Cft				
			Take 80% quantity to be transported. 0.80 = 318.54 = 318.54 Cft = 318.54 Cft			1000	
18	21	12	Restoration of metalled road, on laid service line, including compaction:-				
		a.	a) Carpetted road, with 2" (50 mm) carpet and 10" (250 mm) depth of stone metal for sub-base and base.				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 50% = 28.38392857 Sft =				
			100% x 1 x 3.143 x 3.33 x 3.33 x 0.25 x 50% = 4.365079365 Sft =				
			Total = 24.01884921 Sft = 24.02 Sft			100	
						Total Amount (Rs.)	=
Toatal cost of 5' dia 7' average masonry depth Man hole for						21 "i/d Sewer	Total Amount (Rs.) =

Carried over to the Sub Summary A-1 (i)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 6.5' DIA 19.59' AVERAGE MASONRY DEPTH FOR 42" DIA SEWER RA-07

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023)DISTRICT OKARA

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).				
			100% x 1 x 3.143 x 11.50 x 11.50 x 0.25 x 1.00 = 103.9107 Cft	=	103.91	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.				
			10% x 1 x 3.143 x 11.50 x 11.50 x 0.25 x 0.50 = 5.195536 Cft	=	5.20	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.				
			10% x 1 x 3.143 x 11.50 x 11.50 x 0.25 x 0.50 = 5.195536 Cft	=	5.20	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.				
			5% x 1 x 3.143 x 11.50 x 11.50 x 0.25 x 0.00 = 5.195536 Sft	=	5.20	Sft	100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth				
			i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0 Ft.Depth				
			100% x 1 x 3.143 x 11.50 x 11.50 x 0.25 x 6.00 = 623.4643 Cft				
			10% x 1 x 3.143 x 26.83 x 26.83 x 0.25 x 6.00 = 339.4417 Cft				
			5% x 1 x 3.143 x 23.26 x 23.26 x 0.25 x 6.63 = 140.7717 Cft				
			-15% x 1 x 3.143 x 2.75 x 2.75 x 0.25 x 7.00 = -6.23906 Cft				
			Total = 1097.439 Cft	=	1097.44	Cft	1000
			ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0 Ft.Depth				
			100% x 1 x 3.143 x 19.79 x 19.79 x 0.25 x 8.00 = 2460.697 Cft				
			10% x 1 x 3.143 x 2.00 x 2.00 x 0.25 x 8.00 = 2.514286 Cft				
			5% x 1 x 3.143 x 8.29 x 8.29 x 0.25 x 8.00 = 21.57668 Cft				
			-15% x 1 x 3.143 x 2.00 x 2.00 x 0.25 x 8.00 = -3.77143 Cft				
			Total = 2481.016 Cft	=	2481.02	Cft	1000
			iii) above 15.0 ft. (4.5 m) depth = 6.26 Ft.Depth				
			100% x 1 x 3.143 x 8.29 x 8.29 x 0.25 x 6.26 = 337.4952 Cft				
			10% x 1 x 3.143 x 5.14 x 5.14 x 0.25 x 6.26 = 13.00219 Cft				
			5% x 1 x 3.143 x 2.00 x 2.00 x 0.25 x 6.26 = 0.98319 Cft				
			-15% x 1 x 3.143 x 11.43 x 11.43 x 0.25 x 6.26 = -96.3125 Cft				
			Total = 255.168 Cft	=	255.17	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.				
			Brick.ballast 1 x 3.143 x 11.50 x 11.50 x 0.25 x 1.00 = 103.9107 Cft	=	103.91	Cft	100
7	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):				
			Ratio1.4.8 1 x 3.143 x 10.500 x 10.500 x 0.25 x 0.67 = 57.75 Cft	=	57.75	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)				
			1st.step 1 x 3.143 x 8.000 x 1.50 x 4.59 = 173.1086 Cft				
			2nd.step 1 x 3.143 x 7.625 x 1.125 x 7.00 = 188.7188 Cft				
			3rd.step 1 x 3.143 x 7.250 x 0.75 x 3.00 = 51.26786 Cft				
			Dome 1 x 3.143 x 7.250 + 2.583 x 0.75 x 4.50 = 52.15179 Cft				
			2.000 Total = 465.247 Cft				
			D/d pipe 2 x 3.143 x 4.25 x 0.25 x 1.500 = 42.57589 Cft				
			Net Total = 422.6711 Cft	=	422.67	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.				
			10-20 Height Hight above = 10 ft.				
			2nd.step 1 x 3.143 x 8.000 x 1.500 x 1.59 = 59.96571 Cft				
			3rd.step 1 x 3.143 x 7.625 x 1.125 x 3.00 = 80.87946 Cft				
			Dome 1 x 3.143 x (7.250 + 2.583) x 0.75 x 4.50 = 52.15179 Cft				
			2.000 Total = 133.0313 Cft	=	133.03	Cft	100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.				
			Quantity as per item No 8.00 Total = 422.67 Cft	=	422.67	Cft	100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3				
			Benching 1 x 3.143 x 6.500 x 0.25 x 4.00 = 132.7857 Cft				
			Top Pcc 1 x 3.143 x 2.583 x 0.25 x 0.50 = 2.621776 Cft				
			Total = 135.4075 Cft				
			D/d 1/2 pipe 1 x 0.786 x 3.50 x 0.50 x 1.500 = 7.21875 Cft				
			Above 1/2 pipe 1.0000 x 3.50 x 1.750 x 1.500 = 9.1875 Cft				
			Net Total = 119.0012 Cft	=	119.00	Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .				
			benching top 1 x 3.143 x 6.500 x 0.25 x 0.00 = 33.19643 Sft				
			Pipe shape portion 1 x 3.143 x 6.500 x 0.50 x 0.00 = 35.75 Sft				
			Rectag.sides 1 x 2.000 x 6.500 x 0.00 x 1.750 = 22.75 Sft				
			Total = 91.69643 Sft				

			100%	x	1	x	3.143	x	3.33	x	3.33	x	0.25		50%	=	4.365079	Sft	=																										
															Total	=	47.59028	Sft	=	47.59	Sft					100																			
		c.	Black Topped Road with two coats of surfacing & 10" (250 mm) depth of stone metal, for sub base & base.																																										
			100%	x	1	x	3.143	x	11.50	x	11.50	x	0.25		50%	=	51.95536	Sft	=																										
			100%	x	1	x	3.143	x	3.33	x	3.33	x	0.25		50%	=	4.365079	Sft	=																										
															Total	=	47.59028	Sft	=	47.59	Sft					100																			
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-																																										
			10%	x	1	x	3.143	x	11.50	x	11.50	x	0.25	x	0.50	=	5.195536	Cft	=																										
		D/d	10%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.436508	Cft	=																										
															Total	=	4.759028	Cft	=	4.76	Cft					100																			
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):(f) Ratio 1: 2: 4																																										
			10%	x	1	x	3.143	x	11.50	x	11.50	x	0.25	x	0.50	=	5.195536	Cft	=																										
		D/d	10%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.436508	Cft	=																										
															Total	=	4.759028	Cft	=	4.76	Cft					100																			
25	10	10	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.																																										
			5%	x	1	x	3.143	x	11.50	x	11.50	x	0.25		0.00	=	5.195536	Sft	=																										
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25		0.00	=	0.436508	Sft	=																										
															Total	=	4.759028	Sft	=	4.76	Sft					100																			
																		Total Amount (Rs.)						=																					
1	Material input Rate		Deduct cost of old material (Stone balast)																																										
			Quantity as per item No.																					=	1																				
	158 6.003		Quantity take 80% after deducting the dust stone used as blinding layer.Quantity as per item No.																																										
			Quantity																					=	103.91	x	80	/	100	=	83.13	Cft	=												
			Deduct wastage@ 15%																					=	83.13	x	15.00	/	100.00	=	12.47	Cft	=												
			Input material rate as per item No.06.003																					=																					
			Net Total																					=	70.66	Cft	=	70.66	Cft														100		
			Total cost of 6'-6" dia 19.59' average masonry depth Man hole for																					=	42 "i/d	Sewer	Total Amount (Rs.)				=														

Carried over to the Sub Summary A-1 (iii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 5' DIA 7' AVERAGE MASONRY DEPTH FOR 21" DIA SEWER RA-09

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023)DISTRICT OKARA

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 1.00 = 56.76785714 Cft	= 56.77	Cft		100
2	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth				
			i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0 Ft.Depth				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 6.00 = 340.6071429 Cft				
			Total = 340.6071429 Cft	= 340.61	Cft		1000
			ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 15.0 Ft.Depth				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 1.85 = 104.7745417 Cft				
			Total = 104.7745417 Cft	= 104.77	Cft		1000
3	6	2	Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.				
			Brick.ballast 1 x 3.143 x 8.50 x 8.50 x 0.25 x 1.00 = 56.76785714 Cft	= 56.77	Cft		100
4	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):				
			Ratio1.4.8 1 x 3.143 x 7.500 x 7.500 x 0.25 x 0.67 = 29.46428571 Cft	= 29.46	Cft		100
5	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)				
			1st.step 1 x 3.143 x 5.750 x 2.583 x 0.750 x 3.68 = 49.86358929 Cft				
			Dome 1 x 3.143 x 5.750 + 2.583 x 0.75 x 3.50 = 34.375 Cft				
			2.000 Total = 84.23858929 Cft				
			D/d pipe 2 x 3.143 x 2.20833 x 2.208 x 0.25 x 0.750 = 5.747581845 Cft				
			Net Total = 78.49100744 Cft	= 78.49	Cft		100
7	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.				
			Quantity as per item No 5.00 Total = 78.49 Cft	= 78.49	Cft		100
8	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4				
			Benching 1 x 3.143 x 5.000 x 5.000 x 0.25 x 2.25 = 44.19642857 Cft				
			Top Pcc 1 x 3.143 x 2.583 x 2.583 x 0.25 x 0.50 = 2.621775794 Cft				
			Total = 46.81820437 Cft				
			D/d 1/2 pipe 1 x 0.786 x 1.75 x 1.75 x 0.50 x 0.750 = 0.90234375 Cft				
			Above 1/2 pipe 1.0000 x 1.75 x 0.875 x 0.750 = 1.1484375 Cft				
			Net Total = 44.76742312 Cft	= 44.77	Cft		100
9	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish.				
			benching top 1 x 3.143 x 5.000 x 5.000 x 0.25 x 0.50 = 19.64285714 Sft				
			Pipe shape portion 1 x 3.143 x 5.000 x 1.750 x 0.50 x 0.00 = 13.75 Sft				
			Rectag.sides 1 x 2.000 x 5.000 x 0.875 x 0.00 x 0.00 = 8.75 Sft				
			Total = 42.14285714 Sft				
			D/d Top 1 x 1.000 x 5.000 x 1.75 x = 8.75 Sft				
			Net Total = 33.39 Sft	= 33.39	Sft		100
10	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels .				
			Step Nos 1 x 7.68 - 2.25 = 5.43 / 1 = 3.0 No	= 3.00	No		1
11	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)				
			Out side and Inner Side the man hole				
			1st.step 1 x 3.143 x 6.50 x 3.68 = 75.16 Sft				
			(Dome) 1 x 3.143 x(6.500 + 3.333)x 3.50 = 54.08 Sft				
			2 Total = 129.24 Sft				
			D/d pipe area 2 x 3.143 x 2.208 x 2.208 x 0.25 x 2.00 = 15.33 Sft				
			Net Total = 113.91 Sft	= 113.91	Sft		100
12	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).				
			Out side man hole chamber.				
			Quantity as per item No 11.00 Total = 129.24 Sft	= 129.24	Sft		100
13	11	18.a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-a) ratio 1:2				
			In side the man hole				
			Inside walls of M.H chamber = 1.00 x 3.143 x 5.00 x 7.179 = 112.81 Sft				
			Total = 112.81 Sft	= 112.81	Sft		100
13	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).				
			1 x 1.0 = 1.0 No	= 1.00	No		1

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
14	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.				
			Lead upto 170 K.m from Karana quarry Sargodha District Sargodha.				
			PCC 1: 4: 8 qty.as per item No. 4.00 = 74.23 x 94.77 / 100 = 70.349 Cft				
			PCC 1:2.4 qty. as per item No. 8.00 = 44.77 x 88.0 / 100 = 39.395 Cft				
			Net Total = 109.745 Cft = 109.74 Cft			100	
15	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel				
			Arround 1.4.8 1 x 3.14286 x 8.50 - 7.50 x 0.67 = 2.095 Cft				
			Arround 1st step 1 x 3.14286 x 8.50 - 6.50 x 3.68 = 23.125 Cft				
			Arround dome 1 x 3.14286 x 6.92 - 6.50 + 3.33 x 0.50 = 3.140 Cft				
			2.00 Total = 28.36 Cft = 28.36 Cft			1000	
16	10	3	Supplying and filling sand under floor; or plugging in wells.				
			(Dome) 1 x 3.14286 x 6.92 - 6.50 + 3.33 x 3.00 = 18.841 Cft = 18.84 Cft			100.00	
			2				
17	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile				
		a.	a) upto ¼ mile (400 m). = 1.00 x 4,932 = 4932.20 Rs.				
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.) = 12.00 x 37.95 = 455.40 Rs.				
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km). = 8.00 x 360.50 = 2884.00 Rs.				
			Total = 8271.60 Rs.				
			Quantity as per item No 2 = 445.38 Cft				
			Deduct quantity rehandalled as item No. 15 = 28.36 Cft				
			Deduct quantity of sand as item No. 16 = 18.84 Cft				
			Balance quantity . = 398.18 Cft				
			Take 80% quantity to be transported. 0.80 = 318.54 = 318.54 Cft = 318.54 Cft			1000	
18	21	12	Restoration of metalled road, on laid service line, including compaction:-				
		a.	a) Carpetted road, with 2" (50 mm) carpet and 10" (250 mm) depth of stone metal for sub-base and base.				
			100% x 1 x 3.143 x 8.50 x 8.50 x 0.25 x 50% = 28.38392857 Sft =				
			100% x 1 x 3.143 x 3.33 x 3.33 x 0.25 x 50% = 4.365079365 Sft =				
			Total = 24.01884921 Sft = 24.02 Sft			100	
							Total Amount (Rs.) =
			Total cost of 5' dia 7' average masonry depth Man hole for	=	21 "i/d Sewer		Total Amount (Rs.) =

Carried over to the Sub Summary A-1 (iii)

RATE ANALYSIS FOR CONSTRUCTION OF GULLY GRATING CHAMBER 2' X 2' RA-10

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023)DISTRICT OKARA

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).				
			100% x 1 x 6.750 x 6.75 x 1.00 = 45.5625 Cft	45.56	Cft	100	
2	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth				
			i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0 Ft.Depth				
			100% 1 x 6.750 x 6.75 x 5.00 = 227.813 Cft	227.81	Cft	1000	
3	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):				
			Ratio1.4.8 1 x 6.750 x 6.750 x 0.500 = 22.7813 Cft	22.78	Cft	100	
4	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)				
			1st.step 4 x 5.750 x 1.875 x 0.750 = 32.344 Cft				
			2nd.step 4 x 5.000 x 1.500 x 0.750 = 22.500 Cft				
			3rd.step 4 x 4.250 x 1.125 x 2.500 = 47.813 Cft				
			Net Total = 102.656 Cft	102.66	Cft	100	
5	6	5.c	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):(c) Ratio 1: 1½: 3				
			Benching 1 x 2.000 x 2.000 x 0.417 = 1.667 Cft	1.67	Cft	100	
			Net Total = 1.667 Cft				
6	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):(f) Ratio 1: 2: 4				
			Screening wall 1 x 2.830 x 0.500 x 0.500 = 0.708 Cft	0.71	Cft	100	
			Net Total = 0.708 Cft				
7	6	6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design,including forms, moulds, shuttering, lifting, compacting. ii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal				
			(3) Type C (nominal mix 1: 2: 4)				
			Top Slab 1 x 4.250 x 4.250 x 0.500 = 9.031 Cft	9.03	Cft	1	
			Net Total = 9.031 Cft	9.03	Cft		
8	6	11	FabricationofmildsteelreinforcementdeformedbarcageofspecifiedyieldstrengthforR. C. Boredpilesincludingcuttingbending,loweringofcagewithcraneinposition,weldingandfastening,includingthecostofbindingwire,Cranemac hine(alsoincludesremovalofrustfromthebars)as approved and directed by the Engineer Incharge.				
			ii) Deformed Bars Grade-60				
			Concrete Cft 9.031 Steel Per Cft x 3.25 = 29.352 kg	29.35	Cft	100	
			Net Total = 29.352 kg				
9	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)				
			Out side and Inner Side the man hole				
			1st.step 4 x 5.750 x 0.750 = 17.25 Sft				
			2nd.step 4 x 5.000 x 0.750 = 15.00 Sft				
			3rd.step 4 x 4.250 x 2.500 = 42.50 Sft				
			Total = 74.75 Sft	74.75	Sft	100	
10	11	18.a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-a) ratio 1:2				
			In side the man hole				
			Inside walls of M.H chamber = 4.00 x 2.00 x 4.000 = 32.00 Sft	32.00	Sft	100	
			Total = 32.00 Sft				
11	13	9	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).				
			Out side man hole chamber.				
			Quantity as per item No 9.00 = 74.75 Sft	74.75	Sft		
			Total = 74.75 Sft	74.75	Sft	100	
12	25	10	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, revitting, handling, assembling and fixing, but excluding erection in position.				
			Garating Screen Area 2.00 x 3.20 =				
			Angle Size = 2"x2"x1/4" 4.00 + 6.40 = 10.40 x 1.447 = 15.053 Kg	15.05	Kg		
			Square Bar = 1"x1" 12 No 12 No X 3.20 = 38.32 x 1.543 = 64.056 Kg	64.06	Kg		
			Total = 79.11 Kg	79.11	Kg	100	
13	25	11	Erection and fitting in position iron trusses, staging of water tanks, etc.				

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)	
	Page No.	Item No						
			Item No. 12	= 79.109 Kg				
			Total	= 79.11 Kg	= 79.11 Kg		100	
14	21	3	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-20, Class II, Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc., complete.					
			i) 310 mm (12") i/d Outlet	1.00 x 5.00	= 5.00 Rft			
			i) 310 mm (12") i/d Inlet	1.00 x 10.00	= 10.00 Rft			
			Total	= 15.00 Sft	= 15.00 Sft		1	
15	23	28	Providing, laying, cutting, jointing, testing and disinfecting pipe line in trenches with PVC/ uPVC pipes of B.S.S. with 'D' Class working pressure complete in all respects:-					
			a) 2" i/d (50 mm) for Grating	9.00 x 0.50	= 4.50 Rft			
			Total	= 4.50 Rft	= 4.50 Rft		1	
16	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.					
			Lead upto 170 K.m from Karana quarry Sargodha District Sargodha.					
			PCC 1: 4: 8 qty. as per item No.	3.00 = 22.78 x 94.77 / 100	= 21.590 Cft			
			PCC 1: 1.5:3 qty. as per item No.	5.00 = 1.67 x 84.0 / 100	= 1.400 Cft			
			PCC 1:2.4 qty. as per item No.	7.00 = 9.74 x 88.0 / 100	= 8.570 Cft			
			Net Total	= 31.560 Cft	= 31.56 Cft		100	
17	3	13.a.b	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel					
			Arround 1st step	4 x 5.75 x 0.50 x 0.75	= 8.625 Cft			
			Arround 2nd step	4 x 5.00 x 0.88 x 0.75	= 13.125 Cft			
			Arround 3rd step	4 x 4.25 x 1.25 x 3.00	= 63.750 Cft			
			Total	= 85.500 Cft	= 85.50 Cft		1000	
18	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile					
		a.	a) upto ¼ mile (400 m).	=				
		b.	b) for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	=				
		c.	c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km) upto 5 mile (8 Km).	=				
			Quantity as per item No	2	= 227.81			
			Deduct quantity rehandalled as item No.	17	= 85.50			
			Balance quantity .		= 142.31			
			Take 80% quantity to be transported.	0.80	= 113.85	= 113.85 Cft	1000	
Total cost of 2' x 2' Gully Grating Chamber							Total Amount (Rs.)	=

Carried over to the Sub Summary A-1 (i)

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
17	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.				
			Lead upto 170 K.m from Karana quarry Sargodha District Sargodha.				
			PCC 1: 4: 8 qty.as per item No. 7.00 = 24.90 x 94.77 / 100 = 23.595 Cft				
			PCC 1:2.4 qty. as per item No. 11.00 = 20.81 x 88.0 / 100 = 18.312 Cft				
			Net Total = 41.907 Cft = 41.91 Cft				100
18	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel				
			Arround 1.4.8 1 x 3.14286 x 7.50 - 6.50 x 0.75 = 2.357 Cft				
			Arround 1st step 1 x 3.14286 x 7.50 - 5.50 x 2.50 = 15.714 Cft				
			Arround dome 1 x 3.14286 x 6.92 - 5.50 + 3.33 x 0.50 = 3.926 Cft				
			2.00 Total = 22.00 Cft = 22.00 Cft				1000
19	10	3	Supplying and filling sand under floor; or plugging in wells.				
			(Dome) 1 x 3.14286 x 6.92 - 5.50 + 3.33 x 3.00 = 23.556 Cft = 23.56 Cft				100.00
			2				
20	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile				
		a.	a) upto ¼ mile (400 m). = Rs.				
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.) = Rs.				
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km). = Rs.				
			Quantity as per item No 5 = 464.06 Cft				
			Deduct quantity rehandalled as item No. 18 = 22.00 Cft				
			Deduct quantity of sand as item No. 19 = 23.56 Cft				
			Balance quantity . = 418.51 Cft				
			Take 80% quantity to be transported. 0.80 = 334.81 = 334.81 Cft = 334.81 Cft				1000
21	21	12	Restoration of metalled road, on laid service line, including compaction:-				
		a.	a) Carpetted road, with 2" (50 mm) carpet and 10" (250 mm) depth of stone metal for sub-base and base.				
			80% x 1 x 3.143 x 8.33 x 8.33 x 0.25 x = 43.65778 Sft =				
			Total = 43.65778 Sft = 43.66 Sft				100
			Total Amount (Rs.) =				
			Total cost of 4' dia 9.75' average masonry depth Man hole for = 12 "i/d Sewer				Total Amount (Rs.) =

Carried over to the Sub Summary A-1 (ii)

S No	MRS		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Page No.	Item No					
			Total =	247.50	Sft	=	247.50 Sft
16		input Rate	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).				
			1 x 1.0 =	1.0	No	=	1.00 No
17	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.				
			Lead upto 170 K.m from Karana quarry Sargodha District Sargodha.				
			PCC 1: 4: 8 qty. as per item No. 7.00 = 33.15 x 94.77 / 100 = 31.414 Cft				
			PCC 1:2.4 qty. as per item No. 11.00 = 49.05 x 88.0 / 100 = 43.164 Cft				
			Net Total =	74.578	Cft	=	74.58 Cft
18	3	13.a.b	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel				
			Arround 1.4.8 1 x 3.14286 x 8.50 - 7.50 x 0.75 =	2.357	Cft		
			Arround 1st step 1 x 3.14286 x 8.50 - 6.50 x 8.50 =	53.429	Cft		
			Arround dome 1 x 3.14286 x 6.92 - 6.50 + 3.33 x 0.50 =	3.140	Cft		
			2.00 Total =	58.93	Cft	=	58.93 Cft
19	10	3	Supplying and filling sand under floor; or plugging in wells.				
			(Dome) 1 x 3.14286 x 6.92 - 6.50 + 3.33 x 3.00 =	18.841	Cft	=	18.84 Cft
			2				100.00
20	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile				
		a.	a) upto ¼ mile (400 m).				Rs.
		b.	b) for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)				Rs.
		c.	c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km) upto 5 mile (8 Km).				Rs.
			Quantity as per item No 5 =	794.75	Cft		
			Deduct quantity rehandalled as item No. 18 =	58.93	Cft		
			Deduct quantity of sand as item No. 19 =	18.84	Cft		
			Balance quantity . =	716.98	Cft		
			Take 80% quantity to be transported. 0.80 =	573.59	Cft	=	573.59 Cft
21	21	12	Restoration of metalled road, on laid service line, including compaction:-				
		a.	a) Carpetted road, with 2" (50 mm) carpet and 10" (250 mm) depth of stone metal for sub-base and base.				
			80% x 1 x 3.143 x 9.33 x 9.33 x 0.25 x =	54.76338	Sft	=	
			Total =	54.76338	Sft	=	54.76 Sft
							100
							Total Amount (Rs.) =
			Total cost of 4' dia 9.75' average masonry depth Man hole for	=	24 "/d	Sewer	Total Amount (Rs.) =

Carried over to the Sub Summary A-1 (ii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 9.0' DIA For 66" i/d SEWER RA-14

Size of sewer	Depth	Internal dia of Man hole	9 ft	Average brick masonry depth	20.70 ft														
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA																			
S No	MRS		Description of Items				Rate	Unit	Amount (PKR)										
	Page No.	Item No																	
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).																
			55%	x	1	x	3.143	x	15.25	x	15.25	x	0.25	x	0.83	=	83.42	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.																
			3%	x	1	x	3.143	x	15.25	x	15.25	x	0.25	x	0.50	=	2.74	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.																
			3%	x	1	x	3.143	x	15.25	x	15.25	x	0.25	x	0.50	=	2.74	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.																
			0%	x	1	x	3.143	x	15.25	x	15.25	x	0.25		0.00	=	0.00	Cft	100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth																
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth				=	7.0											
			55%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	6.17	=	620.09	Cft	
			3%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	6.00	=	32.89	Cft	
			0%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	6.63	=	0.00	Cft	
			42%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	7.00	=	537.22	Cft	
															Total	=	1190.20	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth				=	8.0											
			55%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.00	=	804.00		
			3%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.00	=	43.85		
			0%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.00	=	0.00		
			42%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.00	=	613.97		
															Total	=	1461.82	Cft	1000
		iii)	iii) above 15.0 ft. (4.5 m) depth				=	8.36											
			55%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.36	=	840.52		
			3%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.36	=	45.85		
			0%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.36	=	0.00		
			42%		1	x	3.143	x	15.25	x	15.25	x	0.25	x	8.36	=	641.85		
															Total	=	1528.21	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.																
			Brick.ballast		1	x	3.143	x	15.25	x	15.25	x	0.25	x	21.36	=	3903.67	Cft	100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):																
			Ratio 1:4:8		1	x	3.143	x	13.50	x	13.500	x	0.25	x	1.00	=	143.20	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 ft. 7)																
			1st.step		1	x	3.143	x	10.625	x		x	2.625	x	-7.89	=	-691.32		
			2nd.step		1	x	3.143	x	10.25	x		x	2.250	x	5.00	=	362.41		
			3rd.step		1	x	3.143	x	9.875	x		x	1.875	x	5.00	=	290.96		
			4th.step		1	x	3.143	x	9.500	x		x	1.50	x	5.00	=	223.93		
			5th.step		1	x	3.143	x	9.125	x		x	1.125	x	7.000	=	225.84		
			6th.step		1	x	3.143	x	8.750	x		x	0.75	x	1.75	=	36.09		
			Dome		1	x	3.143	x	8.750	+	2.583	x	0.75	x	5.50	=	113.44		
									2.000						Total	=	561.36		
			D/d pipe		2	x	3.143	x	6.58333333	x	6.583	x	0.25	x	2.625	=	178.78		
															Net Total	=	382.58	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft. (3 m) additional height, or part thereof.																
			10-20 Height																
			Hight above				=	10	ft.										
			3rd.step		1	x	3.143	x	9.875	x		x	1.875	x	-7.89	=	-458.94		
			4th.step		1	x	3.143	x	9.500	x		x	1.50	x	5.00	=	223.93		

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)						
	Page No.	Item No																			
			5rth.step	1	x	3.143	x	9.500	x		x	1.125	x	7.00	=	235.13					
			6rth.step	1	x	3.143	x	9.125	x		x	1.125	x	1.75	=	56.46					
			Dome	1	x	3.143	x	8.750	+	2.583	)x	0.75	x	5.50	=	73.46				
								2.000						Total	=	130.04	Cft	100			
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.																		
			Quantity as per item No				8.00							Total	=	382.58	Cft	100			
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3																		
			Benching	1	x	3.143	x	8.000	x	8.000	x	0.25	x	6.17	=	310.10					
			Top Pcc	1	x	3.143	x	2.583	x		x	0.75	x	0.75	=	4.57					
													Total	=	314.66						
			D/d 1/2 pipe	1	x	0.786	x	5.50	x	5.50	x	0.50	x	8.000	=	95.07					
			Above 1/2 pipe			1	x	5.50	-	2.750	=	2.750	x	8.000	=	121.00					
													Total	=	216.07						
													Net	=	314.66	-	216.07	=	98.59	Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .																		
			benching top	1	x	3.143	x	8.000	x	8.000	x	0.25	x	0.00	=	50.29					
			1/2 Pipe	1	x	3.143	x	8.000	x	5.500	x	0.50	x	0.00	=	69.14					
			Rectag.sides	1	x	2.000	x	8.000	x	2.750	x	0.00	x	0.00	=	44.00					
													Total	=	163.43						
			D/d Top	1	x	1.000	x	8.000	x	5.50	x				=	44.00					
													Net	=	163.43	-	44.00	=	119.43	Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels .																		
			Step Nos	1	x	21.36	-	6.17	-	2.00	=	13.00	/	1.0	=	13.00	No	1			
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)																		
			Out side the man hole																		
			1st.step	1	x	3.143	x	13.25	x	-7.89					=	-328.42					
			2nd.step	1	x	3.143	x	12.50	x	5.00					=	196.43					
			3rd.step	1	x	3.143	x	11.75	x	5.00					=	184.64					
			4rth.step	1	x	3.143	x	11.000	x	5.000					=	172.86					
			5rth.step	1	x	3.143	x	10.250	x	7.00					=	225.50					
			6th.step	1	x	3.143	x	9.500	x	1.75					=	52.25					
			1st.step top	1	x	3.143	x	12.125	x	0.375					=	14.29					
			2nd.step top	1	x	3.143	x	11.375	x	0.375					=	13.41					
			3rd.step top	1	x	3.143	x	10.625	x	0.375					=	12.52					
			4rth.step top	1	x	3.143	x	9.875	x	0.375					=	11.64					
			(Dome)	1	x	3.143	x	9.500	+	3.333	)x	5.50			=	110.92				
								2					Total	=	666.03						
			D/d pipe area	1	x	3.143	x	6.583	x	6.583	x	0.25	x	2.00	=	68.11					
													Net Total	=	666.03	-	68.11	=	597.92	Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).																		
			Out side the man hole																		
			Quantity as per item No				14.00								=	597.92					
													Total	=	597.92	Sft	100				
16	11	18.a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-a) ratio 1:2																		
			In side the man hole																		
			Inside wall of M.Hole		=	1.00	x	3.143	x	8.00	x	15.197	=	382.09							
												Total	=	382.09	Sft	100					
17	21	16	Providing and fixing 6" thick R.C.C. manhole cover with tee shaped C.I. frame of 22" l/d (frame weighing 37.324 Kg. or one maund as per Standard Drawing STD/PD No. 6, of 1977, complete in all respect.																		
												1	x	1.0	=	1.00	No	1			
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.																		
			Lead upto	160		K.m from Karana quarry Sargodha District Sargodha.															
			PCC 1: 4: 8 quty.as per item No.			7.00	=	143.20	x	94.77	/	100	=	135.71							

S No	MRS		Description of Items														Rate	Unit	Amount (PKR)										
	Page No.	Item No																											
			PCC 1: 1.5:3 quty. as per item No.											11.00	=	98.59	x	84.0	/	100	=	82.82							
			PCC 1:2.4 quty. as per item No.											24.00	=	2.61	x	88.0	/	100	=	2.30							
			Net Total												=	220.82		Cft		100									
19	3	13.a. b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel																										
			Around PCC 1.4.8											1	x	3.143	x	14.75	x	0.5	x	1.00	=	45.86					
			Around 1st step											1	x	3.143	x	13.50	x	1.75	x	-7.89	=	56.23					
			Around 2nd step											1	x	3.143	x	13.125	x	2.125	x	5.00	=	30.63					
			Around 3rd step											1	x	3.143	x	12.75	x	2.500	x	5.00	=	27.57					
			Around 4th step											1	x	3.143	x	12.375	x	2.875	x	7.00	=	18.77					
			Arround 5th step											1	x	3.143	x	12.000	x	3.3	x	1.75	=	32.03					
			Arround dome											1	x	3.143	-	9.50	+	6.93	x	3.50	=	90.37					
			2.00													Total	=	301.45		Cft		1000							
20	10	3	Supplying and filling sand under floor; or plugging in wells.																										
			Around dome											1	x	1	x	3.143	x	6.931	+	3.333	x	3.00	=	48.39		Cft	100
			2																										
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile																										
		a.	a) upto ¼ mile (400 m).											=															
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)											=															
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).											=															
			Quantity as per item No											5		i)	=	1190.20		Cft									
			Quantity as per item No											5		ii)	=	1461.82		Cft									
			Quantity as per item No											5		iii)	=	1528.21		Cft									
			Total quantity of earth														=	4180.23		Cft									
			Deductions as below																										
			Rehandalled quty. as per item No.											19			=	301.45		Cft									
			Quantity of sand as item No.											20			=	48.39		Cft									
			Total quantity of deductions														=	349.83		Cft									
			Balance quantity .											=	4180.23	-	349.83	=	3830.40		Cft								
			Take 80% quantity to be transported.											0.80	=	3064.32	=	2451.45		Cft		1000							
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-																										
			3%	x	1	x	3.143	x	15.25	x	15.25	x	0.25	x	0.50	=	2.74												
		D/d	3%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.13												
			Total											=	2.61		Cft		100										
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):(f) Ratio 1: 2: 4																										
			3%	x	1	x	3.143	x	15.25	x	15.25	x	0.25	x	0.50	=	2.74												
		D/d	3%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.13												
			Total											=	2.61		Cft		100										
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.																										
			0%	x	1	x	3.143	x	15.25	x	15.25	x	0.25		0.00	=	0.00												
		D/d	0%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.00	=	0.00												
			Total											=	0.00		Sft		100										
												Total Amount (Rs.)					=												

Carried over to the Sub Summary A-3 (i)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 8.0' DIA For 60" i/d SEWER RA-15

Size of sewer	60 "i/d	Internal dia of Man hole	8 ft	Average brick masonry depth	27.79 ft
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MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			55% x 1 x 3.143 x 14.50 x 14.50 x 0.25 x 0.83 =	75.41	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			10% x 1 x 3.143 x 14.50 x 14.50 x 0.25 x 0.50 =	8.26	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			10% x 1 x 3.143 x 14.50 x 14.50 x 0.25 x 0.50 =	8.26	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			0% x 1 x 3.143 x 14.50 x 14.50 x 0.25 x 0.00 =	0.00	Cft	100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			55% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 6.17 =	560.59	Cft	
			10% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 6.00 =	99.12	Cft	
			0% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 6.63 =	0.00	Cft	
			35% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 7.00 =	404.73	Cft	
			Total =	1064.44	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			55% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 8.00 =	726.86		
			10% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 8.00 =	132.16		
			0% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 8.00 =	0.00		
			35% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 8.00 =	462.55		
			Total =	1321.57	Cft	1000
		iii)	iii) above 15.0 ft. (4.5 m) depth = 15.46			
			55% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 15.46 =	1404.36		
			10% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 15.46 =	255.34		
			0% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 15.46 =	0.00		
			35% 1 x 3.143 x 14.50 x 14.50 x 0.25 x 15.46 =	893.69		
			Total =	2553.39	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 3.143 x 14.50 x 14.50 x 0.25 x 28.46 =	4700.94	Cft	100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1.4.8 1 x 3.143 x 13.50 x 13.500 x 0.25 x 1.00 =	143.20	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 10.25 x 2.250 x 4.21 =	304.91		
			2nd.step 1 x 3.143 x 9.875 x 1.875 x 5.00 =	290.96		
			3rd.step 1 x 3.143 x 9.500 x 1.50 x 5.00 =	223.93		
			4th.step 1 x 3.143 x 9.125 x 1.125 x 7.00 =	225.84		
			5th.step 1 x 3.143 x 8.750 x 0.75 x 1.75 =	36.09		
			Dome 1 x 3.143 x 8.750 + 2.583 x 0.75 x 5.50 =	113.44		
			2.000 Total =	1195.17		
			D/d pipe 2 x 3.143 x 6 x 6.000 x 0.25 x 2.625 =	148.50		
			Net Total =	1046.67	Cft	100
9	7	8	Add extra labour for every 10 ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			2nd.step 1 x 3.143 x 9.875 x 1.875 x -0.79 =	-46.17		
			3rd.step 1 x 3.143 x 9.500 x 1.500 x 5.00 =	223.93		

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
17	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1: 4: 8 qty.as per item No. 7.00 = 143.20 x 94.77 / 100 = 135.71			
			PCC 1: 1.5:3 qty. as per item No 10.00 = 110.95 x 84.0 / 100 = 93.20			
			PCC 1:2.4 qty. as per item No. 23.00 = 7.82 x 88.0 / 100 = 6.88			
			Net Total = 235.79 Cft		100	
18	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Around PCC 1.4.8 1 x 3.143 x 9.50 x 5.0 x 1.00 = 24.86			
			Around 1st step 1 x 3.143 x 13.50 x 1.00 x 0.00 = 42.43			
			Around 2nd step 1 x 3.143 x 13.125 x 1.375 x 5.00 = 34.38			
			Around 3rd step 1 x 3.143 x 12.75 x 1.750 x 5.00 = 31.32			
			Around 4th step 1 x 3.143 x 12.375 x 2.125 x 7.00 = 24.02			
			Arround 5th step 1 x 3.143 x 12.000 x 2.5 x 1.75 = 33.34			
			Arround dome 1 x 3.143 - 9.50 + 6.93 x 3.50 = 90.37			
			2.00 Total = 280.71 Cft		1000	
19	7	30	Supplying and filling sand under floor; or plugging in wells.			
			Around dome 1 x 1 x 3.143 x(6.931 + 3.333)x 3.00 = 48.39 Cft		100.00	
			2			
20	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile			
		a.	a) upto ¼ mile (400 m). =			
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.) =			
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km). =			
			Quantity as per item No 5 i) = 1064.44 Cft			
			Quantity as per item No 5 ii) = 1321.57 Cft			
			Quantity as per item No 5 iii) = 2553.39 Cft			
			Total quantity of earth = 4939.40 Cft			
			Deductions as below			
			Rehandalled qty. as per item 18 = 280.71 Cft			
			Quantity of sand as item No. 19 = 48.39 Cft			
			Total quantity of deductions = 329.09 Cft			
			Balance quantity . = ##### - 329.09 = 4610.31 Cft			
			Take 80% quantity to be transported. 0.80 = 3688.25 = 2950.60 Cft		1000	
22	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-			
			10% x 1 x 3.143 x 14.50 x 14.50 x 0.25 x 0.50 = 8.26			
		D/d	10% x 1 x 3.143 x 3.33 x 3.33 x 0.25 x 0.50 = 0.44			
			Total = 7.82 Cft		100	
23	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):(f) Ratio 1: 2: 4			
			10% x 1 x 3.143 x 14.50 x 14.50 x 0.25 x 0.50 = 8.26			
		D/d	10% x 1 x 3.143 x 3.33 x 3.33 x 0.25 x 0.50 = 0.44			
			Total = 7.82 Cft		100	
				Total Amount (Rs.)	=	

Carried over to the Sub Summary A-3 (ii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 7.5' DIA 25.64' AV. DEPTH FOR 54" DIA SEWER RA-16

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			80% x 1 x 3.143 x 13.25 x 13.25 x 0.25 x 0.83 =	91.59	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			10% x 1 x 3.143 x 13.25 x 13.25 x 0.25 x 0.50 =	6.90	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			10% x 1 x 3.143 x 13.25 x 13.25 x 0.25 x 0.50 =	6.90	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 3.143 x 13.25 x 13.25 x 0.25 x 0.00 =	6.90	Cft	100
5	3	42.i.ii.ii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			80% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 6.17 =	680.88	Cft	
			10% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 6.00 =	82.77	Cft	
			5% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 6.63 =	45.69	Cft	
			5% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 7.00 =	48.28	Cft	
			Total =	857.62	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			80% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 8.00 =	882.83		
			10% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 8.00 =	110.35		
			5% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 8.00 =	55.18		
			5% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 8.00 =	55.18		
			Total =	1103.54	Cft	1000
		iii)	iii) above 15.0 ft. (4.5 m) depth = 13.91			
			80% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 13.91 =	1535.39		
			10% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 13.91 =	191.92		
			5% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 13.91 =	95.96		
			5% 1 x 3.143 x 13.25 x 13.25 x 0.25 x 13.91 =	95.96		
			Total =	1919.23	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 3.143 x 13.25 x 13.25 x 0.25 x 1.00 =	137.94	Cft	100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1.4.8 1 x 3.143 x 13.00 x 13.000 x 0.25 x 1.00 =	132.79	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 9.375 x 1.875 x 7.41 =	409.55		
			2nd.step 1 x 3.143 x 9.000 x 1.50 x 5.00 =	212.14		
			3rd.step 1 x 3.143 x 8.625 x 1.125 x 7.00 =	213.47		
			4th.step 1 x 3.143 x 8.250 x 0.75 x 2.50 =	48.62		
			Dome 1 x 3.143 x 8.250 + 2.583 x 0.75 x 5.00 =	97.23		
			2.000 Total =	981.01		
			D/d pipe 2 x 3.143 x 5.4167 x 0.25 x 2.625 =	121.03		
			Net Total =	859.98	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			2nd.ste 1 x 3.143 x 9.000 x 1.50 x 5.00 =			
			1st.ste 1 x 3.143 x 0.000 x 0.000 x =	0.00		
			2nd.step 1 x 3.143 x 9.375 x 1.875 x =	0.00		
			3rd.step 1 x 3.143 x 9.000 x 1.500 x =	399.39		
			4th.step 1 x 3.143 x 8.625 x 1.125 x =	76.24		
			Dome 1 x 3.143 x 8.250 + 2.583 x 0.75 x 5.00 =	63.84		
			2.000 Total =	539.47	Cft	100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total =	859.98	Cft	100

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 3.143 x 7.500 x 7.500 x 0.25 x 5.08 = 224.67			
			Top Pcc 1 x 3.143 x 2.583 x 0.75 x 0.50 = 3.04			
			Total = 227.71			
			D/d 1/2 pipe 1 x 0.786 x 4.50 x 4.50 x 0.50 x 7.500 = 59.67			
			Above 1/2 pipe 1.0000 x 4.50 - 2.250 = 2.250 x 7.500 = 75.94			
			Total = 135.60			
			Net = 227.71 - 135.60 = 92.11	Cft	100	
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			benching 1 x 3.143 x 7.500 x 7.500 x 0.25 x 0.00 = 44.20			
			1/2 Pipe 1 x 3.143 x 7.500 x 4.500 x 0.50 x 0.00 = 53.04			
			Rectag.sid 1 x 2.000 x 7.500 x 2.250 x 0.00 x 0.00 = 33.75			
			Total = 130.98			
			D/d Top 1 x 1.000 x 7.500 x 4.50 x 0.00 = 33.75			
			Net = 130.98 - 33.75 = 97.23	Sft	100	
13	21	13	Providing and fixing 1 1/4"x1 1/4"x3/16" (31x31x5 mm) angle iron step, in man hole chambers, including carriage and setting the same in work to correct lines and levels .			
			Step Nos 1 x 26.91 - 5.08 - 2.00 = 20.00 / 1.0 = 20.00	No		
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) 1/2" (13 mm) thick)			
			Out side the man hole			
			1st.step 1 x 3.143 x 11.25 x 7.41 = 262.11			
			2nd.step 1 x 3.143 x 10.500 x 5.000 = 165.00			
			3rd.step 1 x 3.143 x 9.000 x 7.00 = 198.00			
			4th.step 1 x 3.143 x 9.750 x 2.50 = 76.61			
			1st.step top 1 x 3.143 x 11.625 x 0.375 = 13.70			
			2nd.step 1 x 3.143 x 10.875 x 0.375 = 12.82			
			3rd.step 1 x 3.143 x 9.375 x 0.375 = 11.05			
			4th.step 1 x 3.143 x 10.125 x 0.375 = 11.93			
			(Dome) 1 x 3.143 x (9.000 + 3.333) 5.00 = 96.90			
			2 Total = 848.13			
			D/d pipe 1 x 3.143 x 5.417 x 5.417 x 0.25 x 2.00 = 46.11			
			Net = 848.13 - 46.11 = 802.02	Sft	100	
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No 14.00 = 802.02			
			Total = 802.02	Sft	100	
16	11	18.a	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:-a) ratio 1:2			
			In side the man hole			
			Inside wall of M.Hole = 1.00 x 3.143 x 7.50 x 21.830 = 514.56			
			Total = 514.56	Sft	100	
17	21	16	Providing and fixing 6" thick R.C.C. manhole cover with tee shaped C.I. frame of 22" I/d (frame weighing 37.324 Kg. or one maund as per Standard Drawing STD/PD No. 6, of 1977, complete in all respect.			
			1 x 1.0 = 1.00	No		
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1: 4: 8 quty.as per item No. 7.00 = 132.79 x 94.77 / 100 = 125.84			
			PCC 1: 1.5:3 quty. as per item No. 11.00 = 92.11 x 84.0 / 100 = 77.37			
			PCC 1:2.4 quty. as per item No. 24.00 = 6.46 x 88.0 / 100 = 5.69			
			Net Total = 208.90	Cft	100	
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Around PCC 1.4.8 1 x 3.143 x 9.00 x 4.3 x 1.00 = 24.04			
			Around 1st step 1 x 3.143 x 13.00 x 0.25 x 0.00 = 40.86			
			Around 2nd step 1 x 3.143 x 12.625 x 0.625 x 7.41 = 35.05			
			Around 3rd step 1 x 3.143 x 12.25 x 1.000 x 5.00 = 33.50			
			Around 4th step 1 x 3.143 x 11.875 x 1.375 x 7.00 = 27.70			

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)					
	Page No.	Item No																		
			Arround 5th step	1	x	3.143	x	11.500	x	1.8	x	2.50	=	31.77						
			Arround dome	1	x	3.143	-	9.00	+	5.22	x	2.00	=	44.70						
								2.00				Total	=	237.60	Cft	1000				
20	10	3	Supplying and filling sand under floor; or plugging in wells.																	
			Around dome	1	x	1	x	3.143	x	5.222	+	3.333	)x	3.00	=	40.33	Cft	#####	
								2												
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile																	
		a.	a) upto ¼ mile (400 m).										=							
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)										=							
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).										=							
			Quantity as per item No										5	i)	=	857.62	Cft			
			Quantity as per item No										5	ii)	=	1103.54	Cft			
			Quantity as per item No										5	iii)	=	1919.23	Cft			
			Total quantity of earth												=	3880.39	Cft			
			Deductions as below																	
			Rehandalled quty. as per item										19		=	237.60	Cft			
			Quantity of sand as item No.										20		=	40.33	Cft			
			Total quantity of deductions												=	277.93	Cft			
			Balance quantity .										=	#####	-	277.93	=	3602.45	Cft	
			Take 80% quantity to be transported.										0.80	=	2881.96	=	2305.57	Cft	1000	
22	21	12	Restoration of metalled road, on laid service line, including compaction:-																	
		a.	a) Carpetted road, with 2" (50 mm) carpet and 10" (250 mm) depth of stone metal for sub-base and base.																	
			80%	x	1	x	3.143	x	13.25	x	13.25	x	0.25	x	50%	=	55.18			
		D/d	80%	x	1	x	3.143	x	3.33	x	3.33	x	0.25		50%	=	3.49			
														Total	=	51.68	Sft	100		
		c.	Black Topped Road with two coats of surfacing & 10" (250 mm) depth of stone metal, for sub base & base.																	
			80%	x	1	x	3.143	x	13.25	x	13.25	x	0.25		50%	=	55.18			
		D/d	80%	x	1	x	3.143	x	3.33	x	3.33	x	0.25		50%	=	3.49			
														Total	=	51.68	Sft	100		
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-																	
			10%	x	1	x	3.143	x	13.25	x	13.25	x	0.25	x	0.50	=	6.90			
		D/d	10%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.44			
														Total	=	6.46	Cft	100		
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1: 2: 4																	
			10%	x	1	x	3.143	x	13.25	x	13.25	x	0.25	x	0.50	=	6.90			
		D/d	10%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.44			
														Total	=	6.46	Cft	100		
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.																	
			5%	x	1	x	3.143	x	13.25	x	13.25	x	0.25		0.00	=	6.90			
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.00	=	0.44			
														Total	=	6.46	Sft	100		
												Total Amount (Rs.)		=						
														=		-				

Carried over to the Sub Summary A-3 (iii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 6.50' DIA For 42" i/d SEWER RA-17

Size of sewer	42 "i/d	Internal dia of Man hole	7.5 ft	Average brick masonry depth	27.21 ft	
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA						
S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			80% x 1 x 3.143 x 13.00 x 13.00 x 0.25 x 0.83 =	88.17	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			10% x 1 x 3.143 x 13.00 x 13.00 x 0.25 x 0.50 =	6.64	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			10% x 1 x 3.143 x 13.00 x 13.00 x 0.25 x 0.50 =	6.64	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 3.143 x 13.00 x 13.00 x 0.25 x 0.00 =	6.64	Cft	100
5	3	42.i.ii.i	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			80% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 6.17 =	655.43	Cft	
			10% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 6.00 =	79.67	Cft	
			5% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 6.63 =	43.99	Cft	
			5% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 7.00 =	46.47	Cft	
			Total =	825.56	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			80% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 8.00 =	849.83		
			10% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 8.00 =	106.23		
			5% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 8.00 =	53.11		
			5% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 8.00 =	53.11		
			Total =	1062.29	Cft	1000
		iii)	iii) above 15.0 ft. (4.5 m) depth = 13.61			
			80% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 13.61 =	1445.51		
			10% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 13.61 =	180.69		
			5% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 13.61 =	90.34		
			5% 1 x 3.143 x 13.00 x 13.00 x 0.25 x 13.61 =	90.34		
			Total =	1806.88	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 3.143 x 13.00 x 13.00 x 0.25 x 26.61 =	3533.10	Cft	100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1:4:8 1 x 3.143 x 12.00 x 12.000 x 0.25 x 1.00 =	113.14	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 11.000 x 2.250 x 2.36 =	183.38		
			2nd.step 1 x 3.143 x 8.375 x 1.875 x 5.00 =	246.76		
			3rd.step 1 x 3.143 x 8.000 x 1.50 x 5.00 =	188.57		
			4th.step 1 x 3.143 x 7.625 x 1.125 x 7.00 =	188.72		
			5th.step 1 x 3.143 x 7.250 x 0.75 x 2.75 =	47.00		
			Dome 1 x 3.143 x 7.250 + 2.583 x 0.75 x 4.50 =	76.90		
			2.000 Total =	931.33		
			D/d pipe 2 x 3.143 x 4.25 x 4.250 x 0.25 x 2.625 =	74.51		
			Net Total =	856.82	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft			
			2nd.step 1 x 3.143 x 11.000 x 2.250 x -2.64 =	-205.55		
			4th.step 1 x 3.143 x 8.000 x 1.500 x 5.00 =	188.57		
			3rd.step 1 x 3.143 x 7.625 x 1.125 x 7.64 =	206.04		
			2.000 Total =	189.06	Cft	100
			10-20 Height Hight above = 10 ft			
			3rd.step 1 x 3.143 x 8.000 x 1.125 x -0.64 =	-18.17		
			4th.step 1 x 3.143 x 7.250 x 0.750 x 2.75 =	47.00		
			Dome 1 x 3.143 x 7.250 + 2.583 x 0.75 x 4.50 =	52.15		
			2.000 Total =	80.97	Cft	100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Quantity as per item No	8.00		Total = 856.82 Cft 100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 3.143 x 6.500 x 6.500 x 0.25 x 4.00			= 132.79
			Top Pcc 1 x 3.143 x 2.583 x 0.75 x 0.75			= 4.57
			Total			137.35
			D/d 1/2 pipe 1 x 0.786 x 3.50 x 3.50 x 0.50 x 6.500			= 31.28
			Above 1/2 pipe 1.0000 x 3.50 - 1.750 = 1.750 x 6.500			= 39.81
			Total			= 71.09
			Net = 137.35 - 71.09			= 66.26 Cft 100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			benching top 1 x 3.143 x 6.500 x 6.500 x 0.25 x 0.00			= 33.20
			1/2 Pipe 1 x 3.143 x 6.500 x 3.500 x 0.50 x 0.00			= 35.75
			Rectag.sides 1 x 2.000 x 6.500 x 1.750 x 0.00 x 0.00			= 22.75
			Total			= 91.70
			D/d Top 1 x 1.000 x 6.500 x 3.50 x			= 22.75
			Net = 91.70 - 22.75			= 68.95 Sft 100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels .			
			Step Nos 1 x 26.61 - 4.00 - 2.00 = 21.00 / 1.0			= 21.00 No 1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)			
			Out side the man hole			
			1st.step 1 x 3.143 x 11.00 x 2.36			= 81.50
			2nd.step 1 x 3.143 x 10.25 x 5.00			= 161.07
			3rd.step 1 x 3.143 x 9.500 x 5.000			= 149.29
			4th.step 1 x 3.143 x 8.000 x 7.00			= 176.00
			5th.step 1 x 3.143 x 8.750 x 2.75			= 75.63
			1st.step top 1 x 3.143 x 10.625 x 0.375			= 12.52
			2nd.step top 1 x 3.143 x 9.875 x 0.375			= 11.64
			3rd.step top 1 x 3.143 x 8.375 x 0.375			= 9.87
			4rth.step top 1 x 3.143 x 9.125 x 0.375			= 10.75
			(Dome) 1 x 3.143 x(8.000 + 3.333) 4.50			= 80.14
			Total			= 768.41
			D/d pipe area 1 x 3.143 x 4.250 x 4.250 x 0.25 x 2.00			= 28.38
			Net = 768.41 - 28.38			= 740.03 Sft 100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No	14.00		= 740.03
			Total			= 740.03 Sft 100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2			
			In side the man hole			
			Inside wall of M.Hole = 1.00 x 3.143 x 6.50 x 22.608			= 461.84
			Total			= 461.84 Sft 100
17	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).			
				1 x 1.0		= 1.00 No 1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1: 4: 8 quty.as per item No. 7.00 = 113.14 x 94.77 / 100			= 107.23
			PCC 1: 1.5:3 quty. as per item No. 11.00 = 66.26 x 84.0 / 100			= 55.66
			PCC 1:2.4 quty. as per item No. 24.00 = 6.20 x 88.0 / 100			= 5.46
			Net Total			= 168.34 Cft 100
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Around PCC 1.4.8 1 x 3.143 x 12.50 x 0.5 x 1.00			= 38.79
			Around 1st step 1 x 3.143 x 12.00 x 1.00 x 2.36			= 35.36
			Around 2nd step 1 x 3.143 x 11.625 x 1.375 x 5.00			= 29.66
			Around 3rd step 1 x 3.143 x 11.25 x 1.750 x 5.00			= 26.61
			Around 4th step 1 x 3.143 x 10.875 x 2.125 x 7.00			= 19.30
			Arround 5th step 1 x 3.143 x 10.500 x 2.5 x 2.75			= 26.13
			Arround dome 1 x 3.143 - 8.00 + 5.28 x 2.50			= 52.16

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)						
	Page No.	Item No																			
														2.00	Total	=	228.00	Cft		1000	
20	7	30	Supplying and filling sand under floor; or plugging in wells.																		
			Around dome	1	x	1	x	3.143	x	5.278	+	3.333	)	3.00	=	40.60	Cft		100.00	
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile																		
		a.	a) upto ¼ mile (400 m).										=								
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)										=								
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).										=								
			Quantity as per item No										5	i)	=	825.56	Cft				
			Quantity as per item No										5	ii)	=	1062.29	Cft				
			Quantity as per item No										5	iii)	=	1806.88	Cft				
			Total quantity of earth												=	3694.73	Cft				
			Deductions as below																		
			Rehanded qty. as per item No.										19		=	228.00	Cft				
			Quantity of sand as item No.										20		=	40.60	Cft				
			Total quantity of deductions												=	268.60	Cft				
			Balance quantity .										=	3694.73	-	268.60	=	3426.13	Cft		
			Take 80% quantity to be transported.										0.80	=	2740.91	=	2192.72	Cft		1000	
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-																		
			10%	x	1	x	3.143	x	13.00	x	13.00	x	0.25	x	0.50	=	6.64				
		D/d	10%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.44				
															Total	=	6.20	Cft	100		
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4																		
			10%	x	1	x	3.143	x	13.00	x	13.00	x	0.25	x	0.50	=	6.64				
		D/d	10%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.50	=	0.44				
															Total	=	6.20	Cft	100		
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.																		
			5%	x	1	x	3.143	x	13.00	x	13.00	x	0.25		0.00	=	6.64				
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	x	0.00	=	0.44				
															Total	=	6.20	Sft	100		
												Total Amount (Rs.)		=							

Carried over to the Sub Summary A-3 (iv)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 6.50' DIA For 36" i/d SEWER RA-18

Size of sewer	36 "i/d	Internal dia of Man hole	6.5 ft	Average brick masonry depth	21.87 ft
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MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			55% x 1 x 0.786 x 12.25 x 12.25 x 0.83 = 54.04 = 54.04 Cft			100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			10% x 1 x 0.786 x 12.25 x 12.25 x 0.50 = 5.90 = 5.90 Cft			100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			10% x 1 x 0.786 x 12.25 x 12.25 x 0.50 = 5.90 = 5.90 Cft			100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 12.25 x 12.25 x = 5.90 = 5.90 Sft			100
5	3	42.i.ii .iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			55% x 1 x 0.786 x 12.25 x 12.25 x 6.17 = 399.90 =			
			10% x 1 x 0.786 x 12.25 x 12.25 x 6.00 = 70.74 =			
			5% x 1 x 0.786 x 12.25 x 12.25 x 6.625 = 39.06 =			
			30% x 1 x 0.786 x 12.25 x 12.25 x 7.00 = 247.60 =			
			Total = 757.30 = 757.30 Cft			1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			55% x 1 x 0.786 x 12.25 x 12.25 x 8.00 = 518.79			
			10% x 1 x 0.786 x 12.25 x 12.25 x 8.00 = 94.33			
			5% x 1 x 0.786 x 12.25 x 12.25 x 8.00 = 47.16			
			30% x 1 x 0.786 x 12.25 x 12.25 x 8.00 = 282.98			
			Total = 943.25 = 943.25 Cft			1000
		iii)	iii) above 15.0 ft. (4.5 m) depth = 9.37			
			55% x 1 x 0.786 x 12.25 x 12.25 x 9.37 = 607.63 =			
			10% x 1 x 0.786 x 12.25 x 12.25 x 9.37 = 110.48 =			
			5% x 1 x 0.786 x 12.25 x 12.25 x 9.37 = 55.24 =			
			30% x 1 x 0.786 x 12.25 x 12.25 x 9.37 = 331.43 =			
			Total = 1104.78 = 1104.78 Cft			1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 12.25 x 12.25 x 1.00 = 117.91 = 117.91 Cft			100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1:4:8 1 x 0.786 x 10.50 x 10.500 x 0.67 = 57.75 = 57.75 Cft			100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 8.375 x 1.875 x 2.37 = 116.97			
			2nd.step 1 x 3.143 x 8.000 x 1.500 x 5.00 = 188.57			
			3rd.step 1 x 3.143 x 7.625 x 1.125 x 7.000 = 188.72			
			4th.step 1 x 3.143 x 7.250 x 0.750 x 2.75 = 47.00			
			Dome 3.14 x 7.250 + 2.583 x 0.750 x 4.50 = 52.15			
			2 Total = 476.44			
			D/d pipe 2 x 0.786 x 3.667 x 3.667 x 1.500 = 31.690			
			Net Total = 444.75 = 444.75 Cft			100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			3rd.step 1 x 3.143 x 7.625 x 2.750 x 4.370 = 47.00			
			Dome 3.14 x 7.250 + 2.583 x 0.750 = 4.50 = 52.15			
			2 Total = 99.15 = 99.15 Cft			100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 444.75 = 444.75 Cft			100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)		
	Page No.	Item No															
			Benching	1	x	0.786	x	6.500	x	6.500	x	3.50	=	116.19			
			Top Pcc	1	x	3.143	x	2.583	x	0.750	x	0.75	=	4.57			
										Total		Total	=	120.75			
			D/d 1/2 pipe	0.5	x	0.786	x	3.00	x	3.00	x	6.50	=	22.98			
			Above 1/2 pipe	1	x	3.0	-	1.50	=	1.500	x	6.500	=	9.750			
												Total	=	32.732			
										Total	=	120.754	-	32.73	=	88.02	= 88.02 Cft 100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .														
			Benching top	1	x	3.143	x	6.500	x	6.500	x	0.25	=	33.20			
			1/2 Pipe	1	x	3.143	x	6.500	x	3.000	x	0.50	=	30.64			
			Rectag.sides	1	x	2.000	x	6.500	x	1.500	x	0.00	=	19.50			
												Total	=	83.34			
			D/d Top	1	x	1.000	x	6.500	x	3.00	x		=	19.50			
										Total	=	83.339	-	19.50	=	63.84	= 63.84 Sft 100
13	21	13	Providing and fixing 1½"x1½"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .														
			Step Nos	1	x	22.37	-	3.50	-	2.00	=	17.00	/	1.0	=	17.00	No 1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)														
			Out side the man hole														
			1st.step	1	x	3.143	x	10.25	x	2.370			=	76.348			
			2nd.step	1	x	3.143	x	9.500	x	5.000			=	149.286			
			3rd.step	1	x	3.143	x	8.750	x	7.00			=	192.500			
			4th.step	1	x	3.143	x	8.000	x	2.75			=	69.143			
			1st.step top	1	x	3.143	x	9.125	x	0.375			=	10.754			
			2nd.step top	1	x	3.143	x	9.500	x	0.375			=	11.196			
			(Dome)	1	x	3.143	x	8.000	+	3.333	)x	4.50	=	83.57		
										2		Total	=	516.45			
			D/d pipe area	2	x	3.143	x	3.667	x	3.667	x	0.25	=	21.13			
												Net Total	=	516.45	-	21.13	= 495.32 Sft 100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).														
			Out side the man hole														
			Quantity as per item No			14.00											
												Total	=	495.32	=	495.32	Sft 100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2														
			Inside wall of M.Hole	1	x	3.14	x	6.500	x	18.87	=	385.487					
										Total	=	385.49	=	385.49	Sft 100		
17	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26" dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).														
										1	x	1.0	=	1.00	No	1	
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.														
			Lead upto	160	K.m from Karana quarry Sargodha District Sargodha.												
			PCC 1: 4: 8 qty.as per item No.	7.00	=	57.75	x	94.77	/	100	=	54.73					
			PCC 1: 1.5:3 qty.as per item No.	11.00	=	88.02	x	84.0	/	100	=	73.94					
			PCC 1:2.4 qty. as per item No.	24.00	=	5.46	x	88.0	/	100	=	4.80					
												Net Total	=	133.47	Cft	100	
19	3	13.a. b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel														
			Quantity as per item No			5	i)	757.302	+	943.3	+	1104.8	=	2805.33			
			Deductions as below														
			Volume of dry stone	0.786	x	12.250	x	12.250	x	1.00	=	117.91					
			Volume of PCC 1.4.8	0.786	x	10.500	x	10.500	x	0.67	=	57.75					
			Volume of 1st step	0.786	x	9.500	x	9.500	x	5.00	=	354.55					
			Volume 2nd step	0.786	x	8.750	x	8.750	x	7.000	=	421.09					
			Volume 3rd step	0.786	x	8.000	x	8.00	x	2.750	=	138.29					
			Dome volume	0.786	x	8.000	x	4.44	²)	2.25	=	68.44					
								2		Total	=	1158.034					
										Net Total	=	2805.33	-	1158.034	=	1647.30	Cft 1000
20	10	3	Supplying and filling sand under floor; or plugging in wells.														
			Quantity	0.786	x	12.250	x	12.250	x	3.000	=	353.72					

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)			
	Page No.	Item No																
			D/d dome volume	0.786	x	4.444	+	3.333	$\frac{1}{2}$	2.500	=	29.71						
								2										
			PCC of M.H cover	0.786	x	3.333	x	3.333	x	0.750	=	6.55						
										Total	=	36.25						
										Net Total	=	353.72	-	36.254	=	317.46	Cft	100
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile															
		a.	a) upto ¼ mile (400 m).				=	1	x	4,932	=	4,932						
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)				=	12	=	37.95	=	455						
		c.	c) for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).				=	8	=	360.50	=	2,884						
										Total	=	8,272						
			Quantity as per item No	5	=	757.302	+	943.3	+	1104.8	=	2805.33						
			Deductions as below															
			Rehandalled qty. as per item No.	19			=	1647.30				Cft						
			Quantity of sand as item No.	20			=	317.46				Cft						
			Total quantity of deductions				=	1964.76				Cft						
			Balance quantity .		=	2805.33	-	1964.76	=	840.57		Cft						
			Take 80% quantity to be transported.					0.80	=	672.46			=	537.96	Cft	1000		
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-															
			10%	x	1	x	0.786	x	12.25	x	12.25	x	0.50	=	5.90			
		D/d	10%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	0.44			
										Total			=	5.46	Cft	100		
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4															
			10%	x	1	x	0.786	x	12.25	x	12.25	x	0.50	=	5.90			
		D/d	10%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	0.44			
										Total			=	5.46	Cft	100		
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.															
			5%	x	1	x	3.143	x	12.25	x	12.25	x	0.25	=	5.90			
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	=	0.44			
										Total			=	5.46	Sft	100		
												Total Amount (Rs.)	=					

Carried over to the Sub Summary A-3 (v)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 6.50' DIA For 33" i/d SEWER AT OKARA CITY RA-19

Size of sewer	33 "i/d	Internal dia of Man hole	6.5 ft	Average brick masonry depth	16.25 ft	
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA						
S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			55% x 1 x 0.786 x 11.50 x 11.50 x 0.83 = 47.63 = 47.63 Cft			100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			10% x 1 x 0.786 x 11.50 x 11.50 x 0.50 = 5.20 = 5.20 Cft			100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			10% x 1 x 0.786 x 11.50 x 11.50 x 0.50 = 5.20 = 5.20 Cft			100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 11.50 x 11.50 x = 5.20 = 5.20 Sft			100
5	3	42.i.ii.i	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			55% 1 x 0.786 x 11.50 x 11.50 x 6.17 = 352.43 =			
			10% 1 x 0.786 x 11.50 x 11.50 x 6.00 = 62.35 =			
			5% 1 x 0.786 x 11.50 x 11.50 x 6.625 = 34.42 =			
			30% 1 x 0.786 x 11.50 x 11.50 x 7.00 = 218.21 =			
			Total = 667.41 = 667.41 Cft			1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			55% 1 x 0.786 x 11.50 x 11.50 x 8.00 = 457.21			
			10% 1 x 0.786 x 11.50 x 11.50 x 8.00 = 83.13			
			5% 1 x 0.786 x 11.50 x 11.50 x 8.00 = 41.56			
			30% 1 x 0.786 x 11.50 x 11.50 x 8.00 = 249.39			
			Total = 831.29 = 831.29 Cft			1000
		iii)	iii) above 15.0 ft. (4.5 m) depth = 3.25			
			55% 1 x 0.786 x 11.50 x 11.50 x 3.25 = 185.80 =			
			10% 1 x 0.786 x 11.50 x 11.50 x 3.25 = 33.78 =			
			5% 1 x 0.786 x 11.50 x 11.50 x 3.25 = 16.89 =			
			30% 1 x 0.786 x 11.50 x 11.50 x 3.25 = 101.35 =			
			Total = 337.83 = 337.83 Cft			1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 11.50 x 11.50 x 1.00 = 103.91 = 103.91 Cft			100
7	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio1.4.8 1 x 0.786 x 10.50 x 10.500 x 0.67 = 57.75 = 57.75 Cft			100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 ft. 7)			
			1st.step 1 x 3.143 x 8.000 x 1.500 x 1.25 = 47.18			
			2nd.step 1 x 3.143 x 7.625 x 1.125 x 7.000 = 188.72			
			3rd.step 1 x 3.143 x 7.250 x 0.750 x 2.75 = 47.00			
			Dome 3.14 x 7.250 + 2.583 x 0.750 x 4.50 = 52.15			
			2 Total = 335.05			
			D/d pipe 2 x 0.786 x 3.375 x 3.375 x 1.500 = 26.849			
			Net Total = 308.20 = 308.20 Cft			100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			3rd.step 1 x 3.143 x 7.625 x 2.750 x 1.001 = 47.00			
			Dome 3.14 x 7.250 + 2.583 x 0.750 = 4.50 = 52.15			
			2 Total = 99.15 = 99.15 Cft			100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 308.20 = 308.20 Cft			100

11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3															
			Benching	1	x	0.786	x	6.500	x	6.500	x	3.25	=	107.89				
			Top Pcc	1	x	3.143	x	2.583	x	0.750	x	0.75	=	4.57				
										Total		Total	=	112.46				
			D/d 1/2 pipe	0.5	x	0.786	x	2.75	x	2.75	x	6.50	=	19.31				
			Above 1/2 pipe	1	x	2.8	-	1.38	=	1.375	x	6.500	=	8.938				
												Total	=	28.249				
										Total	=	112.455	-	28.25	=	84.21	Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .															
			Benching top	1	x	3.143	x	6.500	x	6.500	x	0.25	=	33.20				
			1/2 Pipe	1	x	3.143	x	6.500	x	2.750	x	0.50	=	28.09				
			Rectag.sides	1	x	2.000	x	6.500	x	1.375	x	0.00	=	17.88				
												Total	=	79.16				
			D/d Top	1	x	1.000	x	6.500	x	2.75	x		=	17.88				
										Total	=	79.161	-	17.88	=	61.29	Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .															
			Step Nos	1	x	16.25	-	3.25	-	2.00	=	11.00	/	1.0	=	11.00	No	1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)															
			Out side the man hole															
			1st.step	1	x	3.143	x	9.500	x	1.251			=	37.355				
			2nd.step	1	x	3.143	x	8.750	x	7.00			=	192.500				
			3rd.step	1	x	3.143	x	8.000	x	2.75			=	69.143				
			1st.step top	1	x	3.143	x	9.125	x	0.375			=	10.754				
			2nd.step top	1	x	3.143	x	9.500	x	0.375			=	11.196				
			(Dome)	1	x	3.143	x	8.000	+	3.333	)x	4.50	=	83.57				
										2		Total	=	404.52				
			D/d pipe area	2	x	3.143	x	3.375	x	3.375	x	0.25	=	17.90				
										Net Total	=	404.52	-	17.90	=	386.62	Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).															
			Out side the man hole															
			Quantity as per item No					14.00										
												Total	=	386.62	=	386.62	Sft	100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2															
			Inside wall of M.Hole	1	x	3.14	x	6.500	x	13.00	=	265.594						
										Total	=	265.59	=	265.59	Sft	100		
17		input Rate	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having diameter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).									1	x	1.0	=	1.00	No	1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.															
			Lead upto	160														
			K.m from Karana quarry Sargodha District Sargodha.															
			PCC 1: 4: 8 qty.as per item No.					7.00	=	57.75	x	94.77	/	100	=	54.73		
			PCC 1: 1.5:3 qty.as per item No.					11.00	=	84.21	x	84.0	/	100	=	70.73		
			PCC 1:2:4 qty. as per item No.					24.00	=	4.76	x	88.0	/	100	=	4.19		
												Net Total	=	129.65	Cft	100		
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel															
			Quantity as per item No	5	i)	667.410	+	831.3	+	337.8	=	1836.52						
			Deductions as below															
			Volume of dry stone	0.786	x	11.500	x	11.500	x	1.00	=	103.91						
			Volume of PCC 1.4.8	0.786	x	10.500	x	10.500	x	0.67	=	57.75						
			Volume of 1st step	0.786	x	9.500	x	9.500	x	1.25	=	88.72						
			Volume 2nd step	0.786	x	8.750	x	8.750	x	7.000	=	421.09						
			Volume 3rd step	0.786	x	8.000	x	8.00	x	2.750	=	138.29						
			Dome volume	0.786	x	8.000	x	4.44	)²	2.25	=	68.44						
										2		Total	=	878.202				
										Net Total	=	1836.52	-	878.202	=	958.32	Cft	1000

20	10	3	Supplying and filling sand under floor; or plugging in wells.																	
			Quantity	0.786	x	11.500	x	11.500	x	3.000	=	311.73								
			D/d dome volume	0.786	x	4.444	+	3.333	$\frac{1}{2}$	2.500	=	29.71								
						2														
			PCC of M.H cover	0.786	x	3.333	x	3.333	x	0.750	=	6.55								
										Total	=	36.25								
										Net Total	=	311.73	-	36.254	=	275.48	Cft			100
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile																	
		a.	a) upto ¼ mile (400 m).		=															
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)		=															
		c.	c) for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).		=															
			Quantity as per item No	5	=	667.410	+	831.3	+	337.8	=	1836.52								
			Deductions as below																	
			Rehandalled quty. as per item No.	19	=	958.32														
			Quantity of sand as item No.	20	=	275.48														
			Total quantity of deductions		=	1233.80														
			Balance quantity .		=	1836.52	-	1233.80	=	602.72										
			Take 80% quantity to be transported.			0.80	=	482.18												
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-																	
			10%	x	1	x	0.786	x	11.50	x	11.50	x	0.50	=	5.20					
		D/d	10%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	0.44					
													Total	=	4.76	=	4.76	Cft		100
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4																	
			10%	x	1	x	0.786	x	11.50	x	11.50	x	0.50	=	5.20					
		D/d	10%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	0.44					
													Total	=	4.76	=	4.76	Cft		100
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.																	
			5%	x	1	x	3.143	x	11.50	x	11.50	x	0.25	=	5.20					
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	=	0.44					
													Total	=	4.76	=	4.76	Sft		100
																Total Amount (Rs.)	=			

Carried over to the Sub Summary A-3 (vi)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 5.0' DIA For 30" i/d SEWER RA-20

Size of sewer	30 "i/d	Internal dia of Man hole	5.0 ft	Average brick masonry depth	14.93 ft
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MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			30% x 1 x 0.786 x 10.00 x 10.00 x 0.83 = 19.64	= 19.64	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			10% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 3.93	= 3.93	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			10% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 3.93	= 3.93	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 10.00 x 10.00 x = 3.93	= 3.93	Sft	100
5	3	42.i.ii.i	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
			i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			30% 1 x 0.786 x 10.00 x 10.00 x 6.17 = 145.36	=		
			10% 1 x 0.786 x 10.00 x 10.00 x 6.00 = 47.14	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 6.625 = 26.03	=		
			55% 1 x 0.786 x 10.00 x 10.00 x 7.00 = 302.50	=		
			Total = 521.03	= 521.03	Cft	1000
			ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			30% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 188.57			
			10% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 62.86			
			5% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 31.43			
			55% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 345.71			
			Total = 628.57	= 628.57	Cft	1000
			iii) above 15.0 ft. (4.5 m) depth = 1.93			
			30% 1 x 0.786 x 10.00 x 10.00 x 1.93 = 45.49	=		
			10% 1 x 0.786 x 10.00 x 10.00 x 1.93 = 15.16	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 1.93 = 7.58	=		
			55% 1 x 0.786 x 10.00 x 10.00 x 1.93 = 83.40	=		
			Total = 151.64	= 151.64	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 10.00 x 10.00 x 1.00 = 78.57	= 78.57	Cft	100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1:4.8 1 x 0.786 x 9.00 x 9.000 x 0.67 = 42.43	= 42.43	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 6.500 x 1.500 x -0.07 = -2.15			
			2nd.step 1 x 3.143 x 6.125 x 1.125 x 7.000 = 151.59			
			3rd.step 1 x 3.143 x 5.750 x 0.750 x 2.75 = 37.27			
			Dome 3.143 x 5.750 + 2.583 x 0.750 x 4.50 = 44.20			
			2 Total = 230.92			
			D/d pipe 2 x 0.786 x 3.083 x 3.083 x 1.500 = 22.409			
			Net Total = 208.51	= 208.51	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			2nd.step 1 x 3.143 x 6.500 x 1.125 x -3.07 = -70.56			
			3rd.step 1 x 3.143 x 6.125 x 2.750 x 7.000 = 37.27			
			Dome 3.143 x (5.750 + 2.583) x 0.750 = 44.20			
			2 Total = 10.91	= 10.91	Cft	100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 208.51	= 208.51	Cft	100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 5.000 x 5.000 x 3.00 = 58.93			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.75 = 4.57			
			Total = 63.50			
			D/d 1/2 pipe 0.5 x 0.786 x 2.50 x 2.50 x 5.00 = 12.28			
			Above 1/2 pipe 1 x 2.5 - 1.25 = 1.250 x 5.000 = 6.250			
			Total = 18.527			
			Total = 63.496 - 18.53 = 44.97	= 44.97	Cft	100

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top 1 x 3.143 x 5.000 x 5.000 x 0.25 = 19.64			
			1/2 Pipe 1 x 3.143 x 5.000 x 2.500 x 0.50 = 19.64			
			Rectag.sides 1 x 2.000 x 5.000 x 1.250 x 0.00 = 12.50			
			Total = 51.79			
			D/d Top 1 x 1.000 x 5.000 x 2.50 x 12.50			
			Total = 51.786 - 12.50 = 39.29	= 39.29	Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .			
			Step Nos 1 x 14.93 - 3.00 - 2.00 = 10.00 / 1.0 = 10.00		No	1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)			
			Out side the man hole			
			1st.step 1 x 3.143 x 8.000 x -0.070 = -1.760			
			2nd.step 1 x 3.143 x 7.250 x 7.00 = 159.500			
			3rd.step 1 x 3.143 x 6.500 x 2.75 = 56.179			
			1st.step top 1 x 3.143 x 7.625 x 0.375 = 8.987			
			2nd.step top 1 x 3.143 x 8.000 x 0.375 = 9.429			
			(Dome) 1 x 3.143 x(6.500 + 3.333)x 4.50 = 72.32			
			2 Total = 304.66			
			D/d pipe area 2 x 3.143 x 3.083 x 3.083 x 0.25 = 14.94			
			Net Total = 304.66 - 14.94 = 289.72	= 289.72	Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No 14.00			
			Total = 289.72	= 289.72	Sft	100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2			
			Inside wall of M.Hole 1 x 3.14 x 5.000 x 11.93 = 187.471			
			Total = 187.47	= 187.47	Sft	100
17	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26" dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1" with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).			
			1 x 1.0 = 1.00	= 1.00	No	1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1: 4: 8 qty.as per item No. 7.00 = 42.43 x 94.77 / 100 = 40.21			
			PCC 1: 1.5:3 qty.as per item No. 11.00 = 44.97 x 84.0 / 100 = 37.77			
			PCC 1:2.4 qty. as per item No. 24.00 = 3.49 x 88.0 / 100 = 3.07			
			Net Total = 81.06	= 81.06	Cft	100
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Quantity as per item No 5 i) 521.027 + 628.6 + 151.6 = 1301.24			
			Deductions as below			
			Volume of dry stone 0.786 x 10.000 x 10.000 x 1.00 = 78.57			
			Volume of PCC 1.4.8 0.786 x 9.000 x 9.000 x 0.67 = 42.43			
			Volume of 1st step 0.786 x 8.000 x 8.000 x -0.07 = -3.52			
			Volume 2nd step 0.786 x 7.250 x 7.250 x 7.000 = 289.09			
			Volume 3rd step 0.786 x 6.500 x 6.50 x 2.750 = 91.29			
			Dome volume 0.786 x(6.500 x 3.61) ² 2.25 = 45.18			
			2 Total = 543.048			
			Net Total = 1301.24 - 543.048 = 758.19	= 758.19	Cft	1000
20	10	3	Supplying and filling sand under floor; or plugging in wells.			
			Quantity 0.786 x 10.000 x 10.000 x 3.000 = 235.71			
			D/d dome volume 0.786 x(3.611 + 3.333) ² 2.500 = 23.68			
			2			
			PCC of M.H cover 0.786 x 3.333 x 3.333 x 0.750 = 6.55			
			Total = 30.23			
			Net Total = 235.71 - 30.230 = 205.48	= 205.48	Cft	100
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile			

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)	
	Page No.	Item No														
		a.	a) upto ¼ mile (400 m).										=			
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)										=			
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).										=			
			Quantity as per item No	5	=	521.027	+	628.6	+	151.6	=	1301.24				
			Deductions as below													
			Rehandalled qty. as per item No.	19	=	758.19						Cft				
			Quantity of sand as item No.	20	=	205.48						Cft				
			Total quantity of deductions		=	963.68						Cft				
			Balance quantity .	=	1301.24	-	963.68	=	337.56			Cft				
			Take 80% quantity to be transported.			0.80	=	270.05			=	216.04	Cft		1000	
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-													
			10%	x	1	x	0.786	x	10.00	x	10.00	x	0.50	=	3.93	
		D/d	10%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	0.44	
												Total	=	3.49		
													=	3.49	Cft	100
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4													
			10%	x	1	x	0.786	x	10.00	x	10.00	x	0.50	=	3.93	
		D/d	10%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	0.44	
												Total	=	3.49		
													=	3.49	Cft	100
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.													
			5%	x	1	x	3.143	x	10.00	x	10.00	x	0.25	=	3.93	
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	=	0.44	
												Total	=	3.49		
													=	3.49	Sft	100
												Total Amount (Rs.)		=		

Carried over to the Sub Summary A-3 (vii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 5.0' DIA For 27" i/d SEWER RA-21

Size of sewer	27 "i/d	Internal dia of Man hole	5.0 ft	Average brick masonry depth	12.49 ft	
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA						
S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			80% x 1 x 0.786 x 10.00 x 10.00 x 0.83 = 52.38	= 52.38	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			25% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 9.82	= 9.82	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			25% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 9.82	= 9.82	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 10.00 x 10.00 x = 3.93	= 3.93	Sft	100
5	3	42.i.ii.i	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			80% 1 x 0.786 x 10.00 x 10.00 x 6.17 = 387.62	=		
			25% 1 x 0.786 x 10.00 x 10.00 x 6.00 = 117.86	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 6.625 = 26.03	=		
			-10% 1 x 0.786 x 10.00 x 10.00 x 7.00 = -55.00	=		
			Total = 476.50	= 476.50	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			80% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 502.86	=		
			25% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 157.14	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 31.43	=		
			-10% 1 x 0.786 x 10.00 x 10.00 x 8.00 = -62.86	=		
			Total = 628.57	= 628.57	Cft	1000
		iii)	iii) above 15.0 ft. (4.5 m) depth = 4.24			
			80% 1 x 0.786 x 10.00 x 10.00 x 4.24 = 266.69	=		
			25% 1 x 0.786 x 10.00 x 10.00 x 4.24 = 83.34	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 4.24 = 16.67	=		
			-10% 1 x 0.786 x 10.00 x 10.00 x 4.24 = -33.34	=		
			Total = 333.37	= 333.37	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 10.00 x 10.00 x 1.00 = 78.57	= 78.57	Cft	100
7	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio1.4.8 1 x 0.786 x 9.00 x 9.000 x 0.67 = 42.43	= 42.43	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 6.500 x 1.500 x 2.24 = 68.73			
			2nd.step 1 x 3.143 x 6.125 x 1.125 x 7.000 = 151.59			
			3rd.step 1 x 3.143 x 5.750 x 0.750 x 3.00 = 40.66			
			Dome 3.143 x 5.750 + 2.583 x 0.750 x 4.50 = 44.20			
			2 Total = 305.18			
			D/d pipe 2 x 0.786 x 2.792 x 2.792 x 1.500 = 18.370			
			Net Total = 286.81	= 286.81	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			2nd.step 1 x 3.143 x 6.500 x 1.125 x -0.76 = -17.40			
			3rd.step 1 x 3.143 x 6.125 x 3.000 x 7.000 = 40.66			
			Dome 3.14 x(5.750 + 2.583)x 0.750 = 4.50 = 44.20			
			2 Total = 67.46	= 67.46	Cft	100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Quantity as per item No	8.00	Total = 286.81	= 286.81 Cft 100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching	1 x 0.786 x 5.000 x 5.000 x 2.75 = 54.02		
			Top Pcc	1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04		
				Total = 57.06		
			D/d 1/2 pipe	0.5 x 0.786 x 2.25 x 2.25 x 5.00 = 9.94		
			Above 1/2 pipe	1 x 2.3 - 1.13 = 1.125 x 5.000 = 5.625		
				Total = 15.569		
			Total	= 57.063 - 15.57 = 41.49	= 41.49 Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top	1 x 3.143 x 5.000 x 5.000 x 0.25 = 19.64		
			1/2 Pipe	1 x 3.143 x 5.000 x 2.250 x 0.50 = 17.68		
			Rectag.sides	1 x 2.000 x 5.000 x 1.125 x 0.00 = 11.25		
				Total = 48.57		
			D/d Top	1 x 1.000 x 5.000 x 2.25 x = 11.25		
			Total	= 48.571 - 11.25 = 37.32	= 37.32 Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .			
			Step Nos	1 x 17.24 - 2.75 - 2.00 = 12.00 / 1.0 = 12.00	No	1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)			
			Out side the man hole			
			1st.step	1 x 3.143 x 8.000 x 2.243 = 56.391		
			2nd.step	1 x 3.143 x 7.250 x 7.00 = 159.500		
			3rd.step	1 x 3.143 x 6.500 x 3.00 = 61.286		
			1st.step top	1 x 3.143 x 7.625 x 0.375 = 8.987		
			2nd.step top	1 x 3.143 x 8.000 x 0.375 = 9.429		
			(Dome)	1 x 3.143 x(6.500 + 3.333)x 4.50 = 72.32		
				2 Total = 367.91		
			D/d pipe area	2 x 3.143 x 2.792 x 2.792 x 0.25 = 12.25		
			Net Total	= 367.91 - 12.25 = 355.67	Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No	14.00	Total = 355.67	= 355.67 Sft 100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2			
			Inside wall of M.Hole	1 x 3.14 x 5.000 x 14.49 = 227.745		
			Total	= 227.74	= 227.74 Sft	100
17	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).			
				1 x 1.0 = 1.00	No	1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1: 4: 8 qty.as per item No.	7.00 = 42.43 x 94.77 / 100 = 40.21		
			PCC 1: 1.5:3 qty.as per item No.	11.00 = 41.49 x 84.0 / 100 = 34.85		
			PCC 1:2.4 qty. as per item No.	24.00 = 8.73 x 88.0 / 100 = 7.68		
			Net Total	= 82.75	Cft	100
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Quantity as per item No	5 i) 476.503 + 628.6 + 333.4 = 1438.44		
			Deductions as below			
			Volume of dry stone	0.786 x 10.000 x 10.000 x 1.00 = 78.57		
			Volume of PCC 1.4.8	0.786 x 9.000 x 9.000 x 0.67 = 42.43		
			Volume of 1st step	0.786 x 8.000 x 8.000 x 2.24 = 112.78		

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)		
	Page No.	Item No															
			Volume 2nd step	0.786	x	7.250	x	7.250	x	7.000	=	289.09					
			Volume 3rd step	0.786	x	6.500	x	6.50	x	3.000	=	99.59					
			Dome volume	0.786	x	6.500	x	3.61	¹ / ₂ x	2.00	=	40.16					
							2				Total	=	662.629				
								Net Total	=	1438.44	-	662.629	=	775.81	Cft	1000	
20	10	3	Supplying and filling sand under floor; or plugging in wells.														
			Quantity	0.786	x	10.000	x	10.000	x	3.00	=	235.71					
			D/d dome volume	0.786	x	3.611	+	3.333	¹ / ₂ x	2.50	=	23.68					
							2										
			PCC of M.H cover	0.786	x	3.333	x	3.333	x	0.500	=	4.37					
										Total	=	28.05					
								Net Total	=	235.71	-	28.047	=	207.67	Cft	100	
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile														
		a.	a) upto ¼ mile (400 m).	=													
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)	=													
		c.	c) for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).	=													
			Quantity as per item No	5	=	476.503	+	628.6	+	333.4	=	1438.44					
			Deductions as below														
			Rehandalled qty. as per item No.	19	=	775.81								Cft			
			Quantity of sand as item No.	20	=	207.67								Cft			
			Total quantity of deductions		=	983.48								Cft			
			Balance quantity .	=	1438.44	-	983.48	=	454.96					Cft			
			Take 80% quantity to be transported.			0.80	=	363.97						=	291.18	Cft	1000
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-														
			25%	x	1	x	0.786	x	10.00	x	10.00	x	0.50	=	9.82		
		D/d	25%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	1.09		
											Total	=	8.73	=	8.73	Cft	100
24	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):(f)Ratio 1:2:4														
			25%	x	1	x	0.786	x	10.00	x	10.00	x	0.50	=	9.82		
		D/d	25%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	1.09		
											Total	=	8.73	=	8.73	Cft	100
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.														
			5%	x	1	x	3.143	x	10.00	x	10.00	x	0.25	=	3.93		
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	=	0.44		
											Total	=	3.49	=	3.49	Sft	100
												Total Amount (Rs.)	=				

Carried over to the Sub Summary A-3 (viii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 5.0' DIA For 21" i/d SEWER RA-22

Size of sewer	27 "/i/d	Internal dia of Man hole	5.0 ft	Average brick masonry depth	12.49 ft	
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA						
S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			80% x 1 x 0.786 x 10.00 x 10.00 x 0.83 = 52.38	= 52.38	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			25% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 9.82	= 9.82	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			25% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 9.82	= 9.82	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 10.00 x 10.00 x = 3.93	= 3.93	Sft	100
5	3	42.i.ii.i	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			80% 1 x 0.786 x 10.00 x 10.00 x 6.17 = 387.62	=		
			25% 1 x 0.786 x 10.00 x 10.00 x 6.00 = 117.86	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 6.625 = 26.03	=		
			-10% 1 x 0.786 x 10.00 x 10.00 x 7.00 = -55.00	=		
			Total = 476.50	= 476.50	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			80% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 502.86	=		
			25% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 157.14	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 8.00 = 31.43	=		
			-10% 1 x 0.786 x 10.00 x 10.00 x 8.00 = -62.86	=		
			Total = 628.57	= 628.57	Cft	1000
		iii)	iii) above 15.0 ft. (4.5 m) depth = 4.24			
			80% 1 x 0.786 x 10.00 x 10.00 x 4.24 = 266.69	=		
			25% 1 x 0.786 x 10.00 x 10.00 x 4.24 = 83.34	=		
			5% 1 x 0.786 x 10.00 x 10.00 x 4.24 = 16.67	=		
			-10% 1 x 0.786 x 10.00 x 10.00 x 4.24 = -33.34	=		
			Total = 333.37	= 333.37	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 10.00 x 10.00 x 1.00 = 78.57	= 78.57	Cft	100
7	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio1.4.8 1 x 0.786 x 9.00 x 9.000 x 0.67 = 42.43	= 42.43	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 6.500 x 1.500 x 2.24 = 68.73			
			2nd.step 1 x 3.143 x 6.125 x 1.125 x 7.000 = 151.59			
			3rd.step 1 x 3.143 x 5.750 x 0.750 x 3.00 = 40.66			
			Dome 3.143 x 5.750 + 2.583 x 0.750 x 4.50 = 44.20			
			Total = 305.18			
			D/d pipe 2 x 0.786 x 2.792 x 2.792 x 1.500 = 18.370			
			Net Total = 286.81	= 286.81	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			2nd.step 1 x 3.143 x 6.500 x 1.125 x -0.76 = -17.40			
			3rd.step 1 x 3.143 x 6.125 x 3.000 x 7.000 = 40.66			
			Dome 3.14 x(5.750 + 2.583)x 0.750 = 4.50 = 44.20			
			Total = 67.46	= 67.46	Cft	100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Quantity as per item No	8.00	Total = 286.81	= 286.81 Cft 100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching	1 x 0.786 x 5.000 x 5.000 x 2.75 = 54.02		
			Top Pcc	1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04		
				Total = 57.06		
			D/d 1/2 pipe	0.5 x 0.786 x 2.25 x 2.25 x 5.00 = 9.94		
			Above 1/2 pipe	1 x 2.3 - 1.13 = 1.125 x 5.000 = 5.625		
				Total = 15.569		
			Total	= 57.063 - 15.57 = 41.49	= 41.49 Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top	1 x 3.143 x 5.000 x 5.000 x 0.25 = 19.64		
			1/2 Pipe	1 x 3.143 x 5.000 x 2.250 x 0.50 = 17.68		
			Rectag.sides	1 x 2.000 x 5.000 x 1.125 x 0.00 = 11.25		
				Total = 48.57		
			D/d Top	1 x 1.000 x 5.000 x 2.25 x = 11.25		
			Total	= 48.571 - 11.25 = 37.32	= 37.32 Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .			
			Step Nos	1 x 17.24 - 2.75 - 2.00 = 12.00 / 1.0 = 12.00	No	1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)			
			Out side the man hole			
			1st.step	1 x 3.143 x 8.000 x 2.243 = 56.391		
			2nd.step	1 x 3.143 x 7.250 x 7.00 = 159.500		
			3rd.step	1 x 3.143 x 6.500 x 3.00 = 61.286		
			1st.step top	1 x 3.143 x 7.625 x 0.375 = 8.987		
			2nd.step top	1 x 3.143 x 8.000 x 0.375 = 9.429		
			(Dome)	1 x 3.143 x(6.500 + 3.333)x 4.50 = 72.32		
				2 Total = 367.91		
			D/d pipe area	2 x 3.143 x 2.792 x 2.792 x 0.25 = 12.25		
			Net Total	= 367.91 - 12.25 = 355.67	Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No	14.00	Total = 355.67	= 355.67 Sft 100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2			
			Inside wall of M.Hole	1 x 3.14 x 5.000 x 14.49 = 227.745		
			Total	= 227.74	= 227.74 Sft	100
17	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).			
				1 x 1.0 = 1.00	No	1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1: 4: 8 qty.as per item No.	7.00 = 42.43 x 94.77 / 100 = 40.21		
			PCC 1: 1.5:3 qty.as per item No.	11.00 = 41.49 x 84.0 / 100 = 34.85		
			PCC 1:2.4 qty. as per item No.	24.00 = 8.73 x 88.0 / 100 = 7.68		
			Net Total	= 82.75	Cft	100
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Quantity as per item No	5 i) 476.503 + 628.6 + 333.4 = 1438.44		
			Deductions as below			
			Volume of dry stone	0.786 x 10.000 x 10.000 x 1.00 = 78.57		
			Volume of PCC 1.4.8	0.786 x 9.000 x 9.000 x 0.67 = 42.43		
			Volume of 1st step	0.786 x 8.000 x 8.000 x 2.24 = 112.78		

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)			
	Page No.	Item No																
			Volume 2nd step	0.786	x	7.250	x	7.250	x	7.000	=	289.09						
			Volume 3rd step	0.786	x	6.500	x	6.50	x	3.000	=	99.59						
			Dome volume	0.786	x	6.500	x	3.61	¹ / ₂ x	2.00	=	40.16						
							2					Total	=	662.629				
								Net Total	=	1438.44	-	662.629	=	775.81	Cft	1000		
20	10	3	Supplying and filling sand under floor; or plugging in wells.															
			Quantity	0.786	x	10.000	x	10.000	x	3.00	=	235.71						
			D/d dome volume	0.786	x	3.611	+	3.333	¹ / ₂ x	2.50	=	23.68						
							2											
			PCC of M.H cover	0.786	x	3.333	x	3.333	x	0.500	=	4.37						
												Total	=	28.05				
								Net Total	=	235.71	-	28.047	=	207.67	Cft	100		
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile															
		a.	a) upto ¼ mile (400 m).					=										
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)					=										
		c.	c) for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).					=										
			Quantity as per item No	5	=	476.503	+	628.6	+	333.4	=	1438.44						
			Deductions as below															
			Rehandalled qty. as per item No.	19				=	775.81			Cft						
			Quantity of sand as item No.	20				=	207.67			Cft						
			Total quantity of deductions					=	983.48			Cft						
			Balance quantity .		=	1438.44	-	983.48	=	454.96		Cft						
			Take 80% quantity to be transported.				0.80	=	363.97			=	291.18	Cft	1000			
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-															
			25%	x	1	x	0.786	x	10.00	x	10.00	x	0.50	=	9.82			
		D/d	25%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	1.09			
												Total	=	8.73	=	8.73	Cft	100
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):(f)Ratio 1:2:4															
			25%	x	1	x	0.786	x	10.00	x	10.00	x	0.50	=	9.82			
		D/d	25%	x	1	x	0.786	x	3.33	x	3.33	x	0.50	=	1.09			
												Total	=	8.73	=	8.73	Cft	100
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.															
			5%	x	1	x	3.143	x	10.00	x	10.00	x	0.25	=	3.93			
		D/d	5%	x	1	x	3.143	x	3.33	x	3.33	x	0.25	=	0.44			
												Total	=	3.49	=	3.49	Sft	100
												Total Amount (Rs.)	=					

Carried over to the Sub Summary A-3 (xi)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 5.0' DIA 13.71' AV:DEPTH FOR 18" DIA SEWER RA-23

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			20% x 1 x 0.786 x 10.00 x 10.00 x 0.83 = 13.10 = 13.10 Cft			100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			70% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 27.50 = 27.50 Cft			100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			70% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 27.50 = 27.50 Cft			100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 10.00 x 10.00 x = 3.93 = 3.93 Sft			100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			20% 1 x 0.786 x 10.00 x 10.00 x 6.17 = 96.90 =			
			70% 1 x 0.786 x 10.00 x 10.00 x 6.00 = 330.00 =			
			5% 1 x 0.786 x 10.00 x 10.00 x 6.625 = 26.03 =			
			5% 1 x 0.786 x 10.00 x 10.00 x 7.00 = 27.50 =			
			Total = 480.43 = 480.43 Cft			1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			20% 1 x 0.786 x 10.00 x 10.00 x 6.71 = 105.47 =			
			70% 1 x 0.786 x 10.00 x 10.00 x 6.71 = 369.14 =			
			5% 1 x 0.786 x 10.00 x 10.00 x 6.71 = 26.37 =			
			5% 1 x 0.786 x 10.00 x 10.00 x 6.71 = 26.37 =			
			Total = 527.35 = 527.35 Cft			1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 10.00 x 10.00 x 1.00 = 78.57 = 78.57 Cft			100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1.4:8 1 x 0.786 x 9.00 x 9.000 x 0.67 = 42.43 = 42.43 Cft			100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 6.125 x 1.125 x 4.54 = 98.36 =			
			2nd.ste 1 x 3.143 x 5.750 x 0.750 x 3.00 = 40.66 =			
			Dome 3.143 x 5.750 + 2.583 x 0.750 x 4.50 = 44.20 =			
			2 Total = 183.21 =			
			D/d pipe 2 x 0.786 x 1.917 x 1.917 x 1.125 = 6.494 =			
			Net Total = 176.72 = 176.72 Cft			100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			3rd.step 1 x 3.143 x 6.125 x 3.000 x 2.042 = 40.66 =			
			Dome 3.143 x 5.750 + 2.583 x 0.750 = 44.20 =			
			2 Total = 84.86 = 84.86 Cft			100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 176.72 = 176.72 Cft			100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 5.000 x 5.000 x 2.00 = 39.29 =			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04 =			
			Total = 42.33 =			
			D/d 1/2 pipe 0.5 x 0.786 x 1.50 x 1.50 x 5.00 = 4.42 =			
			Above 1/2 pipe 1 x 1.5 - 0.75 = 0.750 x 5.000 = 3.750 =			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Total = 8.170			
			Total = 42.330 - 8.17 = 34.16	34.16	Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top 1 x 3.143 x 5.000 x 5.000 x 0.25 = 19.64			
			1/2 Pipe 1 x 3.143 x 5.000 x 1.500 x 0.50 = 11.79			
			Rectag.sides 1 x 2.000 x 5.000 x 0.750 x 0.00 = 7.50			
			Total = 38.93			
			D/d Top 1 x 1.000 x 5.000 x 1.50 x = 7.50			
			Total = 38.929 - 7.50 = 31.43	31.43	Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .			
			Step Nos 1 x 12.04 - 2.00 - 2.00 = 8.00 / 1.0 = 8.00	8.00	No	1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)			
			Out side the man hole			
			1st.step 1 x 3.143 x 7.250 x 4.54 = 103.485			
			2nd.step 1 x 3.143 x 6.500 x 3.00 = 61.286			
			1st.step top 1 x 3.143 x 7.625 x 0.375 = 8.987			
			(Dome) 1 x 3.143 x(6.500 + 3.333)x 4.50 = 72.32			
			2 Total = 246.08			
			D/d pipe area 2 x 3.143 x 1.917 x 1.917 x 0.25 = 5.77			
			Net = 246.08 - 5.77 = 240.31	240.31	Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No 14.00			
			Total = 240.31	240.31	Sft	100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2			
			Inside wall of M.Hole 1 x 3.14 x 5.000 x 10.04 = 157.798			
			Total = 157.80	157.80	Sft	100
17		input Rate	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).			
			1 x 1.0 = 1.00	1.00	No	1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160.00 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1:4:8 qty.as per item No. 7.00 = 42.43 x 94.77 / 100 = 40.21			
			PCC 1: 1.5:3 qty.as per item No. 11.00 = 34.16 x 84.0 / 100 = 28.70			
			PCC 1:2.4 qty. as per item No. 24.00 = 24.44 x 88.0 / 100 = 21.51			
			Net Total = 90.42	90.42	Cft	100
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Quantity as per item 5 i) 480.43 + 527.3 + 0.0 = 1007.78			
			Deductions as below			
			Volume of dry stone 0.786 x 10.000 x 10.000 x 1.00 = 78.57			
			Volume of PCC 1.4.8 0.786 x 9.000 x 9.000 x 0.67 = 42.43			
			Volume of 1st step 0.786 x 7.250 x 7.250 x 4.542 = 187.57			
			Volume 2nd step 0.786 x 6.500 x 6.50 x 3.000 = 99.59			
			Dome volume 0.786 x(6.500 x 3.61) ² x 2.00 = 40.16			
			2 Total = 448.320			
			Net Total = ##### - 448.320 = 559.46	559.46	Cft	1000
20	10	3	Supplying and filling sand under floor; or plugging in wells.			
			Quantity 0.786 x 10.000 x 10.000 x 3.000 = 235.71			
			D/d dome volume 0.786 x(3.611 + 3.333) ² x 2.500 = 23.68			
			2			
			PCC of M.H cover 0.786 x 3.333 x 3.333 x 0.500 = 4.37			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Total = 28.05			
			Net Total = 235.71 - 28.047 = 207.67	Cft	100	
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile			
		a.	a) upto ¼ mile (400 m).	=		
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)	=		
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).	=		
			Total = 0			
			Quantity as per item 5 = 480.432 + 527.3 + 0.0 = 1007.78			
			Deductions as below			
			Rehandalled quty. as per item 19 = 559.46 Cft			
			Quantity of sand as item No. 20 = 207.67 Cft			
			Total quantity of deductions = 767.12 Cft			
			Balance quantity . = 1007.78 - 767.12 = 240.65 Cft			
			Take 80% quantity to be transported. 0.80 = 192.52 = 154.02 Cft		1000	
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-			
			70% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 27.50			
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06			
			Total = 24.44 = 24.44 Cft		100	
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4			
			70% x 1 x 0.786 x 10.00 x 10.00 x 0.50 = 27.50			
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06			
			Total = 24.44 = 24.44 Cft		100	
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.			
			5% x 1 x 3.143 x 10.00 x 10.00 x 0.25 = 3.93			
		D/d	5% x 1 x 3.143 x 3.33 x 3.33 x 0.25 = 0.44			
			Total = 3.49 = 3.49 Sft		100	
				Total Amount (Rs.)	=	

Carried over to the Sub Summary A-3 (x)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 5.0' DIA 9.70' AV:DEPTH FOR 18" DIA SEWER RA-24

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No.				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			20% x 1 x 0.786 x 8.50 x 8.50 x 0.83 = 9.46	= 9.46	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87	= 19.87	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87	= 19.87	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 8.50 x 8.50 x = 2.84	= 2.84	Sft	100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			20% 1 x 0.786 x 8.50 x 8.50 x 6.17 = 70.01	=		
			70% 1 x 0.786 x 8.50 x 8.50 x 6.00 = 238.43	=		
			5% 1 x 0.786 x 8.50 x 8.50 x 6.625 = 18.80	=		
			5% 1 x 0.786 x 8.50 x 8.50 x 7.00 = 19.87	=		
			Total = 347.11	= 347.11	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			20% 1 x 0.786 x 8.50 x 8.50 x 2.70 = 30.69	=		
			70% 1 x 0.786 x 8.50 x 8.50 x 2.70 = 107.43	=		
			5% 1 x 0.786 x 8.50 x 8.50 x 2.70 = 7.67	=		
			5% 1 x 0.786 x 8.50 x 8.50 x 2.70 = 7.67	=		
			Total = 153.47	= 153.47	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 8.50 x 8.50 x 1.00 = 56.77	= 56.77	Cft	100
7	6	5.i	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio1.4.8 1 x 0.786 x 9.00 x 9.000 x 0.67 = 42.43	= 42.43	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 6.125 x 1.125 x 0.50 = 10.83			
			2nd.ste 1 x 3.143 x 5.750 x 0.750 x 3.03 = 41.11			
			Dome 3.143 x 5.750 + 2.583 x 0.750 x 4.50 = 44.20			
			2 Total = 96.14			
			D/d pipe 2 x 0.786 x 1.917 x 1.917 x 1.125 = 6.494			
			Net Total = 89.64	= 89.64	Cft	100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			3rd.step 1 x 3.143 x 6.125 x 3.033 x -1.967 = 41.11			
			Dome 3.143 x(5.750 + 2.583)x 0.750 = 4.50 = 44.20			
			2 Total = 85.31	= 85.31	Cft	100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 89.64	= 89.64	Cft	100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 5.000 x 5.000 x 1.83 = 36.01			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04			
			Total = 39.06			
			D/d 1/2 pipe 0.5 x 0.786 x 1.50 x 1.50 x 5.00 = 4.42			
			Above 1/2 pipe 1 x 1.5 - 0.75 = 0.750 x 5.000 = 3.750			

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)					
	Page No.	Item No																		
												Total =	8.170							
												Total =	39.057	-	8.17	=	30.89			
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .																	
			Benching top	1	x	3.143	x	5.000	x	5.000	x	0.25	=	19.64						
			1/2 Pipe	1	x	3.143	x	5.000	x	1.500	x	0.50	=	11.79						
			Rectag.sides	1	x	2.000	x	5.000	x	0.750	x	0.00	=	7.50						
												Total =	38.93							
			D/d Top	1	x	1.000	x	5.000	x	1.50	x		=	7.50						
												Total =	38.929	-	7.50	=	31.43			
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .																	
			Step Nos	1	x	8.03	-	1.83	-	2.00	=	4.00	/	1.0	=	4.00	No			1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)																	
			Out side the man hole																	
			1st.step	1	x	3.143	x	7.250	x	0.50		=	11.393							
			2nd.step	1	x	3.143	x	6.500	x	3.03		=	61.968							
			1st.step top	1	x	3.143	x	7.625	x	0.375		=	8.987							
			(Dome)	1	x	3.143	x	6.500	+	3.333	)x	4.50	=	72.32						
												2	Total =	154.67						
			D/d pipe area	2	x	3.143	x	1.917	x	1.917	x	0.25	=	5.77						
												Net =	154.67	-	5.77	=	148.90	Sft		100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).																	
			Out side the man hole																	
			Quantity as per item No																	
												Total =	148.90							
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2																	
			Inside wall of M.Hole	1	x	3.14	x	5.000	x	6.20	=	97.430								
												Total =	97.43							
17		input Rate	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).																	
												1	x	1.0	=	1.00	No			1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.																	
			Lead upto 160.00 K.m from Karana quarry Sargodha District Sargodha.																	
			PCC 1:4:8 qty.as per item No.			7.00	=	42.43	x	94.77	/	100	=	40.21						
			PCC 1: 1.5:3 qty.as per item No.			11.00	=	30.89	x	84.0	/	100	=	25.95						
			PCC 1:2.4 qty. as per item No.			24.00	=	16.81	x	88.0	/	100	=	14.80						
												Net Total	=	80.95	Cft					100
19	3	13.a.b	Rehanding of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel																	
			Quantity as per item	5	i)	347.11	+	153.5	+	0.0	=	500.58								
			Deductions as below																	
			Volume of dry stone	0.786	x	8.500	x	8.500	x	1.00	=	56.77								
			Volume of PCC 1.4.8	0.786	x	9.000	x	9.000	x	0.67	=	42.43								
			Volume of 1st step	0.786	x	7.250	x	7.250	x	0.500	=	20.65								
			Volume 2nd step	0.786	x	6.500	x	6.50	x	3.033	=	100.70								
			Dome volume	0.786	x	6.500	x	3.61	)² x	2.00	=	40.16								
												2	Total =	260.708						
												Net Total =	500.58	-	260.708	=	239.87	Cft		1000
20	10	3	Supplying and filling sand under floor; or plugging in wells.																	
			Quantity	0.786	x	8.500	x	8.500	x	3.000	=	170.30								
			D/d dome volume	0.786	x	3.611	+	3.333	)² x	2.500	=	23.68								
												2								
			PCC of M.H cover	0.786	x	3.333	x	3.333	x	0.500	=	4.37								
												Total =	28.05							

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)	
	Page No.	Item No					
			Net Total = 170.30 - 28.047 = 142.26 Cft		100		
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile				
		a.	a) upto ¼ mile (400 m).	=			
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)	=			
		c.	c) for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).	=			
			Quantity as per item 5 = 347.112 + 153.5 + 0.0 = 500.58				
			Deductions as below				
			Rehandalled qty. as per item 19 = 239.87 Cft				
			Quantity of sand as item No. 20 = 142.26 Cft				
			Total quantity of deductions = 382.13 Cft				
			Balance quantity . = 500.58 - 382.13 = 118.45 Cft				
			Take 80% quantity to be transported. 0.80 = 94.76	=	75.81 Cft	1000	
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-				
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87				
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06				
			Total = 16.81	=	16.81 Cft	100	
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4				
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87				
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06				
			Total = 16.81	=	16.81 Cft	100	
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.				
			5% x 1 x 3.143 x 8.50 x 8.50 x 0.25 = 2.84				
		D/d	5% x 1 x 3.143 x 3.33 x 3.33 x 0.25 = 0.44				
			Total = 2.40	=	2.40 Sft	100	
Total Amount (Rs.)						=	

Carried over to the Sub Summary A-3 (x)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE CHAMBER 5.0' DIA 12.34' AVERAGE DEPTH FOR 15" DIA SEWER RA-25

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			20% x 1 x 0.786 x 8.25 x 8.25 x 0.83 = 8.91 = 8.91	Cft	100	
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			70% x 1 x 0.786 x 8.25 x 0.50 = 18.72 = 18.72	Cft	100	
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			70% x 1 x 0.786 x 8.25 x 0.50 = 18.72 = 18.72	Cft	100	
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 8.25 x 8.25 = 2.67 = 2.67	Sft	100	
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			20% 1 x 0.786 x 8.25 x 8.25 x 6.17 = 65.96 =			
			70% 1 x 0.786 x 8.25 x 8.25 x 6.00 = 224.61 =			
			5% 1 x 0.786 x 8.25 x 8.25 x 6.625 = 17.71 =			
			5% 1 x 0.786 x 8.25 x 8.25 x 7.00 = 18.72 =			
			Total = 326.99 = 326.99	Cft	1000	
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			20% 1 x 0.786 x 8.25 x 8.25 x 5.34 = 57.11			
			70% 1 x 0.786 x 8.25 x 8.25 x 5.34 = 199.89			
			5% 1 x 0.786 x 8.25 x 8.25 x 5.34 = 14.28			
			5% 1 x 0.786 x 8.25 x 8.25 x 5.34 = 14.28			
			Total = 285.56 = 285.56	Cft	1000	
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 8.25 x 8.25 x 1.00 = 53.48 = 53.48	Cft	100	
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1.4:8 1 x 0.786 x 8.00 x 8.000 x 0.67 = 33.52 = 33.52	Cft	100	
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 5.125 x 1.125 x 3.17 = 57.44			
			2nd.ste 1 x 3.143 x 4.750 x 0.750 x 3.00 = 33.59			
			Dome 3.143 x 4.750 + 2.583 x 0.750 x 4.50 = 38.89			
			2 Total = 129.92			
			D/d pipe 2 x 0.786 x 1.625 x 1.625 x 1.125 = 4.668			
			Net Total = 125.25 = 125.25	Cft	100	
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			3rd.step 1 x 3.143 x 5.125 x 3.000 x 0.670 = 33.59			
			Dome 3.143 x 4.750 + 2.583 x 0.750 = 4.50 = 38.89			
			2 Total = 72.48 = 72.48	Cft	100	
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 125.25 = 125.25	Cft	100	
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 4.000 x 4.000 x 1.58 = 19.90			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04			
			Total = 22.95			
			D/d 1/2 pipe 0.5 x 0.786 x 1.25 x 1.25 x 4.00 = 2.46			
			Above 1/2 pipe 1 x 1.3 - 0.63 = 0.625 x 4.000 = 2.500			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Total = 4.955			
			Total = 22.949 - 4.96 = 17.99	17.99	Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top 1 x 3.143 x 4.000 x 4.000 x 0.25 = 12.57			
			1/2 Pipe 1 x 3.143 x 4.000 x 1.250 x 0.50 = 7.86			
			Rectag.sides 1 x 2.000 x 4.000 x 0.625 x 0.00 = 5.00			
			Total = 25.43			
			D/d Top 1 x 1.000 x 4.000 x 1.25 x = 5.00			
			Total = 25.429 - 5.00 = 20.43	20.43	Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .			
			Step Nos 1 x 10.67 - 1.58 - 2.00 = 7.00 / 1.0 = 7.00	7.00	No	1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)			
			Out side the man hole			
			1st.step 1 x 3.143 x 6.250 x 3.17 = 62.263			
			2nd.step 1 x 3.143 x 5.500 x 3.00 = 51.857			
			1st.step top 1 x 3.143 x 6.625 x 0.375 = 7.808			
			(Dome) 1 x 3.143 x(5.500 + 3.333)x 4.50 = 64.82			
			2 Total = 186.75			
			D/d pipe area 2 x 3.143 x 1.625 x 1.625 x 0.25 = 4.15			
			Net = 186.75 - 4.15 = 182.60	182.60	Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No 14.00			
			Total = 182.60	182.60	Sft	100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2			
			Inside wall of M.Hole 1 x 3.14 x 4.000 x 9.09 = 114.230			
			Total = 114.23	114.23	Sft	100
17	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).			
			1 x 1.0 = 1.00	1.00	No	1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160.00 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1:4:8 qty.as per item No. 7.00 = 33.52 x 94.77 / 100 = 31.77			
			PCC 1: 1.5:3 qty.as per item No. 11.00 = 17.99 x 84.0 / 100 = 15.12			
			PCC 1:2.4 qty. as per item No. 24.00 = 15.66 x 88.0 / 100 = 13.78			
			Net Total = 60.67	60.67	Cft	100
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Quantity as per item 5 i) 326.99 + 285.6 + 0.0 = 612.55			
			Deductions as below			
			Volume of dry stone 0.786 x 8.250 x 8.250 x 1.00 = 53.48			
			Volume of PCC 1.4.8 0.786 x 8.000 x 8.000 x 0.67 = 33.52			
			Volume of 1st step 0.786 x 6.250 x 6.250 x 3.170 = 97.29			
			Volume 2nd step 0.786 x 5.500 x 5.50 x 3.000 = 71.30			
			Dome volume 0.786 x(5.500 x 3.06)^2x 2.00 = 28.76			
			2 Total = 284.348			
			Net Total = 612.55 - 284.348 = 328.20	328.20	Cft	1000
20	10	3	Supplying and filling sand under floor; or plugging in wells.			
			Quantity 0.786 x 8.250 x 8.250 x 3.000 = 160.43			
			D/d dome volume 0.786 x(3.056 + 3.333)^2x 2.500 = 20.04			
			2			
			PCC of M.H cover 0.786 x 3.333 x 3.333 x 0.500 = 4.37			
			Total = 24.41			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Net Total = 160.43 - 24.410 = 136.02 Cft		100	
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile			
		a.	a) upto ¼ mile (400 m). =			
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.) =			
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km). =			
			Quantity as per item 5 = 326.994 + 285.6 + 0.0 = 612.55			
			Deductions as below			
			Rehandalled qty. as per item 19 = 328.20 Cft			
			Quantity of sand as item No. 20 = 136.02 Cft			
			Total quantity of deductions = 464.23 Cft			
			Balance quantity . = 612.55 - 464.23 = 148.32 Cft			
			Take 80% quantity to be transported. 0.80 = 118.66 = 94.93 Cft		1000	
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-			
			70% x 1 x 0.786 x 8.25 x 8.25 x 0.50 = 18.72			
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06			
			Total = 15.66 = 15.66 Cft		100	
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4			
			70% x 1 x 0.786 x 8.25 x 8.25 x 0.50 = 18.72			
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06			
			Total = 15.66 = 15.66 Cft		100	
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.			
			5% x 1 x 3.143 x 8.25 x 8.25 x 0.25 = 2.67			
		D/d	5% x 1 x 3.143 x 3.33 x 3.33 x 0.25 = 0.44			
			Total = 2.24 = 2.24 Sft		100	
Total Amount (Rs.)						=

Carried over to the Sub Summary A-3 (xi)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 4.0' DIA 7.17' AV: DEPTH FOR 15" DIA SEWER OKARA SEWER RA-26

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			20% x 1 x 0.786 x 8.50 x 8.50 x 0.83 = 9.46 = 9.46 Cft			100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87 = 19.87 Cft			100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87 = 19.87 Cft			100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 8.50 x 8.50 x = 2.84 = 2.84 Sft			100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			20% 1 x 0.786 x 8.50 x 8.50 x 6.17 = 70.01 =			
			70% 1 x 0.786 x 8.50 x 8.50 x 6.00 = 238.43 =			
			5% 1 x 0.786 x 8.50 x 8.50 x 6.625 = 18.80 =			
			5% 1 x 0.786 x 8.50 x 8.50 x 7.00 = 19.87 =			
			Total = 347.11 = 347.11 Cft			1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			20% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 1.91			
			70% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 6.67			
			5% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 0.48			
			5% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 0.48			
			Total = 9.53 = 9.53 Cft			1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 8.50 x 8.50 x 1.00 = 56.77 = 56.77 Cft			100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1.4.8 1 x 0.786 x 9.00 x 9.000 x 0.67 = 42.43 = 42.43 Cft			100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 6.125 x 1.125 x 0.50 = 10.83			
			2nd.ste 1 x 3.143 x 5.750 x 0.750 x 0.50 = 6.75			
			Dome 3.143 x 5.750 + 2.583 x 0.750 x 4.50 = 44.20			
			2 Total = 61.77			
			D/d pipe 2 x 0.786 x 1.625 x 1.625 x 1.125 = 4.668			
			Net Total = 57.10 = 57.10 Cft			100
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.			
			10-20 Height Hight above = 10 ft.			
			3rd.step 1 x 3.143 x 6.125 x 0.498 x -4.502 = 6.75			
			Dome 3.143 x(5.750 + 2.583)x 0.750 = 4.50 = 44.20			
			2 Total = 50.94 = 50.94 Cft			100
10	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 57.10 = 57.10 Cft			100
11	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 5.000 x 5.000 x 1.58 = 31.10			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04			
			Total Total = 34.15			
			D/d 1/2 pipe 0.5 x 0.786 x 1.25 x 1.25 x 5.00 = 3.07			
			above 1/2 pipe 1 x 1.3 - 0.63 = 0.625 x 5.000 = 3.125			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Total = 6.194			
			Total = 34.146 - 6.19 = 27.95		Cft	100
12	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top 1 x 3.143 x 5.000 x 5.000 x 0.25 = 19.64			
			1/2 Pipe 1 x 3.143 x 5.000 x 1.250 x 0.50 = 9.82			
			Rectag.sides 1 x 2.000 x 5.000 x 0.625 x 0.00 = 6.25			
			Total = 35.71			
			D/d Top 1 x 1.000 x 5.000 x 1.25 x = 6.25			
			Total = 35.714 - 6.25 = 29.46		Sft	100
13	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .			
			Step Nos 1 x 5.50 - 1.58 - 2.00 = 2.00 / 1.0 = 2.00		No	1
14	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)			
			Out side the man hole			
			1st.step 1 x 3.143 x 7.250 x 0.50 = 11.393			
			2nd.step 1 x 3.143 x 6.500 x 0.50 = 10.172			
			1st.step top 1 x 3.143 x 7.625 x 0.375 = 8.987			
			(Dome) 1 x 3.143 x(6.500 + 3.333)x 4.50 = 72.32			
			2 Total = 102.87			
			D/d pipe area 2 x 3.143 x 1.625 x 1.625 x 0.25 = 4.15			
			Net = 102.87 - 4.15 = 98.72		Sft	100
15	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).			
			Out side the man hole			
			Quantity as per item No 14.00			
			Total = 98.72 = 98.72		Sft	100
16	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hiehg:-a)ratio 1:2			
			Inside wall of M.Hole 1 x 3.14 x 5.000 x 3.91 = 61.515			
			Total = 61.51 = 61.51		Sft	100
17	input Rate		RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).			
			1 x 1.0 = 1.00		No	1
18	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.			
			Lead upto 160.00 K.m from Karana quarry Sargodha District Sargodha.			
			PCC 1:4:8 qty.as per item No. 7.00 = 42.43 x 94.77 / 100 = 40.21			
			PCC 1: 1.5:3 qty.as per item No. 11.00 = 27.95 x 84.0 / 100 = 23.48			
			PCC 1:2.4 qty. as per item No. 24.00 = 16.81 x 88.0 / 100 = 14.80			
			Net Total = 78.48		Cft	100
19	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel			
			Quantity as per item No 5 i) 347.11 + 9.5 + 0.0 = 356.64			
			Deductions as below			
			Volume of dry stone 0.786 x 8.500 x 8.500 x 1.00 = 56.77			
			Volume of PCC 1.4.8 0.786 x 9.000 x 9.000 x 0.67 = 42.43			
			Volume of 1st step 0.786 x 7.250 x 7.250 x 0.500 = 20.65			
			Volume 2nd step 0.786 x 6.500 x 6.50 x 0.498 = 16.53			
			Dome volume 0.786 x(6.500 x 3.61) ² x 2.00 = 40.16			
			2 Total = 176.538			
			Net Total = 356.64 - 176.538 = 180.11		Cft	1000
20	10	3	Supplying and filling sand under floor; or plugging in wells.			
			Quantity 0.786 x 8.500 x 8.500 x 3.000 = 170.30			
			D/d dome volume 0.786 x(3.611 + 3.333) ² x 2.500 = 23.68			
			2			
			PCC of M.H cover 0.786 x 3.333 x 3.333 x 0.500 = 4.37			
			Total = 28.05			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Net Total = 170.30 - 28.047 = 142.26 Cft		100	
21	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile			
		a.	a) upto ¼ mile (400 m). = 1 x 4,932 = 4,932			
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.) = 12 = 37.95 = 455			
		c.	c) for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km). = 8 = 360.50 = 2,884			
			Total = 8,272			
			Quantity as per item No 5 = 347.112 + 9.5 + 0.0 = 356.64			
			Deductions as below			
			Rehandedled qty. as per item No. 19 = 180.11 Cft			
			Quantity of sand as item No. 20 = 142.26 Cft			
			Total quantity of deductions = 322.36 Cft			
			Balance quantity . = 356.64 - 322.36 = 34.28 Cft			
			Take 80% quantity to be transported. 0.80 = 27.43 = 21.94 Cft		1000	
23	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-			
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87			
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06			
			Total = 16.81 = 16.81 Cft		100	
24	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4			
			70% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 19.87			
		D/d	70% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.06			
			Total = 16.81 = 16.81 Cft		100	
25	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.			
			5% x 1 x 3.143 x 8.50 x 8.50 x 0.25 = 2.84			
		D/d	5% x 1 x 3.143 x 3.33 x 3.33 x 0.25 = 0.44			
			Total = 2.40 = 2.40 Sft		100	
				Total Amount (Rs.)	=	

Carried over to the Sub Summary A-3 (xi)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 4.0' DIA 10.57' AV: DEPTH FOR 12" DIA SEWER RA-27

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			10% x 1 x 0.786 x 8.25 x 8.25 x 0.83 = 4.46 = 4.46 Cft			100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50 = 21.39 = 21.39 Cft			100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50 = 21.39 = 21.39 Cft			100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 8.25 x 8.25 x = 2.67 = 2.67 Sft			100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			10% 1 x 0.786 x 8.25 x 8.25 x 6.17 = 32.98 =			
			80% 1 x 0.786 x 8.25 x 8.25 x 6.00 = 256.69 =			
			5% 1 x 0.786 x 8.25 x 8.25 x 6.625 = 17.71 =			
			5% 1 x 0.786 x 8.25 x 8.25 x 7.00 = 18.72 =			
			Total = 326.10 = 326.10 Cft			1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			10% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 16.06 =			
			80% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 128.49 =			
			5% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 8.03 =			
			5% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 8.03 =			
			Total = 160.61 = 160.61 Cft			1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 8.25 x 8.25 x 1.00 = 53.48 = 53.48 Cft			100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1.4:8 1 x 0.786 x 8.00 x 8.000 x 0.67 = 33.52 = 33.52 Cft			100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 5.125 x 1.125 x 0.33 = 6.04			
			2nd.ste 1 x 3.143 x 4.750 x 0.750 x 4.00 = 44.79			
			Dome 3.143 x 4.750 + 2.583 x 0.750 x 3.50 = 30.25			
			2 Total = 81.08			
			D/d pipe 2 x 0.786 x 1.333 x 1.333 x 1.125 = 3.143			
			Net Total = 77.93 = 77.93 Cft			100
9	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 77.93 = 77.93 Cft			100
10	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 4.000 x 4.000 x 1.33 = 16.76			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04			
			Total Total = 19.81			
			D/d 1/2 pipe 0.5 x 0.786 x 1.00 x 1.00 x 4.00 = 1.57			
			Above 1/2 pipe 1 x 1.0 - 0.50 = 0.500 x 4.000 = 2.000			
			Total = 3.571			
			Total = 19.807 - 3.57 = 16.24 = 16.24 Cft			100
11	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top 1 x 3.143 x 4.000 x 4.000 x 0.25 = 12.57			
			1/2 Pipe 1 x 3.143 x 4.000 x 1.000 x 0.50 = 6.29			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Rectag.sides 1 x 2.000 x 4.000 x 0.500 x 0.00 = 4.00 Total = 22.86			
			D/d Top 1 x 1.000 x 4.000 x 1.00 x = 4.00 Total = 22.857 - 4.00 = 18.86 = 18.86 Sft			100
12	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels . Step Nos 1 x 8.33 - 1.33 - 2.00 = 5.00 / 1.0 = 5.00 No			1
13	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick) Out side the man hole 1st.step 1 x 3.143 x 6.250 x 0.33 = 6.548 2nd.step 1 x 3.143 x 5.500 x 4.00 = 69.143 1st.step top 1 x 3.143 x 6.625 x 0.375 = 7.808 (Dome) 1 x 3.143 x(5.500 + 3.333)x 3.50 = 50.42 2 Total = 133.92 D/d pipe area 2 x 3.143 x 1.333 x 0.25 = 2.79 Net = 133.92 - 2.79 = 131.12 Sft			100
14	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m). Out side the man hole Quantity as per item No 13.00 Total = 131.12 = 131.12 Sft			100
15	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2 Inside wall of M.Hole 1 x 3.14 x 4.000 x 7.00 = 88.000 Total = 88.00 = 88.00 Sft			100
16		input Rate	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum). 1 x 1.0 = 1.00 No			1
17	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead upto 160.00 K.m from Karana quarry Sargodha District Sargodha. PCC 1:4:8 qty.as per item No. 7.00 = 33.52 x 94.77 / 100 = 31.77 PCC 1: 1.5:3 qty.as per item No. 10.00 = 16.24 x 84.0 / 100 = 13.64 PCC 1:2:4 qty. as per item No. 23.00 = 17.90 x 88.0 / 100 = 15.75 Net Total = 61.16 Cft			100
18	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel Quantity as per item 5 i) 326.10 + 160.6 + 0.0 = 486.71 Deductions as below Volume of dry stone 0.786 x 8.250 x 8.250 x 1.00 = 53.48 Volume of PCC 1.4.8 0.786 x 8.000 x 8.000 x 0.67 = 33.52 Volume of 1st step 0.786 x 6.250 x 6.250 x 0.333 = 10.23 Volume 2nd step 0.786 x 5.500 x 5.50 x 4.000 = 95.07 Dome volume 0.786 x(5.500 x 2.36)x 1.00 = 12.13 2 Total = 204.430 Net Total = 486.71 - 204.430 = 282.28 Cft			1000
19	10	3	Supplying and filling sand under floor; or plugging in wells. Quantity 0.786 x 8.250 x 8.250 x 3.000 = 160.43 D/d dome volume 0.786 x(2.357 + 3.333)x 2.500 = 15.90 2 PCC of M.H cover 0.786 x 3.333 x 3.333 x 0.500 = 4.37 Total = 20.27 Net Total = 160.43 - 20.267 = 140.17 Cft			100
20	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile a) upto ¼ mile (400 m). =			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)	
	Page No.	Item No					
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)	=			
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).	=			
			Quantity as per item	5 = 326.102	+ 160.6	+ 0.0 = 486.71	
			Deductions as below				
			Rehandalled quty. as per item	18	=	282.28 Cft	
			Quantity of sand as item No.	19	=	140.17 Cft	
			Total quantity of deductions		=	422.45 Cft	
			Balance quantity .	= 486.71	- 422.45	= 64.26 Cft	
			Take 80% quantity to be transported.		0.80	= 51.41 = 41.13 Cft	
22	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-				
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50	=	21.39		
		D/d	80% x 1 x 0.786 x 3.33 x 3.33 x 0.50	=	3.49		
					Total	17.90 = 17.90 Cft	
23	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4				
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50	=	21.39		
		D/d	80% x 1 x 0.786 x 3.33 x 3.33 x 0.50	=	3.49		
					Total	17.90 = 17.90 Cft	
24	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.				
			5% x 1 x 3.143 x 8.25 x 8.25 x 0.25	=	2.67		
		D/d	5% x 1 x 3.143 x 3.33 x 3.33 x 0.25	=	0.44		
					Total	2.24 = 2.24 Sft	
						Total Amount (Rs.)	=

Carried over to the Sub Summary A-3 (xii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 4.0' DIA 7.17' AV: DEPTH FOR 12" DIA SEWER RA-28

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			10% x 1 x 0.786 x 8.50 x 8.50 x 0.83 = 4.73 = 4.73 Cft			100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			80% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 22.71 = 22.71 Cft			100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			80% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 22.71 = 22.71 Cft			100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 8.50 x 8.50 x = 2.84 = 2.84 Sft			100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			10% 1 x 0.786 x 8.50 x 8.50 x 6.17 = 35.01 =			
			80% 1 x 0.786 x 8.50 x 8.50 x 6.00 = 272.49 =			
			5% 1 x 0.786 x 8.50 x 8.50 x 6.625 = 18.80 =			
			5% 1 x 0.786 x 8.50 x 8.50 x 7.00 = 19.87 =			
			Total = 346.17 = 346.17 Cft			1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			10% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 0.95			
			80% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 7.63			
			5% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 0.48			
			5% 1 x 0.786 x 8.50 x 8.50 x 0.17 = 0.48			
			Total = 9.53 = 9.53 Cft			1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 8.50 x 8.50 x 1.00 = 56.77 = 56.77 Cft			100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1:4.8 1 x 0.786 x 9.00 x 9.00 x 0.67 = 42.43 = 42.43 Cft			100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 5.750 x 0.750 x 0.50 = 6.75			
			Dome 3.143 x 5.750 + 2.583 x 0.750 x 4.50 = 44.20			
			2 Total = 50.94			
			D/d pipe 2 x 0.786 x 1.333 x 1.333 x 0.750 = 2.095			
			Net Total = 48.85 = 48.85 Cft			100
9	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 48.85 = 48.85 Cft			100
10	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 5.000 x 5.000 x 1.33 = 26.19			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04			
			Total = 29.24			
			D/d 1/2 pipe 0.5 x 0.786 x 1.00 x 1.00 x 5.00 = 1.96			
			Above 1/2 pipe 1 x 1.0 - 0.50 x 5.000 = 2.500			
			Total = 4.464			
			Total = 29.235 - 4.46 = 24.77 = 24.77 Cft			100
11	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top 1 x 3.143 x 5.000 x 5.000 x 0.25 = 19.64			
			1/2 Pipe 1 x 3.143 x 5.000 x 1.000 x 0.50 = 7.86			
			Rectag.sides 1 x 2.000 x 5.000 x 0.500 x 0.00 = 5.00			

S No	MRS		Description of Items										Rate	Unit	Amount (PKR)			
	Page No.	Item No																
			D/d Top	1	x	1.000	x	5.000	x	1.00	x	Total =	32.50					
								Total =	32.500	-	5.00	=	27.50	=	27.50	Sft	100	
12	21	13	Providing and fixing 1½"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels .															
			Step Nos	1	x	5.50	-	1.33	-	2.00	=	2.00	/	1.0	=	2.00	No	1
13	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick)															
			Out side the man hole															
			1st.step	1	x	3.143	x	6.500	x	0.50	=	10.172						
			(Dome)	1	x	3.143	x(6.500	+	3.333)x	4.50	=	72.32				
								2			Total =	82.49						
			D/d pipe area	2	x	3.143	x	1.333	x	1.333	x	0.25	=	2.79				
								Net =	82.49	-	2.79	=	79.70	=	79.70	Sft	100	
14	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).															
			Out side the man hole															
			Quantity as per item No										13.00					
											Total =	79.70	=	79.70	Sft	100		
15	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2															
			Inside wall of M.Hole	1	x	3.14	x	5.000	x	4.16	=	65.443						
											Total =	65.44	=	65.44	Sft	100		
16		input Rate	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).															
											1	x	1.0	=	1.00	No	1	
17	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.															
			Lead upto 160.00 K.m from Karana quarry Sargodha District Sargodha.															
			PCC 1:4:8 qty.as per item No.	7.00	=	42.43	x	94.77	/	100	=	40.21						
			PCC 1: 1.5:3 qty.as per item No.	10.00	=	24.77	x	84.0	/	100	=	20.81						
			PCC 1:2:4 qty. as per item No.	23.00	=	19.22	x	88.0	/	100	=	16.91						
								Net Total			=	77.93	Cft		100			
18	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel															
			Quantity as per item	5	i)	346.17	+	9.5	+	0.0	=	355.70						
			Deductions as below															
			Volume of dry stone	0.786	x	8.500	x	8.500	x	1.00	=	56.77						
			Volume of PCC 1.4.8	0.786	x	9.000	x	9.000	x	0.67	=	42.43						
			Volume 2nd step	0.786	x	6.500	x	6.50	x	0.498	=	16.53						
			Dome volume	0.786	x(6.500	x	3.61) ² x	2.00	=	40.16						
								2		Total =	155.889							
								Net Total =	355.70	-	155.889	=	199.81	Cft	1000			
19	10	3	Supplying and filling sand under floor; or plugging in wells.															
			Quantity	0.786	x	8.500	x	8.500	x	3.000	=	170.30						
			D/d dome volume	0.786	x(3.611	+	3.333) ² x	2.500	=	23.68						
								2										
			PCC of M.H cover	0.786	x	3.333	x	3.333	x	0.500	=	4.37						
								Total =	28.05									
								Net Total =	170.30	-	28.047	=	142.26	Cft	100			
20	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile															
		a.	a) upto ¼ mile (400 m).										=					
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)										=					

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).			
			Quantity as per item 5 = 346.166 + 9.5 + 0.0 = 355.70			
			Deductions as below			
			Rehandalled qty. as per item 18 = 199.81 Cft			
			Quantity of sand as item No. 19 = 142.26 Cft			
			Total quantity of deductions = 342.07 Cft			
			Balance quantity . = 355.70 - 342.07 = 13.63 Cft			
			Take 80% quantity to be transported. 0.80 = 10.91 = 8.72 Cft			1000
22	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-			
			80% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 22.71			
		D/d	80% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.49			
			Total = 19.22 = 19.22 Cft			100
23	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4			
			80% x 1 x 0.786 x 8.50 x 8.50 x 0.50 = 22.71			
		D/d	80% x 1 x 0.786 x 3.33 x 3.33 x 0.50 = 3.49			
			Total = 19.22 = 19.22 Cft			100
24	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.			
			5% x 1 x 3.143 x 8.50 x 8.50 x 0.25 = 2.84			
		D/d	5% x 1 x 3.143 x 3.33 x 3.33 x 0.25 = 0.44			
			Total = 2.40 = 2.40 Sft			100
				Total Amount (Rs.)	=	

Carried over to the Sub Summary A-3 (xii)

RATE ANALYSIS FOR CONSTRUCTION OF MANHOLE 4.0' DIA 10.57' AV: DEPTH FOR 12" DIA SEWER RA-29

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
1	4	46	Dismantling and removing road pavement, etc., including Screening and stacking of byproducts upto one chain lead (30 metre).			
			10% x 1 x 0.786 x 8.25 x 8.25 x 0.83 = 4.46	4.46	Cft	100
2	4	19.c	Dismantling cement concrete 1:2:4 plain.			
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50 = 21.39	21.39	Cft	100
3	4	19.d	Dismantling cement concrete with brick aggregate.			
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50 = 21.39	21.39	Cft	100
4	4	29	Dismantling brick or flagged flooring without concrete foundation.			
			5% x 1 x 0.786 x 8.25 x 8.25 x = 2.67	2.67	Sft	100
5	3	42.i.ii.iii	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimension according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth			
		i)	i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.0			
			10% 1 x 0.786 x 8.25 x 8.25 x 6.17 = 32.98			
			80% 1 x 0.786 x 8.25 x 8.25 x 6.00 = 256.69			
			5% 1 x 0.786 x 8.25 x 8.25 x 6.625 = 17.71			
			5% 1 x 0.786 x 8.25 x 8.25 x 7.00 = 18.72			
			Total = 326.10	326.10	Cft	1000
		ii)	ii) 7-01 ft. to 15.0 ft. (2.15 to 4.5 m) depth = 8.0			
			10% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 16.06			
			80% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 128.49			
			5% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 8.03			
			5% 1 x 0.786 x 8.25 x 8.25 x 3.00 = 8.03			
			Total = 160.61	160.61	Cft	1000
6	6	2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.			
			Brick.ballast 1 x 0.786 x 8.25 x 8.25 x 1.00 = 53.48	53.48	Cft	100
7	6	5.i	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):			
			Ratio 1.4:8 1 x 0.786 x 8.00 x 8.000 x 0.67 = 33.52	33.52	Cft	100
8	7	7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)			
			1st.step 1 x 3.143 x 5.125 x 1.125 x 0.33 = 6.04			
			2nd.ste 1 x 3.143 x 4.750 x 0.750 x 4.00 = 44.79			
			Dome 3.143 x 4.750 + 2.583 x 0.750 x 3.50 = 30.25			
			2 Total = 81.08			
			D/d pipe 2 x 0.786 x 1.333 x 1.333 x 1.125 = 3.143			
			Net Total = 77.93	77.93	Cft	100
9	7	10	Extra for pacca brick work in steining of wells or any other circular masonry.			
			Quantity as per item No 8.00 Total = 77.93	77.93	Cft	100
10	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 1/2:3			
			Benching 1 x 0.786 x 4.000 x 4.000 x 1.33 = 16.76			
			Top Pcc 1 x 3.143 x 2.583 x 0.750 x 0.50 = 3.04			
			Total = 19.81			
			D/d 1/2 pipe 0.5 x 0.786 x 1.00 x 1.00 x 4.00 = 1.57			
			Above 1/2 pipe 1 x 1.0 - 0.50 = 0.500 x 4.000 = 2.000			
			Total = 3.571			
			Total = 19.807 - 3.57 = 16.24	16.24	Cft	100
11	21	9	Extra for making and finishing benching floor work in manhole chamber, with 1/8" (3 mm) thick cement finish .			
			Benching top 1 x 3.143 x 4.000 x 4.000 x 0.25 = 12.57			
			1/2 Pipe 1 x 3.143 x 4.000 x 1.000 x 0.50 = 6.29			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)
	Page No.	Item No				
			Rectag.sides 1 x 2.000 x 4.000 x 0.500 x 0.00 = 4.00 Total = 22.86			
			D/d Top 1 x 1.000 x 4.000 x 1.00 x = 4.00 Total = 22.857 - 4.00 = 18.86 = 18.86 Sft			100
12	21	13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers,including carriage and setting the same in work to correct lines and levels . Step Nos 1 x 8.33 - 1.33 - 2.00 = 5.00 / 1.0 = 5.00 No			1
13	11	7-b	Cement plaster 1:2 upto 20' (6.00 m) height:- b) ½" (13 mm) thick) Out side the man hole 1st.step 1 x 3.143 x 6.250 x 0.33 = 6.548 2nd.step 1 x 3.143 x 5.500 x 4.00 = 69.143 1st.step top 1 x 3.143 x 6.625 x 0.375 = 7.808 (Dome) 1 x 3.143 x(5.500 + 3.333)x 3.50 = 50.42 2 Total = 133.92 D/d pipe area 2 x 3.143 x 1.333 x 0.25 = 2.79 Net = 133.92 - 2.79 = 131.12 Sft			100
14	13	9-b	Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m). Out side the man hole Quantity as per item No 13.00 Total = 131.12 = 131.12 Sft			100
15	11	18.a	Cement pointing struck joints,on walls,upto 20' (6.00 m)hieght:-a)ratio 1:2 Inside wall of M.Hole 1 x 3.14 x 4.000 x 7.00 = 88.000 Total = 88.00 = 88.00 Sft			100
16		input Rate	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum). 1 x 1.0 = 1.00 No			1
17	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stoneaggregate, spawl, kankar lime (unslaked), surkhi, etc. or150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead upto 160.00 K.m from Karana quarry Sargodha District Sargodha. PCC 1:4:8 qty.as per item No. 7.00 = 33.52 x 94.77 / 100 = 31.77 PCC 1: 1.5:3 qty.as per item No. 10.00 = 16.24 x 84.0 / 100 = 13.64 PCC 1:2:4 qty. as per item No. 23.00 = 17.90 x 88.0 / 100 = 15.75 Net Total = 61.16 Cft			100
18	3	13.a.b	Rehandling of earthwork:a) Lead upto a single throw of Kassi, phaorah or shovel a) Lead upto a single throw of Kassi, phaorah or shovel Quantity as per item 5 i) 326.10 + 160.6 + 0.0 = 486.71 Deductions as below Volume of dry stone 0.786 x 8.250 x 8.250 x 1.00 = 53.48 Volume of PCC 1.4.8 0.786 x 8.000 x 8.000 x 0.67 = 33.52 Volume of 1st step 0.786 x 6.250 x 6.250 x 0.333 = 10.23 Volume 2nd step 0.786 x 5.500 x 5.50 x 4.000 = 95.07 Dome volume 0.786 x(5.500 x 2.36)x 1.00 = 12.13 2 Total = 204.430 Net Total = 486.71 - 204.430 = 282.28 Cft			1000
19	10	3	Supplying and filling sand under floor; or plugging in wells. Quantity 0.786 x 8.250 x 8.250 x 3.000 = 160.43 D/d dome volume 0.786 x(2.357 + 3.333)x 2.500 = 15.90 2 PCC of M.H cover 0.786 x 3.333 x 3.333 x 0.500 = 4.37 Total = 20.27 Net Total = 160.43 - 20.267 = 140.17 Cft			100
20	3	17 a.b.c	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) Lead upto 3 mile a) upto ¼ mile (400 m). =			

S No	MRS		Description of Items	Rate	Unit	Amount (PKR)	
	Page No.	Item No					
		b.	b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile(400 m)upto one mile.(1.6 Km.)	=			
		c.	for every ¼ mile (400 m) additional lead or part thereof,beyond one mile(1.6 Km)upto 5 mile(8 Km).	=			
			Quantity as per item	5 = 326.102	+ 160.6	+ 0.0 = 486.71	
			Deductions as below				
			Rehandalled quity. as per item	18	=	282.28 Cft	
			Quantity of sand as item No.	19	=	140.17 Cft	
			Total quantity of deductions		=	422.45 Cft	
			Balance quantity .	= 486.71	- 422.45	= 64.26 Cft	
			Take 80% quantity to be transported.	0.80	=	51.41	
					=	41.13 Cft	
22	6	3.d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-				
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50	=	21.39		
		D/d	80% x 1 x 0.786 x 3.33 x 3.33 x 0.50	=	3.49		
					Total	17.90 = 17.90 Cft 100	
23	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete(including screening and washing of stone aggregate):(f)Ratio 1:2:4				
			80% x 1 x 0.786 x 8.25 x 8.25 x 0.50	=	21.39		
		D/d	80% x 1 x 0.786 x 3.33 x 3.33 x 0.50	=	3.49		
					Total	17.90 = 17.90 Cft 100	
24	10	9	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.				
			5% x 1 x 3.143 x 8.25 x 8.25 x 0.25	=	2.67		
		D/d	5% x 1 x 3.143 x 3.33 x 3.33 x 0.25	=	0.44		
					Total	2.24 = 2.24 Sft 100	
						Total Amount (Rs.)	=

Carried over to the Sub Summary A-3 (xiii)

Comprehensive Sewerage System in Okara City

Construction of gully grating chambers size 3'x2½' with 9" i/d Rcc connection pipe

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS, Reference		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Ch	Item					
1	21	8	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	= 1	No	1.00	
2	3	42.i	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1.00 x 14.50 x 2.710 x 4 = 157.18	Cft	1000	
3	10	3	Supplying and filling sand under floor; or plugging in wells	1.00 x 14.50 x 2.710 x 0.79 = 31.04	Cft		
			D/d of Pipe	1 x 3.143 x 14.50 x 0.92 x 0.92 x 0.25 x 0.5 = 4.82	Cft		
			Net :- Net quantity :- = 26.22	Cft		100	
4	21	3-i	Providing and laying R.C.C. pipe, moulded with cement concrete 1:1½:3, with spigot socket or collar joint, etc. including cost of enforcement, conforming to B.S. 5911: Part I: 1981, Class "L" including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing, etc., completeiii) 300 mm (12:) i/d.	12"i/d pipe = 1 x 16 = 16	Rft	1.00	
5	3	13	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel complete.	Quantity as per iten No. 2.00 = 157.18 x 80 / 100 = 125.74	Cft	1000	
			Total cost of 1 No.gully grating & 9" i/d RCC connection pipe	1	No		Total :-
			Total cost of 20 No.gully grating & 9" i/d RCC connection pipe	20	x	=	Say =

Carried over to the Sub Summary A-4 (i)

Comprehensive Sewerage System in Okara City

Construction of gully grating chambers size 12"x12" with C.I gully trap with 9" i/d Rcc connection pipe

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS, Reference		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Ch	Item					
1	21	8	Constructing gully grating chamber, 12"x12", (300x300 mm) complete in all respects: a) with C.I. gully trap, weighing 81 lbs. (36.75 Kg.) frame = 1 No hinged safety type.				1.00
2	3	42.i	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle, gravel and rock:- i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth 1.00 x 6.00 x 2.000 x 3.0 = 36.00 Cft				1000
3	7	30	Supplying and filling sand under floor; or plugging in wells For 6"i/d pipe 1.00 x 6.00 x 2.000 x 0.67 = 8.00 Cft D/d of Pipe 1 x 3.143 x 6.00 x 0.92 x 0.92 x 0.25 x 0.5 = 2.00 Cft Net :- Net quantity :- = 6.01 Cft				100
4	21	3-1-iii	Providing and laying R.C.C. pipe, moulded with cement concrete 1:1½:3, with spigot socket or collar joint, etc. including cost of reinforcement, conforming to B.S. 5911: Part I: 1981, Class "L" including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing, etc., completeiii) 300 mm (12) i/d. 12"i/d pipe = 1 x 16 = 16 Rft				1.00
5	3	13	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel complete. Quantity as per iten No. 2.00 = 36.00 x 80 / 100 = 28.80 Cft Total cost of 1 No.gully grating & 9" i/d RCC connection pipe = 1 No Total cost of 32 No.gully grating & 9" i/d RCC connection pipe = 20 x				1000
					Total :-	=	
					Say	=	

Carried over to the Sub Summary A-4 (ii)

Comprehensive Sewerage System in Okara City

Construction of ventilating shafts & its foundation for sewer lines.

MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA

S No	MRS, Reference		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Ch	Item					
1	4	42	Dismantling all type of wire fencing, including rolling wire into bundles and collecting material. Take 30% Road 1 x 30% x 26.00 x 2.000 x 0.833 =	13.00	Cft	100	
2	4	19	d) Dismantling cement concrete with brick aggregate. Take 50% Road 1 x 50% x 26.00 x 2.000 x 0.333 =	8.67	Cft	100	
3	4	19	c) Dismantling cement concrete 1:2:4 plain. Take 50% Road 1 x 50% x 26.00 x 2.000 x 0.333 =	8.67	Cft	100	
4	3	44	Excavation of trenches in all kinds of soil, except cutting rock, for watersupply pipelines upto 5 ft. (1.5 m) depth from ground level, including trimming, dressing sides, leveling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects. Under road 1 x 30% x 26.00 x 2.000 x 3.17 = Under Pcc pavement 1 x 50% x 26.00 x 2.000 x 3.33 = Under katcha street 1 x 20% x 26.00 x 2.000 x 4.0 = Total =	49.40 86.67 41.60 177.67	Cft	1000	
5	19	48	Providing,fixing, testing and commissioning of μ-PVC (Unplasticized Polyvinyl Chloride) sewerage pipe make of Dadex / Popular / Beta or equivalent , plain / socket ended conforming to code EN- 01 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge. a)Type (SDR 34/SN-8) i) 6" dia 150mm Pipe in horizontal position = 1.00 x 26.00 = 26 Pipe in vertical position = 1.00 x 18.0 = 18 Total =	44	Rft	1.00	
6	23	61.iii	Supplying, fixing and testing ductile iron pipe with flange including the cost of specials, (teepee pipe / alpine steel or approved equivalent) complying Class K-12, ISO - 2531 & BS - 4772, & jointing material with all fittings and accessories complete in all respect as approved by the Engineer Incharge iii) 6" dia (150 mm) on Rcc colune 1.000 x 11.50 =	11.50	Rft	1	
7			Providing and fixing flanged C.I ventilating cowl as per BSS with nuts and bolts 6" i/d = 1 =	1.00	No	1	
8	6	5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (i) Ratio 1: 4: 8 1 x 3.00 x 3.00 x 0.330 = 2.97 =	8.82	Cft	100	
9	6	6.a.iii	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design,including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):- (a)(iii) Reinforced cement concrete in slab of rafts /strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (3) Type C (nominal mix 1: 2: 4) Base of V.Shaft 1 x 3.00 x 3.00 x 4.000 = 36.0 = Total = D/d of Pipe volume 1 x 0.6667 x 0.67 x 3.00 x 0.78571 =	36.00 36.00 (-) 1.05 34.95	Cft Cft Cft Cft	1	
			Net quantity :-	= 34.95	Cft	1	

		ii	(a)(ii) Reinforced cement concrete in retaining/Shear walls laid in situ or precast laid in position, or prestressed members cast in situ (Formwork on both sides), complete in all respects: (c) Type C (nominal mix 1:2:4). (i) Upto 9" thick (Avg) V.S. protection column haunched portion V.S. protection column D/d of Pipe volume Net quantity :-	1 x 3.00 + 1.50 x 0.500 x 0.75 = 1.69 Cft 1 x 1.50 + 1.50 x 14.25 x 0.79 = 25.19 Cft Total = 26.88 Cft (-) 5.24 Cft = 21.64 Cft			1
10	6	12.c	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60) Qty. as per item No. 9 i 34.95 x 5.00 / 2.204 = 79.29 = Qty. as per item No. 9 ii 21.64 x 5.00 / 2.204 = 49.10 = Total = 128.39 =		128.39 Kg		100
11	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead up to 160 Km Qty. as per item No. 9 i 34.95 x 88.00 / 100 = 30.76 = Qty. as per item No. 9 ii 21.64 x 88.00 / 100 = 19.04 = Total = 49.80 =		49.80 Kg		100
12	10	3	Supplying and filling sand under floor; or plugging in wells. Under road 1 x 30% x 26.00 x 2.000 x 3.00 = 46.80 Cft Under Pcc pavement 1 x 50% x 26.00 x 2.000 x 3.00 = 78.00 Cft Total = 124.80 Cft D/d of Pipe volume 1 x 0.79 x 0.50 x 0.500 = 26.00 = (-) 5.11 Cft Total = 119.69 Cft				1000
13	3	13	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel complete. Qty. as per item No. 4 = 177.67 Cft = D/d Qty. as per it.No. 1 = 13.00 = D/d Qty. as per it.No. 2 = 8.67 = D/d Qty. as per it.No. 3 = 8.67 = D/d Qty. as per it.No. 12 = 119.69 = Total = 150.03 = 150.03 Cft				1000
14	3	17.a. b.c Rate	Balance Quantity. Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) a) upto ¼ mile (400 m). = <input type="text"/> b) for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.) = <input type="text"/> c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km.). = <input type="text"/> Tota rate for 3 mile lead Qty. as per item No. ### = 177.67 D/d Qty. as per it.No. 13 = 27.64 Balance Quantity. = 177.67 - 27.64 = 150.03 Take 80% to be transported = 150.03 x 80.00 / 100.00 = 120.021 Cft		27.64 Cft		1000
			Total cost of 1 No. 6" I/D Vevrilating shaft. Total cost of 6" I/D Vevrilating shaft.	1 No 16 x		Total :- Say	= = =

Carried over to the Sub Summary A-4 (iii)

ESMMP Implementation cost of sewerage system

Item	Quantity	Tentative Cost/Item- PKR./-	Total Cost
A-PPEs for Health and Safety of Labor/Workers			
Face Masks (3 PLY) - box	15		
Safety Hard Helmets	8		
Safety Shoes	8		
Hand Gloves	8		
Ear Plugs	8		
Reflective Safety Vest	8		
Safety Goggles	8		
B-Community Health and Safety			
Hiring of Environmental Manager (for 01 year)	12		
First Aid Box Complete	1		
Safety Signs	5		
Safety Cones	5		
Safety Tapes	5		
Portable Delineator with chain	3		
Solid Waste Collection Drums with Cover	5		
Labor Campsite Management	1		
Water Sprinkling	1		
Social and Behavior Change Campaign and Labor Awareness/Training	1		
C- Environment Quality Testing during Construction Phase			
Ambient Air Quality- Before, during, and after construction	3		
Noise Quality-Before, during, and after construction	3		
Water Quality-Before, during, and after construction	3		
Fire Fighting Equipment Purchase and refilling	2		
Total (PKR)-A+B+C			

BIDDING DOCUMENTS

FOR

**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY
PACKAGE 2 – CONSTRUCTION OF WASTE WATER TREATMENT PLANT**



**Local Government &
Community Development
Government of the Punjab**

February 2024

MC OKARA

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E. Bid Opening and Evaluation for Single Stage Two Envelope Bidding Procedure

- IB.23 Bid Opening
- IB.24 Process to be Confidential
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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 Guarantee
- IB.33 Signing of Contract Agreement
- IB.34 General Performance of the bidders
- IB.35 Integrity Pact
- IB.36 Instructions not Part of Contract
- IB.37 PPRA Act, 2009 and PPR-14 will have over-riding effect

BIDDING DATA SHEET

LETTERS OF TECHNICAL BID/FINANCIAL BID AND APPENDICES TO BID

- Letter of Technical Bid
- Letter of Financial Bid
- Appendix-A to Bid : Special Stipulations
- Appendix-B to Bid : Foreign Currency Requirements
- Appendix-C to Bid : Price Adjustment
- 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 Labor
- Appendix-L to Bid : Integrity Pact
- Appendix-M1 & M2 to Bid : Eligibility Criteria
- Appendix-N to Bid : Qualification Criteria

FORMS

- Bid Security**
- Form of Performance Security**
- Form of Contract Agreement**
- Mobilization Advance Guarantee/Bond**
- Indemnity Bond for Secured Advance Against Material Brought at Site**

INVITATION FOR BIDS

TENDER NOTICE

Municipal Committee, Okara (MC Okara) (hereinafter referred to as the “client”), invites the sealed bids from Contractors / firms / Manufacturer / Authorized dealers registered with **FBR & PRA (NTN and PNTN)**. The scope of work is as under:

S. #	Description	Estimated Cost (Rs.)	Bid Security (Rs.)	PEC Category and Specialization	Date and time of closing	Date and time of opening
COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY						
1	Package 1- Sewerage System	922,094,999	18,441,891	C2 & Above with CE-09	27.02.2024 10:00 A.M	27.02.2024 10:30 A.M
2	Package 2 - Construction of Waste Water Treatment Plant	704,296,999	14,085,940	C2 & Above with CE-09	27.02.2024 11:30 A.M	27.02.2024 12:00 P.M
3	Package 3 – Supply of Liquid waste Machinery	44,323,999	886,480	Not Applicable, STRN is Applicable	27.02.2024 1:00 P.M	27.02.2024 1:30 P.M
4	Package 4 – Providing and Fixing of RPC Manhole Cover	14,372,322	287,446	Not Applicable, STRN is Applicable	27.02.2024 02:30 P.M	27.02.2024 03:00 P.M

2. Each applicant may apply in one or all projects by rendering a separate request for every project and submission of unique / non-identical requisites against each project, required in bidding documents. (Same working experience, financial soundness and other resources for all projects will not be acceptable).

3. The bidding documents are available immediately after publication (2014 Punjab Procurement Rule 25(1)) at the office of **Municipal Officer (I&S), Municipal Committee Okara** and a complete set of Bidding Documents can be obtained on submission of written application along with deposited slip of Bank of Punjab in the favour of Municipal Committee Okara for Rs.10,000/- (non-refundable fee) for every project. Bidding documents shall be issued to owner of the firm by showing original CNIC and / or to Authorized representative of firm having authority letter with specimen signature of representative of firm along with original CNIC.

4. Single stage two envelopes bidding procedure will be adopted. The Bids (**Technical & Financial**) prepared in accordance with the instructions given in the Bidding Documents must be accompanied by a Bid Security **given above** in shape of CDR / Bank Guarantee from any Scheduled Bank in Pakistan in the name of the Chief Officer, Municipal Committee Okara. Last date for purchase of bidding documents is **26-02-2024**. The Bids (**Technical & Financial**) must be delivered in the office of Chief Officer, Municipal Committee Okara. The Technical bids will be opened on **27-02-2024** in presence of the bidder / bidder's representatives who choose to present.

5. Only technically responsive bidder(s) will be qualified for opening of financial bid(s). Financial bid(s) of bidder(s) found technically nonresponsive shall be returned unopened to the bidder(s).

6. The procuring Authority may reject all bids or proposals at any time prior to the acceptance of a bid or proposal under Punjab Procurement Rules 2014 (**Rule-35**).

7. Conditional tender will not be accepted.

8. Tendered rates and amount should be filled in figures as well as in words and tenders should be signed as per general directions given in the tender documents.

9. In case the total tendered amount is equal to or less than 5% of the approved estimated (DNIT) amount, the lowest bidder will have to deposit quality assurance security equal to the amount difference between approved DNIT amount and the quoted bid amount from

the Scheduled Bank within 15 days of issuance of notice or within expiry period of bid, whichever is earlier.

10. The bids will be valid for 120 days.

11. In case, the last date of bid submission falls in / within the official holiday(s), the last date for submission of the bids shall be the next working day.

12. A pre-bid meeting will be held on **Feb 15, 2024** at **11:00 AM, 12:00 PM, 1:00 PM and 2:00 PM**, or any other date and time which may separately be notified by the Client to clarify any queries and to answer any questions on matters related to the bidding documents.

**Chief Officer
Municipal Committee
Okara**

**Administrator
Municipal Committee
Okara**

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid

The Client “Chief Officer MC Okara” intends “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE 2 - CONSTRUCTION OF WASTE WATER TREATMENT PLANT**”

Identification and number of Contract is: _____

IB.2 Source of Funds

2.1 The Source of fund is mentioned in bidding data.

IB.3 Eligible Bidders

3.1 The bidder (Firm/ Joint Venture) must fulfill the basic eligibility criteria as per Appendix – M to Bid.

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 Bidder 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 would be free to visit site for the purpose of such inspection, but only upon the express condition that the Bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BID DOCUMENTS

IB.7 Documents Comprising the Bid

7.1 The Bid Documents are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.

1. Instructions to Bidders
2. Bidding Data Sheet

3. Special Stipulations
4. Form of Bid & Appendices to Bid
5. Bill of Quantities (Appendix-D to Bid)
6. Form of Bid Security
7. Form of Contract Agreement
8. Forms of Performance Guarantee and Mobilization Advance Guarantee and Form of Indemnity Bond for Secured Advance
9. Special Provisions
10. Environmental and Social Management and Monitoring Plan

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 Bidders own risk. Pursuant to Clause IB.26, Bids which are not substantially responsive to the requirements of the Bid Documents will be rejected.

IB.8 Clarification of Bid 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 7 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 Bid 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 Bid Documents by issuing addendum.

9.2 Any addendum thus issued shall be part of the Bid Documents pursuant to IB 7.1 hereof and shall be communicated in writing to all purchasers of the Bid Documents. Prospective Bidders shall acknowledge receipt of each addendum in writing to the Employer.

9.3 To give 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

10.1 The Bid and all correspondence and documents related to the Bid exchanged by a Bidder and the Employer shall be in the bid language stipulated in the Bidding Data Sheet and conditions of Particular Application. 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 English language, in which case, for purposes of evaluation of the Bid, the English translation shall prevail.

IB.11 Documents Accompanying the Bid

11.1 The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid and the other the Financial Bid, containing the documents listed in Bidding Data Sheet under the heading of IB 11.1 A & B respectively. Both envelopes to be enclosed together

in an outer single envelope called the Bid. Each bidder shall furnish all the documents as specified in Bidding Data Sheet 11.1 A& B

11.2 Bids submitted by a JV shall include a copy of the Joint Venture Agreement (in line with PEC JV modalities) entered into by all partners. 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 line with PEC JV modalities). The role to be played by each partner to be specified therein. Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements: -

- (a) In case of a successful bid, the Form of JV Agreement shall be signed so as to be legally binding on all partners within 7 days of the receipt of letter of acceptance failing which the contract and the letter of acceptance shall stand void and redundant.
- (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 JV Agreement 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 JV Agreement (in case of a successful bid); and
- (e) A copy of JV agreement shall be submitted before signing of the Contract, stating the conditions under which JV 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. The JV Agreement shall be made part of the contract. 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 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 Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time referred to in Sub-Clause 1.2 hereof.

IB.12 Bid Prices

12.1 Unless stated otherwise in the Bid Documents, the Contract shall be for the whole of the Works as described in IB 1.1 hereof, based on the unit rates and / or prices submitted by the Bidder.

12.2 The Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a Bidder will not be paid for

by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.

- 12.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, throughout the duration of the Contract except PRA, shall be included in the rates and prices and the total Bid Price submitted by a bidder.

IB.13 Currencies of Bid and Payment

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

IB.14 Bid Validity

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data Sheet after the Date of Bid Opening specified in sub-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 or 180 days whichever is more. 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 Sheet in Pak Rupees.
- 15.2 The Bid Security shall be, at the option of the bidder, in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan 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/Earnest money shall be rejected by the Employer as non-responsive.
- 15.4 The Bid security of unsuccessful bidder will be returned by adopting the following mechanism:
- a) Written request certifying that bidder has no objection or grievance against the Procurement process.
 - b) Time for grievance period as provided by Punjab Procurement Rules-2014 has expired.
 - c) If he filed a grievance and same is dismissed by the Grievance Committee.
- 15.5 The Bid Security of the successful Bidder will be returned when the Bidder has furnished the required Performance Guarantee and signed the Agreement.
- 15.6 The Bid Security may be forfeited:
- (a) If the bidder withdraws his bid except as provided in IB 22.1;
 - (b) If the Bidder does not accept the correction of his Bid Price pursuant to IB 27.2 hereof; or
 - (c) In the case of successful Bidder, if he fails within the specified time limit to:
 - (i) Furnish the required Performance Guarantee, or

- (ii) Sign the Agreement.
- (iii) Furnish the required JV agreement within 7-days of the receipt of letter of acceptance.

IB.16 Alternate Proposals by Bidder

Not Applicable

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 Bid Documents. The date, time and venue of pre-bid meeting, if convened, is as stipulated in the Bidding Data Sheet. All prospective Bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 17.2 The Bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than one week before the proposed pre-bid meeting.
- 17.3 Minutes of the pre-bid meeting in shape of response to queries or suggestions of the bidders, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bid documents. Any modification of the Bid documents listed in IB 7.1 hereof which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a Bidder.
- 17.5 All the concerned teams of client and consultant including Environmental and Social Management Team will be present to attend the queries / questions / clarifications of the bidders.

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 Bid 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 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 in the Bidding Data Sheet 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.

- 18.6 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.
- 18.7 Bidders shall indicate in the space provided in the Letter of Technical and Financial Bids, their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.
- 18.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS FOR SINGLE STAGE TWO ENVELOPE 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.
 - (c) The technical bid should comprise of documents listed in IB11.1 (A) & the Financial Bid should comprise of documents listed in IB 11.1 (B) which shall be placed in separate envelopes in accordance with IB 11.1.
- 19.2 The inner and outer envelopes shall;
 - (a) Be addressed to the Employer at the address provided in the Bidding Data Sheet.
 - (b) Bear the name and identification number of the contract as defined in the Bidding Data Sheet, and;
 - (c) Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data Sheet.
- 19.3 In addition to the identification required in IB 19.2 hereof, the inner envelope shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared "late" pursuant to Clause IB.21
- 19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

IB.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 Sheet
- (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the Bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of Bids. No claims will be entertained for refund of such expenses.

- (c) Where delivery of a Bid is by mail and the Bidder wishes to receive an acknowledgment of receipt of such Bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed Bid package.
 - (d) Upon request, acknowledgment of receipt of Bids will be provided to those making delivery in person or by messenger.
- 20.2 The Employer may, at his discretion, extend the deadline for submission of Bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the Bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.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 and Withdrawal of Bids

- 22.1 Any Bidder may modify or withdraw his Bid after Bid submission provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of Bidders.
- 22.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No Bid may be modified by a Bidder after the deadline for submission of Bids except in accordance with IB 22.1 and 27.2.
- 22.4 Withdrawal of a Bid during the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified in the Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.15.

E. BID OPENING AND EVALUATION SINGLE STAGE TWO ENVELOPE PROCEDURE

IB.23 Bid Opening

- 23.1 The Employer will open the Technical Bids in public at the address, date and time specified in the Bidding Data Sheet in the presence of Bidders' designated representatives and anyone who choose to attend. The Financial Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening.
- 23.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal

shall be permitted unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out at bid opening.

- 23.3 Second, outer envelopes marked “SUBSTITUTION” shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Financial Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Financial Bid will remain unopened in accordance with IB .23.1. No envelope shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening
- 23.4 Next, outer envelopes marked “MODIFICATION” shall be opened. No Technical Bid and/or Financial Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Financial Bids, both Original and Modification, will remain unopened in accordance with IB 23.1. The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 23.5 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 IB21.1. Only Technical Bids read out and recorded at bid opening, shall be considered for evaluation

- 23.6 Pre-liminary Examination of Technical Bids
- (a) 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 Financial Bids. The date, time, and location of the opening of Financial Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Financial 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 Financial Bids unopened before inviting others, who are determined as being qualified, to attend the opening of Financial Bids.
- 23.10 The Employer shall conduct the opening of Financial Bids of all Bidders who submitted substantially responsive Technical Bids, publicly 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 Financial 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 Financial Bids and discounts, read out and recorded during the opening of Financial Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Financial 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 ten (10) 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; (iv) Includes signed Integrity Pact where required as per clause IB.35 and (v) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Only substantially responsive bid shall be considered for further evaluation.

26.3 If a bid is not substantially responsive, it may not subsequently be made responsive by correction or withdrawal of the non-conforming material deviation or reservation. The Employer may, however, seek confirmation/ clarification in writing or by email which shall be responded accordingly.

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

IB.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.
 - (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 imbalanced 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 Guarantee set forth in 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 IB 29.2.
- 29.2 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in Bidder's capacities, may require the bidders to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

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

IB.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, the lowest evaluated bidder may further reduce the Bid Price voluntarily without compromising the quality/ quantity.
- 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 Guarantee, the Employer will promptly notify the other bidders that their Bids have been unsuccessful. No bid security can be returned without exhausting the grievance period or without finally disposing off the complaint of the non-responsive bidder. However, bid security may be returned earlier if any bidder submits affidavit that he is satisfied with the proceedings and hence his bid security may be returned.

IB.32 Performance Guarantee

- 32.1 The successful bidder shall furnish to the Employer a Performance Guarantee in the form and the amount stipulated in the Bidding Data Sheet and the Conditions of Contract within a period of 15 days after the receipt of Letter of Acceptance.
- 32.2 Failure of the successful bidder to comply with the requirements of IB.32.1 or IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.33 Signing of Agreement

- 33.1 Upon furnishing of acceptable Performance Guarantee under the Conditions of Contract, formal Agreement between the Employer and the successful bidder shall be executed.

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, inter-alia, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

The Successful Contractor/Joint Venture shall comply with and acquire all consents, approvals, permits and licenses applicable under the laws of Pakistan in relation to the performance of the work & services.

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 / Provincial 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

Submission of bids shall be construed as evidence that the bidder has admitted all provisions of the instruction to the bidder.

IB.37 PPRA Act, 2009 and PPR-14 will have over-riding effect

PPRA Act, 2009 and PPR-14 as amended upto date will supersede and will have an over-riding effect in case in case of any contradiction with these Instructions, the Contract, or any other part of the Bidding Documents.

BIDDING DATA SHEET

BIDDING DATA SHEET

The following specific data for the Works 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

Clause IB-1:

Sub-Clause: 1.1 Name and address of the Employer

Chief Officer,

Municipal Committee Okara

Email: info@mcokara.lgpunjab.org.pk

Phone: 044-9330011

Summary of Works

- An-aerobic, Facultative and Sludge Drying Pond
- Inlet/Outlet Channels, Collection/ Distribution Chambers, Storm Water Drain & Protection Wall
- Office Building
- Staff building
- Equipment for Laboratory
- Area Lighting works of WWTP
- Plantation
- Outlet & ByPass Chanel
- Environmental and Social Management and Monitoring Plan Cost

Clause IB-2: Source of Funds

Sub-Clause 2.1

The Project is funded by Government of the Punjab through World Bank.

Clause IB-10: Language of Bid

Sub-Clause 10.1

English

Clause IB-11: Documents Accompanying the Bid

Sub-Clause 11.1:

A) The Bidder shall submit with its Technical Bid the following documents:

(a) Letter of Technical Bid

(b) Bid Security

(IB.15)

- (c) Written confirmation authorizing signatory of the bid to commit the Bidder. (IB 18.5)
- (d) Pending litigation information.
- (e) Special Stipulations Appendix-A
- (f) Proposed Construction Schedule Appendix-E
- (g) Method of Performing the work Appendix-F
- (h) Availability of Critical Equipment Appendix-G
- (i) Construction Camp and Housing Facilities Appendix-H
- (j) List of Sub-Contractor Appendix-I
- (k) Organization Chart for Supervisory Staff Appendix-K
- (l) Integrity Pact Appendix-L
- (m) Eligibility Criteria Appendix-M1&M2
- (n) Qualification Criteria Appendix-N

B) The Bidder shall submit with its Financial Bid the following documents:

- (o) Letter of Financial Bid
- (p) Bid Security
- (q) Bill of Quantities Appendix-D
- (r) Estimate Progress Payment Appendix-J

Clause IB-13: Currency of Bid and Payment:

Sub-Clause 13.1

The unit rates and the prices shall be quoted by the Bidder entirely in Pakistani Rupees and likewise payments will also be made entirely in Pakistani Rupees.

Clause IB-14 Bid Validity:

Sub-Clause 14.1 Period of Bid Validity

120 Days

Clause IB-15 Bid Security

2% of the Estimated Cost of Rs. 704,296,999/- . i.e (14,085,940/-)

The bids must be accompanied with Bid Security for the Project in the form of CDR/Bank Guarantee of amount Specified above in the name of the undersigned from a Scheduled Bank of Pakistan. No bid security in cash will be accepted. **Bid security should be attached with the technical bid, otherwise the bid will not be taken into account for evaluation and it will be rejected straight forward.**

Clause IB-16 Alternate Proposals by Bidders

NOT APPLICABLE

Clause IB-17 Pre-Bid Meeting

The pre bid meeting with bidders and their authorize representatives will be held on **Feb 15, 2024** at **12:00 PM** in the office of Chief Officer, Municipal Committee Okara or in any other office specified by Client to clarify the issues and to answer any questions on matters related to bid documents

Clause IB-18 Format and Signing of Bid

Sub-Clause 18.4 Format and Signing of Bid

One Original & Three Copies (Two hard and one electronic in USB/DVD) of **Technical Bid** whereas One original and Two copies for **Financial Bid**.

Clause IB-19 Sealing and Making of Bid

Sub-Clause 19.2 (a) Employer's address for the purpose of Bid Submission is as follows:-

Municipal Committee Okara
Email: info@mcokara.lgpunjab.org.pk
Phone: 044-9330011

19.2 (b) Name and Number of the Contract is as follows: -

Contract No. _____

Clause IB-20 Deadline for submission of Bid:

Sub-Clause 20.1 (a)

Venue: Chief Officer, Municipal Committee Okara
Time: 11:30 AM,
Date: February 27th, 2024

Clause IB-23 Bid Opening:

Sub-Clause 23.1 (a) Venue, Time and Date of Bid Opening

Venue: Chief Officer, Municipal Committee Okara
Time: 12:00 PM
Date: February 27th, 2024

Clause IB-32 Performance Guarantee:

Sub-Clause 32.1

Delete the text sub-clause 32.1 and substitute with the following: -

The Performance Guarantee shall be 05% of **Contract Amount** (work being greater than 50 Million) mentioned in the Letter of Acceptance on the prescribed form [PS-1] in shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.

Add at the end of **Sub-Clause 32.2:**

Next lowest Bidder

In the event, the Performance Guarantee is not provided by the lowest bidder, and the award is annulled, the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and technically accepted and is determined by the Employer to be qualified to perform the Contract satisfactorily.

Clause IB-36 Instructions not part of Contract:

Fraud and Corrupt Practices:

Bidders and their sub-contractors under contracts must observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Employer:

- a) Defines, for the purposes of this provision, the terms set forth below are defined as follows:
 - “Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party.
 - “Fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation
 - “Coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - “Collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.
 - obstructive practice” means (a) deliberately destroying· falsifying· altering· or concealing of evidence material to an investigation by the Employer; making false statements to investigators in order to materially impede an investigation by the Employer; (c) failing to comply with requests to provide information· documents· or records in connection with an office of Anticorruption investigation; (d) threatening· harassing· or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (e) materially impeding the Employer’s contractual rights of audit or access to information
 - “Integrity violation” is any act which violates the Government's Anticorruption Policy· including (i) to (v) above and the following: abuse, conflict of interest· violations of the Government sanctions, retaliation against whistleblowers or witnesses· and other violations of the Government’s Anticorruption Policy including failure to adhere to the highest ethical standard.
- b) will reject any Bid/proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
- c) will cancel the contract if it determines at any time that its representatives or those of the Bidder were engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the selection process or the execution of the Contract; and
- d) will sanction bidders or its successor including declaring ineligible, either indefinitely or for a stated period of time, to participate in bidding activities in Pakistan if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing Contract
- e) Will have the right to require that consultants permit the Government or its appointed agent to inspect their accounts and records and other documents relating to the

submission of proposals and contract performance and to have them audited by auditors appointed by the government.

**FORM OF BID
AND
APPENDICES TO BID**

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;

We offer to execute and complete in conformity with the Bidding Documents the following Works:
"COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-2 CONSTRUCTION OF WASTE WATER TREATMENT PLANT"

- (a) Our Bid consisting of the Technical Bid and the Financial Bid shall be valid for a period of 120 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;
(b) 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) 30 days beyond validity of Bid itself.
(c) 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).
(d) 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.....

Letter of Financial 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) The total price of our Bid, excluding any discounts offered in item (c) below is:

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

(d) Our Bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(e) If our Bid is accepted, we commit to obtain a Performance Guarantee and Quality Assurance Security in accordance with the Bidding Documents;

(f) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.

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

(h) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.

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

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Address.....

SPECIAL STIPULATIONS**Clause****Conditions of Contract**

1.	The Engineer's (Consultant) Authority to issue Variation in emergency	2% of the Contract Price stated in the Letter of Acceptance with the written approval of client.
2.	Law applicable	The relevant laws applied in the Province of Punjab.
3.	Amount of Performance Guarantee	The Performance Guarantee shall be 05% of Contract Amount mentioned in the Letter of Acceptance on the prescribed form [PS-1] in the shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.
4.	Time for Furnishing Work Programme	Within 14 days from the date of receipt of Letter of Acceptance.
5.	Minimum amount of Third-Party Insurance	The amount of insurance taken out by the Contractor per occurrence with number of occurrences unlimited shall be as follows: a. Bodily injury (any one person) PKR 0.5 (Half Million (Max) b. Fatal Case (any one person) PKR 01 (one) million (Minimum) c. Property Damages Depending upon nature of loss (100% of the Damage)
6.	Time for Commencement	Within 7 days from the date of receipt of Engineer's Notice to Commence which shall be issued within 14 days after signing of Contract Agreement.
7.	Time for Completion	09 Months from the date of Commencement of the Project.
8.	a) Amount of Liquidated Damages	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.
	b) Amount of Bonus for early completion	Not Applicable.
9.	Defects Liability Period	365 days from the effective date of Taking Over Certificate.
10	Percentage of Retention Money	10 % on the amount of work done up to Rs. 5 million and 5 % on the amount of work done beyond 5 million
11	Limit of Retention Money	05% of Contract Price stated in the Letter of Acceptance.
12	Minimum amount of Interim Payment Certificates (Running Bills)	Greater than PKR. Ten Million (10 Million) except last 2 IPC's
13	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	30 days
14	List of material	NOT USED
15	Mobilization Advance (Interest Free)	Not Applicable

16	Environment, Health & Safety	Contractor will be bound to comply the Environmental & Social Management and Monitoring Plan (ESMMP) and Environmental Health Safety SOPs for Labor/Construction Workers including Women Workers to fulfill ESMMP safeguards compliance otherwise 1 % of contractual amount will be forfeited upon Engineer's report from last IPC
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NAME OF ELIGIBLE COUNTRIES

All countries of the World with whom Islamic Republic of Pakistan has commercial trade relations.

FOREIGN CURRENCY REQUIREMENTS

NOT APPLICABLE

PRICE ADJUSTMENT

Price adjustment / variation for the materials specified by the Government of Punjab will be paid as per rates issued by Finance department Government of Punjab from time to time and in the line with Punjab Local Government works Rules.

BILL OF QUANTITIES**D. Preamble**

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract (in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the contract include all costs of contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the contract. Furthermore, all duties, taxes and other levies payable by the contractor under the contract, or for any other cause, as on the date 14 days prior to dead line for submission of Bids in case of ICB/NCB respectively, shall be included in the rates and prices and the total bid price submitted by the bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities and shall not be paid separately.
5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the works.
6. General directions and description of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the bidding documents shall be made before entering prices against each item in the priced Bill of Quantities.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance
8. Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend

for approval one of them or as contractor for other than those manufacturers proposed in shape of submittal by contractor for someone else on equivalency basis.

9. The contractor will also provide the submittals of imported items as stated above. Pre-shipment inspection of the selected manufacturer's equipment will be carried out as per by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site.

10. Work program of level three must be submitted to Engineer/employer along with submittal.

BILL OF QUANTITIES
SUMMARY
ABSTRACT OF TENDER PRICE

Sr. No.	Description	Amount (Rs)
Part-A		
1	An-aerobic, Facultative and Sludge Drying Pond	N/A
2	Inlet/Outlet Channels, Collection/ Distribution Chambers, Storm Water Drain & Protection Wall	
3	Office Building	
4	Staff building	
5	Equipment for Laboratory	
6	Area Lighting works of WWTP	
7	Plantation	
8	Outlet & ByPass Chanel	
9	Environmental & Social Management And Monitoring Plan (ESMMP) Cost	
Total Amount (Rs)		N/A
Note: These rates are exclusive of PRA charges		

Note: All Provisional Sums are to be expended in whole or in part at the direction and discretion of the Engineer in-charge

PROPOSED CONSTRUCTION SCHEDULE

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 his Construction Schedule in the Bar Chart form 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 program 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 issue of Engineer’s Notice to Commence (Bidder to attach sheets as required for the specified form of Construction Schedule):

<u>Description</u>	<u>Time for Completion</u>
a) Whole Works	_____ days
b) Part-A	_____ days
c) Part-B	_____ days
d) _____	_____ days
e) _____	_____ days

Appendix-F to Bid

METHOD OF PERFORMING THE WORK

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

1. Organization Chart indicating head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.
2. Mobilization at site of works, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for Storage, communications, security and other services to be used.
3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.
4. Quality control/ Quality assurance measures to be adopted including procedures to be followed for carrying out all tests required under specifications.
5. Production of Authorization from Original Equipment Manufacturer.
6. Pre-shipment inspection at the factory premises shall be carried out by an independent Third-Party Firm having specialization in the task and possess the relevant professionals of the field. Third Party Validation Firm (TPV) shall be engaged by the Chief Engineer / D.G. (O&M) if required. The expenses in this connection shall be borne by the Contractor.
7. The Contractor should submit appropriate plans detailing how they intend to coordinate the Works with the ongoing system so that the existing system is not disturbed in any manner, and how they will ensure that the necessary facilities are available to enable it.

Note

- The Bidder shall provide the methods for performing the work in such manner that the works falling under the Construction must be in compliance with the Technical Specifications. These shall form part of and be included at the relevant appendix in the respective Contracts.
- Import documents like bill of lading, custom clearance, Air-way bill, port of shipment etc. will be provided by the contractor to the consultant/employer for verification of imported plants & equipment prior to submit the bill invoice of the same.

G-1
Appendix-G to Bid

LIST OF MAJOR EQUIPMENT – RELATED ITEMS

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

LIST OF MAJOR EQUIPMENT

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 CAMPS 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 Tenderer 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 sub-contractors. In my/our opinion, the sub-contractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of sub-contractors, 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)	Sub-Contractor (With Complete Address)
1	2

ESTIMATED PROGRESS PAYMENTS

Note: Appendix – J duly filled by the Contractor should only be included in the **Financial Proposal/Financial Bid.**

Month	Amounts (Million Rs.)
1	2
1st	
2 nd	
3 rd	
4 th	
5 th	
6 th	
Bid Price	

ORGANIZATION CHART
FOR THE
SUPERVISORY STAFF AND LABOUR

(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 owned or controlled by GoP through any 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 from GoP, except that which has been expressly declared pursuant hereto.

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

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

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

Name of Employer:.....

Name of Contractor:.....

Signature:.....

Signature:

Seal/Stamp.....

Seal/Stamp.....

Eligibility Criteria

The Bidders (Firm/ Joint Venture) fulfilling the following basic eligibility criteria shall only be considered for further evaluation. (Relevant documents to be attached):

- a) Duly licensed by the Pakistan Engineering Council (PEC) in the category **C2 & Above** with relevant code **CE-09**. In case of Joint Venture, the Lead partner must be registered in the category **C2 & Above** with the relevant code and the other member/s should at least have registration from PEC. No foreign Firm(s) is allowed to participate whether as Single entity or Lead member of JV.
- b) A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be non-Responsive. The bidder must submit affidavit with these points mentioned in the affidavit:
 - a. The firm has no conflict of interest with one or more parties in this Bidding process.
 - b. The firm is not associated or have been associated, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design and other documents to be used.
 - c. The firm doesn't have controlling shareholders in common with one or more parties in this Bidding process.
 - d. The firm hasn't received or have received any direct or indirect subsidy from one or more parties in this Bidding process.
 - e. The firm has not the same legal representative, as that of, one or more parties in this Bidding process, for purposes of this Bid.
 - f. The firm doesn't have a relationship with one or more parties in this Bidding process, directly or through common third parties, that puts it in a position to have access to information about or influence on the Bid of another Bidder or influence the decisions of the Procuring Agency regarding this Bidding process.

p

- c) Valid legal entity of the bidder / firm/ company e.g. Certificate of registration from SECP or registrar of firms etc.
- d) Certificate of registration with active Income Tax & active Sales Tax under Relevant Authority.
- e) Affidavit on Non-Judicial Stamp paper for No litigation OR submission of Litigation History of last 10 years.
- f) Affidavit declaring "Neither the firms nor its Directors, Stakeholders, as a whole or as a part of the firm have ever been black listed/ defaulted by any government agency / department / organization / Donors or settled dispute in plea bargain or Volunteer recovery".

Un-signed and un-stamped bids will be rejected.

Note: In case of Joint Venture, all the members have to meet in full the afore-mentioned basic eligibility criteria.

Eligibility Criteria (Part-B)

TECHNICAL SPECIFICATIONS

Sr. No.	Description / Specification	Bidder to Specify
1	Providing, laying to designed section and compacting (to at least 90% of the maximum modified Proctor dry density) clay as liner (source to be approved by the Engineer), complete in all respects. Liner material should be compacted in layers not exceeding 6"(150mm). Liner material should be compacted slightly wet of optimum. Scarify the top of already compacted liner layer to a minimum depth of 1.0 inch before placing the next layer. Clods more then 5.0 mm size must be present in liner material, these must be pulverized before placing. (both in bed & slope) The material suitable to be used for compacted soil liner shall meet the following specifications: Vertical in-situ hydraulic conductivity in compacted state $\leq 1 \times 10^{-7}$ cm/sec Fines (particles passing 0.075 mm sieve) $\geq 30\%$ Plasticity index = 8 – 30 % Gravels (particles passing 75 mm sieve and retaining 4.75 mm sieve) $\leq 20\%$ Maximum particle size ≤ 10 mm (Item rate include lead from any source within district up to WWTP)	
2	Supply, installation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating, 11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges, complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge (C24/105) 25 KVA	

Note:

1. This part of evaluation shall be of knock out basis if the bidder fails to comply the given specifications he shall be considered as **non-responsive** and shall not be considered for further evaluation.
2. Similar to other than above or better specifications of an equivalent item will be accepted by the Procurement Committee / Bid Opening & Evaluation Committee, provided the bidder attaches brochure mentioning the relevant specifications. In absence of brochure the bid will be considered as non-responsive and the decision of the committee shall be final.

Qualification Criteria

Technical Evaluation will be based on the criteria given in succeeding paras regarding the Bidder's General Experience, Specific Experience, Personnel Capabilities and Equipment Capabilities as demonstrated by the Bidder's responses in the forms attached. The Procuring Agency reserves the right to waive minor deviations, if these don't materially affect the capability of a Bidder to perform the contract. Sub-contractor's experience and resources shall not be taken into account in determining the Bidder's compliance with the qualifying criteria. However, Joint Venture experience & resources shall be considered. Consortium or Association of Contractors will be considered for similar treatment as in case of Joint Venture. The detailed qualification criteria for Technical Evaluation is provided as follows:

Sr. No.	Category	Weightage/Marks
1.	Financial Soundness	30
2.	General & Relevant Experience	45
3.	Personnel Capabilities	15
4.	Equipment Capabilities	10
	Total:	100

The applicants must score total 65 marks and at least 50 % marks in each category, to qualify.

SUB CATEGORY A: FINANCIAL SOUNDNESS

For financial soundness, Letter from Banks and audited financial statements for *last five financial years shall be submitted. if Bank statement (In case of Cash), letter from Banks (In case of Credit Line) & audited financial statements of last five financial years are not attached, no consideration will be given to bidder.*

Sr. No.	Description	Maximum Marks
i)	<p>Available Cash / Bank Credit Line Limit (or combination of both)</p> <p>A= Available Cash/Bank Credit Line limit or combination of both (in PKR Million)</p> <p>(15 - Marks)</p>	<ul style="list-style-type: none"> • Full Marks will be given if “A” is PKR 300 Million or above. • For ‘A’ less than PKR 300 Million, marks will be awarded as: (A/300) *15 • No Marks will be given if “A” is less than PKR 150 Million. <p><u>No marks shall be allotted if Bank statement (In case of Cash) & letter from Bank (In case of Credit Line as proof of Credit Line) is not attached.</u></p>
ii)	<p>Average Working Capital in last Five financial years.</p> <p>A= Average Working Capital in last five financial years (in PKR Million)</p> <p>(15 - Marks)</p>	<ul style="list-style-type: none"> • Full Marks will be given if “A” is PKR 300 Million or above. • For ‘A’ less than PKR 300 Million, marks will be awarded as: (A/300) *15 • No Marks will be given if “A” is less than PKR 150 Million. <p><u>No marks shall be allotted if audited financial statements of last five financial years are not attached.</u></p>
	Sub-total:	30

SUB-CATEGORY B: EXPERIENCE RECORD

Bidder must meet following criteria for evaluation of the experience of the Firm/JV.

Sr. No.	Description	Max. Marks
i)	<p>Projects of General Nature completed over last 05 years.</p> <p>a. Max 03-projects having minimum cost Rs. 400 Million each.</p> <p>(General nature project includes buildings, roads, bridges water supply, water/sewerage treatment etc.)</p> <p>Each project having above-said minimum cost bracket; will have equal marks. (i.e. 3*5=15)</p>	15
ii)	<p>Projects of similar nature and complexity</p> <p>a. Max 02-projects of Sewerage System and allied works having Min Cost Rs. 250 Million each (completed over last 05 years) (2*5=10)</p> <p>b. Max 02-projects of Sewerage System and allied works having Min Cost Rs. 250 Million each (in hand) (2*5=10)</p> <p>Each project having above-said minimum cost bracket; will have equal marks. (i.e. 4*5=20)</p>	20
iii)	<p>Any construction project with satisfactory completion certificates granted by the departments for the other projects enlisted at Sr. no. i & ii. (02-projects)</p>	10
	Sub-total:	45

SUB-CATEGORY C: PERSONNEL CAPABILITIES

The following key experts at a minimum shall be evaluated:

No personnel will be considered for evaluation if declaration of Professional Staff Employment & availability for this Project (**Form T11-12-13**) **duly signed by authorized signatory** is not attached. Bidder will also provide **affidavit of employee** on judicial stamp paper.

Bidders will submit the detailed particular of his experts considering that all staff **will serve at site full time during execution of works** In case bidder fails to appoint full time Project Manager at site, a penalty of PKR 100,000 will be imposed on monthly basis and in case bidder fails to appoint full time other supporting staff (all personnel or partly) mentioned below (other than Project Manager) at site, a penalty of Rs. 100,000/- will be imposed on monthly basis.

Sr. No.	Description	Maximum Points
i)	Engineers in employment of the contractor & Registered with PEC a) Number of Engineers (Min 2 No. Civil) b) Experience of Civil Engineer (Minimum 07 years)	6 3
ii)	Number of Diploma Engineers in Employment of the Contractor a) Number of Sub Engineers having Diploma in Associate Engineering (Min 3-No Civil) b) Experience of Engineers in number of Years (Minimum 05 -years)	3 3
	Sub-total:	15

Bidders will provide **short CVs**, showing details of experts are desired by highlighting the name of expert, qualification, year of graduation or other degree(s), general experience, specific experience, designation, time of association with this firm. Experience certificates, affidavit of employee on judicial stamp paper. No marks if required documents are not attached.

SUB-CATEGORY D: EQUIPMENT CAPABILITIES

The following Equipment shall be evaluated:

Declaration of ownership/lease of Equipment (Form T- 15) duly signed by authorized signatory shall be attached.

Form T-14 shall be filled along with manufacturer authorization.

Sr. No	Equipment Type	Maximum Marks
1	Surveying Equipment (Total Station) (01 Set)	1
2	Dump Truck 2-Ton (02 No.)	1
3	Excavator (02 No.)	2
4	Wheel Loader (01 No.)	0.5
6	Tractor Trolley [02 No]	2
7	Motor Grader (01 No.)	1
8	Water Bowser (02 No.)	1
9	Generator (100/200 KVA, 01 No)	0.5
10	Roller (01 No.)	1
	Sub-total:	10

Bidder will provide evidence of ownership in case of his purchased equipment or Lease paper in case of any rented equipment OR Affidavit on his letter head that he will arrange the following equipment subject to award the work.

Joint Venture (JV)

Joint Venture must comply with the following requirements: -

- a) Minimum qualification requirements: -
 - i) The lead partner shall meet not less than 50 percent of all qualifying criteria given in paras A to D heretofore.
 - ii) The joint venture must collectively satisfy the criteria of paras A to D, for which purpose the relevant figures for each of the partners shall be added together to arrive at the JV's total capacity.
- b) Any change in a qualified JV after qualification, shall be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval may be denied if:-
 - i) Partner(s) withdrawn from a JV and remaining partners do not meet the qualifying requirements;
 - ii) The new partners to a JV are not qualified individually or as another JV; or
 - iii) In the opinion of the Employer, a substantial reduction in competition would result.
- c) Bid shall be signed by all members in the JV so as to legally bind all partners, jointly and severally, and any bid shall be submitted with a copy of the JV

agreement providing the joint and several liability with respect to the contract.

Conflict of Interest

The Bidder (including all members of a JV) must not be associated, nor have been associated in the past, with the consultant or any other entity that has prepared the design, specifications, and other prequalification and bidding documents for the project, or was proposed as Engineer for the contract, over the last Ten years. Any such association may result in disqualification of the Bidder.

Form -T-1

General Information

Bidder (or each Member of a Joint Venture) applying for qualification is required to complete the information in this form.

1.	Name of Firm:	
2.	Head Office Address:	
3.	Telephone:	
4.	Email:	
5.	Type of Organization:	
6.	Place of Incorporation/Registration:	Year of incorporation/registration:
7.	PEC Registration Category: PEC Registration No:	Validity:
8.	NTN#	
9.	Name, Designation, email and Mobile Number of Firm's Representative	

Detail of Owners/ Directors

Name	Designation	Nationality
1.		
2.		
3.		
4.		
5.		

Financial Soundness

Name of Bidder (Lead Member of a Joint Venture, in case of JV)
--

Bidder (Lead Member of a Joint Venture, in case of JV) applying for qualification is required to provide financial information to demonstrate that they meet the requirements of Evaluation Criteria. If necessary, use separate sheets to provide complete information. A copy of the audited financial statements of the past five (5) financial years must be attached.

Bidder's Legal Name: _____

Date: _____

JV Members Legal Name: _____

Information Balance Sheet

	Year-1	Year-2	Year-3	Year-4	Year-5	Overall Average
Total Assets (TA)						
Total Liabilities (TL)						
Net Worth (TA-TL)						
Current Assets (CA)						
Current Liabilities (CL)						
Average Annual Turnover (AATO)						
Average Annual Turnover						
Financial Resources						
Cash/Bank Balance						
Credit Line Limit						

Form -T-6

Details of Similar Nature Projects in hand

Name of Bidder or Member of a Joint Venture

*A separate form with adequate documentary evidence (**Letter of Award/ Agreement indicating Cost of Project**) shall be provided for each project in **Form T-5**.*

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a)Sole Contractor (b)Sub-Contractor (c) Member in a JV
6.	Value of the total contract(in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Planned Date of Completion

Form -T-8

Details of General Nature Projects Completed in Last 5 Years

Name of Bidder or Member of a Joint Venture

*A separate form with adequate documentary evidence (**Completion Certificate indicating Cost of Project**) shall be provided for each project in **Form T-07**.*

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a) Sole Contractor (b) Sub-Contractor (c) Member in a JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____ Years _____ Months

Summary of Fast Track Project Completed

Name of Bidder or Member of a Joint Venture

Bidder and each Member of a Joint Venture applying for qualification is required to complete the information in this form.

Use a separate sheet for each Member of a Joint Venture.

Project Name	Year of Completion	Location	Value in PKR (Million)	Completion Duration

NOT USED

Form -T-10

Details of Fast Track Similar Nature Projects Completed in Last Ten (10) Years

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-09.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of
5.	Contr (a)Sole-C (b)Sub-Contractor (c) Member in a JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____Years _____Months

NOT USED

List of Proposed Staff

Name of Bidder:

_____ *(Bidder or Member of Joint Venture)*

1	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	
2	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	

Candidate Summary

Name of Bidder: _____
(Bidder or Member of Joint Venture)

Position	Candidate	
	Prime	Alternate
Candidate Information	Name of Candidate	Date of Birth
	Professional Qualification:	
PEC Registration No. (Only for Engineer)		
Present Employer	Name of Employer:	
	Address of Employer	
	Telephone:	Fax:
	Job Title of Candidate	Years with Present Employer

Summarize professional experience in reverse chronological order.

From	To	Company	Project	Position	Relevant Technical & Management Experience

Form -T-13

DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT

[To be submitted on Company Letterhead]

TO WHOM IT MAY CONCERN

PROJECT: _____

SUBJECT: DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT & AVAILABILITY

We hereby certify that the personnel nominated in Form-T-11 are employed by our firm and are available for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Equipment Detail

Name of Bidder or Member of Joint Venture

Bidder and each Member of Joint Venture is required to provide adequate information to demonstrate clearly that it has the sufficient capability to undertake the Project. A separate form shall be prepared for each item of equipment listed in the Evaluation Criteria.

Item of Equipment		
Equipment information	1. Name of manufacturer	2. Model and power rating
	3. Capacity	4. Year of manufacture
Current status	5. Current location	
	6. Details of current commitments	
Source	7. Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased	

Omit the following information if it is owned by the Bidder or Member of JV.

Owner	8. Name of owner	
	9. Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreement	Details of rental/lease specific to the Project.	

Affidavit of ownership/Availability of Equipment

PROJECT: _____

SUBJECT: DECLARATION OF OWNERSHIP/ LEASE OF EQUIPMENT

We hereby certify that the equipment nominated in T-14 is owned by/Leased by our firm and is available in Pakistan for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Litigation History for the last Ten (10) Years

Name: _____
(Bidder or Member of Joint Venture)

Description of Contract	Year	Name of Client, Cause of litigation and matter in dispute	Disputed amount (Current value in PKR or US\$ equivalent)	Award FOR or AGAINST Bidder	Remarks by Bidder

Attach Affidavit/undertaking that non-performance of a contract did not occur within the last ten years based on information on all settled disputes or litigation.

AFFIDAVIT FOR CORRECTNESS OF INFORMATION

(To be printed on PKR 100 Stamp Paper)

Name: _____
(Bidder or member of Joint Venture)

I, the undersigned, do hereby certify that all the statements made in the Forms and in the supporting documents are true, correct and valid to the best of my knowledge and belief and may be verified by employer if the Employer, at any time, deems it necessary.

The undersigned hereby authorize and request the bank, person, firm or corporation to furnish any additional information requested by the Employer deemed necessary to verify this statement regarding my (our) competence and general reputation.

The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the Employer. Employer undertakes to treat all information provided as confidential.

Signed by an authorized Officer of the firm

Title of Officer

Name of Firm

Date

POSSESSION OF SITE HANDING / TAKING OVER

Name of Sub-Project / Contract Name:

Name of Contractor / Contracting Firm:

Date of Award of Work:

Date of Contract Agreement:

Contract number:

The sub-project (Name of subproject) which pertains to the sites as shown in drawings are integral part of this Contract is hereby handed over to the Contractor M/s _____ on (Date, day, year) in presence of witness.

(Plan attached list of sites being handed over / taken over)

Handed over by

Name:

Designation: Chief Officer MC _____

Cell:

Stamp:

CNIC No:

Witness (MOI)

Name:

Designation:

taken over by (Contractor / Firm)

Name:

Designation:

Cell No:

Stamp:

CNIC No:

PEC No:

I, hereby take over the sites as marked in the plan attached as Annexure-A of this document

Witness:

Designated approved Site Engineer of Contracting Firm

FORMS

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

**BID SECURITY
(Bank Guarantee)**

Security Executed on _____
(Date)

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

Name of Principal (Bidder) with Address _____

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

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at their quest 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, 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 Guarantee, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Guarantee 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 Guarantee 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.

WITNESS:	SURETY (Bank)
1. _____ _____	Signature _____
Corporate Secretary (Seal)	Name _____
	Title _____
	Corporate Guarantor (Seal)

2. _____

Name, Title & Address

**FORM OF PERFORMANCE GUARANTEE
(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.

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 _____

Corporate Secretary (Seal)

Name _____

Title _____

2. _____
Name, Title & Address

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

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

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

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda / Clarification as agreed or otherwise, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract, viz:
 - a. The Contract Agreement;
 - b. The Letter of Acceptance;
 - c. The completed Form of Bid;
 - d. Special Stipulations (Appendix-A to Bid);
 - e. Contract form for execution of work;
 - f. The priced Bill of Quantities (Appendix-D to Bid);
 - g. The completed Appendices to Bid (B, C, E to O);
 - h. Special Provisions;
 - i. The Drawings;
 - j. The Specifications;
 - k. Work Schedule;
 - l. (any other)
3. The contractor will have to complete the work within the stipulated period, according to specifications as mentioned in the acceptance letter and Contract Agreement to the entire satisfaction of the engineer in-charge
4. 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.
5. 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.

6. That if the contractor fails to comply with any of the conditions of the contract, he will be held liable for the consequences thereof which shall be either in the form of liquidated damages or allotment of work at his risk and cost or both. The damages so incurred shall be recovered from the contractor, either from his security money or his running/outstanding bills. Further, if any information/ document submitted by contractor/ firm, founds false, fabricated, materially incorrect at any stage, he/firm will be liable for blacklisting.

7. 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

(Seal)

Signature of Employer

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

(Name, Title and Address)

Witness:

(Name, Title and Address)

MOBILIZATION ADVANCE GUARANTEE/BOND

Guarantee No. _____ Date _____

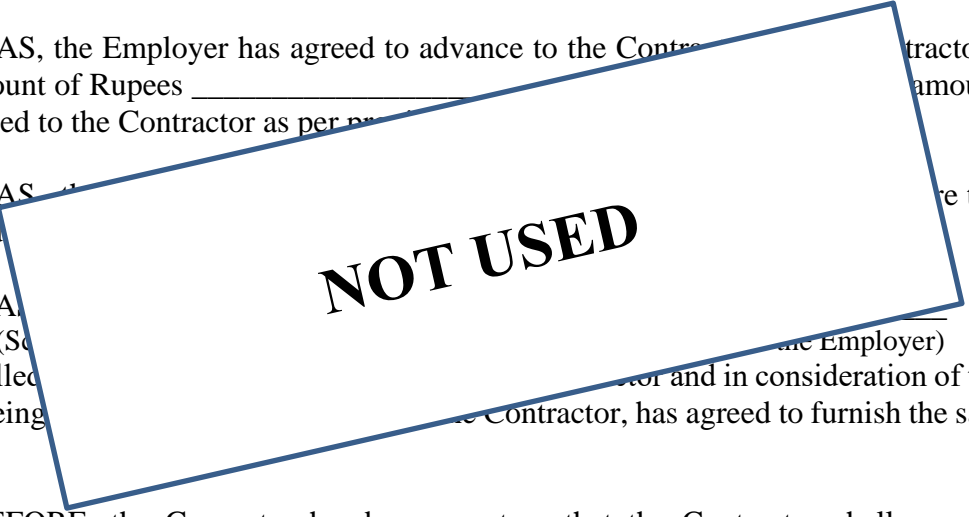
WHEREAS _____ (hereinafter called the 'Employer') has entered into a Contract for _____

(Particulars of Contract)
with _____ (hereinafter called the "Contractor").

AND WHEREAS, the Employer has agreed to advance to the Contractor _____ Contractor's
request, an amount of Rupees _____ amount
shall be advanced to the Contractor as per _____

AND WHEREAS _____ the
mobilization advance of _____

AND WHEREAS _____ the Employer)
(Hereinafter called _____ Contractor and in consideration of the
Employer agreeing _____ 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.

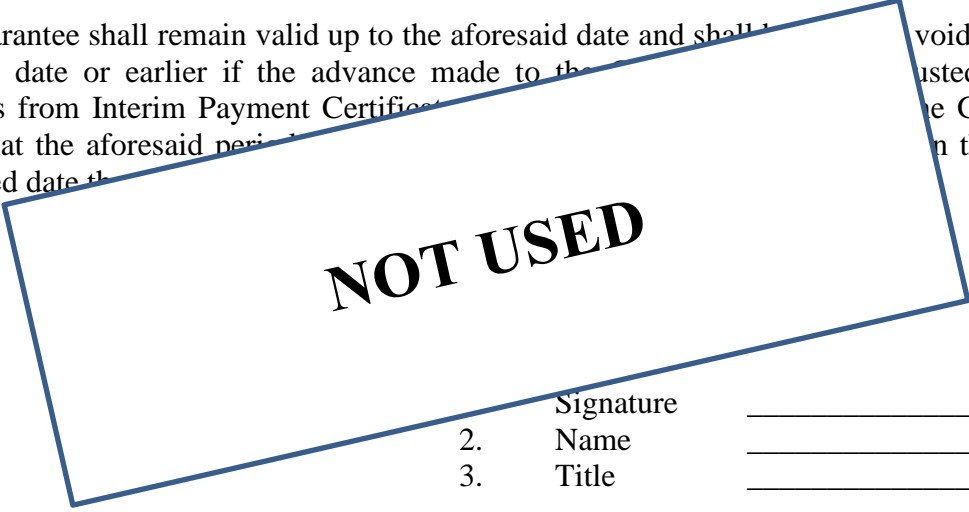
Notice in writing of any default, of which the Employer shall be the sole and final judge, on
the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first
written demand, payment shall be made by the Guarantor of all sums then due under this
Guarantee without any reference 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 void after the aforesaid date or earlier if the advance made to the _____ against _____ payments from Interim Payment Certificates _____ the Guarantor agrees that the aforesaid period _____ in the above mentioned date the _____



2. Name _____
 3. Title _____

WITNESS

1. _____

 Corporate Secretary (Seal)

2. _____
 (Name Title & Address) _____ Corporate Guarantor(Seal)

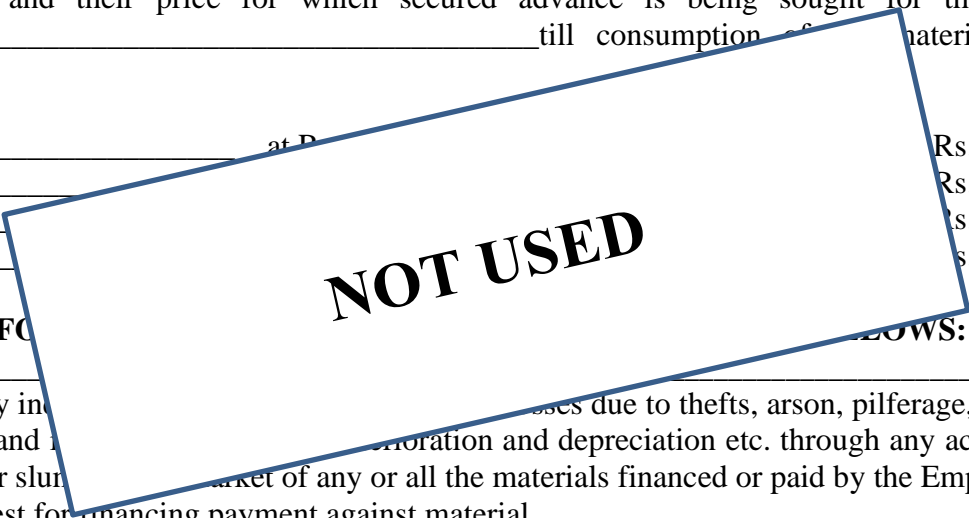
**INDEMNITY BOND
FOR SECURED ADVANCE
AGAINST MATERIALS BROUGHT AT SITE**

(ON RS.40 NON JUDICIAL STAMP PAPER)

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

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

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



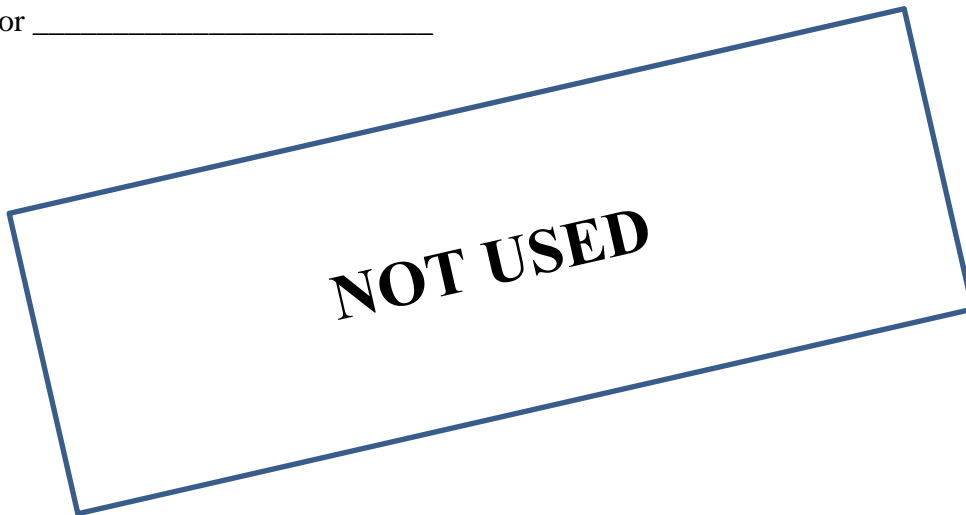
THEREFORE _____
I/We _____
do hereby indemnify _____ against all losses due to thefts, arson, pilferage, loss due to flood and fire, deterioration and depreciation etc. through any act of Man or God or slurrage or loss of any or all the materials financed or paid by the Employer on our request for financing payment against material.
I/We _____ shall indemnify _____ against any or all claims, action damages arising out of or resulting to the said material.
I/We _____ further declare that we will faithfully abide by the above declaration and solemnly affirm that we will not remove, sell, pilferage any of the materials against which M/s _____ has paid us such a secured advance and will not pledge the same with any Bank, Finance Corporation, Firm, Company, Individual or the like agency or create any change whereon in any from what so ever.
I/We _____ do hereby also declare that in the event of my/our infringement of the declaration made above

_____ will be entitled to forfeit all such material and also proceed against me/us according to the relevant clause pertaining to breach of contract and further invoke the power or seek any remedies secured of _____ under the contract Agreement signed with us or otherwise

available under law.

Place _____ Dated _____

Contractor _____



GENERAL / PARTICULAR CONDITIONS OF CONTRACT FOR WORKS

GOVERNMENT OF THE PUNJAB

CONTRACT FORM FOR EXECUTION OF WORK

(To be procured by the Contractor)

Copies of the Contract Form for Execution of Work can be obtained from Finance Department Punjab's Website as well as from the Employer.

SPECIAL PROVISIONS

SPECIAL PROVISIONS (CIVIL WORKS)

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SP-6	Utilities
SP-7	Topography and Geology of the Site
SP-8	Extent of Work
SP-9	Drawings
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9.2	Construction Drawings
9.3	Checking Drawings
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SPECIFICATIONS - SPECIAL PROVISIONS (CIVIL WORKS)

Okara is about 127km to the south-west of Lahore on the National Highway and on the main Lahore-Karachi railway track. Okara spreads between latitudes of 30°18' to 30°08' North, and the longitudes of 73°14' to 74°09' East. The current population of the city is 466,852 and the projected population by the year 2032 is 764,459.

Okara sewerage system covers about 70% population. The existing system consists of lateral sewers, mains, trunk sewers and disposal stations. No waste water treatment plant (WWTP) exists in Okara city.

Punjab Municipal Development Fund Company (PMDFC) has proposed the establishment of a waste water treatment plant (WWTP) at Okara city with the financial support of the World Bank (WB). The treatment facility will receive the municipal waste water generated from southern part of Okara City through a main sewer line and after treatment will dispose it of in the Sukhera Drain. The project will be supervised by Municipal Committee Okara.
“COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE – 2 CONSTRUCTION OF WASTE WATER TREATMENT PLANT”

The Project aims at improvement of infrastructure of municipal services for sewerage system.

The Project has the following objectives;

1. Improvement of service delivery level of the municipal services in the served areas of the city or provision of better basic urban services for improved livability of the citizen.
2. Reduction in annual O&M charges of the infrastructure due to reduced repairs in the forthcoming years because of repair or replacement of infrastructure components.
3. Reduction and prompt addressal of the public complaints regarding municipal service delivery.
4. Reduction in surcharging and overflowing of sewers thus reducing waste water ponding in the city

SP-2 DESCRIPTION OF THE WORKS

2.1 The work included in this Contract are as follows but not limited to these items only:

Sr. No.	Description
1	An-aerobic, Facultative and Sludge Drying Pond
2	Inlet/Outlet Channels, Collection/ Distribution Chambers, Storm Water Drain & Protection Wall
3	Office Building
4	Staff building
5	Equipment for Laboratory
6	Area Lighting works of WWTP
7	Plantation
8	Outlet & ByPass Chanel
9	Environmental & Social Management and Monitoring Plan (ESMMP) Cost

SP-3 SITE OF WORKS

The work mainly comprising of “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-2 CONSTRUCTION OF WASTE WATER TREATMENT PLANT**”

SP-4 SETTING OUT

Setting out data and control points for the construction of the road and allied works will be provided by the Engineer following the Notice to Commence but, in any case, prior to start of work.

SP-5 CLIMATOLOGICAL DATA

Not used.

SP-6 UTILITIES

The Contractor shall directly enquire from the utility companies about availability of connections of electric power supply and telephone lines for his use at the Site. In case of non-availability of electric power supply from national grid to meet his requirements the Contractor shall provide at his own cost electric power generators as necessary for supply of power for the various parts of the Works including his camps, offices, stores, workshops and other installations as well as for the Engineer’s Site office provided under Sub-Clause SP 20.1. The Contractor shall bear all costs for constructing, operating and maintaining the generation system, including the standby generation system, and distribution system including providing diesel, oil or other consumables and all services and necessary attendance to ensure uninterrupted power supply at all

times.

The Contractor shall make his own investigations and arrangements for supply of water of acceptable quality for construction requirements and safe drinking water for his staff and workmen and for the staff of the Engineer.

No separate payment will be made to the Contractor for works performed under this Clause and the costs thereof shall be deemed to be included in the rates and prices of the various items in the Bill of Quantities.

SP-7 TOPOGRAPHY AND GEOLOGY OF THE SITE

The details of Topography is with the Employer / Engineer.

SP-8 EXTENT OF WORK

The Contractor shall remove all debris and unsuitable construction to the Engineer's satisfaction with no additional cost.

The Contractor shall construct the Works in accordance with the Drawings and Specifications and as directed by the Engineer. The Contractor shall procure, furnish, provide and arrange all the necessary construction materials, equipment, transportation, fuel, electric power, water and services; be responsible for the construction and maintenance of the construction camps, offices, workshops and warehouses that he may require, and perform all other work necessary for completion of the Works described herein, in complete conformity with the Contract.

SP-9 DRAWINGS

9.1 Bidding Drawings

The Drawings provided as separate volume of Bid Documents and hereinafter referred to as Bid Drawings show the scope of the work to be performed by the Contractor. The Bid Drawings shall not be used as a basis for fabrication or construction, but may be used as the basis for planning, scheduling and placing preliminary orders for materials, subject to corrections based on future issue of Construction Drawings. Any other Drawings if issued through Addenda, before opening of Tenders, shall become part of the Bid Drawings.

9.2 Construction Drawings

After award of Contract, Bidding Drawings will be replaced by Drawings issued by the Engineer for Construction, with such modifications as may be necessary. The Drawings Issued for Construction will include Bid Drawings re-issued, Bidding Drawings modified and additional Drawings as required to develop in greater detail the construction required and shall be referred to hereinafter as "Construction Drawings". The Construction Drawings that show changes from the Tender Drawings and Specifications, will be reviewed by the Engineer for determination of adjustments, if any, of the Contract Price in accordance with the provisions of Clause 51.1, Variations, of the Conditions of Contract. The work shall be executed in conformity with the Construction Drawings.

The Engineer and Contractor shall jointly prepare a schedule for issuance of Drawings Issued for Construction of the various parts of the Works based on a list of drawings

provided by the Engineer.

9.3 Checking of Drawings

The Contractor shall carefully check all Construction Drawings as soon as practicable after receipt thereof, and shall promptly advise the Engineer of any errors if discovered.

SP-10 RIGHT TO CHANGE

The Engineer may find it desirable to change location, alignment, dimensions or design of one or more of the features of the Works to conform to the newly disclosed conditions. Toward this end, the Engineer reserves the right to make such reasonable changes, and the Contractor's operations shall be conducted so as to accommodate any such changes in the Works.

SP-11 DRAWINGS/DATA TO BE FURNISHED BY EMPLOYER /ENGINEER

11.1 Procedure for Submittal of Contractor's Drawings

All drawings showing construction details shall be provided by the Employer/Engineer.

11.2 Other Drawings

Other drawings additional to those referred to herein-above required by the Specifications showing proposed methods of constructing Temporary Works and all bar bending schedules shall be submitted by the Contractor to the Engineer for approval.

11.3 Ownership of Drawings etc.

All the drawings, details, and any other information or documents furnished by the Engineer shall become the property of the Employer.

SP-12 COOPERATION WITH OTHER CONTRACTORS

The Contractor shall cooperate and coordinate his work with that of the other contractors working at the Site, to whatever extent may be necessary to complete the Works in accordance with the approved programme and the Engineer's instructions.

SP-13 QUALITY OF MATERIALS

All materials, fixtures, fittings, and supplies furnished under the Contract shall be new and unused, of standard first grade quality and of the best workmanship and design. No inferior or low grade materials and supplies will be either approved or accepted, and all work of assembly and construction shall be done in a first class and workmanlike manner. In asking for prices of materials intended for delivery to the Site and incorporation in the Works under any portion of these Specifications, the Contractor shall provide the manufacturer or supplier with complete information as may be necessary to secure compliance with these requirements and, in every case, he shall quote this Clause in full to each such manufacturer or supplier.

Prior to procurement, the Contractor shall furnish to the Engineer, for his approval, the names of the manufacturers of all equipment and materials which he contemplates incorporating in the Works. With this information, the Contractor shall also furnish

such pertinent information as to capacities, efficiencies and sizes, and such other information as may be required by the Engineer. Samples of materials shall be submitted to the Engineer for approval unless waived of by the Engineer. Equipment, materials, supplies and articles installed or used without the Engineer's approval shall be at the risk of subsequent rejection.

The Contractor shall use non-reactive aggregates from suitable quarries for concrete work. The Contractor shall use deformed steel reinforcement bars rolled from Pakistan Steel Mills billet or equivalent from re-rolling mills proposed by the Contractor and approved by the Engineer.

SP-14 INSPECTIONS AND TESTS

14.1 Inspection

All equipment and materials furnished under the Contract and all work performed in connection therewith under the Contract shall be subject to inspection and testing by the Engineer or his authorized agent at all times and in all stages of completion. Inspection at the manufacturer's plant may be made to determine that the equipment and materials meet the requirements of these Specifications. The Contractor shall notify the Engineer not less than 05 days in advance of the date and place that the equipment or materials will be available for inspection and testing. No equipment or materials shall be transported until inspection at the manufacturer's plant has been made. Acceptance of equipment and materials or the waiving of inspection and testing thereof shall in no way relieve the Contractor of the responsibility for furnishing equipment and materials meeting the requirements of the Contract Documents. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items or Items to be imported for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend for approval one of them or as contractor for other than those manufacturer proposed in shape of submittal by contractor for someone else on equivalency basis. Pre-shipment inspection of the selected manufacturer's equipment will be carried out by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

14.2 Testing

The Engineer will make such tests on concrete, aggregates, fill materials, reinforcing steel and other materials as he may from time to time select, and the Contractor shall provide at his own cost such samples or assistance in sampling materials at the Site as the Engineer may reasonably require. Testing by the Engineer shall in no way relieve the Contractor of his responsibility to test materials to ensure that they meet all the specified requirements and to control their quality. The Engineer may accept that items manufactured away from the Site meeting the specified requirements without further testing subject to the Contractor furnishing satisfactory proof of compliance with these

Specifications in one or more of the ways described below.

The Contractor shall provide free of charge such material testing equipment, labour, materials, electricity, fuel, water, stores, apparatus and feedstock as may be reasonably required by the Employer to carry out the Tests as per the required frequency. Further contractor shall make all kind of arrangements for third party inspection/ Witnessing of Factory Acceptance Tests of major components of manufacturing factory whether located in Pakistan/abroad for four officials (02 from Employer and 02 from Engineer-In-charge side). All expanses regarding air tickets, visa in case of abroad, boarding/lodging, food, transport, hoteling etc. will be borne by the Contractor and no extra/additional payment will be made to contractor. Contractor shall quote his prices keeping in view of such expanses.

Manufacturer's Certificate of Compliance

In the case of standard labelled stock products of standard manufacture which have a record of satisfactory performance in similar work over a period of not less than five years, the Engineer may accept a notarised statement from the approved manufacturer certifying that the product conforms to the applicable specifications.

Mill Certificates

Regarding materials for which such practice is usual, the Engineer may accept the approved manufacturer's certified mill and laboratory certificates.

Testing Laboratory Certificates

The Engineer may accept a certificate from a renowned commercial testing laboratory, satisfactory to him, certifying that the product has been tested within a period acceptable to the Engineer and that it conforms to the requirements of these Specifications.

Service Record

If a demonstrable satisfactory service record for a period not less than five (05) years is available for a material, certain specified tests may be waived off by the Engineer.

14.3 Cost

The cost of any laboratory, field and shop tests required from any agency of compliance with under Specifications shall be borne by the Contractor.

SP-15 CONSTRUCTION PROGRAMME

15.1 General

The Contractor shall submit his programme for execution of the Works in accordance with Clause 14.1 [*Programme to be Submitted*], under the Conditions of Contract, to the Engineer for approval. The programme may contain adjustments if any, to the CPM (Critical Path Method) based Bar Chart submitted with the Bid. The completion date, milestones, and key targets indicated in Appendix-E to Bid, or dates earlier than the said milestone and key target dates, shall be shown on the construction programme to be submitted by the Contractor. Other dates including rates of progress for various parts of the Works in the construction programme may be changed by the Contractor and

submitted for approval. The operations under each section of the programme submitted by the Contractor shall be broken down in greater detail than those shown on the Schedule submitted with the Bid.

The programme shall also show the timing of provision of any facilities the Contractor is required to supply for use by the Employer and the Engineer, in such manner that these shall be available as stipulated in the Contract and instructed by the Engineer.

15.2 Submittals

- (a) The initial submittal of network analysis shall include a description of the major items of construction equipment planned to be used. The description of the equipment shall include the type, number of units, their capacity, etc. The forecast shall include the estimated dates on which each major item of construction equipment will be on the job. The Bar Chart and the Network Analysis shall be submitted within 14 days after receipt of the Letter of Acceptance.

The submittal shall consist of:

- (i) 4 copies of the Bar Chart.
- (ii) A narrative summary of the construction plan.
- (iii) A backup of the schedule files on re-writable CD disks or pen drive.

The Engineer will review the construction schedule and the approved initial submittal will be the Project Baseline Schedule by which the performance of the Contractor will be measured

- (b) Monthly submittals shall show completed progress of each activity during the past month, with forecast for the coming month. Hammock networks shall be incorporated on the Base Line Schedule of activities. Each monthly submittal shall contain:
- (i) 4 copies of the Bar Chart.
 - (ii) 4 copies of a time scaled logic diagram for the next three months.
 - (iii) A narrative summary of the schedule related issues and status. The narrative shall include discussion of pending schedule changes submitted to the Engineer in the past month.
 - (iv) A backup of the schedule files on rewritable CDs or pen drive.
- (c) The successful bidder shall submit the supervision plan in respect of Environmental Health Safety SOPs and Environmental & Social Management & Monitoring Plan on monthly basis along-with other deliverables manifesting the progress activities as per schedule.

15.3 Progress Schedule

Both the bar charts and network analysis schedules shall be continuously monitored and kept current and updated by the Contractor throughout the work, and at least on every milestone date and submitted for approval. The Contractor's schedules shall be available for examination during normal business hours. All revisions shall be accompanied by a detailed explanation of the reasons for the changes and describing any new or modified construction procedure proposed and, if applicable, any steps

being taken to improve progress to achieve completion within the Time for Completion.

SP-16 LAY OUT OF WORKS

16.1 Reference Points, Lines and Levels

The Engineer will lay out a reference line or lines in the field with accompanying points and/or bench-marks to enable the Contractor to establish there from survey control for construction.

16.2 Verification

The Engineer may make checks as the work progresses to verify lines, levels and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirements of the Specifications and the Drawings. Shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and Specifications and the lines, levels and grades given therein.

16.3 Primary Control Points

Based upon the Engineer's basic control, the Contractor shall provide his own primary control points, as needed for the Works, and shall preserve and maintain them until otherwise authorized.

The Contractor shall be responsible for maintaining all survey markers/monuments, and property corners. If any markers/monuments are disturbed or destroyed by the Contractor, the Contractor shall arrange, at his own cost, to retrace and replace them to the entire satisfaction of the Engineer. If a monument cannot be replaced in its original position, the Contractor shall install a witness corner. The Contractor shall complete and file monument reference cards on all monuments as per instructions of the Engineer.

16.4 Construction Surveyors

The Contractor shall provide experienced construction surveyor/s with adequate experience in the construction surveys similar in nature as required by this Contract.

16.5 Basic Control Monument

Based upon the Engineer's established basic control monuments, the Contractor shall establish all lines and grades necessary to control the Works, and shall be responsible for all measurements that may be required for execution of the Works to the tolerance prescribed in Sub-Clause 16.7 below.

16.6 Surveys and Computations

The Contractor shall perform such surveys and computations as are necessary to determine quantities of work performed or placed during each progress payment period, and shall also perform all surveys required by the Engineer to determine final quantities of work in place. The Engineer will determine final quantities based on original ground levels determined by the Contractor and agreed by the Engineer.

The Contractor shall notify the Engineer at least 24 hours before performing a quantity survey and, unless specifically waived, quantity surveys shall be performed in the

presence of and agreed by an authorized representative of the Engineer.

16.7 Tolerances

Degree of accuracy for the survey works shall satisfy the following specified tolerances:

- (a) Alignment of tangents and curves shall be within 0.1 foot for 1,000 feet i.e., an accuracy of 1:10,000.
- (b) Structure points shall be set within 0.01 foot accuracy from point to point, except where tighter tolerances are required.
- (c) Cross-section points shall be located within 0.10 foot, horizontally and 0.01 foot vertically.
- (d) Permissible closing error for a levelling line meant for establishing Temporary Bench Mark (TBMs) shall not exceed $0.045 \times \sqrt{M}$ foot, where M is in miles. The permissible closing error shall be duly adjusted.

16.8 Material and Equipment

The Contractor shall provide all materials, equipment and labour required for work.

SP-17 STANDARDS AND SPECIFICATIONS

Except as otherwise provided by these Specifications or the Drawings all materials, equipment and fabrication and testing thereof shall conform to the latest applicable Standards and Specifications contained in the following list or to equivalent applicable Standards and Specifications. Copies of these Standards and Specifications may be purchased from the indicated agency, which publishes them:

- | | | |
|---|--|------|
| - | British Standard | BS |
| - | American Concrete Institute | ACI |
| - | American Society for Testing and Materials | ASTM |

Where relevant Standards and Codes of Practice now quote metric units only, these are to be interpreted as required to the nearest equivalent imperial (foot/pound) unit for the purposes of this Contract.

All materials and workmanship not fully specified herein or covered by an approved Standard shall be of such a kind as is used in first class work and suitable to the climate in the Project Area.

If the Contractor, at any time and for any reason, wishes to deviate from the above standards or desires to use material or equipment not covered by the above standards, he shall state the exact nature of the changes, the reason for making the change and shall submit complete specifications of the materials and equipment to the Engineer for approval.

SP-18 ACCESS TO SITE

18.1 Right of Way for Access and Haul Routes

The Contractor shall be responsible for providing and maintaining access routes for the

Works. The right of way for access to the Works from existing roads will be provided by the Employer. The Contractor shall make his own investigations of the condition of available public or private roads and of clearances, restrictions, bridge load limits and other limitations that affect or may affect transportation and ingress and egress at the job sites. The repair and reinstatement of roadways, drain and canal banks if damaged during operation shall be the responsibility of the Contractor without any additional cost to the Employer. The Employer controlled right of way shall be the Right of Way (ROW) available to the Contractor for carrying out the Works.

18.2 Restoration of Site

On completion of the Works, the Site shall be restored by the Contractor to its original conditions as far as practicable and left in tidy condition.

SP-19 FACILITIES TO BE PROVIDED BY THE CONTRACTOR AT SITE

19.1 Contractor's Camps

The Contractor is required to arrange the facility of housing in nearby area of the project for the labour through portable containers or house on rent in compliance with PMDFC SOPs for labour / construction worker including women worker. In case of failure and on lodging of complaint by the labour to the Engineer will result in fining of Rs. 5000 / day. Preference shall be given to utilization of local labour / construction workers.

19.2 Temporary Sanitary Facilities

- (a) The Contractor shall provide adequate temporary sanitary conveniences for the use of his employees and persons engaged on the work, including the Engineer and his employees. He shall ensure that his employees and labour make proper use of the latrines and do not foul the Site.
- (b) In addition to toilet facilities, suitable and adequate washing facilities shall be provided.
- (c) Sanitary facilities shall be located as directed or approved by the Engineer and shall be maintained in a clean and sanitary condition during the entire course of the work.
- (d) The septic tank and/or temporary holding tank(s) shall be kept pumped out at such intervals that the tank(s) will not overflow and contaminate the ground, flowing streams or surface drainage.
- (e) On completion of the Works, sanitary facilities shall be properly disinfected and all evidence of same including temporary buried tanks and foundations removed from the Site.

19.3 Medical Facilities

The Contractor shall arrange provision of adequate medical facilities for his employees.

Adequately equipped dispensary/ies with qualified and experienced staff shall be provided by the Contractor at his camps. In addition suitably equipped first aid stations manned by trained staff shall be provided at strategic locations, to administer first aid treatment at all times free of charge to all persons on the Site, including personnel of

the Engineer and the Employer. The nature, number and location of facilities furnished and the Contractor's staff for administering first-aid treatment shall meet the requirements of the Health Services of the Government of Pakistan.

19.4 Operation and Maintenance of the Camps and Facilities

For the purpose of operation and maintenance of the camps and facilities provided as above, the Contractor shall comply with all applicable provisions of the Pakistani Labour Laws and specifically to the following requirements:

- (a) Camp areas shall be kept dry and free from dense vegetation. Measures shall be taken to control dust within the camp area, by water or oil spraying or other approved means.
- (b) Any ponded water around a camp shall be sprayed weekly with oil or other approved anti-malaria liquid.
- (c) The Contractor shall provide garbage collection and disposal services for his construction camps and the Engineer's office. Disposal shall be by burial (landfill) and/or incineration. Disposal area shall be located a sufficient distance away and downwind from camp facilities and offices so as not to create objectionable odours or health hazards. Equipment, methods of collection and disposal and location of disposal areas shall be submitted to the Engineer for approval.
- (d) The interior walls and ceilings of buildings shall be lime washed or painted. The whole of the open spaces around the buildings shall be swept each day and all rubbish removed. The living areas shall be suitable for the climatic conditions. Roof height shall not be less than 10.5 ft. and adequate number of ceiling fans shall be provided.
- (e) Adequate sanitary conveniences, including washing and bathing places shall be maintained at each of the camps. All sanitary fixtures, receptacles, toilet rooms, lavatories and wash rooms shall be cleaned and disinfected at least once every day.

19.5 Drainage

The ground around the buildings shall be graded to slope away from building perimeters so as to provide adequate drainage and shall be thoroughly compacted. Excavated material shall be disposed of by filling in low areas or as otherwise directed by the Engineer.

19.6 Water Supply

The Contractor shall arrange for the water supply for his staff residences, labour camps, site offices, work yards, workshops, and various camp facilities. Construction of pumps, storage tanks, overhead tank, distribution system, and their proper running and maintenance shall be his responsibility. Water shall be supplied to the camps 24 hours a day. Adequate supply of water, cooled in summer, shall be ensured in camps and sites of work. Water samples shall be tested periodically to ensure that it is fit for human consumption.

19.7 Electricity Supply

The Contractor shall provide electricity required for the Works including labour camps, staff residences, offices including the Engineer's Site office and various camp facilities. The Contractor shall also provide sufficient standby electricity supply arrangements for his needs.

19.8 Utility Lines

The Contractor Shall conduct his operations, make necessary arrangements, take suitable precautions and perform all required work incidental to the protection of and avoidance of interference with power, telephone, water and other utilities within the areas of his operations in connection with the Contract. No separate payment shall be made for such incidental work. In case the utility lines are required to be relocated the Contractor shall arrange their relocation with the concerned departments and organizations. The Contractor shall obtain cost estimates for relocation of utilities for the Engineer/Employer's approval before execution of the Work. The Contractor shall be reimbursed the actual approved cost carried in by him.

19.9 Handing Over/Removal after Completion

Upon completion of the Works, the Contractor shall remove all the Contractor's camps, labour and staff accommodation, site office, other installations and buildings constructed and all facilities provided by the Contractor under this Clause, and the Site cleared and reinstated to the satisfaction of the Engineer.

19.10 Measurement and Payment

Except as provided in SP-19.8 no separate payment will be made for the work included under the Clause SP-19; the cost thereof is deemed to be included in the rates and prices of other items entered in the Bill of Quantities. The contractor is bound to comply with all the instructions stated in SP-19 and in case of otherwise or if any complaint lodged by the labour to the Engineer / Client, the contractor will be penalized for amounting to Rs. 5000 / day.

SP-20 PROVISION OF FACILITIES FOR THE ENGINEER (FOR CONSULTANT STAFF) /EMPLOYER

20.1 Facilities for Engineer/Employer's Staff:

(a) **Site offices:**

One furnished portacabin with all the requisite accessories for the Engineer / Employer

20.2 Ownership of Site facilities

All facilities/utilities provided by the contractor as stated above in Clause-20.1 will be property of Engineer In charge after successful handing taking over of project and expiration of defect liability period considering that the said amount is included in all items listed in Bill of Quantities.

20.3 Measurement and Payment

No extra/separate payment will be made to Contractor considering that Contractor has

quoted his bid keeping in view of such expanses.

SP-21 PROGRESS PHOTOGRAPHS

The Contractor shall furnish to the Engineer every month, for the site of Fifteen colour photographs on CD or pen drive and 4 colour prints of each photograph taken with a digital camera to clearly show the progress of construction. Each photograph shall be submitted in four prints of size 20 cm x 25 cm. Each print shall be marked on the back side with the caption of the activity, date and serial number. There shall be no writing, lettering or marking on the face of the photograph. Progress photographs shall be submitted from the month, following the month in which Notice to Commence is issued and continued till completion of the Works.

No separate payment will be made for the work specified herein and the cost thereof shall be deemed to be included in the other items of the Bill of Quantities.

SP-22 SITE FACILITIES TO BE PROVIDED BY THE EMPLOYER

22.1 General

Without prejudice to the generality of the various clauses of the Contract and except for the facilities referred to hereinafter, particular attention is drawn to the obligations of the Contractor to make his own arrangements for providing, maintenance and furnishing of labour camps, staff residences, offices, workshops, stores watching and guarding thereof.

The Contractor shall submit his written demand of his requirements of land for his Site Facilities as herein specified, at least 28 days in advance.

22.2 Area for Storage and Workshop

The contractor will arrange an open area of adequate size for the facilities listed in Appendix-H to Tender and approved by the Engineer, for use as storage, and workshop areas. The Contractor shall provide and maintain at his own cost, all fencing, any necessary clearing, land levelling, foundations and above ground structures for sheds, covered areas, workshops, electricity, telephone, water distribution and waste water disposal etc, as he may need to meet his requirements.

SP-23 SAFETY MEASURES AT CONSTRUCTION SITE

- a) Pursuant to the provisions of Sub-Clause, for Safety Measures the Contractor shall observe high standards of safety for men and machines at all times and with regard to safety.
- b) The Contractor shall take all possible measures to protect his personnel from harm. In case of any casualty or injury to any person due to the Contractor's operations, the Contractor shall ensure quality medical treatment and payment of due compensation.
- c) The Contractor shall not permit casual observers to come close to the sites where excavation and other hazardous operations are being performed.

SP-24 ENVIRONMENTAL PROTECTION

The Contractor shall exercise 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 the Permanent Works, approved construction roads and the Temporary Works, and for excavation operations, all 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 to the natural appearance of the landscape. Where unnecessary destruction, scarring, damage or defacing may occur as a result of the Contractor's operations, it shall be repaired, replanted, or otherwise corrected as directed by the Engineer at no additional cost to the Employer.

Contractor will get appreciation/performance certificate from Engineer in charge and reward of Rs. 200,000/- upon compliance with ESMMP attributes at the last IPC on recommendation of DPO-ESM to engineering in charge

Contract may be terminated upon serving of 4th ESMMP Non-Compliance notice from the DPO-ESM to Engineer in charge.

Contractor will hire services of a Qualified Environmentalist before the commencement of construction activities under the Sub-Project. (CV to be shared for approval to DPO-ESM)

The Environmental Health Safety SOPs for Labour / Construction Workers including Women workers and Environmental & Social Management and Monitoring Plan are attached with this bidding document as **Annexure-1** and **Annexure-II**

**Comprehensive Sewerage
System in Okara City**

Package II: Construction of Waste Water Treatment Plant

Summary of Cost

Sr. No	Description	Cost (Rs.)
1	Construction of Waste Water Treatment Plant	
2	ESMMP Cost	
	Grand Total Cost	

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head 1. Construction of Waste Water Treatment Plant

Sr. #	Description	Amount (Rs.)
A	Anearobic, Facultative and Sludge Drying Pond	
A-1	Anearobic, Facultative and Sludge Drying Pond (MRS)	Rs.
A-2	Anearobic, Facultative and Sludge Drying Pond (Non MRS)	Rs.
B	Inlet/Outlet Channels, Collection/ Distribution Chambers, Storm Water Drain & Protection Wall	
B-1	Inlet/Outlet Channels & Collection/ Distribution Chambers Storm Drain (MRS)	Rs.
B-2	Inlet/Outlet Channels & Collection/ Distribution Chambers Storm Drain (NON MRS)	Rs.
C	Office Building	Rs.
D	Staff building	Rs.
E	Area Lighting works of WWTP	Rs.
F	Outlet & ByPass Chanel	Rs.
G	Fencing	Rs.
		Rs.

Carried over to the Main Summary

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # A-1: Anearobic, Facultative and Sludge Drying Pond

Sr. No.	Chap # / Item #	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	3/47	Jungle clearance and removing within 100ft. (30m).				
		a) light	1000 Sft	123,786.70		
2	3/52	Earthwork in excavation of drains, irrigation channels through excavator / drag lines in all kind of soil and conditions(dry, slush,daldal and under water) including its disposal and preparation of working pad for operation of machinery. (Rates includes 100 ft lead)	1000 Cft	24,815,961.00		
3	3/25	Compaction of earthwork with power road roller, including ploughing, mixing, moisturing earth to optimum moisture content in layers, etc, complete:- i) 95% to 100% maximum modified AASHO dry density. (Qunatity of compaction includes embankments and in bed of ponds from excavated earth within site. (Contractor will stack the excavated earth from site at suitable places and then will use it for embankments. Quantity of excavated material may	1000 Cft	198,478.00		
4	C-3/20b	Dressing of earthwork (done by machinery or otherwise and left undressed) to designed section.	100 Sft	283,540.00		
5	18/20	Providing and laying dry brick pavement /soling in streets or roads, etc. sand groundted, laid in proper camber, including preparation, watering, compaction of bed to proper camber, and sand cushion.	100 Cft	141,770.00		
6	26/42	Providing and fixing barbed wire fencing, with 4 horizontal and two cross wires, with R.C.C. 1:2:4 posts, 5.5"x6"x9" (1.68mx150mmx225 mm) at 8 ft. (2.45 m) centre to centre, reinforced with 4 No. 3/8" (10 mm) dia vertical bars and 1/8" (3 mm) dia stirrups 12" (300 mm) centre to centre, complete in all respects.. ii) in cement concrete 1:4:8 base of size 12"x12"x21" (300x300x525 mm).	100 Rft	8,495.00		
7	Analysis attached	Construction of gate (RA-01 Attached) Making and fixing steel grated doors, complete with locking arrangement, angle iron frame 2"x2"x3/8" 50x50x10 mm) and 3/4" (20 mm) square bars 4" (100 mm) centre to centre.	No.	2.00		
8	3/17	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) (This is provisional quantity and will be paid as per actual lead chart to be approved by the Engineer) b) for every 330 ft. (100 m) additional lead or part thereof, beyond 1/4 mile (400 m) upto one mile. (1.6 Km.) (for 1200m)	1000 Cft	13,147,512		
9	26/37 (ii)	Supplying and laying polythene sheet ii) 500 gauge (.005" thick)	Per Sft.	1,776,700		
10	16/31i+iii	Providing and laying stone pitching, hand packed, with surface levelled off to the correct section and voids filled in 1:8 cement, sand mortar, in floors of bridges along banks and in appons etc i) top layer on slope	100 Cft	174,081		
11	6.6	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (i) Ratio 1: 4: 8	100 Cft	163		

12	6.6	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (3) Type C (nominal mix 1: 2: 4)		Cft	788			
13	6.12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-	100	kg	3,940			
Total Amount MRS Items								
							Say Rs.	
Carried over to the Sub Head 1 Sr. A-1								

RATE ANALYSIS FOR CONSTRUCTION OF GATE RA-01

Construction of Main Gate:

Item No.	Ref Sor Item/Page	Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
1	C-3/21	Excavation in foundation of bulidings, bridges and other structures including dagbelling, dressing, refilling around structures with excavated earth watering and reamming lead upto one chain and lift ordinary soil. 0' to 5.0 ft. Depth	1000 Cft	45.00		
2	C-6/3	Cement concrete brick or stone ballast 1-1/2" to 2" (40mm to 50 mm guage in foundation and plinth Ratio (1:4:8)	100 Cft	4.50		
3	C-7/7	Pacca brick work other than building upto 10 ft height in 1:5 cement sand mortor.	100 Cft	56.25		
4	C-6/36	P/L damp proof course with cement concrete 1:2:4 using cement sand and shingle including bitumen coating with 2 coats of bitumen 2" thick	100 Sft	7.88		
5	C-7/5	Pucca brick work in ground floor:- (i) Cement sand mortar 1:4	100 Cft	55.13		
6	C-11/18	Cement pointing struck joints on walls, upto 20' height: b) ratio 1:2	100 Sft	147.00		
7	C6-6-a-iii	P/L reinforced cement concrete (including prestressed concrete), using coarse sand and aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing,rendering and finishing exposed surface, complete. (a) Reinforced cement concrete in slab of Raft/strip foundation; base slab of column and retaining walls; etc. and other structural members other than those mentioned in 5(a) (i) above not requiring from work, complete in all respects:- Type C (nominal mix 1:2: 4)	Cft	31.53		
8	C-6/12	Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust (b) deformed bars. 60 grade	100 Kg	134.31		
9	C-25/30	Making and fixing steel grated doors complete with locking arrangement, angle iron frame 2"x2"x3/8" and 3/4" square walls 4" center to center.	Sft	96.00		
10	C-13/5	Preparing surface and painting guard bars , gates of iron bars priming coat each subsequent coat (Two Coats)	100 Sft 100 Sft	192.00 192.00		
11	C-1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Ch.No. 1, Item.No. 1)	100 Cft	32.01		

Total:- (Rs.)

Carried over to the Sub Head A-1 Item #7

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # A-2: Anearobic, Facultative and Sludge Drying Pond

SR. NO.	NON MRS	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
					(Rs)	(Rs)
1	RA-02	<p>Providing, laying to designed section and compacting (to at least 90% of the maximum modified Proctor dry density) clay as liner (source to be approved by the Engineer),complete in all respects. Liner material should be compected in layers not exceeding 6"(150mm). Liner material should be compacted slightly wet of optimum. Scarify the top of already compected liner layer to a minimum depth of 1.0 inch before placing the next layer. Clods more then 5.0 mm size must be present in liner material, these must be pulverized before placing. (both in bed & slope)</p> <p>The material suitable to be used for compacted soil liner shall meet the following specifications: Vertical in-situ hydraulic conductivity in compacted state $\leq 1 \times 10^{-7}$ cm/sec Fines (particles passing 0.075 mm sieve) $\geq 30\%$ Plasticity index = 8 – 30 % Gravels (particles passing 75 mm sieve and retaining 4.75 mm sieve) $\leq 20\%$ Maximum particle size ≤ 10 mm (Item rate include lead from any source within district up to WWTP)</p>	Cft	2,595,887		
Total Amount Non MRS Items						
Say Rs.						
Carried over to the Sub Head 1						

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # B.1: Inlet/Outlet Channels & Collection/ Distribution Chambers (MRS)

Sr. No.	MRS 1st Bi-Annual 2023 Chap# / Item#	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	R.A	Main Distribution Chamber (RA-02 Attached)	1 Each	1.00		
2	R.A	RCC Channel (RA-03 Attached)	1 Rft	60.00		
3	R.A	Inlet Chamber (RA-04 Attached)	1 Each	1.00		
4	R.A	Coarse Screen (RA-05 Attached)	1 Each	1.00		
5	R.A	Grit Chamber (RA-06 Attached)	1 Each	1.00		
6	R.A	Inlet Chanel Anarobic pond (RA-07 Attached)	1 Rft	910.00		
7	R.A	Inlet chamber Anarobic pond (RA-08 Attached)	1 Each	4.00		
8	R.A	Outlet Chanel Anarobic pond (RA-09 Attached)	1 Rft	855.00		
9	R.A	Outlet Chamber of Anarobic pond (RA-10 Attached)	1 Each	4.00		
10	R.A	Distribution Chamber (RA-11 Attached)	1 Each	1		
11	R.A	Inlet Chanel Facultative pond (RA-12 Attached)	1 Rft	1375.00		
12	R.A	Inlet Chamber of Facultative pond (RA-13 Attached)	1 Each	4.00		
13	R.A	Outlet Chanel Facultative pond (RA-14 Attached)	1 Rft	1120.00		
14	R.A	Outlet Chamber Facultative pond (RA-15 Attached)	1 Each	4.00		
15	R.A	Stormwater Drain (RA-16 Attached)	1 Rft	4282.00		
16	R.A	Box Culvert (RA-17 Attached)	1 Each	15		
17	R.A	Protection Wall (RA-18 Attached)	1 Rft	3076.00		
					Total Amount MRS Items	

Carried over to the Sub Head 1

RATE ANALYSIS RA-02
CONSTRUCTION OF MAIN DISTRIBUTION CHAMBER

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	1694.00		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	45.38		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal (3) Type (3) Type C (nominal mix 1: 2: 4) Ratio 1:1.5:3	Per Cft	561.00		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(c) Deformed bars (Grade-60)	100 Kg	1,683.00		
6	25. 38	Providing and fixing M.S. angle iron 1½"x1½"x¼" (40x40x6 mm) edge protector nozing of steps of stairs, having holdfast or 3/8" (10 mm) dia M.S. bars	1 P.Rft	20.00		
7	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)				
			100 Cft	513.17		
8	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect.				
		i) 10"wide 6 mm thick	Per Rft	66.00		
9	13/9	Bitumen coating to plastered or cement concrete surface:-				
		i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	110.00		

Total
Carried over to Sub head B.1

RATE ANALYSIS RA-03
CONSTRUCTION OF RCC CHANNEL (60 ft)

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	2250.00		
3	6.5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (i) Ratio 1: 4: 8	100 Cft	168.75		
4	6.6	a)(iii) Reinforced cement concrete in slab of rafts / stripfoundation, base slab of column and retaining walls; etc and footing beams, other structural members complete in all respects:- (3) Type B (nominal mix 1: 2 : 4)	1 Cft	900.00		
5	6.12©	Fabrication of mild steel reinforcement for cement concrete,including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- ('c) Deformed bars (Grade-60)	100 Kg	2,700.00		
6	3.13	Rehandling of earth lead upto a single through of kassi phahorah or shovel .	1000 Cft	2,250.00		

Total
Rate Per Ft.
Carried over to Sub head B.1

RATE ANALYSIS 04

CONSTRUCTION OF INLET CHAMBER

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	4299.75		#
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	230.34		#
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal (3) Type C (nominal mix 1: 2: 4) Ratio 1:2:4	Per Cft	950.63		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	2,851.88		#
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	1,011.36		#

7	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	175.50		
8	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	292.50		#

Total
Carried over to Sub head B.1

RATE ANALYSIS RA-05
CONSTRUCTION OF COARSE SCREEN

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	1367.44		
	6, 5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate). (i) Ratio 1: 4: 8	100 Cft	93.23		
	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal (3) Type C (nominal mix 1: 2: 4)	Per Cft	401.63		
		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (3) Type B (nominal mix 1: 2: 4)	Per Cft	68.00		
2	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	1,408.88		
3	C25/ I 10	Fabrication of heavy steel work, with angl, tees, flat iron, rounded iron and sheet iron for making trasses, girders, tanks etc. including cutting, drilling, revetting, handling, amembling and fixing but excluding erection in position.	100 Kg	187.01		
4	C25/11	Erection in position iron trasses, staging of water tank etc.	100 Kg	187.01		

5	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	59.84		
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Total

Carried over to the Sub Head B.1

RATE ANALYSIS RA-06

CONSTRUCTION OF GRIT CHAMBER

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	11104.20		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	462.68		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal (3) Type C (nominal mix 1: 2: 4)				
5	6/12	(3) Type C (nominal mix 1: 2: 4) Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	Per Cft 100 Kg	4,119.30 12,357.90		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	3,887.72		

7	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect.				
		i) 10"wide 6 mm thick	Per	Rft	238.80	
9	13/9	Bitumen coating to plastered or cement concrete surface:-				
		i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100	Sft	398.00	

Total

Carried over to the Sub Head B.1

RATE ANALYSIS RA-07

CONSTRUCTION OF INLET CHANNEL ANAEROBIC POND (910 ft)

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	26617.50		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	2218.13		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal (3) Type (3) Type C (nominal mix 1: 2: 4) (3) Type C (nominal mix 1: 2: 4)	Per Cft	7,962.50		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	23,887.50		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	8,738.05		

7	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	5,460.00		
8	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	9100.00		

Total
Rate Per Ft
Carried over to the Sub Head B.1

RATE ANALYSIS RA-08
CONSTRUCTION OF INLET CHAMBER ANAROBIC POND

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	887.05		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	73.92		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):- (a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)& (ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (3) Type C (nominal mix 1: 2: 4)	Per Cft	1,033.16		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-	100 Kg	3,099.48		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	936.16		

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
7	C-23/43A	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE-100) working presure pipe, Beta/ Dadex/ Popular/ IIL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects b) a) PN-6 (SDR-26) 355 mm	Rft	200.00		
9	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	18.68		
10	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	100.00		

Total

Carried over to the Sub Head B.1

RATE ANALYSIS RA-09
CONSTRUCTION OF OUTLET CHANNEL ANAROBIC POND (855 ft)

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	38301.86		#VA
2	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	2611.49		#VA
3	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal (3) (3) Type C (nominal mix 1: 2: 4)				
4	6/12	(3) Type C (nominal mix 1: 2: 4) Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-	Per Cft	9,008.85		
		(c) Deformed bars (Grade-60)	100 Kg	27,026.55		#VA
5	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	9,980.45		#VA

6	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	5,130.00		
7	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	8550.00		#V/

Total
Rate Per Ft
Carried over to the Sub Head B.1

RATE ANALYSIS RA-10
CONSTRUCTION OF OUTLET CHAMBER ANAROBIC POND

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	887.05		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	73.92		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):- (a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)& (ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (3) Type C (nominal mix 1: 2: 4)	Per Cft	1,033.16		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-	100 Kg	3,099.48		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	936.16		

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
7	C-23/43a	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE-100) working presure pipe, Beta/ Dadex/ Popular/ IIL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects 355mm	Rft	165.00		
8	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	18.68		
9	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	100.00		

Total

Carried over to the Sub Head B.1

RATE ANALYSIS RA-11
CONSTRUCTION OF DISTRIBUTION CHAMBER

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	1028.50		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	45.38		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)& (ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-3) Type C (nominal mix 1: 2: 4)				
5	6/12	3) Type C (nominal mix 1: 2: 4) Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	Per Cft	340.00		
6	25. 38	Providing and fixing M.S. angle iron 1½"x1½"x¼" (40x40x6 mm) edge protector nozing of steps of stairs, having holdfast or 3/8" (10 mm) dia M.S. bars	100 Kg	1,020.00		
7	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	1 P.Rft	21.00		
			100 Cft	327.53		

8	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	40.00		
9	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	200.00		

Total

Carried over to the Sub Head B.1

RATE ANALYSIS RA-12
CONSTRUCTION OF INLET CHANNEL FACULTATIVE PONDS (1375 ft)

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	64932.45		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	3650.63		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):- (a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)& (ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
5	6/12	(3) Type C (nominal mix 1: 2: 4) Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	Per Cft 100 Kg	16,573.33 49,720.00		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	17,294.78		

7	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	8,250.00		
8	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	13750.00		

Total
Per Ft
Carried over to the Sub Head B.1

RATE ANALYSIS RA-13
CONSTRUCTION OF INLET CHAMBER ANAROBIC POND

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	1084.17		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone Ratio 1:4:8	100 Cft	73.92		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):- (a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)& (ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (1) Type A (nominal mix 1: 2: 4)	Per Cft	102.28		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-	100 Kg	306.84		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	154.22		

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
7	C-23/43A	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE-100) working presure pipe, Beta/ Dadex/ Popular/ IIL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects PN-6 (SDR-26)				
8	6/31A	355 mm Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Rft	200.00		
9	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	Per Rft	18.68		
			100 Sft	100.00		

Total

Carried over to the Sub Head B.1

RATE ANALYSIS RA-14

CONSTRUCTION OF OUTLET CHANNEL FACULTATIVE PONDS (1120 ft)

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	77459.20		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	3057.60		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)& (ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(3) Type C (nominal mix 1: 2: 4)	Per Cft	8,915.20		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(c) Deformed bars (Grade-60)	100 Kg	17,830.40		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	10,313.99		

7	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10" wide 6 mm thick	Per Rft	6,720.00		
8	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	11200.00		

Total
Rate Per Ft
Carried over to the Sub Head B.1

RATE ANALYSIS RA-15

CONSTRUCTION OF OUTLET CHAMBER ANAROBIC POND

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	1281.29		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	73.92		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):- (a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)& (ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (3) Type C (nominal mix 1: 2: 4)	Per Cft	119.64		
5	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-	100 Kg	358.92		
6	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	168.80		

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
7	C-23/43A	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE-100) working presure pipe, Beta/ Dadex/ Popular/ IIL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects PN-6 (SDR-26) 355 mm	Rft	165.00		
8	6/31A	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect. i) 10"wide 6 mm thick	Per Rft	18.68		
9	13/9	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	100.00		
Total						
Carried over to the Sub Head B.1						

RATE ANALYSIS RA-16
CONSTRUCTION OF STORM WATER DRAIN

Sr. No.	Ref. CSR	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	C-3/7	Earthwork excavation in open cutting upto 1.5m depth for storm water channels, drains, sullage drains, in open areas, roads, streets, lanes, including under pining of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed levels and dimensions, trimming, removal of surface water from trenches, backfilling and surplus excavated material disposed of and dressed within 15m lead:-	1000 Cft	102904.79		
2	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone (i) Ratio 1: 4: 8	100 Cft	7814.65		
3	14/9	Brick lining 9"x4½"x3" (225x113x75 mm), in 1:3 cement,sand mortar	100 Cft	5620.13		
4	7 . 4	a) in bed b) on slope Pacca brick work in foundation and plinth in:- i)Cement, sand mortar:- Toe Wall	100 Cft 100 Cft 100 Cft	10758.53 9228.00		
5	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (95km)	100 Cft	7,405.88		

Total
Rate Per Ft
Carried over to the Sub Head B.1

RATE ANALYSIS RA-17

Box Culvert																												
MRS, 2nd BI-ANNUAL-2023 (01.07.2023 to 31.12.2023) DISTRICT OKARA																												
	Clear Water Carrier P.119-120	Size	3.7 Ft	x	5.0 Ft	=	W.hieght	=	5.00 ft	A.exv.depth	=	6.42	W.Th.	0.667	A.RI													
Sr No.	MRS, Reference		Description of Items										Quantity	Rate	Unit	Amount (PKR)												
	Ch	It:No																										
1	3	7	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-																									
		i)	i) ordinary																									
				=	1	x	20.0	x	7.83	x	6.417	=	1004.85															
			Total										=	1004.85	=	1004.85	Cft	1000										
2	6	5.f	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):																									
			(i) Ratio 1: 4: 8																									
				=	1.00	=	20.00	x	6.16	x	0.3333	=	41.09															
			Total										=	41.1	=	41.09	Cft	100										
3	6	6.iii	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):																									
		i)	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-																									
			(2) Type B (nominal mix 1: 1½: 3)																									
			Base Slab										=	1	x	20.0	x	6.330	x	0.667	=	84.40						
			Fillets at base slab										1.00	x	4	x	20.00	x	0.500	x	0.500	=	20.00					
			Total										=	104.4	=	104.40	Cft	1										
1	6	6.i	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):																									
		i)	(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-																									
			(2) Type B (nominal mix 1: 1½: 3)																									
			Top Slab										=	1	x	20.0	x	5.00	x	0.500	=	50.00						
			Total										=	50.0	=	50.00	Cft	1										
		ii)	(a)(ii)Reinforced cement concrete inretaining/ Shear walls laid in situ or precast laid in position, or prestressed members cast in situ (Form work on both sides) , complete in all respects.																									
			(2) Type B (nominal mix 1: 1½: 3)																									
			(i) Upto 9" thick (Avg)																									
			Walls										1.0	x	2	x	20.00	x	0.667	x	5.00	=	133.33					
			Total										=	133.33	=	133.33	Cft	1										
4	6	12.c	Fabrication of mild steel reinforcement for cement concrete,including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-																									
			(c) Deformed bars (Grade-60)																									
			Quantity as per item No.										3	i)	=	154	x	6.00	/	2.204	=	420.33						
			Quantity as per item No.										3	ii)	=	133	x	6.00	/	2.204	=	362.98						
			Total										=	783.30	=	783.30	Kg	100										
5	1	1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Carriage for Bajri quarry sargodha (Sikhan Wali) to site of work (Analysis Attached) 170 Km																									
			Lead upto										170	K.m from Karana quarry District Sargodha.														
			Pcc 1:1.5:3 item No.										3	i)	=	104	x	84.00	/	100.00	=	87.70						
			Pcc 1:1.5:3 item No.										3	ii)	=	133	x	84.00	/	100.00	=	112.00						
			Total										=	199.70	=	199.70	Cft	100										
6	6	31	Providing embedding 10" (250 mm) wide ¼" (6 mm) thick rubber water stopper in expansion joints of R.C.C. roof slab complete in all respects.																									
			At bed Slab																									
				=	1	x	1.000	x	2.00	x	20.00	=	40.00															
			Crosswise																									
				=	1	x	20.00	/	200.00	x	14.33	=	1.43															
			Total										=	41.43	=	41.43	Rft	1										
7	3	13	Rehandling of earthwork:																									
			a) Lead upto a single throw of Kassi, phaorah or shovel																									
			Along RCC B.slab										1	x	2	x	20.0	x	0.333	x	0.667	=	8.89					
			Along RCC walls										1	x	2	x	20.0	x	0.833	x	6.417	=	213.89					
			50% of item No.																		=	0.50	x	222.78	=	111.39	Cft	1000
			b) Upto a lead of 50 ft. (15 m).																									
			50% of item No.										7	a							=	0.50	x	222.78	=	111.39	Cft	1000
8	3	24.c	Compaction of earthwork (soft, ordinary or hard soil) :-																									
			c) Ramming earthwork (all types of soil).																									
			Qty.as per item No.										9	a	b						=	111.4	+	111.39	=	222.78		
			Total										=	222.78	=	222.78	Cft	1000										

Sr No.	MRS, Reference		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Ch	It:No					
9	3	17.a.b	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m).Lead upto 1/2 mile upto proposed site of WWTP.				
			a) upto ¼ mile (400 m).	=			
			b) for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	=			
			Qty.as per item No.	9	a	b	= 1004.9 + 0.00 = 1004.85
			Deductions				
			Volume of back fill as per item.No.	=	7.00	a.b	= 222.78 = 222.78
			Balance total	=	1004.85	- 222.78	= 782.07 = 782.07
							= 782.07 Cft
							Total 1000
Carried over to the Sub Head B.1							

RATE ANALYSIS RA-18

CONSTRUCTION OF PROTECTION WALL

Sr. No.	Chap # / Item #	Description	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	3/52	Earthwork in excavation of drains, irrigation channels through excavator / drag lines in all kind of soil and conditions(dry, slush,daldal and under water) including its disposal and preparation of working pad for operation of machinery. (Rates includes 100 ft lead)	1000 Cft	32,298.00		
2	Ch-10 Item 3	Supplying and filling sand under floor; or plugging in wells.	100 Cft	7,690.00		
3	6 5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate).				
		i) Ratio 1: 4: 8	100 Cft	12,884.60		
		h) Ratio 1: 3: 6	100 Cft	11,535.00		
4	16/31i	Providing and laying stone pitching, hand packed, with surface levelled off to the correct section and voids filled in 1:8 cement, sand mortar, in floors of bridges along banks				
		and in appons etc i) top layer on slope	100 Cft	15,380.00		
5	16/31i+iii	Providing and laying stone pitching, hand packed, with surface levelled off to the correct section and voids filled in 1:8 cement, sand mortar, in floors of bridges along banks				
		and in appons etc iii) stone pitching/filling on slope or on level (other than top layer).	100 Cft	9,228.00		
Total Amount MRS Items						
Carried over to the Sub Head B.1						

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # B.2: Inlet/Outlet Channels & Collection/ Distribution Chambers (NON MRS)

ITEM NO.	NON MRS	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT		
					(Rs)	(Rs)		
1		Providing and fixing manual and gear operated C.I penstock gate B.S.S 7775 of verious size with CI shutter and CI frame channel with interior brass channel on bottom and two sides through which gate travels i/c non-magnetic SS spindle with square thread CI head stock and wheel etc complete in all respect as per drawing and/or directed by the engineer incharge. Penstock Gate for 3'x2' Clear Opening Penstock Gate for 4.5'x2' Clear Opening Penstock Gate Size 8'x3' Clear Opening Penstock Gate Size 2'x2' Clear Opening						
							Each	1.00
							Each	1.00
							Each	1.00
2		Providing and fixing sluice valve of B.S.S. quality and weight, Class `B', for cast iron pipe line, and Asbestos cement pipe line (including cost of jointing material):- 14" i/d (355 mm)						
							Each	16.00
Total Amount Non MRS Items								
Carried over to the Sub Head 1								

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # C: Office Building

SR. NO	MRS 1st Bi-Annual	DESCRIPTION	UNIT	QUANTIT Y	UNIT RATE	AMOUNT
					(Rs)	(Rs)
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead upto one chain (30 m)lift upto 5 ft (1.5m) i) By Manual ii) Ordinary soil	1000 Cft	10.92		
2	26/43	Spraying termite proofing by using liquid FMC/ Biflex/ Terminix Exin/ Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability- HEXSTAR with Ratio (1:250) =540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect. as approved by the Engineer Incharge	Sft	7,139.56		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate). (f) Nominal mix Ratio 1: 2: 4 (h) Nominal mix Ratio 1: 3: 6	100 Cft 100 Cft	0.63 3.50		
4	7/4	Pacca brick work in foundation and plinth i) Cement, sand mortar i) Cement, sand mortar Ratio 1 : 3	100 Cft	11.55		
5	6/36	Providing and laying damp proof course of cement concrete 1:2:4 (cement, sand, shingle), including bitumen coating. (b) with 2 coats of bitumen: i) 1½" thick (40 mm)	100 Sft	2.83		
6	6/37	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:- (a) with one coat of bitumen and one coat of polythene sheet 500 gauge: ii) Ratio 1:3 b) ¾" thick (20 mm)	100 Sft	2.33		
7	7/5	Pacca brick work in ground floor:- i) cement, sand mortar Ratio 1:3	100 Cft	19.61		
8	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):- (a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	Per Cft	734.24		
9	6/12	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and other structural members other than those mentioned in 5(a) (i) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (2) Type B (nominal mix 1: 1½: 3) Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	Per Cft 100 Kg	562.18 29.41		
10	Chap-1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (130km)	100 Cft	14.66		

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # C: Office Building

SR. NO	MRS 1st Bi-Annual	DESCRIPTION	UNIT	QUANTIT Y	UNIT RATE	AMOUNT
					(Rs)	(Rs)
11	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- a) 3/8" (10 mm) thick	100 Sft	40.63		
12	11/10	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. c) 1:4	100 Sft	13.68		
13	3/15	Filling, watering and ramming earth under floors:- (i) with surplus earth from foundation, etc. (ii) with new earth excavated from out side, lead upto one chain (30m)	1000 Cft 1000 cft	1.27 0.35		
14	3/16	Extra for every 50 ft. (15 m) additional lead or part thereof i) for earth work soft, ordinary, hard and very heard (up to 1000 ft)	1000 cft	7.00		
15	3-Oct	Supplying and filling sand under floor; or plugging in wells. (Provisional as Slect Fill)	100 Cft	50.39		
16	6/2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.	100 Cft	1.35		
17	10/42	Providing and laying superb quality Porcelain glazed tiles flooring of MASTER brand of specified size in approved design, Color and Shade with adhesive/bond over 3/4"thick (1:3) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge.				
		a) Full body Glazed tiles (ii) 600mmx 600 mm	Per Sft	375.07		
18	10/43	Providing and laying superb quality Porcelain glazed tiles of Master brand, skirting/dado of specified size, Color and Shade with adhesive / bond over 1/2"thick (1:2) cement plaster i/c the cost of and sealer for finishing the joints, cutting grinding complete in all respect as approved and directed by the Engineer Incharge.				
		a) Full body Glazed Tile (ii) 600mm x600 mm	Per Sft	255.19		
20	9/5	Single layer of tiles 225 x 113 x 40 mm laid over 100mm earth and 25mm mud plaster without bhoosa grouted with cement sand 1:3 on top of RCC roof slab provided with 1.72kg/sq.m bitumen coating sand blinded	100 Sft	12.94		
21	26/37	Supplying and laying polythene sheet over D.P.C under floors and on roofs, etc. (i) 300 gauge (0.003" thick)	Per Sft	1,294.00		
22	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150mm)	Each	1.00		
23	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	Each	1.00		
24	7-Oct	Dry brick on edge paving, sand grouted, including preparation of bed by watering, ramming & bringing the same to proper camber, by ½ " (13 mm) thick mud plaster.	100 Sft	0.50		
25	8-Oct	Grouting 4½" (113 mm) dry brick work with cement mortar ratio 1: 5	100 Sft	0.50		
26	12/64	Providing and fixing 1-1/2" thick G.I sheet forged door comprising of G.I pressed double skin pannelled sheet of 22 SWG in specified width of rails, Styles and panels pressed on both sides of fillet (Honey Comb paper), dully fixed in chowkat with Archtrative on one side, with heavy duty 4 No. steel hinges i/c M.S Tower bolt 9" long, M.S Sliding bolt 12" long, Rowel bolt for Hold Fast, duly powder coated paint and punching of required holes as approved and directed by the Engineer Incharge .	Per Sft	28.00		
27	12/61	Providing and fixing sliding bolt to doors:- iii) brass sliding bolt, 10" (250 mm) long	Each	5.00		
28	12/50(i)	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1½" (30 mm) thick and partial wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):-	Per Sft	112.00		

COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # C: Office Building

SR. NO	MRS 1st Bi-Annual	DESCRIPTION	UNIT	QUANTIT Y	UNIT RATE	AMOUNT
					(Rs)	(Rs)
29	12/17	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/ welded/ supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6-Nos) welded/ screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge.				
		(ii) 10.50 " wide	Per Sft	112.00		
28	13/5 (C i+ii)	Painting new surface:- c) Preparing surface and painting of doors and windows any type (including edges):- i) priming coat. ii) each subsequent coat of paint. (2 coats)	100 Sft	2.24		
29	25/52	Providing and fitting all types of glazed aluminium windows of anodised bronze colour partly fixed and partly sliding using delux sections of approved manufacturer having frame size of 100 x 30 mm (4"x3/4") and leaf frame sections of 50 x 20 mm (2"x3/4"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using pproved standard latches, hardware etc., as approved by the Engineer in-charge.	Per Sft	96.00		
30	25/58	Providing and fixing M.S. flat 1/2"x1/8" (13mm x 3mm) grill including 3/4" x 1/8" (20 mmx3 mm) M.S. flat f rame, in windows of approved design, including painting three coats, complete in all respects.	Per Sft	96.00		
31	11/22	Priming coat of chalk under distemper.	100 Sft	27.21		
32	11/23	Distemperring (a) new surface ii) two coats	100 Sft	27.21		
33	11/18	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght:- (external wall) a) ratio 1:2	100 Sft	11.31		
		PLUMBING WORKS				
34	19/7	Providing and fitting glazed earthen ware wash hand basin 56x40cm, including bracket set, waste pipe and waste coupling, etc. ii) coloured, with pedestal	Each	1.00		
35	19/8	Providing and fixing stainless steel sink withdrain board, size 120x60 cm (48"x24") including bracket set, waste pipe and waste coupling.	Each	1.00		
36	19/29	Providing and fixing chromium plated shower rose:- ii) 2x15 cm (3/4"x6")	Each	1.00		
37	19/30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	3.00		
38	23/23	Providing, laying, cutting, jointing, testing and disinfecting G.I. pipe line in trenches, with socket joints, using G.I pipes of B.S.S. 1387-1967complete in all respects with specials and valves:- ii) Medium Quality b) 3/4" i/d (20 mm) 2.65mm thick c) 1" i/d (25 mm) 3.25mm thick	Per Rft Per Rft	20.00 20.00		
39	19/4	Providing and fitting glazed earthen ware water closet, squatter type, combined with foot rest. ii) coloured	Each	1.00		
40	19/13	Providing and fitting plastic made low down flushing cistern 1363 liters (3 gallons) capacity, including bracket set, copper connection etc., complete. ii) coloured	Each	1.00		
41	19/20	Providing and fixing looking glass 55x40 cm size and 5mm thick, first quality	Each	1.00		
42	19/23	Providing and fitting i) Plastic Soap Dish ii) Plastic toilet paper holder iii) Plastic towel rail iv) Plastic shelf 60X13cm with bracket and railing	Each Each Each Each	1.00 1.00 1.00 1.00		
43	19/27	Providing and fixing chromium plated bib cock i) 2 cm (3/4")	Each	4.00		

COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # C: Office Building

SR. NO	MRS 1st Bi-Annual	DESCRIPTION	UNIT	QUANTIT Y	UNIT RATE	AMOUNT
					(Rs)	(Rs)
44	19/49	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of Dadex/Popular/Beta or equivalent, conforming to code EN-1329 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. b) Multi-Trap (i) 4" dia	Each	2.00		
45	19/36	Providing and fitting gully trap, including cement concrete, cost of PVC grating 15x15cm and masonry chamber 30x30cm.	Each	2.00		
46	23/47	Providing, laying, testing and commissioning of POLYPROPYLENERANDOM COPOLYMER (PPRC) watersupply pipe (Dadex/ Popular/ Beta or equivalent) with specified pressure rating PN(PRESSURE NOMINAL) and conforming to DIN 8077-8078 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directed by Engineer Incharge. (Internal/External Diameters mentioned). c) PN-25 pipe Diameters mentioned). c) PN-25 pipe (ii) (5/8") 25 mm (iii) (3/4") 32 mm	Per Rft Per Rft	70.40 16.00		
47	19/47	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized Polyvinyl Chloride) Nikasi/ waste pipe make of Dadex/ Popular/ Beta or equivalent, plain/ socket ended conforming to code EN-1329 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge. Type (SDR 32.5/SN 8) (iv) 3"(85 mm) (v) 4"(110 mm) (vi) 6"(160 mm)	Per Rft Per Rft Per Rft	20.00 12.00 15.00		
48	19/49	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of Dadex/ Popular/ Beta or equivalent, conforming to code EN-1329 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. a) P-Trap (i) 4" dia	Each	1.00		
					Total Amount Civil Works A (MRS)	

COMPERHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # C: Office Building

SR. NO	MRS 1st Bi-Annual	DESCRIPTION	UNIT	QUANTIT Y	UNIT RATE	AMOUNT
					(Rs)	(Rs)
Electrical Items (MRS) (B)						
1.1	10(a-ii)/24, 3(iii)/24, 14(i)/24, 32(ii)/24	Wiring of light or fan point from switch to the point with 7/0.74 mm mm (3/0.029") PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, PVC box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan and installed as in specifications.	16.00	Each		
1.2	10(a-iii)/24, 3(iii)/24	Circuit wiring from MCBs board to gang switches board with 3x7/0.74 mm (7/0.029") PVC insulated single core cables in appropriate size PVC conduit.	5.00	Each		
1.3	10(a-ii)/24, 3(iii)/24	The same as item No. 1.1 but from one light point to another light point.	12.00	Each		
1.4	10(a-iv)/24, 14(ii)/24, 36(i)/24, 3(iii)/24	5 Amp 2/3 pin universal flush mounting switch socket unit away from switch board and wired with 3x7/0.91mm (7/0.036") single core cable from nearest circuit available in PVC concealed conduits or trunking including all conduit accessories as required complete in all respect.	4.00	Each		
1.5	10(a-iii)/24, 3(iii)/24	The same as item No.1.4 but wiring from one socket to another socket with 3x7/0.74 mm (7/0.029") single core cable	4.00	Each		
1.6	10(a-v)/24, 3(iii)/24, 36(ii)/24, 14(ii)/24	The same as item No. 1.4 but wiring of 15/20A, 3-pin flush mounting switch socket unit wired with 3x7/1.12mm (7/0.044") single core cable wires starting from D.B.	4.00	Each		
2.0		Power Cables				
2.1		Supply and erection of copper conductor cables for service connection, in pre-laid pipe/G.I. wire/trenches, etc. (rate for cable only) PVC insulated, PVC sheathed 4 core, 600/1000 volt non armoured cable				
(a)	13(c-vi)/24	10 mm (7/0.052")	100.00	Rft.		
2.2		Supply and erection of single core PVC insulated copper conductor cables, in pre-laid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten / wooden casing an capping / G.I. wire / trenches (rate for cables only) 450/750 volts, PVC insulated:				
(a)	10(c-vi)/24	10 mm sq (7/0.052")	100.00	Rft.		
3.0		Conduits / Pipes				
3.1	11(b)/23	PVC pipe/conduit Class-B 100 mm dia with accessories suitable for laying multi-core cables from pole to pole in trenches/directly burried including excavation.	80	Rft.		
(a)						
Total Amount Electrical Works B (MRS)						
Electrical Items (NON MRS) (C)						

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # C: Office Building

SR. NO	MRS 1st Bi-Annual	DESCRIPTION	UNIT	QUANTIT Y	UNIT RATE	AMOUNT
					(Rs)	(Rs)
	RA-09	Supply, transportation at site, storage, installation, testing and commissioning of the following items of work (unless specifically stated otherwise) including all material, labour, tools and accessories etc. required for proper completion of each item as per specification and drawings and/or as directed by the Engineer.				
1.0		LIGHT FITTINGS AND FANS				
1.1		Following LED Luminaries of suitable wattage make Philips, GE, Pierlite or approved equivalent suitable for the project requirements. Contractor to submit lighting design calculation to determine the adequacy of the wattage and should adjust the number of LEDs/wattage as per project lighting requirements. The fitting shall be approved by the Engineer.				
(a)		Light Fixture Type LED Batten surface mounted, 18W complete in all respect with allied accessories make Philips, GE, Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	8.00	Each		
(b)		Light Fixture Type LED Batten surface mounted, 10W above mirror in toilets complete in all respect with allied accessories make Philips, GE, Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	1.00	Each		
1.2		Wall bracket Light Fixture Type LED 6W energy saving lamp with holder and complete in all respect with allied accessories make Philips, GE, Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	8.00	Each		
1.3		20W LED Water tight light fixture IP 65 complete in all respect with all allied accessories or approved equivalent. The fitting shall be approved by the Engineer.	6.00	Each		
1.4		Light Fixture Type LED surface mounted down lighter, 6W complete in all respect with allied accessories make Philips, GE, Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	1.00	Each		
1.5		56" ceiling fan sweep (Climax, Pak, Millat) make or approved equivalent.	2.00	Each		
1.6		Wall Bracket fan 20" sweep make (Royal, Pak, GFC or approved equivalent) capacitor type, copper winding complete with all required accessories etc.	2.00	Each		
1.7		Exhaust fan 12" sweep make (Royal, Pak, Millat or approved equivalent) capacitor type, copper winding complete with Plastic body and all accessories etc.	2.00	Each		
2.0		DISTRIBUTION BOARDS				
		D.Bs with TP incoming adjustable moulded case circuit breaker and SP miniature outgoing circuit breakers, Panel box SWG 16 powder coated RAL colour 7032, IP class 44 and with all accessories. alongwith all installation and operational accessories as per specification or as shown on the drawings.				
2.1		D B- Operator Quarter				
		MATERIAL				
-		01 No. 32 Amps (Adj.) MCCB TP, RC=25kA, Icu	1.00	Each		
-		06 No. outgoing 10A, MCB, SP, RC=10kA, Icu=100%Ics				
-		03 Nos. outgoing 20A, MCB, SP, RC=10kA, Icu=100%Ics				
-		03 Nos. Spare 10/20A, MCB, SP, RC=10kA, Icu=100%Ics				
-		02 Nos. Space for 10/20A, MCB				
-		Indication lights, push buttons, digital ammeter with selector switch, digital voltmeter with selector switch, Panel box SWG 16 powder coated RAL colour 7032, IP class 44 and with all accessories.				
3.0		EARTHING AND BONDING				
3.1		Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground. The earthing rods shall be completed with fixing clamps etc.	2.00	No.		
Total Amount Electrical Works C (NON MRS)						
Total Amount (A+B+C)						
Carried over to the Sub Head 1						

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # D: Staff Building

SR. NO.	MRS 1st Bi-Annual	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead upto one chain (30 m)lift upto 5 ft (1.5m) 1) By Manual ii) Ordinary soil	4.21	1000 Cft.		#
2	26/43	Spraying termite proofing by using liquid FMC/ Biflex/ Terminex Exin/ Ms Hextar or equivalent @ specified suspension concentrerate (SC), Mixing Ability- HEXTAR with Ratio (1:250) =540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect. as approved by the Engineer Incharge	3,073.55	Sft		#
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate). (f) Nominal mix Ratio 1: 2: 4 (h) Nominal mix Ratio 1: 3: 6	1.04 3.64	100 Cft. 100 Cft.		# #
4	7/4	Pacca brick work in foundation and plinth i) Cement, sand mortar Ratio 1 : 3	7.83	100 Cft.		#
5	6/36	Providing and laying damp proof course of cement concrete 1:2:4 (cement, sand, shingle), including bitumen coating. (b) with 2 coats of bitumen: i) 1½" thick (40 mm)	1.80	100 Sft.		#
6	6/37	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:- (a) with one coat of bitumen and one coat of polythene sheet 500 gauge: ii) Ratio 1:3 b) ¾" thick (20 mm)	1.45	100 Sft.		#
7	7/5	Pacca brick work in ground floor:- i) cement, sand mortar Ratio 1:3	8.72	100 Cft.		#
8	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and (a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	430.63	Per Cft		#

		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and other structural members other than those mentioned in 5(a) (i) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	288.18	Per Cft	#
9	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	15.02	100 kg	#
10	Chap-1,1-1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead From nearest quarry (130km)	10.30	100 Cft	#
11	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- a) 3/8" (10 mm) thick	27.35	100 Sft.	#
12	11/10	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height. c) 1:4	7.63	100 Sft.	#
13	3/15	Filling, watering and ramming earth under floors:- (i) with surplus earth from foundation, etc. (ii) with new earth excavated from out side, lead upto one chain (30m)	0.94	1000 Cft.	#
			1.73	1000 Cft.	#
14	3/16	Extra for every 50 ft. (15 m) additional lead or part thereof i) for earth work soft, ordinary, hard and very hard (up to 1000 ft)	34.60	1000 Cft.	#
15	7/30	Supplying and filling sand under floor; or plugging in wells. (Provisional as Slect Fill)	13.36	100 Cft.	#
16	6/2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.	2.23	100 Cft.	#
17	10/42	Providing and laying superb quality Porcelain glazed tiles flooring of MASTER brand of specified size in approved design,Color and Shade with adhesive/bond over 3/4"thick (1:3) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge. a) Full body Glazed tiles (ii) 600mmx 600 mm	625.44	100 Sft.	#
18	10/43	Providing and laying superb quality Porcelain glazed tiles of Master brand, skirting/dado of specified size, Color and Shade with adhesive/ bond over 1/2"thick (1:2) cement plaster i/c the cost of and sealer for finishing the joints, cutting grinding complete in all respect as approved and directed by the Engineer Incharge. a) Full body Glazed Tile (ii) 600mm x600 mm	219.86	100 Sft.	#

19	9/5	Single layer of tiles 225 x 113 x 40 mm laid over 100mm earth and 25mm mud plaster without bhoosa grouted with cement sand 1:3 on top of RCC roof slab provided with 1.72kg/sq.m bitumen coating sand blinded.	7.28	100 Sft.	#
20	26/37	Supplying and laying polythene sheet over D.P.C under floors and on roofs, etc. (i) 300 gauge (0.003" thick)	728.00	Per Sft.	#
21	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	1.00	Each	#
22	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	1.00	Each	#
23	12/16	Providing and fixing M.S. sheet hollow pressed frame of doors, windows, C. windows, etc. (chowkat only) of 20 SWG welded with M.S. flat 6"x 1¼" x 1/8" (150 mmx30mmx3mm) M.S. holdfast 9"x1"x1/8" (225mmx25mmx3mm) welded/screwed 4" (100 mm) long iron hinges, including filling chowkat with cement sand mortar 1:8 and embedding holdfast in cement concrete 1:2:4, complete in all respects: a) single rebate b) double rebate	91.00 21.00	Per Sft. Per Sft.	# #
24	12/50(i)- 12/15(a)	Providing and fixing 1½" (40 mm) thick hollow flush doors and windows with commercial ply (3 ply) on both faces of deodar wood shutter frame 1¼" (30 mm) thick and partal wood braces at about 3" (75 mm) apart and deodar wood lipping 1½"x3/8" (40 mmx10 mm) fixed with M.S. chowkat (frame) including chromium plated fittings, etc. complete in all respects (without sliding bolt or lock):-	112.00	Per Sft.	#
25	10/6	Dry brick on edge paving, sand grouted, including preparation of bed by watering, ramming & bringing the same to proper camber, by ½ " (13 mm) thick mud plaster.	2.19	100 Sft.	#
26	10/7	Grouting 4½" (113 mm) dry brick work with cement mortar ratio 1: 5	2.19	100 Sft.	#
27	12/61	Providing and fixing sliding bolt to doors:- iii) brass sliding bolt, 10" (250 mm) long	5.00	Each	#
28	13/5 (C i+ii)	Painting new surface:- c) Preparing surface and painting of doors and windows any type (including edges):- i) priming coat. ii) each subsequent coat of paint. (2 coats)	2.24	100 Sft.	#
29	25/52	Providing and fitting all types of glazed aluminium windows of anodised bronze colour partly fixed and partly sliding using delux sections of approved manufacturer having frame size of 100 x 30 mm (4"x¾") and leaf frame sections of 50 x 20 mm (2"x¾"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using pproved standard latches, hardware etc., as approved by the Engineer in-charge.	96.00	Per Sft.	#

30	25/58	Providing and fixing M.S. flat ½"x1/8" (13mm x 3mm) grill including ¾" x 1/8" (20 mmx3 mm) M.S. flat frame, in windows of approved design, including painting three coats, complete in all respects.	96.00	Per Sft.	#
31	11/22	Priming coat of chalk under distemper.	22.65	100 Sft.	#
32	11/23	Distemping (a) new surface ii) two coats	22.65	100 Sft.	#
33	11/18	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:- (external wall) a) ratio 1:2	22.20	100 Sft.	#
PLUMBING WORKS					
34	19/7	Providing and fitting glazed earthen ware wash hand basin 56x40cm, including bracket set, waste pipe and waste coupling, etc. ii) coloured, with pedestal	1.00	Each	#
35	19/8	Providing and fixing stainless steel sink with drain board, size 120x60 cm (48"x24") including bracket set, waste pipe and waste coupling.	1.00	Each	#
36	19/29	Providing and fixing chromium plated shower rose:- ii) 2x15 cm (¾"x6")	1.00	Each	#
37	19/30.	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	3.00	Each	#
38	23/23	Providing, laying, cutting, jointing, testing and disinfecting G.I. pipe line in trenches, with socket joints, using G.I pipes of B.S.S. 1387-1967 complete in all respects with specials and valves:- ii) Medium Quality (Provisional) b) ¾" i/d (20 mm) 2.65mm thick c) 1" i/d (25 mm) 3.25mm thick	26.40 20.00	Per Rft. Per Rft.	# #
39	19/4	Providing and fitting glazed earthen ware water closet, squatter type, combined with foot rest. ii) coloured	1.00	Each	#
40	19/13	Providing and fitting plastic made low down flushing cistern 1363 liters (3 gallons) capacity, including bracket set, copper connection etc., complete. ii) coloured	1.00	Each	#
41	19/20	Providing and fixing looking glass 55x40 cm size and 5mm thick, first quality	1.00	Each	#
42	19/23	Providing and fitting i) Plastic Soap Dish ii) Plastic toilet paper holder iii) Plastic towel rail iv) Plastic shelf 60X13cm with bracket and railing	1.00 1.00 1.00 1.00	Each Each Each Each	# # # #

43	19/27	Providing and fixing chromium plated bib cock i) 2 cm (¾")	4.00	Each		#
44	19/34	Providing and fixing floor trap of cast iron, including concrete chamber all round, and C.I grating: ii) 10x7.5 cm (4"x3")	2.00	Each		#
45	19/36	Providing and fitting gully trap, including cement concrete, cost of PVC grating 15x15cm and masonry chamber 30x30cm.	2.00	Each		#
46	23/47	Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe (Dadex/ Popular/ Beta or equivalent) with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN 8077-8078 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directed by Engineer Incharge. (Internal/External Diameters mentioned). c) PN-25 pipe (ii) (5/8") 25 mm (iii) (3/4") 32 mm	66 22	Per Rft Per Rft		# #
47	19/47	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized Polyvinyl Chloride) Nikasi/ waste pipe make of Dadex/ Popular/ Beta or equivalent, plain/ socket ended conforming to code EN-1329 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge. Type (SDR 32.5/SN 8) (iv) 3"(85 mm) (v) 4"(110 mm) (v) 4"(110 mm)	40 15	Per Rft Per Rft		# #
48	19/49	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of Dadex/ Popular/ Beta or equivalent, conforming to code EN-1329 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. a) P-Trap (i) 4" dia	1.00	Each		#
Total Amount Civil Works A (MRS)						#
Electrical Works (MRS)						
1.0	WIRING AND ACCESSORIES					
1.1	10(a-ii)/24, 3(iii)/24, 14(i)/24, 32(ii)/24	Wiring of light or fan point from switch to the point with 7/0.74 mm mm (3/0.029") PVC insulated single core cables in PVC pipes concealed in walls, columns and slabs including accessories, PVC box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan and installed as in specifications.	17.00			
1.2	10(a-iii)/24, 3(iii)/24	Circuit wiring from MCBs board to gang switches board with 3x7/0.74 mm (7/0.029") PVC insulated single core cables in appropriate size PVC conduit.	5.00			
1.3	10(a-ii)/24, 3(iii)/24	The same as item No. 1.1 but from one light point to another light point.	12.00			

1.4	10(a-iv)/24, 14(ii)/24, 36(i)/24, 3(iii)/24	5 Amp 2/3 pin universal flush mounting switch socket unit away from switch board and wired with 3x7/0.91mm (7/0.036") single core cable from nearest circuit available in PVC concealed conduits or trunking including all conduit accessories as required complete in all respect.	2.00				
1.5	10(a-iii)/24, 3(iii)/24	The same as item No.1.4 but wiring from one socket to another socket with 3x7/0.74 mm (7/0.029") single core cable	2.00				
1.6	10(a-v)/24, 3(iii)/24, 36(ii)/24, 14(ii)/24	The same as item No. 1.4 but wiring of 15/20A, 3-pin flush mounting switch socket unit wired with 3x7/1.12mm (7/0.044") single core cable wires starting from D.B.	3.00				
2.0		Power Cables					
2.1		Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only)					
	(a) 13(c-vi)/24)	PVC insulated, PVC sheathed 4 core, 600/1000 volt non armoured cable 10 mm (7/0.052")	100.00				
2.2		Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only) 450/750 volts, PVC insulated:					
	(a) 10(c-vi)/24	10 mm sq (7/0.052")	100.00	Rft.		#	
3.0		Conduits / Pipes					
3.1(a)	11(b)/23	PVC pipe/conduit Class-B 100 mm dia with accessories suitable for laying multi-core cables from pole to pole in trenches/directly burried including excavation.	80	Rft.		#	
Total Amount Electrical Works B (MRS)							#
Electrical Works (Non MRS)							
1.0	RA-09	Supply, transportation at site, storage, installation, testing and commissioning of the following items of work (unless specifically stated otherwise) including all material, labour, tools and accessories etc. required for proper completion of each item as per specification and drawings and/or as directed by the Engineer.					
1.1		LIGHT FITTINGS AND FANS					
		Following LED Luminaries of suitable wattage make Philips, GE, Pierlite or approved equivalent suitable for the project requirements. Contractor to submit lighting design calculation to determine the adequacy of the wattage and should adjust the number of LEDs/wattage as per project lighting requirements. The fitting shall be approved by the Engineer.					
	(a)	Light Fixture Type LED Batten surface mounted, 18W complete in all respect with allied accessories make Philips, GE,Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	7.00	Each			

(b)	Light Fixture Type LED Batten surface mounted, 10W above mirror in toilets complete in all respect with allied accessories make Philips, GE, Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	1.00	Each		
1.2	Wall bracket Light Fixture Type LED 6W energy saving lamp with holder and complete in all respect with allied accessories make Philips, GE, Pierlite or approved equivalent. The fitting shall be approved by the Engineer.				
1.3	20W LED Water tight light fixture IP 65 complete in all respect with all allied accessories or approved equivalent. The fitting shall be approved by the Engineer.	4.00	Each		
1.4	Light Fixture Type LED surface mounted down lighter, 6W complete in all respect with allied accessories make Philips, GE, Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	5.00	Each		
1.5	56" ceiling fan sweep (Climax, Pak, Millat) make or approved equivalent.	2.00	Each		
1.6	Wall Bracket fan 20" sweep make (Royal, Pak, GFC or approved equivalent) capacitor type, copper winding complete with all required accessories etc.	2.00	Each		
2.0	<u>DISTRIBUTION BOARDS</u> D.Bs with TP incoming adjustable moulded case circuit breaker and SP miniature outgoing circuit breakers, Panel box SWG 16 powder coated RAL colour 7032, IP class 44 and with all accessories. alongwith all installation and operational accessories as per specification or as shown on the drawings.	1.00	Each		
2.1	<u>D B- Staff Building MATERIAL</u> - 03 Nos.outgoing 20A, MCB, SP, RC=10kA, - Icu=100%lcs - 03 Nos. Spare 10/20A, MCB, SP, RC=10kA, - Icu=100%lcs 02 Nos. Space for 10/20A, MCB Indication lights, push buttons, digital ammeter with selector switch, digital voltmeter with selector switch, Panel box SWG 16 powder coated RAL colour 7032, IP class 44 and with all accessories.				
3.0	<u>EARTHING AND BONDING</u>				
3.1	Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground. The earthing rods shall be completed with fixing clamps etc.	2.00	No.		
		Total Amount Electrical Works C (Non MRS)			
		Total Amount (A+B+C)			
		Carried over to the Sub Head 1			

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head # E:Area Lighting works of WWTP

S #	NON MRS	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
					(Rs)	(Rs)
1	RA-11	Supply, transportation at site, storage, installation, testing and commissioning of the following items of work (unless specifically stated otherwise) including all material, labour, tools and accessories etc. required for proper completion of each item as per specification and drawings and/or as directed by the Engineer.				
		<p><u>Road / Street Lighting Poles and Foundations</u></p> <p>(a) 12 m high single arm conical octagonal (hot dip) galvanized steel pole with extension arm luminaire arrangement, base plate, 2Amp., (RC=10KA) circuit breaker, terminal blocks including end caps, base connection plates & end stopper etc. as shown on drawing.</p> <p>(b) Road Lighting Pole Foundation (Bitchmen Coating)</p>	25.00	Each		
2		<p><u>LED Road Light Fixtures</u></p> <p>a) Road Lighting LED Luminaries 120 Watt make Philips, GE, or approved equivalent, fully in compliance with the specified requirements suitable for the project requirements, fully IP 66 with corrosion resistant die cast aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection and all accessories/ components required for the proper operation of the system. The luminaries shall be fully flexible for future upgrades and easy replacements for maintenance purposes. Contractor to submit lighting design calculation to determine the adequacy of the wattage and should adjust the number of LEDs/wattage as per project lighting requirements.</p>	25.00	No.		
3		<p><u>Conduits / Pipes</u></p> <p>PVC pipe/conduit with accessories suitable for laying multi-core cables on road crossings.</p> <p>a) 100 mm Class-B (Pole to pole)</p> <p>b) 100 mm Class-D (Road crossing)</p>	8,315.00	Rft.		
			1,453.00	Rft.		
4	C-24/13c	<p><u>Power Cables</u></p> <p>a) 4-core 25 mm² PVC insulated and PVC overall sheathed 600/1000 Volt grade unarmoured copper cable from main power supply to LCP. (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)</p>	10,657.10	Rft.		
	b) C-24/13c	4-core 50 mm ² PVC insulated and PVC overall sheathed 600/1000 Volt grade unarmoured copper cable from main power supply to LCP. (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)				
	c) C-24/12	Single core 16 mm ² PVC insulated and PVC overall sheathed 450/750 Volt grade copper cable from pole to pole as CPC. (Imported copper shall be used.Verified	482.00	Rft.		

		documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)	8,175.00	Rft.		
d)	C-24/12	Single core 25 mm ² PVC insulated and PVC overall sheathed 450/750 Volt grade copper cable from pole to pole as CPC. (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)	2,381.00	Rft.		
e)		3 Nos. 1 core 2.5 mm ² (Red+Black+Green) Cu. PVC 450/750 Volt grade copper cable including connections at ends. The cables shall be drawn from junction box to the light fitting through hollow of the pole (for street light pole). (Imported copper shall be used. Verified documentary evidence for source of copper & PVC shall be furnished prior to manufacturing)				
-		40 Rft. cable is required for each pole and the unit is taken as No. Price per No.	25.00	No.		
5		<u>Lighting Control Panels</u>				
a)		Road lighting control panel (LCP) with angle iron frame claded 16 SGW, sheet steel enclosure having high quality powder coated paint. The LCP shall be complete with incoming and outgoing MCCBs, Cu busbars, magnetic contactors, photo-electric switches, meters, indication lights, 16 SWG sheet steel construction with IP 43 protection class, door, locking arrangement etc. and all other accessories as required for quality work.	2.00	Each		
-		LCP Description				
-		1 No. incoming 63Amp.(adjust.) TP, MCCB, 25 kA, Icu=100%Ics				
-		4 Nos. outgoing 16 Amp.(Adj.) TP MCCBs, 18 kA, Icu=100%Ics				
-		2 No. spare 16 Amp. (Adj.) TP MCCBs, 18 kA, Icu=100%Ics				
-		4 Nos. 26 Amp. magnetic contactor, AC-3				
-		2 No. spare 26 Amp. magnetic contactor, AC-3				
-		3 Nos. photo-electric switches				
		a) 1 No. ammeters 0-40 Amp., with selector switch (04 position) and CT of 50/5 Amp				
		b) 09 Nos. indication lights				
		c) 1 No. voltmeter with fuse and 7 position selector switch.				
		d) 3 Ph, N & Earth copper busbars				
		e) Internal wiring & line-up terminals etc.				
		f) Brass cable glands/accessories				
		g) 3 Nos. Auto-Manual-OFF (3 position switches for operation in auto (with photocell) and normal (manual mode- photocell override)				
		h) Panel steel grid painted alongwith locking arrangement				
		i) IP =44/54 panel shall be weather proof, dust proof with studded and shade arrangement on top.				

6 a)		<p><u>Earthing Rod</u> Earth point comprising of 10 ft. 5/8" dia. (16 mm dia) copper coated M.S. rods driven in ground near each lighting control panel and civil works as per drawings The earthing rods shall be completed with fixing clamps etc.</p>	3.00	No.		
7		<p>Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge (C-24/105)</p>	1.00	No.		
Total Amount						
Carried over to the Sub Head 1						

Sr No.	MRS, Reference		Description of Items	Quantity	Rate	Unit	Amount (PKR)
	Ch	It:No					
9	3	17.a.b	Transportation of earth all types when the total distance,including the lead covered in the item of work, is more than 1000 ft. (300 m).Lead upto 1/2 mile upto proposed site of WWTP.				
			a) upto ¼ mile (400 m).	= 1	x 4,932	= 4932.20	
			b) for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	= 4	x 37.95	= 151.80	
					Totaal	= 5084.00	
			Qty.as per item No.	9	a	b	
			Deductions				
			Volume of back fill as per item.No.	= 7.00	a.b	= 41422.22	= 41422.22
			Balance total	= 140533.33	- 41422.22	= 99111.11	= 99111.11 Cft 1000
							Total
Carried over to the Sub Head 1							

COMPEREHENSIVE SEWERAGE SYSTEM IN OKARA CITY

Sub Head: Fencing

Ser	MRS		Description	Unit		Quantity	Rate	Amount (Rs.)
1	26	3	Providing and fixing barbed wire fencing, with 4 horizontal and 2 number cross wires fixed with posts of R.C.C., 1:2:4 (straining posts 7'x9"x9" (2.13 mx225x225 mm) at 100' 30 m) centre to centre, stiffening posts 7'x6"x6" (2.13 mx150x150 mm) at 50 ft. (15 m) interval and intermediate post 7'x5"x5" (2.13 mx125x125 mm) at 8 ft.(2.4 m) centre to centre), including cost of steel, its fabrication and placing of steel reinforcement, eye bolts, washers, etc. complete.	100	Rft	10,000		
							Total Cost	
Carried over to the Sub Head 1								

ESMMP cost of WWTP

Item	Quantity	Tentative Cost/Item- PKR./-	Total Cost
A-PPEs for Health and Safety of Labor/Workers			
Face Masks (3 PLY) - box	50		
Safety Hard Helmets	30		
Safety Shoes	30		
Hand Gloves	30		
Ear Plugs	30		
Reflective Safety Vest	30		
Safety Goggles	30		
B-Community Health and Safety			
First Aid Box Complete	4		
Infrared Thermometer (Benetech GM-2200 or equivalent)	1		
Safety Signs	20		
Safety Cones	19		
Safety Tapes	20		
Portable Delineator with chain	20		
Emergency Portable Lights	20		
Solid Waste Collection Drums with Cover	20		
Fire Fighting Equipment Purchase and refilling	3		
Hiring of Environmental Manager (for 02 years)	24		
Pole Hanging Waste Bins	8		
Labor Campsite Management	1		
Water Sprinkling	1		
Social and Behavior Change Campaign and Labor Awareness/Training	1		
C- Environment Quality Testing during Construction Phase			
Ambient Air Quality-Before, during, and after construction			
Noise Quality-Before, during, and after construction			
Water Quality-Before, during, and after construction			
Total (PKR)-A+B+C+D			

BIDDING DOCUMENTS

FOR

**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY
PACKAGE 3 – SUPPLY OF LIQUID WASTE MACHINERY**



**Local Government &
Community Development
Government of the Punjab**

February 2024

MC OKARA

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INVITATION FOR BIDS

TENDER NOTICE

Municipal Committee, Okara (MC Okara) (hereinafter referred to as the “client”), invites the sealed bids from Contractors / firms / Manufacturer / Authorized dealers registered with **FBR & PRA (NTN and PNTN)**. The scope of work is as under:

S. #	Description	Estimated Cost (Rs.)	Bid Security (Rs.)	PEC Category and Specialization	Date and time of Closing	Date and time of opening
COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY						
1	Package 1- Sewerage System	922,094,999	18,441,891	C2 & Above with CE-09	27.02.2024 10:00 A.M	27.02.2024 10:30 A.M
2	Package 2 - Construction of Waste Water Treatment Plant	704,296,999	14,085,940	C2 & Above with CE-09	27.02.2024 11:30 A.M	27.02.2024 12:00 P.M
3	Package 3 – Supply of Liquid Waste Machinery	44,323,999	886,480	Not Applicable, STRN is Applicable	27.02.2024 1:00 P.M	27.02.2024 1:30 P.M
4	Package 4 – Providing and Fixing of RPC Manhole Cover	14,372,322	287,446	Not Applicable, STRN is Applicable	27.02.2024 02:30 P.M	27.02.2024 03:00 P.M

2. Each applicant may apply in one or all projects by rendering a separate request for every project and submission of unique / non-identical requisites against each project, required in bidding documents. (Same working experience, financial soundness and other resources for all projects will not be acceptable).

3. The bidding documents are available immediately after publication (2014 Punjab Procurement Rule 25(1)) at the office of **Municipal Officer (I&S), Municipal Committee Okara** and a complete set of Bidding Documents can be obtained on submission of written application along with deposited slip of Bank of Punjab in the favour of Municipal Committee Okara for Rs.10,000/- (non-refundable fee) for every project. Bidding documents shall be issued to owner of the firm by showing original CNIC and / or to Authorized representative of firm having authority letter with specimen signature of representative of firm along with original CNIC.

4. Single stage two envelopes bidding procedure will be adopted. The Bids (**Technical & Financial**) prepared in accordance with the instructions given in the Bidding Documents must be accompanied by a Bid Security **given above** in shape of CDR / Bank Guarantee from any Scheduled Bank in Pakistan in the name of the Chief Officer, Municipal Committee Okara. Last date for purchase of bidding documents is **26-02-2024**. The Bids (**Technical & Financial**) must be delivered in the office of Chief Officer, Municipal Committee Okara. The Technical bids will be opened on **27-02-2024** in presence of the bidder / bidder's representatives who choose to present.

5. Only technically responsive bidder(s) will be qualified for opening of financial bid(s). Financial bid(s) of bidder(s) found technically nonresponsive shall be returned unopened to the bidder(s).

6. The procuring Authority may reject all bids or proposals at any time prior to the acceptance of a bid or proposal under Punjab Procurement Rules 2014 (**Rule-35**).

7. Conditional tender will not be accepted.

8. Tendered rates and amount should be filled in figures as well as in words and tenders should be signed as per general directions given in the tender documents.

9. In case the total tendered amount is equal to or less than 5% of the approved estimated (DNIT) amount, the lowest bidder will have to deposit quality assurance security equal to the amount difference between approved DNIT amount and the quoted bid amount from

the Scheduled Bank within 15 days of issuance of notice or within expiry period of bid, whichever is earlier.

10. The bids will be valid for 120 days.

11. In case, the last date of bid submission falls in / within the official holiday(s), the last date for submission of the bids shall be the next working day.

12. A pre-bid meeting will be held on **Feb 15, 2024** at **11:00 AM, 12:00 PM, 1:00 PM and 2:00 PM**, or any other date and time which may separately be notified by the Client to clarify any queries and to answer any questions on matters related to the bidding documents.

**Chief Officer
Municipal Committee
Okara**

**Administrator
Municipal Committee
Okara**

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid

The Client “Chief Officer MC Okara” intends “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE 3 – SUPPLY OF LIQUID WASTE MACHINERY**”

Identification and number of Contract is: _____

IB.2 Source of Funds

2.1 The Source of fund is mentioned in bidding data.

IB.3 Eligible Bidders

3.1 The bidder (Firm/ Joint Venture) must fulfill the basic eligibility criteria as per Appendix – M to Bid.

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 Bidder 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 would be free to visit site for the purpose of such inspection, but only upon the express condition that the Bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BID DOCUMENTS

IB.7 Documents Comprising the Bid

7.1 The Bid Documents are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.

1. Instructions to Bidders
2. Bidding Data Sheet

3. Special Stipulations
4. Form of Bid & Appendices to Bid
5. Bill of Quantities (Appendix-D to Bid)
6. Form of Bid Security
7. Form of Contract Agreement
8. Forms of Performance Guarantee and Mobilization Advance Guarantee and Form of Indemnity Bond for Secured Advance
9. Special Provisions
10. Environmental Management Plan

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 Bidders own risk. Pursuant to Clause IB.26, Bids which are not substantially responsive to the requirements of the Bid Documents will be rejected.

IB.8 Clarification of Bid 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 7 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 Bid 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 Bid Documents by issuing addendum.

9.2 Any addendum thus issued shall be part of the Bid Documents pursuant to IB 7.1 hereof and shall be communicated in writing to all purchasers of the Bid Documents. Prospective Bidders shall acknowledge receipt of each addendum in writing to the Employer.

9.3 To give 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

10.1 The Bid and all correspondence and documents related to the Bid exchanged by a Bidder and the Employer shall be in the bid language stipulated in the Bidding Data Sheet and conditions of Particular Application. 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 English language, in which case, for purposes of evaluation of the Bid, the English translation shall prevail.

IB.11 Documents Accompanying the Bid

11.1 The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid and the other the Financial Bid, containing the documents listed in Bidding Data Sheet under the heading of IB 11.1 A & B respectively. Both envelopes to be enclosed together

in an outer single envelope called the Bid. Each bidder shall furnish all the documents as specified in Bidding Data Sheet 11.1 A& B

11.2 Bids submitted by a JV shall include a copy of the Joint Venture Agreement (in line with PEC JV modalities) entered into by all partners. 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 line with PEC JV modalities). The role to be played by each partner to be specified therein. Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements: -

- (a) In case of a successful bid, the Form of JV Agreement shall be signed so as to be legally binding on all partners within 7 days of the receipt of letter of acceptance failing which the contract and the letter of acceptance shall stand void and redundant.
- (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 JV Agreement 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 JV Agreement (in case of a successful bid); and
- (e) A copy of JV agreement shall be submitted before signing of the Contract, stating the conditions under which JV 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. The JV Agreement shall be made part of the contract. 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 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 Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time referred to in Sub-Clause 1.2 hereof.

IB.12 Bid Prices

12.1 Unless stated otherwise in the Bid Documents, the Contract shall be for the whole of the Works as described in IB 1.1 hereof, based on the unit rates and / or prices submitted by the Bidder.

12.2 The Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a Bidder will not be paid for

by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.

- 12.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, throughout the duration of the Contract except PRA, shall be included in the rates and prices and the total Bid Price submitted by a bidder.

IB.13 Currencies of Bid and Payment

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

IB.14 Bid Validity

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data Sheet after the Date of Bid Opening specified in sub-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 or 180 days whichever is more. 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 Sheet in Pak Rupees.
- 15.2 The Bid Security shall be, at the option of the bidder, in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan 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/Earnest money shall be rejected by the Employer as non-responsive.
- 15.4 The Bid security of unsuccessful bidder will be returned by adopting the following mechanism:
- a) Written request certifying that bidder has no objection or grievance against the Procurement process.
 - b) Time for grievance period as provided by Punjab Procurement Rules-2014 has expired.
 - c) If he filed a grievance and same is dismissed by the Grievance Committee.
- 15.5 The Bid Security of the successful Bidder will be returned when the Bidder has furnished the required Performance Guarantee and signed the Agreement.
- 15.6 The Bid Security may be forfeited:
- (a) If the bidder withdraws his bid except as provided in IB 22.1;
 - (b) If the Bidder does not accept the correction of his Bid Price pursuant to IB 27.2 hereof; or
 - (c) In the case of successful Bidder, if he fails within the specified time limit to:
 - (i) Furnish the required Performance Guarantee, or

- (ii) Sign the Agreement.
- (iii) Furnish the required JV agreement within 7-days of the receipt of letter of acceptance.

IB.16 Alternate Proposals by Bidder

Not Applicable

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 Bid Documents. The date, time and venue of pre-bid meeting, if convened, is as stipulated in the Bidding Data Sheet. All prospective Bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 17.2 The Bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than one week before the proposed pre-bid meeting.
- 17.3 Minutes of the pre-bid meeting in shape of response to queries or suggestions of the bidders, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bid documents. Any modification of the Bid documents listed in IB 7.1 hereof which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a Bidder.
- 17.5 All the concerned teams of client and consultant including Environmental and Social Management Team will be present to attend the queries / questions / clarifications of the bidders.

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 Bid 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 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 in the Bidding Data Sheet 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.

- 18.6 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.
- 18.7 Bidders shall indicate in the space provided in the Letter of Technical and Financial Bids, their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.
- 18.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS FOR SINGLE STAGE TWO ENVELOPE 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.
 - (c) The technical bid should comprise of documents listed in IB11.1 (A) & the Financial Bid should comprise of documents listed in IB 11.1 (B) which shall be placed in separate envelopes in accordance with IB 11.1.
- 19.2 The inner and outer envelopes shall;
 - (a) Be addressed to the Employer at the address provided in the Bidding Data Sheet.
 - (b) Bear the name and identification number of the contract as defined in the Bidding Data Sheet, and;
 - (c) Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data Sheet.
- 19.3 In addition to the identification required in IB 19.2 hereof, the inner envelope shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared "late" pursuant to Clause IB.21
- 19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

IB.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 Sheet
- (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the Bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of Bids. No claims will be entertained for refund of such expenses.

- (c) Where delivery of a Bid is by mail and the Bidder wishes to receive an acknowledgment of receipt of such Bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed Bid package.
 - (d) Upon request, acknowledgment of receipt of Bids will be provided to those making delivery in person or by messenger.
- 20.2 The Employer may, at his discretion, extend the deadline for submission of Bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the Bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.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 and Withdrawal of Bids

- 22.1 Any Bidder may modify or withdraw his Bid after Bid submission provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of Bidders.
- 22.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No Bid may be modified by a Bidder after the deadline for submission of Bids except in accordance with IB 22.1 and 27.2.
- 22.4 Withdrawal of a Bid during the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified in the Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.15.

E. BID OPENING AND EVALUATION SINGLE STAGE TWO ENVELOPE PROCEDURE

IB.23 Bid Opening

- 23.1 The Employer will open the Technical Bids in public at the address, date and time specified in the Bidding Data Sheet in the presence of Bidders' designated representatives and anyone who choose to attend. The Financial Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening.
- 23.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal

shall be permitted unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out at bid opening.

- 23.3 Second, outer envelopes marked “SUBSTITUTION” shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Financial Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Financial Bid will remain unopened in accordance with IB .23.1. No envelope shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening
- 23.4 Next, outer envelopes marked “MODIFICATION” shall be opened. No Technical Bid and/or Financial Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Financial Bids, both Original and Modification, will remain unopened in accordance with IB 23.1. The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 23.5 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 IB21.1. Only Technical Bids read out and recorded at bid opening, shall be considered for evaluation

- 23.6 Pre-liminary Examination of Technical Bids
- (a) 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 Financial Bids. The date, time, and location of the opening of Financial Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Financial 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 Financial Bids unopened before inviting others, who are determined as being qualified, to attend the opening of Financial Bids.
- 23.10 The Employer shall conduct the opening of Financial Bids of all Bidders who submitted substantially responsive Technical Bids, publicly 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 Financial 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 Financial Bids and discounts, read out and recorded during the opening of Financial Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Financial 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 ten (10) 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; (iv) Includes signed Integrity Pact where required as per clause IB.35 and (v) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Only substantially responsive bid shall be considered for further evaluation.

26.3 If a bid is not substantially responsive, it may not subsequently be made responsive by correction or withdrawal of the non-conforming material deviation or reservation. The Employer may, however, seek confirmation/ clarification in writing or by email which shall be responded accordingly.

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

IB.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.
 - (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 imbalanced 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 Guarantee set forth in 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 IB 29.2.
- 29.2 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in Bidder's capacities, may require the bidders to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

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

IB.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, the lowest evaluated bidder may further reduce the Bid Price voluntarily without compromising the quality/ quantity.
- 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 Guarantee, the Employer will promptly notify the other bidders that their Bids have been unsuccessful. No bid security can be returned without exhausting the grievance period or without finally disposing off the complaint of the non-responsive bidder. However, bid security may be returned earlier if any bidder submits affidavit that he is satisfied with the proceedings and hence his bid security may be returned.

IB.32 Performance Guarantee

- 32.1 The successful bidder shall furnish to the Employer a Performance Guarantee in the form and the amount stipulated in the Bidding Data Sheet and the Conditions of Contract within a period of 15 days after the receipt of Letter of Acceptance.
- 32.2 Failure of the successful bidder to comply with the requirements of IB.32.1 or IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.33 Signing of Agreement

- 33.1 Upon furnishing of acceptable Performance Guarantee under the Conditions of Contract, formal Agreement between the Employer and the successful bidder shall be executed.

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, inter-alia, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

The Successful Contractor/Joint Venture shall comply with and acquire all consents, approvals, permits and licenses applicable under the laws of Pakistan in relation to the performance of the work & services.

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 / Provincial 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

Submission of bids shall be construed as evidence that the bidder has admitted all provisions of the instruction to the bidder.

IB.37 PPRA Act, 2009 and PPR-14 will have over-riding effect

PPRA Act, 2009 and PPR-14 as amended upto date will supersede and will have an over-riding effect in case in case of any contradiction with these Instructions, the Contract, or any other part of the Bidding Documents.

BIDDING DATA SHEET

BIDDING DATA SHEET

The following specific data for the Works 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

Clause IB-1:

Sub-Clause: 1.1 Name and address of the Employer

Chief Officer,

Municipal Committee Okara

Email: info@mcokara.lgpunjab.org.pk

Phone: 044-9330011

Summary of Works

SN	Description
1.	Suction Machine 4500 Liters
2.	Jetting Machine 4500 Liters
3.	Desilting Machine
4.	Environmental Management Plan

Clause IB-2: Source of Funds

Sub-Clause 2.1

The Project is funded by Government of the Punjab through World Bank.

Clause IB-10: Language of Bid

Sub-Clause 10.1

English

Clause IB-11: Documents Accompanying the Bid

Sub-Clause 11.1:

A) The Bidder shall submit with its Technical Bid the following documents:

- (a) Letter of Technical Bid
- (b) Bid Security (IB.15)
- (c) Written confirmation authorizing signatory of the bid to commit the Bidder.
(IB 18.5)
- (d) Pending litigation information.
- (e) Special Stipulations Appendix-A

(f) Proposed Construction Schedule	Appendix-E
(g) Method of Performing the work	Appendix-F
(h) Availability of Critical Equipment	Appendix-G
(i) Construction Camp and Housing Facilities	Appendix-H
(j) List of Sub-Contractor	Appendix-I
(k) Organization Chart for Supervisory Staff	Appendix-K
(l) Integrity Pact	Appendix-L
(m) Eligibility Criteria	Appendix-M1&M2
(n) Qualification Criteria	Appendix-N

B) The Bidder shall submit with its Financial Bid the following documents:

(o) Letter of Financial Bid	
(p) Bid Security	
(q) Bill of Quantities	Appendix-D
(r) Estimate Progress Payment	Appendix-J

Clause IB-13: Currency of Bid and Payment:

Sub-Clause 13.1

The unit rates and the prices shall be quoted by the Bidder entirely in Pakistani Rupees and likewise payments will also be made entirely in Pakistani Rupees.

Clause IB-14 Bid Validity:

Sub-Clause 14.1 Period of Bid Validity

120 Days

Clause IB-15 Bid Security

2% of the Estimated Cost of Rs. 44,323,999/- . i.e (8,86,480/-)

The bids must be accompanied with Bid Security for the Project in the form of CDR/Bank Guarantee of amount Specified above in the name of the undersigned from a Scheduled Bank of Pakistan. No bid security in cash will be accepted. **Bid security should be attached with the technical bid, otherwise the bid will not be taken into account for evaluation and it will be rejected straight forward.**

Clause IB-16 Alternate Proposals by Bidders

NOT APPLICABLE

Clause IB-17 Pre-Bid Meeting

The pre bid meeting with bidders and their authorize representatives will be held on **Feb 15, 2024** at **01:00 PM** in the office of Chief Officer, Municipal Committee Okara or in any other office specified by Client to clarify the issues and to answer any questions on matters related to bid documents

Clause IB-18 Format and Signing of Bid

Sub-Clause 18.4 Format and Signing of Bid

One Original & Three Copies (Two hard and one electronic in USB/DVD) of **Technical Bid** whereas One original and Two copies for **Financial Bid**.

Clause IB-19 Sealing and Making of Bid

Sub-Clause 19.2 (a) Employer's address for the purpose of Bid Submission is as follows:-

Municipal Committee Okara
Email: info@mcokara.lgpunjab.org.pk
Phone: 044-9330011

19.2 (b) Name and Number of the Contract is as follows: -

Contract No. _____

Clause IB-20 Deadline for submission of Bid:

Sub-Clause 20.1 (a)

Venue: Chief Officer, Municipal Committee Okara
Time: 1:00 PM,
Date: February 27th, 2024

Clause IB-23 Bid Opening:

Sub-Clause 23.1 (a) Venue, Time and Date of Bid Opening

Venue: Chief Officer, Municipal Committee Okara
Time: 1:30 PM
Date: February 27th, 2024

Clause IB-32 Performance Guarantee:

Sub-Clause 32.1

Delete the text sub-clause 32.1 and substitute with the following: -

The Performance Guarantee shall be 10% of **Contract Amount** (work being less than 50 Million) mentioned in the Letter of Acceptance on the prescribed form [PS-1] in shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.

Add at the end of **Sub-Clause 32.2:**

Next lowest Bidder

In the event, the Performance Guarantee is not provided by the lowest bidder, and the award is annulled, the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and technically accepted and is determined by the Employer to be qualified to perform the Contract satisfactorily.

Clause IB-36 Instructions not part of Contract:

Fraud and Corrupt Practices:

Bidders and their sub-contractors under contracts must observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Employer:

- a) Defines, for the purposes of this provision, the terms set forth below are defined as follows:
- “Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party.
 - “Fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation
 - “Coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - “Collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.
 - obstructive practice” means (a) deliberately destroying· falsifying· altering· or concealing of evidence material to an investigation by the Employer; making false statements to investigators in order to materially impede an investigation by the Employer;(c) failing to comply with requests to provide information· documents· or records in connection with an office of Anticorruption investigation; (d) threatening· harassing· or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (e) materially impeding the Employer’s contractual rights of audit or access to information
 - “Integrity violation” is any act which violates the Government's Anticorruption Policy· including (i) to (v) above and the following: abuse, conflict of interest· violations of the Government sanctions, retaliation against whistleblowers or witnesses· and other violations of the Government’s Anticorruption Policy including failure to adhere to the highest ethical standard.
- b) will reject any Bid/proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
- c) will cancel the contract if it determines at any time that its representatives or those of the Bidder were engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the selection process or the execution of the Contract; and
- d) will sanction bidders or its successor including declaring ineligible, either indefinitely or for a stated period of time, to participate in bidding activities in Pakistan if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing Contract
- e) Will have the right to require that consultants permit the Government or its appointed agent to inspect their accounts and records and other documents relating to the submission of proposals and contract performance and to have them audited by auditors appointed by the government.

**FORM OF BID
AND
APPENDICES TO BID**

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;

We offer to execute and complete in conformity with the Bidding Documents the following Works:
"COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-3 SUPPLY OF LIQUID WASTE MACHINERY

- (a) Our Bid consisting of the Technical Bid and the Financial Bid shall be valid for a period of 120 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;
(b) 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) 30 days beyond validity of Bid itself.
(c) 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).
(d) 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.....

Letter of Financial 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) The total price of our Bid, excluding any discounts offered in item (c) below is:

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

(d) Our Bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(e) If our Bid is accepted, we commit to obtain a Performance Guarantee and Quality Assurance Security in accordance with the Bidding Documents;

(f) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.

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

(h) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.

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

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Address.....

SPECIAL STIPULATIONS**Clause****Conditions of Contract**

1.	The Engineer's (Consultant) Authority to issue Variation in emergency	2% of the Contract Price stated in the Letter of Acceptance with the written approval of client.
2.	Law applicable	The relevant laws applied in the Province of Punjab.
3.	Amount of Performance Guarantee	The Performance Guarantee shall be 10% of Contract Amount mentioned in the Letter of Acceptance on the prescribed form [PS-1] in the shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.
4.	Time for Furnishing Work Programme	Within 14 days from the date of receipt of Letter of Acceptance.
5.	Minimum amount of Third-Party Insurance	The amount of insurance taken out by the Contractor per occurrence with number of occurrences unlimited shall be as follows: a. Bodily injury (any one person) PKR 0.5 (Half Million (Max) b. Fatal Case (any one person) PKR 01 (one) million (Minimum) c. Property Damages Depending upon nature of loss (100% of the Damage)
6.	Time for Commencement	Within 7 days from the date of receipt of Engineer's Notice to Commence which shall be issued within 14 days after signing of Contract Agreement.
7.	Time for Completion	06 Months from the date of Commencement of the Project.
8.	a) Amount of Liquidated Damages	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.
	b) Amount of Bonus for early completion	Not Applicable.
9.	Defects Liability Period	365 days from the effective date of Taking Over Certificate.
10	Percentage of Retention Money	10 % on the amount of work done up to Rs. 5 million and 5 % on the amount of work done beyond 5 million
11	Limit of Retention Money	05% of Contract Price stated in the Letter of Acceptance.
12	Minimum amount of Interim Payment Certificates (Running Bills)	Greater than PKR. Five Million (05 Million) except last 2 IPC's
13	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	30 days
14	List of material	NOT USED
15	Mobilization Advance (Interest Free)	Not Applicable

16	Environment, Health & Safety	Contractor will be bound to comply the Environmental Management Plan and Environmental Health Safety SOPs for Labor/Construction Workers including Women Workers to fulfill ESMMP safeguards compliance otherwise 1 % of contractual amount will be forfeited upon Engineer's report from last IPC
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NAME OF ELIGIBLE COUNTRIES

All countries of the World with whom Islamic Republic of Pakistan has commercial trade relations.

FOREIGN CURRENCY REQUIREMENTS

NOT APPLICABLE

PRICE ADJUSTMENT

Price adjustment / variation for the materials specified by the Government of Punjab will be paid as per rates issued by Finance department Government of Punjab from time to time and in the line with Punjab Local Government works Rules.

BILL OF QUANTITIES**D. Preamble**

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract (in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the contract include all costs of contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the contract. Furthermore, all duties, taxes and other levies payable by the contractor under the contract, or for any other cause, as on the date 14 days prior to dead line for submission of Bids in case of ICB/NCB respectively, shall be included in the rates and prices and the total bid price submitted by the bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities and shall not be paid separately.
5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the works.
6. General directions and description of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the bidding documents shall be made before entering prices against each item in the priced Bill of Quantities.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance
8. Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend

for approval one of them or as contractor for other than those manufacturers proposed in shape of submittal by contractor for someone else on equivalency basis.

9. The contractor will also provide the submittals of imported items as stated above. Pre-shipment inspection of the selected manufacturer's equipment will be carried out as per by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site.

10. Work program of level three must be submitted to Engineer/employer along with submittal.

BILL OF QUANTITIES
SUMMARY
ABSTRACT OF TENDER PRICE

Sr. No.	Description	Amount (Rs)
Part-A		
1	Suction Machine 4500 Liters	N/A
2	Jetting Machine 4500 Liters	
3	Desilting Machine	
4	Environmental Management Plan	
Total Amount (Rs)		N/A
Note: These rates are exclusive of PRA charges		

Note: All Provisional Sums are to be expended in whole or in part at the direction and discretion of the Engineer in-charge

PROPOSED CONSTRUCTION SCHEDULE

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 his Construction Schedule in the Bar Chart form 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 program 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 issue of Engineer’s Notice to Commence (Bidder to attach sheets as required for the specified form of Construction Schedule):

<u>Description</u>	<u>Time for Completion</u>
a) Whole Works	_____ days
b) Part-A	_____ days
c) Part-B	_____ days
d) _____	_____ days
e) _____	_____ days

Appendix-F to Bid

METHOD OF PERFORMING THE WORK

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

1. Organization Chart indicating head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.
2. Mobilization at site of works, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for Storage, communications, security and other services to be used.
3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.
4. Quality control/ Quality assurance measures to be adopted including procedures to be followed for carrying out all tests required under specifications.
5. Production of Authorization from Original Equipment Manufacturer.
6. Pre-shipment inspection at the factory premises shall be carried out by an independent Third-Party Firm having specialization in the task and possess the relevant professionals of the field. Third Party Validation Firm (TPV) shall be engaged by the Chief Engineer / D.G. (O&M) if required. The expenses in this connection shall be borne by the Contractor.
7. The Contractor should submit appropriate plans detailing how they intend to coordinate the Works with the ongoing system so that the existing system is not disturbed in any manner, and how they will ensure that the necessary facilities are available to enable it.

Note

- The Bidder shall provide the methods for performing the work in such manner that the works falling under the Construction must be in compliance with the Technical Specifications. These shall form part of and be included at the relevant appendix in the respective Contracts.
- Import documents like bill of lading, custom clearance, Air-way bill, port of shipment etc. will be provided by the contractor to the consultant/employer for verification of imported plants & equipment prior to submit the bill invoice of the same.

G-1
Appendix-G to Bid

LIST OF MAJOR EQUIPMENT – RELATED ITEMS

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

LIST OF MAJOR EQUIPMENT

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 CAMPS 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 Tenderer 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 sub-contractors. In my/our opinion, the sub-contractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of sub-contractors, 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)	Sub-Contractor (With Complete Address)
1	2

ESTIMATED PROGRESS PAYMENTS

Note: Appendix – J duly filled by the Contractor should only be included in the **Financial Proposal/Financial Bid**.

Month	Amounts (Million Rs.)
1	2
1st	
2 nd	
3 rd	
4 th	
5 th	
6 th	
Bid Price	

ORGANIZATION CHART
FOR THE
SUPERVISORY STAFF AND LABOUR

(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 owned or controlled by GoP through any 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 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 from GoP.

Name of Employer:.....

Name of Contractor:.....

Signature:.....

Signature:

Seal/Stamp.....

Seal/Stamp.....

Eligibility Criteria

The Bidders (Firm/ Joint Venture) fulfilling the following basic eligibility criteria shall only be considered for further evaluation. (Relevant documents to be attached):

- a) A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be non-Responsive. The bidder must submit affidavit with these points mentioned in the affidavit:
 - a. The firm has no conflict of interest with one or more parties in this Bidding process.
 - b. The firm is not associated or have been associated, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design and other documents to be used.
 - c. The firm doesn't have controlling shareholders in common with one or more parties in this Bidding process.
 - d. The firm hasn't received or have received any direct or indirect subsidy from one or more parties in this Bidding process.
 - e. The firm has not the same legal representative, as that of, one or more parties in this Bidding process, for purposes of this Bid.
 - f. The firm doesn't have a relationship with one or more parties in this Bidding process, directly or through common third parties, that puts it in a position to have access to information about or influence on the Bid of another Bidder or influence the decisions of the Procuring Agency regarding this Bidding process.
- b) Valid legal entity of the bidder / firm/ company e.g. Certificate of registration from SECP or registrar of firms etc.
- c) Certificate of registration with active Income Tax & active Sales Tax under Relevant Authority.
- d) Affidavit on Non-Judicial Stamp paper for No litigation OR submission of Litigation History of last 10 years.
- e) Affidavit declaring "Neither the firms nor its Directors, Stakeholders, as a whole or as a part of the firm have ever been black listed/ defaulted by any government agency / department / organization / Donors or settled dispute in plea bargain or Volunteer recovery".

Un-signed and un-stamped bids will be rejected.

Note: In case of Joint Venture, all the members have to meet in full the afore-mentioned basic eligibility criteria.

Eligibility Criteria (Part-B)

TECHNICAL SPECIFICATIONS

Sr. No.	Description / Specification	Bidder to Specify
1	Suzuki Pick up mounted desilting machine, capacity/ Container of the desilting is 0.5 cubic meter, Grab Bucket can lift 5-10 kg silt at one time, can reach to the depth of 18' to 20' all steel part surfaces is free from rust and oil residue. One coat of red oxide and two coat of final paint is done with synthetic enamel paint. Color as per customer choice.	
	Suction Machine 4500 Liters Truck mounted sewer suction unit to be installed on a truck chassis, Locally fabricated tank with 4500 liters capacity, cylindrical in shape with full opening dish end with suitable locking system. Compound gauge for both negative and positive reading (Italy, UK, USA) with accessories; i) Superstructure of Sewer Suction unit 4500 Liters ii) ii) Truck Hino/ ISUZU or equivalent Truck Chassis Euro III 4009 CC	
	Jetting Machine 4500 Liters Truck mounted sewer jetting unit to be installed on a truck chassis, Locally fabricated tank with 4500 liters capacity, cylindrical in shape with full opening dish end with suitable locking system. Compound gauge for both negative and positive reading (Italy, UK, USA) i) Superstructure of Sewer Jetting unit 4500 Liters ii) ii) Truck Hino/ ISUZU or equivalent Truck Chassis Euro III 4009 CC	

Note:

1. This part of evaluation shall be of knock out basis if the bidder fails to comply the given specifications he shall be considered as **non-responsive** and shall not be considered for further evaluation.
2. Similar to other than above or better specifications of an equivalent item will be accepted by the Procurement Committee / Bid Opening & Evaluation Committee, provided the bidder attaches brochure mentioning the relevant specifications. In absence of brochure the bid will be considered as non-responsive and the decision of the committee shall be final.

Qualification Criteria

Technical Evaluation will be based on the criteria given in succeeding paras regarding the Bidder's General Experience, Specific Experience, Personnel Capabilities and Equipment Capabilities as demonstrated by the Bidder's responses in the forms attached. The Procuring Agency reserves the right to waive minor deviations, if these don't materially affect the capability of a Bidder to perform the contract. Sub-contractor's experience and resources shall not be taken into account in determining the Bidder's compliance with the qualifying criteria. However, Joint Venture experience & resources shall be considered. Consortium or Association of Contractors will be considered for similar treatment as in case of Joint Venture. The detailed qualification criteria for Technical Evaluation is provided as follows:

Sr. No.	Category	Weightage/Marks
1.	Financial Soundness	40
2.	General & Relevant Experience	45
3.	Personnel Capabilities	15
	Total:	100

The applicants must score total 65 marks and at least 50 % marks in each category, to qualify.

SUB CATEGORY A: FINANCIAL SOUNDNESS

For financial soundness, Letter from Banks and audited financial statements for *last five financial years shall be submitted. if Bank statement (In case of Cash), letter from Banks (In case of Credit Line) & audited financial statements of last five financial years are not attached, no consideration will be given to bidder.*

Sr. No.	Description	Maximum Marks
i)	<p>Available Cash / Bank Credit Line Limit (or combination of both)</p> <p>A= Available Cash/Bank Credit Line limit or combination of both (in PKR Million)</p> <p>(20 - Marks)</p>	<ul style="list-style-type: none"> • Full Marks will be given if “A” is PKR 30 Million or above. • For ‘A’ less than PKR 30 Million, marks will be awarded as: (A/30) *20 • No Marks will be given if “A” is less than PKR 15 Million. <p><u>No marks shall be allotted if Bank statement (In case of Cash) & letter from Bank (In case of Credit Line as proof of Credit Line) is not attached.</u></p>
ii)	<p>Average Working Capital in last Five financial years.</p> <p>A= Average Working Capital in last five financial years (in PKR Million)</p> <p>(20 - Marks)</p>	<ul style="list-style-type: none"> • Full Marks will be given if “A” is PKR 30 Million or above. • For ‘A’ less than PKR 30 Million, marks will be awarded as: (A/30) *20 • No Marks will be given if “A” is less than PKR 15 Million. <p><u>No marks shall be allotted if audited financial statements of last five financial years are not attached.</u></p>
	Sub-total:	40

SUB-CATEGORY B: EXPERIENCE RECORD

Bidder must meet following criteria for evaluation of the experience of the Firm/JV.

Sr. No.	Description	Max. Marks
i)	<p>Projects of Similar Nature completed over last 05 years.</p> <p style="padding-left: 40px;">a. Max 03-projects having minimum cost Rs. 40 Million each.</p> <p>(Similar nature project includes supply of sewer cleaning machinery)</p> <p>Each project having above-said minimum cost bracket; will have equal marks. (i.e. 3*10=30)</p>	30
ii)	<p>Any construction project with satisfactory completion certificates granted by the departments for the other projects enlisted at Sr. no. i), 03 projects (i.e *3x5=15)</p>	15
	Sub-total:	45

SUB-CATEGORY C: PERSONNEL CAPABILITIES

The following key experts at a minimum shall be evaluated:

No personnel will be considered for evaluation if declaration of Professional Staff Employment & availability for this Project (**Form T11-12-13**) **duly signed by authorized signatory** is not attached. Bidder will also provide **affidavit of employee** on judicial stamp paper.

Bidders will submit the detailed particular of his experts considering that all staff **will serve at site full time during execution of works** In case bidder fails to appoint full time Project Manager at site, a penalty of PKR 100,000 will be imposed on monthly basis and in case bidder fails to appoint full time other supporting staff (all personnel or partly) mentioned below (other than Project Manager) at site, a penalty of Rs. 100,000/- will be imposed on monthly basis.

Sr. No.	Description	Maximum Points
i)	Personnel in employment of the contractor a) Number of Managers/Engineers (Min 01-No) b) Experience of Manager/Engineers (MBA Manager or PEC registered Engineer with 7 year experience)	6 3
ii)	Number of support staff in Employment of the Contractor a) Number of Supervisors/DAE (Min 1-No.) b) Experience of Supervisors/DAE (Minimum 05 -years)	3 3
Sub-total:		15

Bidders will provide **short CVs**, showing details of experts are desired by highlighting the name of expert, qualification, year of graduation or other degree(s), general experience, specific experience, designation, time of association with this firm. Experience certificates, affidavit of employee on judicial stamp paper. No marks if required documents are not attached.

Joint Venture (JV)

Joint Venture must comply with the following requirements: -

- a) Minimum qualification requirements: -
 - i) The lead partner shall meet not less than 50 percent of all qualifying criteria given in paras A to D heretofore.
 - ii) The joint venture must collectively satisfy the criteria of paras A to D, for which purpose the relevant figures for each of the partners shall be added together to arrive at the JV's total capacity.
- b) Any change in a qualified JV after qualification, shall be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval may be denied if:-
 - i) Partner(s) withdrawn from a JV and remaining partners do not meet the qualifying requirements;
 - ii) The new partners to a JV are not qualified individually or as another JV; or
 - iii) In the opinion of the Employer, a substantial reduction in competition would result.
- c) Bid shall be signed by all members in the JV so as to legally bind all partners, jointly and severally, and any bid shall be submitted with a copy of the JV agreement providing the joint and several liability with respect to the contract.

Conflict of Interest

The Bidder (including all members of a JV) must not be associated, nor have been associated in the past, with the consultant or any other entity that has prepared the design, specifications, and other prequalification and bidding documents for the project, or was proposed as Engineer for the contract, over the last Ten years. Any such association may result in disqualification of the Bidder.

Form -T-1

General Information

Bidder (or each Member of a Joint Venture) applying for qualification is required to complete the information in this form.

1.	Name of Firm:	
2.	Head Office Address:	
3.	Telephone:	
4.	Email:	
5.	Type of Organization:	
6.	Place of Incorporation/Registration:	Year of incorporation/registration:
7.	PEC Registration Category: PEC Registration No:	Validity:
8.	NTN#	
9.	Name, Designation, email and Mobile Number of Firm's Representative	

Detail of Owners/ Directors

Name	Designation	Nationality
1.		
2.		
3.		
4.		
5.		

Financial Soundness

Name of Bidder (Lead Member of a Joint Venture, in case of JV)
--

Bidder (Lead Member of a Joint Venture, in case of JV) applying for qualification is required to provide financial information to demonstrate that they meet the requirements of Evaluation Criteria. If necessary, use separate sheets to provide complete information. A copy of the audited financial statements of the past five (5) financial years must be attached.

Bidder's Legal Name: _____

Date: _____

JV Members Legal Name: _____

Information Balance Sheet

	Year-1	Year-2	Year-3	Year-4	Year-5	Overall Average
Total Assets (TA)						
Total Liabilities (TL)						
Net Worth (TA-TL)						
Current Assets (CA)						
Current Liabilities (CL)						
Average Annual Turnover (AATO)						
Average Annual Turnover						
Financial Resources						
Cash/Bank Balance						
Credit Line Limit						

Form -T-4

Details of Similar Nature Projects Completed

Name of Bidder or Member of a Joint Venture

*A separate form with adequate documentary evidence (**Completion Certificate indicating Cost of Project**) shall be provided for each project in **Form T-03**.*

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a)Sole Contractor (b)Sub-Contractor (c) Member in JV
6.	Value of the total contract(in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____Years _____Months

Form -T-6

Details of Similar Nature Projects in hand

Name of Bidder or Member of a Joint Venture

*A separate form with adequate documentary evidence (**Letter of Award/ Agreement indicating Cost of Project**) shall be provided for each project in **Form T-5**.*

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a)Sole Contractor (b)Sub-Contractor (c) Member in a JV
6.	Value of the total contract(in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Planned Date of Completion

Form -T-8

Details of General Nature Projects Completed in Last 5 Years

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-07.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a)Sole Contractor (b)Sub-Contractor (c) Member in a JV
6.	Value of the total contract(in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____Years _____Months

Summary of Fast Track Project Completed

Name of Bidder or Member of a Joint Venture

Bidder and each Member of a Joint Venture applying for qualification is required to complete the information in this form.

Use a separate sheet for each Member of a Joint Venture.

Project Name	Year of Completion	Location	Value in PKR (Million)	Completion Duration

NOT USED

Form -T-10

Details of Fast Track Similar Nature Projects Completed in Last Ten (10) Years

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-09.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of
5.	Contr (a)Sole-C (b)Sub-Contractor (c) Member in a JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____Years _____Months

NOT USED

List of Proposed Staff

Name of Bidder:

_____ *(Bidder or Member of Joint Venture)*

1	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	
2	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	

Candidate Summary

Name of Bidder: _____
(Bidder or Member of Joint Venture)

Position	Candidate	
	Prime	Alternate
Candidate Information	Name of Candidate	Date of Birth
	Professional Qualification:	
PEC Registration No. (Only for Engineer)		
Present Employer	Name of Employer:	
	Address of Employer	
	Telephone:	Fax:
	Job Title of Candidate	Years with Present Employer

Summarize professional experience in reverse chronological order.

From	To	Company	Project	Position	Relevant Technical & Management Experience

Form -T-13

DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT

[To be submitted on Company Letterhead]

TO WHOM IT MAY CONCERN

PROJECT: _____

SUBJECT: DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT & AVAILABILITY

We hereby certify that the personnel nominated in Form-T-11 are employed by our firm and are available for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Equipment Detail

Name of Bidder or Member of Joint Venture

Bidder and each Member of Joint Venture is required to provide adequate information to demonstrate clearly that it has the sufficient capability to undertake the Project. A separate form shall be prepared for each item of equipment listed in the Evaluation Criteria.

Item of Equipment		
Equipment information	1. Name of manufacturer	2. Model and power rating
	3. Capacity	4. Year of manufacture
Current status	5. Current location	
	6. Details of current commitments	
Source	7. Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased	

Omit the following information if it is owned by the Bidder or Member of JV.

Owner	8. Name of owner	
	9. Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreement	Details of rental/lease specific to the Project.	

Affidavit of ownership/Availability of Equipment

PROJECT: _____

SUBJECT: DECLARATION OF OWNERSHIP/ LEASE OF EQUIPMENT

We hereby certify that the equipment nominated in T-14 is owned by/Leased by our firm and is available in Pakistan for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Litigation History for the last Ten (10) Years

Name: _____
(Bidder or Member of Joint Venture)

Description of Contract	Year	Name of Client, Cause of litigation and matter in dispute	Disputed amount (Current value in PKR or US\$ equivalent)	Award FOR or AGAINST Bidder	Remarks by Bidder

Attach Affidavit/undertaking that non-performance of a contract did not occur within the last ten years based on information on all settled disputes or litigation.

AFFIDAVIT FOR CORRECTNESS OF INFORMATION

(To be printed on PKR 100 Stamp Paper)

Name: _____
(Bidder or member of Joint Venture)

I, the undersigned, do hereby certify that all the statements made in the Forms and in the supporting documents are true, correct and valid to the best of my knowledge and belief and may be verified by employer if the Employer, at any time, deems it necessary.

The undersigned hereby authorize and request the bank, person, firm or corporation to furnish any additional information requested by the Employer deemed necessary to verify this statement regarding my (our) competence and general reputation.

The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the Employer. Employer undertakes to treat all information provided as confidential.

Signed by an authorized Officer of the firm

Title of Officer

Name of Firm

Date

POSSESSION OF SITE HANDING / TAKING OVER

Name of Sub-Project / Contract Name:

Name of Contractor / Contracting Firm:

Date of Award of Work:

Date of Contract Agreement:

Contract number:

The sub-project (Name of subproject) which pertains to the sites as shown in drawings are integral part of this Contract is hereby handed over to the Contractor M/s _____ on (Date, day, year) in presence of witness.

(Plan attached list of sites being handed over / taken over)

Handed over by

Name:

Designation: Chief Officer MC _____

Cell:

Stamp:

CNIC No:

taken over by (Contractor / Firm)

Name:

Designation:

Cell No:

Stamp:

CNIC No:

PEC No:

Witness (MOI)

Name:

Designation:

I, hereby take over the sites as marked in the plan attached as Annexure-A of this document

Witness:

Designated approved Site Engineer of Contracting Firm

FORMS

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

**BID SECURITY
(Bank Guarantee)**

Security Executed on _____
(Date)

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

Name of Principal (Bidder) with Address _____

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

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at their quest 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, 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 Guarantee, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Guarantee 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 Guarantee 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.

WITNESS:	SURETY (Bank)
1. _____ _____	Signature _____
Corporate Secretary (Seal)	Name _____
	Title _____
	Corporate Guarantor (Seal)

2. _____

Name, Title & Address

**FORM OF PERFORMANCE GUARANTEE
(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.

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 _____

Corporate Secretary (Seal)

Name _____

Title _____

2. _____
Name, Title & Address

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

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

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

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda / Clarification as agreed or otherwise, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract, viz:
 - a. The Contract Agreement;
 - b. The Letter of Acceptance;
 - c. The completed Form of Bid;
 - d. Special Stipulations (Appendix-A to Bid);
 - e. Contract form for execution of work;
 - f. The priced Bill of Quantities (Appendix-D to Bid);
 - g. The completed Appendices to Bid (B, C, E to O);
 - h. Special Provisions;
 - i. The Drawings;
 - j. The Specifications;
 - k. Work Schedule;
 - l. (any other)
3. The contractor will have to complete the work within the stipulated period, according to specifications as mentioned in the acceptance letter and Contract Agreement to the entire satisfaction of the engineer in-charge
4. 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.
5. 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.

6. That if the contractor fails to comply with any of the conditions of the contract, he will be held liable for the consequences thereof which shall be either in the form of liquidated damages or allotment of work at his risk and cost or both. The damages so incurred shall be recovered from the contractor, either from his security money or his running/outstanding bills. Further, if any information/ document submitted by contractor/ firm, founds false, fabricated, materially incorrect at any stage, he/firm will be liable for blacklisting.
7. 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

(Seal)

Signature of Employer

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

(Name, Title and Address)

Witness:

(Name, Title and Address)

MOBILIZATION ADVANCE GUARANTEE/BOND

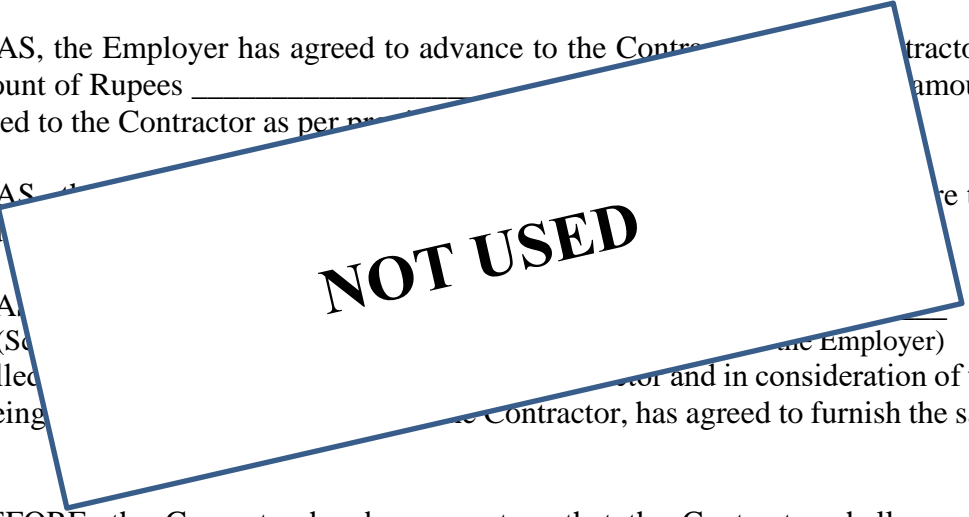
Guarantee No. _____ Date _____

WHEREAS _____ (hereinafter called the 'Employer') has entered into a Contract for _____
_____ (Particulars of Contract)
with _____ (hereinafter called the "Contractor").

AND WHEREAS, the Employer has agreed to advance to the Contractor _____ Contractor's
request, an amount of Rupees _____ amount
shall be advanced to the Contractor as per _____

AND WHEREAS _____ the
mobilization advance of _____

AND WHEREAS _____ the Employer)
(Hereinafter called _____ Contractor and in consideration of the
Employer agreeing _____ 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 void after the aforesaid date or earlier if the advance made to the _____ is repaid against payments from Interim Payment Certificates. The Guarantor agrees that the aforesaid period shall extend to the above mentioned date that is _____.

NOT USED

2. Signature _____
3. Name _____
Title _____

WITNESS

1. _____

Corporate Secretary (Seal)

2. _____
(Name Title & Address) _____
Corporate Guarantor(Seal)

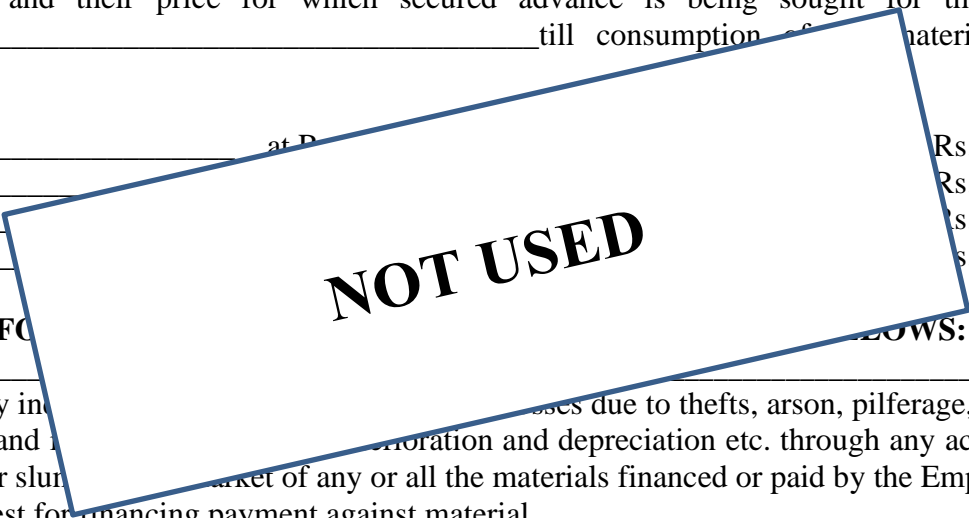
**INDEMNITY BOND
FOR SECURED ADVANCE
AGAINST MATERIALS BROUGHT AT SITE**

(ON RS.40 NON JUDICIAL STAMP PAPER)

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

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

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



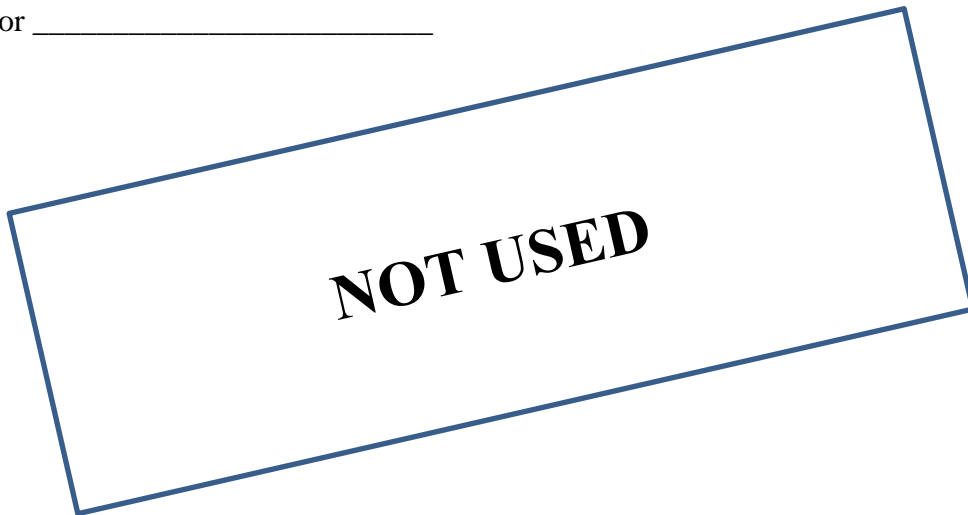
THEREFORE _____
I/We _____
do hereby indemnify _____ against all losses due to thefts, arson, pilferage, loss due to flood and fire, deterioration and depreciation etc. through any act of Man or God or slurrage or loss of any or all the materials financed or paid by the Employer on our request for financing payment against material.
I/We _____ shall indemnify _____ against any or all claims, action damages arising out of or resulting to the said material.
I/We _____ further declare that we will faithfully abide by the above declaration and solemnly affirm that we will not remove, sell, pilferage any of the materials against which M/s _____ has paid us such a secured advance and will not pledge the same with any Bank, Finance Corporation, Firm, Company, Individual or the like agency or create any change whereon in any from what so ever.
I/We _____ do hereby also declare that in the event of my/our infringement of the declaration made above

_____ will be entitled to forfeit all such material and also proceed against me/us according to the relevant clause pertaining to breach of contract and further invoke the power or seek any remedies secured of _____ under the contract Agreement signed with us or otherwise

available under law.

Place _____ Dated _____

Contractor _____



GENERAL / PARTICULAR CONDITIONS OF CONTRACT FOR WORKS

GOVERNMENT OF THE PUNJAB

CONTRACT FORM FOR EXECUTION OF WORK

(To be procured by the Contractor)

Copies of the Contract Form for Execution of Work can be obtained from Finance Department Punjab's Website as well as from the Employer.

SPECIAL PROVISIONS

SPECIAL PROVISIONS (CIVIL WORKS)

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SPECIFICATIONS - SPECIAL PROVISIONS (CIVIL WORKS)

Okara is about 127km to the south-west of Lahore on the National Highway and on the main Lahore-Karachi railway track. Okara spreads between latitudes of 30°18' to 30°08' North, and the longitudes of 73°14' to 74°09' East. The current population of the city is 466,852 and the projected population by the year 2032 is 764,459.

Okara sewerage system covers about 70% population. The existing system consists of lateral sewers, mains, trunk sewers and disposal stations. No waste water treatment plant (WWTP) exists in Okara city.

Punjab Municipal Development Fund Company (PMDFC) has proposed the establishment of a waste water treatment plant (WWTP) at Okara city with the financial support of the World Bank (WB). The treatment facility will receive the municipal waste water generated from southern part of Okara City through a main sewer line and after treatment will dispose it of in the Sukhera Drain. The project will be supervised by Municipal Committee Okara. **“COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE – 3 SUPPLY OF LIQUID WASTE MACHINERY”**

The Project aims at improvement of infrastructure of municipal services for sewerage system.

The Project has the following objectives;

1. Improvement of service delivery level of the municipal services in the served areas of the city or provision of better basic urban services for improved livability of the citizen.
2. Reduction in annual O&M charges of the infrastructure due to reduced repairs in the forthcoming years because of repair or replacement of infrastructure components.
3. Reduction and prompt addressal of the public complaints regarding municipal service delivery.
4. Reduction in surcharging and overflowing of sewers thus reducing waste water ponding in the city

SP-2 DESCRIPTION OF THE WORKS

2.1 The work included in this Contract are as follows but not limited to these items only:

SN	Description
1.	Suction Machine 4500 Liters
2.	Jetting Machine 4500 Liters
3.	Desilting Machine
4.	Environmental Management Plan

SP-3 SITE OF WORKS

The work mainly comprising of “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-3 SUPPLY OF LIQUID WASTE MACHINERY**”

SP-4 SETTING OUT

Setting out data and control points for the construction of the road and allied works will be provided by the Engineer following the Notice to Commence but, in any case, prior to start of work.

SP-5 CLIMATOLOGICAL DATA

Not used.

SP-6 UTILITIES

The Contractor shall directly enquire from the utility companies about availability of connections of electric power supply and telephone lines for his use at the Site. In case of non-availability of electric power supply from national grid to meet his requirements the Contractor shall provide at his own cost electric power generators as necessary for supply of power for the various parts of the Works including his camps, offices, stores, workshops and other installations as well as for the Engineer's Site office provided under Sub-Clause SP 20.1. The Contractor shall bear all costs for constructing, operating and maintaining the generation system, including the standby generation system, and distribution system including providing diesel, oil or other consumables and all services and necessary attendance to ensure uninterrupted power supply at all times.

The Contractor shall make his own investigations and arrangements for supply of water of acceptable quality for construction requirements and safe drinking water for his staff and workmen and for the staff of the Engineer.

No separate payment will be made to the Contractor for works performed under this Clause and the costs thereof shall be deemed to be included in the rates and prices of the various items in the Bill of Quantities.

SP-7 TOPOGRAPHY AND GEOLOGY OF THE SITE

The details of Topography is with the Employer / Engineer.

SP-8 EXTENT OF WORK

The Contractor shall remove all debris and unsuitable construction to the Engineer's satisfaction with no additional cost.

The Contractor shall construct the Works in accordance with the Drawings and Specifications and as directed by the Engineer. The Contractor shall procure, furnish, provide and arrange all the necessary construction materials, equipment, transportation, fuel, electric power, water and services; be responsible for the construction and maintenance of the construction camps, offices, workshops and warehouses that he may require, and perform all other work necessary for completion of the Works described herein, in complete conformity with the Contract.

SP-9 DRAWINGS

9.1 Bidding Drawings

The Drawings provided as separate volume of Bid Documents and hereinafter referred to as Bid Drawings show the scope of the work to be performed by the Contractor. The Bid Drawings shall not be used as a basis for fabrication or construction, but may be used as the basis for planning, scheduling and placing preliminary orders for materials, subject to corrections based on future issue of Construction Drawings. Any other Drawings if issued through Addenda, before opening of Tenders, shall become part of the Bid Drawings.

9.2 Construction Drawings

After award of Contract, Bidding Drawings will be replaced by Drawings issued by the Engineer for Construction, with such modifications as may be necessary. The Drawings Issued for Construction will include Bid Drawings re-issued, Bidding Drawings modified and additional Drawings as required to develop in greater detail the construction required and shall be referred to hereinafter as "Construction Drawings". The Construction Drawings that show changes from the Tender Drawings and Specifications, will be reviewed by the Engineer for determination of adjustments, if any, of the Contract Price in accordance with the provisions of Clause 51.1, Variations, of the Conditions of Contract. The work shall be executed in conformity with the Construction Drawings.

The Engineer and Contractor shall jointly prepare a schedule for issuance of Drawings Issued for Construction of the various parts of the Works based on a list of drawings provided by the Engineer.

9.3 Checking of Drawings

The Contractor shall carefully check all Construction Drawings as soon as practicable after receipt thereof, and shall promptly advise the Engineer of any errors if discovered.

SP-10 RIGHT TO CHANGE

The Engineer may find it desirable to change location, alignment, dimensions or design of one or more of the features of the Works to conform to the newly disclosed conditions. Toward this end, the Engineer reserves the right to make such reasonable changes, and the Contractor's operations shall be conducted so as to accommodate any such changes in the Works.

SP-11 DRAWINGS/DATA TO BE FURNISHED BY EMPLOYER /ENGINEER

11.1 Procedure for Submittal of Contractor's Drawings

All drawings showing construction details shall be provided by the Employer/Engineer.

11.2 Other Drawings

Other drawings additional to those referred to herein-above required by the Specifications showing proposed methods of constructing Temporary Works and all bar bending schedules shall be submitted by the Contractor to the Engineer for approval.

11.3 Ownership of Drawings etc.

All the drawings, details, and any other information or documents furnished by the Engineer shall become the property of the Employer.

SP-12 COOPERATION WITH OTHER CONTRACTORS

The Contractor shall cooperate and coordinate his work with that of the other contractors working at the Site, to whatever extent may be necessary to complete the Works in accordance with the approved programme and the Engineer's instructions.

SP-13 QUALITY OF MATERIALS

All materials, fixtures, fittings, and supplies furnished under the Contract shall be new and unused, of standard first grade quality and of the best workmanship and design. No inferior or low grade materials and supplies will be either approved or accepted, and all work of assembly and construction shall be done in a first class and workmanlike manner. In asking for prices of materials intended for delivery to the Site and incorporation in the Works under any portion of these Specifications, the Contractor shall provide the manufacturer or supplier with complete information as may be necessary to secure compliance with these requirements and, in every case, he shall quote this Clause in full to each such manufacturer or supplier.

Prior to procurement, the Contractor shall furnish to the Engineer, for his approval, the names of the manufacturers of all equipment and materials which he contemplates incorporating in the Works. With this information, the Contractor shall also furnish such pertinent information as to capacities, efficiencies and sizes, and such other information as may be required by the Engineer. Samples of materials shall be submitted to the Engineer for approval unless waived of by the Engineer. Equipment, materials, supplies and articles installed or used without the Engineer's approval shall be at the risk of subsequent rejection.

The Contractor shall use non-reactive aggregates from suitable quarries for concrete work. The Contractor shall use deformed steel reinforcement bars rolled from Pakistan Steel Mills billet or equivalent from re-rolling mills proposed by the Contractor and approved by the Engineer.

SP-14 INSPECTIONS AND TESTS

14.1 Inspection

All equipment and materials furnished under the Contract and all work performed in connection therewith under the Contract shall be subject to inspection and testing by the Engineer or his authorized agent at all times and in all stages of completion. Inspection at the manufacturer's plant may be made to determine that the equipment and materials meet the requirements of these Specifications. The Contractor shall notify the Engineer not less than 05 days in advance of the date and place that the equipment or materials will be available for inspection and testing. No equipment or materials shall be transported until inspection at the manufacturer's plant has been made. Acceptance of equipment and materials or the waiving of inspection and testing thereof shall in no way relieve the Contractor of the responsibility for furnishing equipment and materials meeting the requirements of the Contract Documents. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These

tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items or Items to be imported for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend for approval one of them or as contractor for other than those manufacturer proposed in shape of submittal by contractor for someone else on equivalency basis. Pre-shipment inspection of the selected manufacturer's equipment will be carried out by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

14.2 Testing

The Engineer will make such tests on concrete, aggregates, fill materials, reinforcing steel and other materials as he may from time to time select, and the Contractor shall provide at his own cost such samples or assistance in sampling materials at the Site as the Engineer may reasonably require. Testing by the Engineer shall in no way relieve the Contractor of his responsibility to test materials to ensure that they meet all the specified requirements and to control their quality. The Engineer may accept that items manufactured away from the Site meeting the specified requirements without further testing subject to the Contractor furnishing satisfactory proof of compliance with these Specifications in one or more of the ways described below.

The Contractor shall provide free of charge such material testing equipment, labour, materials, electricity, fuel, water, stores, apparatus and feedstock as may be reasonably required by the Employer to carry out the Tests as per the required frequency. Further contractor shall make all kind of arrangements for third party inspection/ Witnessing of Factory Acceptance Tests of major components of manufacturing factory whether located in Pakistan/abroad for four officials (02 from Employer and 02 from Engineer-In-charge side). All expanses regarding air tickets, visa in case of abroad, boarding/lodging, food, transport, hoteling etc. will be borne by the Contractor and no extra/additional payment will be made to contractor. Contractor shall quote his prices keeping in view of such expanses.

Manufacturer's Certificate of Compliance

In the case of standard labelled stock products of standard manufacture which have a record of satisfactory performance in similar work over a period of not less than five years, the Engineer may accept a notarised statement from the approved manufacturer certifying that the product conforms to the applicable specifications.

Mill Certificates

Regarding materials for which such practice is usual, the Engineer may accept the approved manufacturer's certified mill and laboratory certificates.

Testing Laboratory Certificates

The Engineer may accept a certificate from a renowned commercial testing laboratory, satisfactory to him, certifying that the product has been tested within a period acceptable to the Engineer and that it conforms to the requirements of these Specifications.

Service Record

If a demonstrable satisfactory service record for a period not less than five (05) years is available for a material, certain specified tests may be waived off by the Engineer.

14.3 Cost

The cost of any laboratory, field and shop tests required from any agency of compliance with under Specifications shall be borne by the Contractor.

SP-15 CONSTRUCTION PROGRAMME

15.1 General

The Contractor shall submit his programme for execution of the Works in accordance with Clause 14.1 [*Programme to be Submitted*], under the Conditions of Contract, to the Engineer for approval. The programme may contain adjustments if any, to the CPM (Critical Path Method) based Bar Chart submitted with the Bid. The completion date, milestones, and key targets indicated in Appendix-E to Bid, or dates earlier than the said milestone and key target dates, shall be shown on the construction programme to be submitted by the Contractor. Other dates including rates of progress for various parts of the Works in the construction programme may be changed by the Contractor and submitted for approval. The operations under each section of the programme submitted by the Contractor shall be broken down in greater detail than those shown on the Schedule submitted with the Bid.

The programme shall also show the timing of provision of any facilities the Contractor is required to supply for use by the Employer and the Engineer, in such manner that these shall be available as stipulated in the Contract and instructed by the Engineer.

15.2 Submittals

- (a) The initial submittal of network analysis shall include a description of the major items of construction equipment planned to be used. The description of the equipment shall include the type, number of units, their capacity, etc. The forecast shall include the estimated dates on which each major item of construction equipment will be on the job. The Bar Chart and the Network Analysis shall be submitted within 14 days after receipt of the Letter of Acceptance.

The submittal shall consist of:

- (i) 4 copies of the Bar Chart.
- (ii) A narrative summary of the construction plan.
- (iii) A backup of the schedule files on re-writable CD disks or pen drive.

The Engineer will review the construction schedule and the approved initial

submittal will be the Project Baseline Schedule by which the performance of the Contractor will be measured

- (b) Monthly submittals shall show completed progress of each activity during the past month, with forecast for the coming month. Hammock networks shall be incorporated on the Base Line Schedule of activities. Each monthly submittal shall contain:
 - (i) 4 copies of the Bar Chart.
 - (ii) 4 copies of a time scaled logic diagram for the next three months.
 - (iii) A narrative summary of the schedule related issues and status. The narrative shall include discussion of pending schedule changes submitted to the Engineer in the past month.
 - (iv) A backup of the schedule files on rewritable CDs or pen drive.
- (c) The successful bidder shall submit the supervision plan in respect of Environmental Health Safety SOPs and Environmental Management Plan on monthly basis along-with other deliverables manifesting the progress activities as per schedule.

15.3 Progress Schedule

Both the bar charts and network analysis schedules shall be continuously monitored and kept current and updated by the Contractor throughout the work, and at least on every milestone date and submitted for approval. The Contractor's schedules shall be available for examination during normal business hours. All revisions shall be accompanied by a detailed explanation of the reasons for the changes and describing any new or modified construction procedure proposed and, if applicable, any steps being taken to improve progress to achieve completion within the Time for Completion.

SP-16 LAY OUT OF WORKS

16.1 Reference Points, Lines and Levels

The Engineer will lay out a reference line or lines in the field with accompanying points and/or bench-marks to enable the Contractor to establish there from survey control for construction.

16.2 Verification

The Engineer may make checks as the work progresses to verify lines, levels and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirements of the Specifications and the Drawings. Shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and Specifications and the lines, levels and grades given therein.

16.3 Primary Control Points

Based upon the Engineer's basic control, the Contractor shall provide his own primary control points, as needed for the Works, and shall preserve and maintain them until otherwise authorized.

The Contractor shall be responsible for maintaining all survey markers/monuments, and property corners. If any markers/monuments are disturbed or destroyed by the

Contractor, the Contractor shall arrange, at his own cost, to retrace and replace them to the entire satisfaction of the Engineer. If a monument cannot be replaced in its original position, the Contractor shall install a witness corner. The Contractor shall complete and file monument reference cards on all monuments as per instructions of the Engineer.

16.4 Construction Surveyors

The Contractor shall provide experienced construction surveyor/s with adequate experience in the construction surveys similar in nature as required by this Contract.

16.5 Basic Control Monument

Based upon the Engineer's established basic control monuments, the Contractor shall establish all lines and grades necessary to control the Works, and shall be responsible for all measurements that may be required for execution of the Works to the tolerance prescribed in Sub-Clause 16.7 below.

16.6 Surveys and Computations

The Contractor shall perform such surveys and computations as are necessary to determine quantities of work performed or placed during each progress payment period, and shall also perform all surveys required by the Engineer to determine final quantities of work in place. The Engineer will determine final quantities based on original ground levels determined by the Contractor and agreed by the Engineer.

The Contractor shall notify the Engineer at least 24 hours before performing a quantity survey and, unless specifically waived, quantity surveys shall be performed in the presence of and agreed by an authorized representative of the Engineer.

16.7 Tolerances

Degree of accuracy for the survey works shall satisfy the following specified tolerances:

- (a) Alignment of tangents and curves shall be within 0.1 foot for 1,000 feet i.e., an accuracy of 1:10,000.
- (b) Structure points shall be set within 0.01 foot accuracy from point to point, except where tighter tolerances are required.
- (c) Cross-section points shall be located within 0.10 foot, horizontally and 0.01 foot vertically.
- (d) Permissible closing error for a levelling line meant for establishing Temporary Bench Mark (TBMs) shall not exceed $0.045 \times \sqrt{M}$ foot, where M is in miles. The permissible closing error shall be duly adjusted.

16.8 Material and Equipment

The Contractor shall provide all materials, equipment and labour required for work.

SP-17 STANDARDS AND SPECIFICATIONS

Except as otherwise provided by these Specifications or the Drawings all materials,

equipment and fabrication and testing thereof shall conform to the latest applicable Standards and Specifications contained in the following list or to equivalent applicable Standards and Specifications. Copies of these Standards and Specifications may be purchased from the indicated agency, which publishes them:

- | | | |
|---|--|------|
| - | British Standard | BS |
| - | American Concrete Institute | ACI |
| - | American Society for Testing and Materials | ASTM |

Where relevant Standards and Codes of Practice now quote metric units only, these are to be interpreted as required to the nearest equivalent imperial (foot/pound) unit for the purposes of this Contract.

All materials and workmanship not fully specified herein or covered by an approved Standard shall be of such a kind as is used in first class work and suitable to the climate in the Project Area.

If the Contractor, at any time and for any reason, wishes to deviate from the above standards or desires to use material or equipment not covered by the above standards, he shall state the exact nature of the changes, the reason for making the change and shall submit complete specifications of the materials and equipment to the Engineer for approval.

SP-18 ACCESS TO SITE

18.1 Right of Way for Access and Haul Routes

The Contractor shall be responsible for providing and maintaining access routes for the Works. The right of way for access to the Works from existing roads will be provided by the Employer. The Contractor shall make his own investigations of the condition of available public or private roads and of clearances, restrictions, bridge load limits and other limitations that affect or may affect transportation and ingress and egress at the job sites. The repair and reinstatement of roadways, drain and canal banks if damaged during operation shall be the responsibility of the Contractor without any additional cost to the Employer. The Employer controlled right of way shall be the Right of Way (ROW) available to the Contractor for carrying out the Works.

18.2 Restoration of Site

On completion of the Works, the Site shall be restored by the Contractor to its original conditions as far as practicable and left in tidy condition.

SP-19 FACILITIES TO BE PROVIDED BY THE CONTRACTOR AT SITE

19.1 Contractor's Camps

The Contractor is required to arrange the facility of housing in nearby area of the project for the labour through portable containers or house on rent in compliance with PMDFC SOPs for labour / construction worker including women worker. In case of failure and on lodging of complaint by the labour to the Engineer will result in fining of Rs. 5000 / day. Preference shall be given to utilization of local labour / construction workers.

19.2 Temporary Sanitary Facilities

- (a) The Contractor shall provide adequate temporary sanitary conveniences for the use of his employees and persons engaged on the work, including the Engineer and his employees. He shall ensure that his employees and labour make proper use of the latrines and do not foul the Site.
- (b) In addition to toilet facilities, suitable and adequate washing facilities shall be provided.
- (c) Sanitary facilities shall be located as directed or approved by the Engineer and shall be maintained in a clean and sanitary condition during the entire course of the work.
- (d) The septic tank and/or temporary holding tank(s) shall be kept pumped out at such intervals that the tank(s) will not overflow and contaminate the ground, flowing streams or surface drainage.
- (e) On completion of the Works, sanitary facilities shall be properly disinfected and all evidence of same including temporary buried tanks and foundations removed from the Site.

19.3 Medical Facilities

The Contractor shall arrange provision of adequate medical facilities for his employees.

Adequately equipped dispensary/ies with qualified and experienced staff shall be provided by the Contractor at his camps. In addition suitably equipped first aid stations manned by trained staff shall be provided at strategic locations, to administer first aid treatment at all times free of charge to all persons on the Site, including personnel of the Engineer and the Employer. The nature, number and location of facilities furnished and the Contractor's staff for administering first-aid treatment shall meet the requirements of the Health Services of the Government of Pakistan.

19.4 Operation and Maintenance of the Camps and Facilities

For the purpose of operation and maintenance of the camps and facilities provided as above, the Contractor shall comply with all applicable provisions of the Pakistani Labour Laws and specifically to the following requirements:

- (a) Camp areas shall be kept dry and free from dense vegetation. Measures shall be taken to control dust within the camp area, by water or oil spraying or other approved means.
- (b) Any ponded water around a camp shall be sprayed weekly with oil or other approved anti-malaria liquid.
- (c) The Contractor shall provide garbage collection and disposal services for his construction camps and the Engineer's office. Disposal shall be by burial (landfill) and/or incineration. Disposal area shall be located a sufficient distance away and downwind from camp facilities and offices so as not to create objectionable odours or health hazards. Equipment, methods of collection and disposal and location of disposal areas shall be submitted to the Engineer for approval.
- (d) The interior walls and ceilings of buildings shall be lime washed or painted. The

whole of the open spaces around the buildings shall be swept each day and all rubbish removed. The living areas shall be suitable for the climatic conditions. Roof height shall not be less than 10.5 ft. and adequate number of ceiling fans shall be provided.

- (e) Adequate sanitary conveniences, including washing and bathing places shall be maintained at each of the camps. All sanitary fixtures, receptacles, toilet rooms, lavatories and wash rooms shall be cleaned and disinfected at least once every day.

19.5 Drainage

The ground around the buildings shall be graded to slope away from building perimeters so as to provide adequate drainage and shall be thoroughly compacted. Excavated material shall be disposed of by filling in low areas or as otherwise directed by the Engineer.

19.6 Water Supply

The Contractor shall arrange for the water supply for his staff residences, labour camps, site offices, work yards, workshops, and various camp facilities. Construction of pumps, storage tanks, overhead tank, distribution system, and their proper running and maintenance shall be his responsibility. Water shall be supplied to the camps 24 hours a day. Adequate supply of water, cooled in summer, shall be ensured in camps and sites of work. Water samples shall be tested periodically to ensure that it is fit for human consumption.

19.7 Electricity Supply

The Contractor shall provide electricity required for the Works including labour camps, staff residences, offices including the Engineer's Site office and various camp facilities. The Contractor shall also provide sufficient standby electricity supply arrangements for his needs.

19.8 Utility Lines

The Contractor Shall conduct his operations, make necessary arrangements, take suitable precautions and perform all required work incidental to the protection of and avoidance of interference with power, telephone, water and other utilities within the areas of his operations in connection with the Contract. No separate payment shall be made for such incidental work. In case the utility lines are required to be relocated the Contractor shall arrange their relocation with the concerned departments and organizations. The Contractor shall obtain cost estimates for relocation of utilities for the Engineer/Employer's approval before execution of the Work. The Contractor shall be reimbursed the actual approved cost carried in by him.

19.9 Handing Over/Removal after Completion

Upon completion of the Works, the Contractor shall remove all the Contractor's camps, labour and staff accommodation, site office, other installations and buildings constructed and all facilities provided by the Contractor under this Clause, and the Site cleared and reinstated to the satisfaction of the Engineer.

19.10 Measurement and Payment

Except as provided in SP-19.8 no separate payment will be made for the work included under the Clause SP-19; the cost thereof is deemed to be included in the rates and prices of other items entered in the Bill of Quantities. The contractor is bound to comply with all the instructions stated in SP-19 and in case of otherwise or if any complaint lodged by the labour to the Engineer / Client, the contractor will be penalized for amounting to Rs. 5000 / day.

SP-20 PROVISION OF FACILITIES FOR THE ENGINEER (FOR CONSULTANT STAFF) /EMPLOYER

20.1 Facilities for Engineer/Employer's Staff:

(a) **Site offices:**

One furnished portacabin with all the requisite accessories for the Engineer / Employer

20.2 Ownership of Site facilities

All facilities/utilities provided by the contractor as stated above in Clause-20.1 will be property of Engineer In charge after successful handing taking over of project and expiration of defect liability period considering that the said amount is included in all items listed in Bill of Quantities.

20.3 Measurement and Payment

No extra/separate payment will be made to Contractor considering that Contractor has quoted his bid keeping in view of such expanses.

SP-21 PROGRESS PHOTOGRAPHS

The Contractor shall furnish to the Engineer every month, for the site of Fifteen colour photographs on CD or pen drive and 4 colour prints of each photograph taken with a digital camera to clearly show the progress of construction. Each photograph shall be submitted in four prints of size 20 cm x 25 cm. Each print shall be marked on the back side with the caption of the activity, date and serial number. There shall be no writing, lettering or marking on the face of the photograph. Progress photographs shall be submitted from the month, following the month in which Notice to Commence is issued and continued till completion of the Works.

No separate payment will be made for the work specified herein and the cost thereof shall be deemed to be included in the other items of the Bill of Quantities.

SP-22 SITE FACILITIES TO BE PROVIDED BY THE EMPLOYER

22.1 General

Without prejudice to the generality of the various clauses of the Contract and except for the facilities referred to hereinafter, particular attention is drawn to the obligations of the Contractor to make his own arrangements for providing, maintenance and furnishing of labour camps, staff residences, offices, workshops, stores watching and guarding thereof.

The Contractor shall submit his written demand of his requirements of land for his Site Facilities as herein specified, at least 28 days in advance.

22.2 Area for Storage and Workshop

The contractor will arrange an open area of adequate size for the facilities listed in Appendix-H to Tender and approved by the Engineer, for use as storage, and workshop areas. The Contractor shall provide and maintain at his own cost, all fencing, any necessary clearing, land levelling, foundations and above ground structures for sheds, covered areas, workshops, electricity, telephone, water distribution and waste water disposal etc, as he may need to meet his requirements.

SP-23 SAFETY MEASURES AT CONSTRUCTION SITE

- a) Pursuant to the provisions of Sub-Clause, for Safety Measures the Contractor shall observe high standards of safety for men and machines at all times and with regard to safety.
- b) The Contractor shall take all possible measures to protect his personnel from harm. In case of any casualty or injury to any person due to the Contractor's operations, the Contractor shall ensure quality medical treatment and payment of due compensation.
- c) The Contractor shall not permit casual observers to come close to the sites where excavation and other hazardous operations are being performed.

SP-24 ENVIRONMENTAL PROTECTION

The Contractor shall exercise 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 the Permanent Works, approved construction roads and the Temporary Works, and for excavation operations, all 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 to the natural appearance of the landscape. Where unnecessary destruction, scarring, damage or defacing may occur as a result of the Contractor's operations, it shall be repaired, replanted, or otherwise corrected as directed by the Engineer at no additional cost to the Employer.

Contractor will get appreciation/performance certificate from Engineer in charge and reward of Rs. 200,000/- upon compliance with ESMMP attributes at the last IPC on recommendation of DPO-ESM to engineering in charge

Contract may be terminated upon serving of 4th ESMMP Non-Compliance notice from the DPO-ESM to Engineer in charge.

The Environmental Health Safety SOPs for Labour / Construction Workers including Women workers and Environmental Management Plan are attached with this bidding document as **Annexure-1** and **Annexure-II**

Comprehensive Sewerage System in Okara City

Package-III Liquid Waste Machinery

Summary of Cost

Part - III

Sr. No.	Description	Cost (Rs.)
A	Liquid waste Machinery	
B	Environmental Management Plan	
	Grand Total Cost	

**Comprehensive Sewerage System in Okara City
Package-III Liquid Waste Machinery**

S #	Ref. CSR P/Item	Description	Unit	Quantity	Rate	Amount
1	N.S	<p>Suction Machine 4500 Liters Truck mounted sewer suction unit to be installed on a truck chassis, Locally fabricated tank with 4500 liters capacity, cylindrical in shape with full opening dish end with suitable locking system. Compound gauge for both negative and positive reading (Italy, UK, USA) Quotation Attached with accessories; i) Superstructure of Sewer Suction unit 4500 Liters ii) Truck Hino/ ISUZU or equivalent Truck Chasis Euro III 4009 CC</p>	Each	1		
2	N.S	<p>Jetting Machiner 4500 liter Truck mounted sewer jetting unit to be installed on a truck chassis, Locally fabricated tank with 4500 liters capacity, cylindrical in shape with full opening dish end with suitable locking system. Compound gauge for both negative and positive reading (Italy, UK, USA) i) Superstructure of Sewer Jetting unit 4500 Liters ii) Truck Hino/ ISUZU or equivalent Truck Chasis Euro III 4009 CC</p>	Each	1		
3	N.S	<p>Desilting Machine Suzuki Pick up mounted desilting machine, capacity/ Container of the desilting is 0.5 cubic meter, Grab Bucket can lift 5-10 kg silt at one time, can reach to the depth of 18' to 20' all steel part surfaces is free from rust and oil residue. One coat of red oxide and two coat of final paint is done with syenthitic enamel paint. Colour as per costumer choice</p>	Each	1		
4	N.S	<p>Providing and fixing of sewer cleaning heavy duty pressure pipe (thermoplastic hydraulic Hose, reinforced with syntheic thread) (Dhaagay wala) 0.75" i/d inner dia complete in all respect. with following specifications: i Reinforced with syntheic thread ii Weaether resistant synthetic rubber iii Min. working pressure: 300 bar</p>	Each	500		
Rs.						
Carried over to the Main Summary						

Environmental Management Plan cost of Supply of Liquid waste Machinery

Item	Quantity	Tentative Cost/Item- PKR./-	Total Cost
A-PPEs for Health and Safety of Labor/Workers			
Face Masks (3 PLY) - box	5		
Safety Hard Helmets	5		
Safety Shoes	5		
Hand Gloves	10		
Ear Plugs	5		
Reflective Safety Vest	5		
Safety Goggles	5		
Total (PKR)			

BIDDING DOCUMENTS

FOR

**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY
PACKAGE 4 – PROVIDING AND FIXING OF RPC MANHOLE COVER**



**Local Government &
Community Development
Government of the Punjab**

February 2024

MC OKARA

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- Form of Contract Agreement**
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INVITATION FOR BIDS

TENDER NOTICE

Municipal Committee, Okara (MC Okara) (hereinafter referred to as the “client”), invites the sealed bids from Contractors / firms / Manufacturer / Authorized dealers registered with **FBR & PRA (NTN and PNTN)**. The scope of work is as under:

S. #	Description	Estimated Cost (Rs.)	Bid Security (Rs.)	PEC Category and Specialization	Date and time of Closing	Date and time of opening
COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY						
1	Package 1- Sewerage System	922,094,999	18,441,891	C2 & Above with CE-09	27.02.2024 10:00 A.M	27.02.2024 10:30 A.M
2	Package 2 - Construction of Waste Water Treatment Plant	704,296,999	14,085,940	C2 & Above with CE-09	27.02.2024 11:30 A.M	27.02.2024 12:00 P.M
3	Package 3 – Supply of Liquid Waste Machinery	44,323,999	886,480	Not Applicable, STRN is Applicable	27.02.2024 1:00 P.M	27.02.2024 1:30 P.M
4	Package 4 – Providing and Fixing of RPC Manhole Cover	14,372,322	287,446	Not Applicable, STRN is Applicable	27.02.2024 02:30 P.M	27.02.2024 03:00 P.M

2. Each applicant may apply in one or all projects by rendering a separate request for every project and submission of unique / non-identical requisites against each project, required in bidding documents. (Same working experience, financial soundness and other resources for all projects will not be acceptable).

3. The bidding documents are available immediately after publication (2014 Punjab Procurement Rule 25(1)) at the office of **Municipal Officer (I&S), Municipal Committee Okara** and a complete set of Bidding Documents can be obtained on submission of written application along with deposited slip of Bank of Punjab in the favour of Municipal Committee Okara for Rs.10,000/- (non-refundable fee) for every project. Bidding documents shall be issued to owner of the firm by showing original CNIC and / or to Authorized representative of firm having authority letter with specimen signature of representative of firm along with original CNIC.

4. Single stage two envelopes bidding procedure will be adopted. The Bids (**Technical & Financial**) prepared in accordance with the instructions given in the Bidding Documents must be accompanied by a Bid Security **given above** in shape of CDR / Bank Guarantee from any Scheduled Bank in Pakistan in the name of the Chief Officer, Municipal Committee Okara. Last date for purchase of bidding documents is **26-02-2024**. The Bids (**Technical & Financial**) must be delivered in the office of Chief Officer, Municipal Committee Okara. The Technical bids will be opened on **27-02-2024** in presence of the bidder / bidder's representatives who choose to present.

5. Only technically responsive bidder(s) will be qualified for opening of financial bid(s). Financial bid(s) of bidder(s) found technically nonresponsive shall be returned unopened to the bidder(s).

6. The procuring Authority may reject all bids or proposals at any time prior to the acceptance of a bid or proposal under Punjab Procurement Rules 2014 (**Rule-35**).

7. Conditional tender will not be accepted.

8. Tendered rates and amount should be filled in figures as well as in words and tenders should be signed as per general directions given in the tender documents.

9. In case the total tendered amount is equal to or less than 5% of the approved estimated (DNIT) amount, the lowest bidder will have to deposit quality assurance security equal to the amount difference between approved DNIT amount and the quoted bid amount from

the Scheduled Bank within 15 days of issuance of notice or within expiry period of bid, whichever is earlier.

10. The bids will be valid for 120 days.

11. In case, the last date of bid submission falls in / within the official holiday(s), the last date for submission of the bids shall be the next working day.

12. A pre-bid meeting will be held on **Feb 15, 2024** at **11:00 AM, 12:00 PM, 1:00 PM and 2:00 PM**, or any other date and time which may separately be notified by the Client to clarify any queries and to answer any questions on matters related to the bidding documents.

**Chief Officer
Municipal Committee
Okara**

**Administrator
Municipal Committee
Okara**

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid

The Client “Chief Officer MC Okara” intends “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE 4 – PROVIDING AND FIXING OF RPC MANHOLE COVER**”

Identification and number of Contract is: _____

IB.2 Source of Funds

2.1 The Source of fund is mentioned in bidding data.

IB.3 Eligible Bidders

3.1 The bidder (Firm/ Joint Venture) must fulfill the basic eligibility criteria as per Appendix – M to Bid.

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 Bidder 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 would be free to visit site for the purpose of such inspection, but only upon the express condition that the Bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BID DOCUMENTS

IB.7 Documents Comprising the Bid

7.1 The Bid Documents are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.

1. Instructions to Bidders
2. Bidding Data Sheet

3. Special Stipulations
4. Form of Bid & Appendices to Bid
5. Bill of Quantities (Appendix-D to Bid)
6. Form of Bid Security
7. Form of Contract Agreement
8. Forms of Performance Guarantee and Mobilization Advance Guarantee and Form of Indemnity Bond for Secured Advance
9. Special Provisions
10. Environmental & Social Management & Monitoring Plan (ESMMP)

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 Bidders own risk. Pursuant to Clause IB.26, Bids which are not substantially responsive to the requirements of the Bid Documents will be rejected.

IB.8 Clarification of Bid 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 7 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 Bid 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 Bid Documents by issuing addendum.

9.2 Any addendum thus issued shall be part of the Bid Documents pursuant to IB 7.1 hereof and shall be communicated in writing to all purchasers of the Bid Documents. Prospective Bidders shall acknowledge receipt of each addendum in writing to the Employer.

9.3 To give 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

10.1 The Bid and all correspondence and documents related to the Bid exchanged by a Bidder and the Employer shall be in the bid language stipulated in the Bidding Data Sheet and conditions of Particular Application. 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 English language, in which case, for purposes of evaluation of the Bid, the English translation shall prevail.

IB.11 Documents Accompanying the Bid

11.1 The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid and the other the Financial Bid, containing the documents listed in Bidding Data Sheet under the heading of IB 11.1 A & B respectively. Both envelopes to be enclosed together

in an outer single envelope called the Bid. Each bidder shall furnish all the documents as specified in Bidding Data Sheet 11.1 A& B

11.2 Bids submitted by a JV shall include a copy of the Joint Venture Agreement (in line with PEC JV modalities) entered into by all partners. 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 line with PEC JV modalities). The role to be played by each partner to be specified therein. Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements: -

- (a) In case of a successful bid, the Form of JV Agreement shall be signed so as to be legally binding on all partners within 7 days of the receipt of letter of acceptance failing which the contract and the letter of acceptance shall stand void and redundant.
- (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 JV Agreement 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 JV Agreement (in case of a successful bid); and
- (e) A copy of JV agreement shall be submitted before signing of the Contract, stating the conditions under which JV 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. The JV Agreement shall be made part of the contract. 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 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 Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time referred to in Sub-Clause 1.2 hereof.

IB.12 Bid Prices

12.1 Unless stated otherwise in the Bid Documents, the Contract shall be for the whole of the Works as described in IB 1.1 hereof, based on the unit rates and / or prices submitted by the Bidder.

12.2 The Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a Bidder will not be paid for

by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.

- 12.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, throughout the duration of the Contract except PRA, shall be included in the rates and prices and the total Bid Price submitted by a bidder.

IB.13 Currencies of Bid and Payment

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

IB.14 Bid Validity

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data Sheet after the Date of Bid Opening specified in sub-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 or 180 days whichever is more. 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 Sheet in Pak Rupees.
- 15.2 The Bid Security shall be, at the option of the bidder, in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan 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/Earnest money shall be rejected by the Employer as non-responsive.
- 15.4 The Bid security of unsuccessful bidder will be returned by adopting the following mechanism:
- a) Written request certifying that bidder has no objection or grievance against the Procurement process.
 - b) Time for grievance period as provided by Punjab Procurement Rules-2014 has expired.
 - c) If he filed a grievance and same is dismissed by the Grievance Committee.
- 15.5 The Bid Security of the successful Bidder will be returned when the Bidder has furnished the required Performance Guarantee and signed the Agreement.
- 15.6 The Bid Security may be forfeited:
- (a) If the bidder withdraws his bid except as provided in IB 22.1;
 - (b) If the Bidder does not accept the correction of his Bid Price pursuant to IB 27.2 hereof; or
 - (c) In the case of successful Bidder, if he fails within the specified time limit to:
 - (i) Furnish the required Performance Guarantee, or

- (ii) Sign the Agreement.
- (iii) Furnish the required JV agreement within 7-days of the receipt of letter of acceptance.

IB.16 Alternate Proposals by Bidder

Not Applicable

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 Bid Documents. The date, time and venue of pre-bid meeting, if convened, is as stipulated in the Bidding Data Sheet. All prospective Bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 17.2 The Bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than one week before the proposed pre-bid meeting.
- 17.3 Minutes of the pre-bid meeting in shape of response to queries or suggestions of the bidders, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bid documents. Any modification of the Bid documents listed in IB 7.1 hereof which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a Bidder.
- 17.5 All the concerned teams of client and consultant including Environmental and Social Management Team will be present to attend the queries / questions / clarifications of the bidders.

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 Bid 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 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 in the Bidding Data Sheet 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.

- 18.6 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.
- 18.7 Bidders shall indicate in the space provided in the Letter of Technical and Financial Bids, their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.
- 18.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS FOR SINGLE STAGE TWO ENVELOPE 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.
 - (c) The technical bid should comprise of documents listed in IB11.1 (A) & the Financial Bid should comprise of documents listed in IB 11.1 (B) which shall be placed in separate envelopes in accordance with IB 11.1.
- 19.2 The inner and outer envelopes shall;
 - (a) Be addressed to the Employer at the address provided in the Bidding Data Sheet.
 - (b) Bear the name and identification number of the contract as defined in the Bidding Data Sheet, and;
 - (c) Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data Sheet.
- 19.3 In addition to the identification required in IB 19.2 hereof, the inner envelope shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared "late" pursuant to Clause IB.21
- 19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

IB.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 Sheet
- (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the Bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of Bids. No claims will be entertained for refund of such expenses.

- (c) Where delivery of a Bid is by mail and the Bidder wishes to receive an acknowledgment of receipt of such Bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed Bid package.
 - (d) Upon request, acknowledgment of receipt of Bids will be provided to those making delivery in person or by messenger.
- 20.2 The Employer may, at his discretion, extend the deadline for submission of Bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the Bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.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 and Withdrawal of Bids

- 22.1 Any Bidder may modify or withdraw his Bid after Bid submission provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of Bidders.
- 22.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No Bid may be modified by a Bidder after the deadline for submission of Bids except in accordance with IB 22.1 and 27.2.
- 22.4 Withdrawal of a Bid during the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified in the Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.15.

E. BID OPENING AND EVALUATION SINGLE STAGE TWO ENVELOPE PROCEDURE

IB.23 Bid Opening

- 23.1 The Employer will open the Technical Bids in public at the address, date and time specified in the Bidding Data Sheet in the presence of Bidders' designated representatives and anyone who choose to attend. The Financial Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening.
- 23.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal

shall be permitted unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out at bid opening.

- 23.3 Second, outer envelopes marked “SUBSTITUTION” shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Financial Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Financial Bid will remain unopened in accordance with IB .23.1. No envelope shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening
- 23.4 Next, outer envelopes marked “MODIFICATION” shall be opened. No Technical Bid and/or Financial Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Financial Bids, both Original and Modification, will remain unopened in accordance with IB 23.1. The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 23.5 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 IB21.1. Only Technical Bids read out and recorded at bid opening, shall be considered for evaluation

- 23.6 Pre-liminary Examination of Technical Bids
- (a) 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 Financial Bids. The date, time, and location of the opening of Financial Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Financial 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 Financial Bids unopened before inviting others, who are determined as being qualified, to attend the opening of Financial Bids.
- 23.10 The Employer shall conduct the opening of Financial Bids of all Bidders who submitted substantially responsive Technical Bids, publicly 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 Financial 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 Financial Bids and discounts, read out and recorded during the opening of Financial Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Financial 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 ten (10) 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; (iv) Includes signed Integrity Pact where required as per clause IB.35 and (v) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Only substantially responsive bid shall be considered for further evaluation.

26.3 If a bid is not substantially responsive, it may not subsequently be made responsive by correction or withdrawal of the non-conforming material deviation or reservation. The Employer may, however, seek confirmation/ clarification in writing or by email which shall be responded accordingly.

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

IB.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.
 - (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 imbalanced 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 Guarantee set forth in 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 IB 29.2.
- 29.2 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in Bidder's capacities, may require the bidders to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

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

IB.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, the lowest evaluated bidder may further reduce the Bid Price voluntarily without compromising the quality/ quantity.
- 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 Guarantee, the Employer will promptly notify the other bidders that their Bids have been unsuccessful. No bid security can be returned without exhausting the grievance period or without finally disposing off the complaint of the non-responsive bidder. However, bid security may be returned earlier if any bidder submits affidavit that he is satisfied with the proceedings and hence his bid security may be returned.

IB.32 Performance Guarantee

- 32.1 The successful bidder shall furnish to the Employer a Performance Guarantee in the form and the amount stipulated in the Bidding Data Sheet and the Conditions of Contract within a period of 15 days after the receipt of Letter of Acceptance.
- 32.2 Failure of the successful bidder to comply with the requirements of IB.32.1 or IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.33 Signing of Agreement

- 33.1 Upon furnishing of acceptable Performance Guarantee under the Conditions of Contract, formal Agreement between the Employer and the successful bidder shall be executed.

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, inter-alia, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

The Successful Contractor/Joint Venture shall comply with and acquire all consents, approvals, permits and licenses applicable under the laws of Pakistan in relation to the performance of the work & services.

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 / Provincial 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

Submission of bids shall be construed as evidence that the bidder has admitted all provisions of the instruction to the bidder.

IB.37 PPRA Act, 2009 and PPR-14 will have over-riding effect

PPRA Act, 2009 and PPR-14 as amended upto date will supersede and will have an over-riding effect in case in case of any contradiction with these Instructions, the Contract, or any other part of the Bidding Documents.

BIDDING DATA SHEET

BIDDING DATA SHEET

The following specific data for the Works 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

Clause IB-1:

Sub-Clause: 1.1 Name and address of the Employer

Chief Officer,

Municipal Committee Okara

Email: info@mcokara.lgpunjab.org.pk

Phone: 044-9330011

Summary of Works

SN	Description
1.	RPC Manhole Cover
2.	Environmental & Social Management & Monitoring Plan (ESMMP) Cost
	Total Cost (Rs.)

Clause IB-2: Source of Funds

Sub-Clause 2.1

The Project is funded by Government of the Punjab through World Bank.

Clause IB-10: Language of Bid

Sub-Clause 10.1

English

Clause IB-11: Documents Accompanying the Bid

Sub-Clause 11.1:

A) The Bidder shall submit with its Technical Bid the following documents:

- (a) Letter of Technical Bid
- (b) Bid Security (IB.15)
- (c) Written confirmation authorizing signatory of the bid to commit the Bidder. (IB 18.5)
- (d) Pending litigation information.
- (e) Special Stipulations Appendix-A
- (f) Proposed Construction Schedule Appendix-E
- (g) Method of Performing the work Appendix-F

(h) Availability of Critical Equipment	Appendix-G
(i) Construction Camp and Housing Facilities	Appendix-H
(j) List of Sub-Contractor	Appendix-I
(k) Organization Chart for Supervisory Staff	Appendix-K
(l) Integrity Pact	Appendix-L
(m) Eligibility Criteria	Appendix-M1 & M2
(n) Qualification Criteria	Appendix-N

B) The Bidder shall submit with its Financial Bid the following documents:

(o) Letter of Financial Bid	
(p) Bid Security	
(q) Bill of Quantities	Appendix-D
(r) Estimate Progress Payment	Appendix-J

Clause IB-13: Currency of Bid and Payment:

Sub-Clause 13.1

The unit rates and the prices shall be quoted by the Bidder entirely in Pakistani Rupees and likewise payments will also be made entirely in Pakistani Rupees.

Clause IB-14 Bid Validity:

Sub-Clause 14.1 Period of Bid Validity

120 Days

Clause IB-15 Bid Security

2% of the Estimated Cost of Rs. 14,372,322/- . i.e (287,446/-)

The bids must be accompanied with Bid Security for the Project in the form of CDR/Bank Guarantee of amount Specified above in the name of the undersigned from a Scheduled Bank of Pakistan. No bid security in cash will be accepted. **Bid security should be attached with the technical bid, otherwise the bid will not be taken into account for evaluation and it will be rejected straight forward.**

Clause IB-16 Alternate Proposals by Bidders

NOT APPLICABLE

Clause IB-17 Pre-Bid Meeting

The pre bid meeting with bidders and their authorize representatives will be held on **Feb 15, 2024** at **02:00 PM** in the office of Chief Officer, Municipal Committee Okara or in any other office specified by Client to clarify the issues and to answer any questions on matters related to bid documents

Clause IB-18 Format and Signing of Bid

Sub-Clause 18.4 Format and Signing of Bid

One Original & Three Copies (Two hard and one electronic in USB/DVD) of **Technical Bid** whereas One original and Two copies for **Financial Bid**.

Clause IB-19 Sealing and Making of Bid

Sub-Clause 19.2 (a) Employer’s address for the purpose of Bid Submission is as follows:-

Municipal Committee Okara
Email: info@mcokara.lgpunjab.org.pk
Phone: 044-9330011

19.2 (b) Name and Number of the Contract is as follows: -

Contract No. _____

Clause IB-20 Deadline for submission of Bid:

Sub-Clause 20.1 (a)

Venue: Chief Officer, Municipal Committee Okara
Time: 2:30 PM,
Date: February 27th, 2024

Clause IB-23 Bid Opening:

Sub-Clause 23.1 (a) Venue, Time and Date of Bid Opening

Venue: Chief Officer, Municipal Committee Okara
Time: 3:00 PM
Date: February 27th, 2024

Clause IB-32 Performance Guarantee:

Sub-Clause 32.1

Delete the text sub-clause 32.1 and substitute with the following: -

The Performance Guarantee shall be 10% of **Contract Amount** (work being less than 50 Million) mentioned in the Letter of Acceptance on the prescribed form [PS-1] in shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.

Add at the end of **Sub-Clause 32.2:**

Next lowest Bidder

In the event, the Performance Guarantee is not provided by the lowest bidder, and the award is annulled, the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and technically accepted and is determined by the Employer to be qualified to perform the Contract satisfactorily.

Clause IB-36 Instructions not part of Contract:

Fraud and Corrupt Practices:

Bidders and their sub-contractors under contracts must observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Employer:

- a) Defines, for the purposes of this provision, the terms set forth below are defined as follows:
- “Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party.
 - “Fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation
 - “Coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - “Collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.
 - obstructive practice” means (a) deliberately destroying· falsifying· altering· or concealing of evidence material to an investigation by the Employer; making false statements to investigators in order to materially impede an investigation by the Employer; (c) failing to comply with requests to provide information· documents· or records in connection with an office of Anticorruption investigation; (d) threatening· harassing· or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (e) materially impeding the Employer’s contractual rights of audit or access to information
 - “Integrity violation” is any act which violates the Government’s Anticorruption Policy· including (i) to (v) above and the following: abuse, conflict of interest· violations of the Government sanctions, retaliation against whistleblowers or witnesses· and other violations of the Government’s Anticorruption Policy including failure to adhere to the highest ethical standard.
- b) will reject any Bid/proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
- c) will cancel the contract if it determines at any time that its representatives or those of the Bidder were engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the selection process or the execution of the Contract; and
- d) will sanction bidders or its successor including declaring ineligible, either indefinitely or for a stated period of time, to participate in bidding activities in Pakistan if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing Contract
- e) Will have the right to require that consultants permit the Government or its appointed agent to inspect their accounts and records and other documents relating to the submission of proposals and contract performance and to have them audited by auditors appointed by the government.

**FORM OF BID
AND
APPENDICES TO BID**

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;

We offer to execute and complete in conformity with the Bidding Documents the following Works:
"COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-4 PROVIDING AND FIXING OF RPC MANHOLE COVER"

- (a) Our Bid consisting of the Technical Bid and the Financial Bid shall be valid for a period of 120 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;
(b) 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) 30 days beyond validity of Bid itself.
(c) 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).
(d) 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.....

Letter of Financial 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) The total price of our Bid, excluding any discounts offered in item (c) below is:

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

(d) Our Bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(e) If our Bid is accepted, we commit to obtain a Performance Guarantee and Quality Assurance Security in accordance with the Bidding Documents;

(f) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.

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

(h) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.

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

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Address.....

SPECIAL STIPULATIONS**Clause****Conditions of Contract**

1.	The Engineer's (Consultant) Authority to issue Variation in emergency	2% of the Contract Price stated in the Letter of Acceptance with the written approval of client.
2.	Law applicable	The relevant laws applied in the Province of Punjab.
3.	Amount of Performance Guarantee	The Performance Guarantee shall be 10% of Contract Amount mentioned in the Letter of Acceptance on the prescribed form [PS-1] in the shape of Bank Guarantee from any Scheduled Bank in Pakistan in favor of the Employer.
4.	Time for Furnishing Work Programme	Within 14 days from the date of receipt of Letter of Acceptance.
5.	Minimum amount of Third-Party Insurance	The amount of insurance taken out by the Contractor per occurrence with number of occurrences unlimited shall be as follows: a. Bodily injury (any one person) PKR 0.5 (Half Million (Max)) b. Fatal Case (any one person) PKR 01 (one) million (Minimum) c. Property Damages Depending upon nature of loss (100% of the Damage)
6.	Time for Commencement	Within 7 days from the date of receipt of Engineer's Notice to Commence which shall be issued within 14 days after signing of Contract Agreement.
7.	Time for Completion	04 Months from the date of Commencement of the Project.
8.	a) Amount of Liquidated Damages	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.
	b) Amount of Bonus for early completion	Not Applicable.
9.	Defects Liability Period	365 days from the effective date of Taking Over Certificate.
10	Percentage of Retention Money	10 % on the amount of work done up to Rs. 5 million and 5 % on the amount of work done beyond 5 million
11	Limit of Retention Money	05% of Contract Price stated in the Letter of Acceptance.
12	Minimum amount of Interim Payment Certificates (Running Bills)	Greater than PKR. Two Million (02 Million) except last 2 IPC's
13	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	30 days
14	List of material	NOT USED
15	Mobilization Advance (Interest Free)	Not Applicable

16	Environment, Health & Safety	Contractor will be bound to comply the Environmental & Social Management And Monitoring Plan (ESMMP) and Environmental Health Safety SOPs for Labor/Construction Workers including Women Workers to fulfill ESMMP safeguards compliance otherwise 1 % of contractual amount will be forfeited upon Engineer's report from last IPC
----	------------------------------	--

NAME OF ELIGIBLE COUNTRIES

All countries of the World with whom Islamic Republic of Pakistan has commercial trade relations.

FOREIGN CURRENCY REQUIREMENTS

NOT APPLICABLE

PRICE ADJUSTMENT

Price adjustment / variation for the materials specified by the Government of Punjab will be paid as per rates issued by Finance department Government of Punjab from time to time and in the line with Punjab Local Government works Rules.

BILL OF QUANTITIES**D. Preamble**

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract (in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the contract include all costs of contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the contract. Furthermore, all duties, taxes and other levies payable by the contractor under the contract, or for any other cause, as on the date 14 days prior to dead line for submission of Bids in case of ICB/NCB respectively, shall be included in the rates and prices and the total bid price submitted by the bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities and shall not be paid separately.
5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the works.
6. General directions and description of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the bidding documents shall be made before entering prices against each item in the priced Bill of Quantities.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance
8. Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend

for approval one of them or as contractor for other than those manufacturers proposed in shape of submittal by contractor for someone else on equivalency basis.

9. The contractor will also provide the submittals of imported items as stated above. Pre-shipment inspection of the selected manufacturer's equipment will be carried out as per by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site.

10. Work program of level three must be submitted to Engineer/employer along with submittal.

BILL OF QUANTITIES
SUMMARY
ABSTRACT OF TENDER PRICE

Sr. No.	Description	Amount (Rs)
Part-A		
1	RPC Manhole Cover	N/A
2	Environmental & Social Management And Monitoring Plan (ESMMP) Cost	
Total Amount (Rs)		N/A
Note: These rates are exclusive of PRA charges		

Note: All Provisional Sums are to be expended in whole or in part at the direction and discretion of the Engineer in-charge

PROPOSED CONSTRUCTION SCHEDULE

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 his Construction Schedule in the Bar Chart form 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 program 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 issue of Engineer’s Notice to Commence (Bidder to attach sheets as required for the specified form of Construction Schedule):

<u>Description</u>	<u>Time for Completion</u>
a) Whole Works	_____ days
b) Part-A	_____ days
c) Part-B	_____ days
d) _____	_____ days
e) _____	_____ days

Appendix-F to Bid

METHOD OF PERFORMING THE WORK

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

1. Organization Chart indicating head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.
2. Mobilization at site of works, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for Storage, communications, security and other services to be used.
3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.
4. Quality control/ Quality assurance measures to be adopted including procedures to be followed for carrying out all tests required under specifications.
5. Production of Authorization from Original Equipment Manufacturer.
6. Pre-shipment inspection at the factory premises shall be carried out by an independent Third-Party Firm having specialization in the task and possess the relevant professionals of the field. Third Party Validation Firm (TPV) shall be engaged by the Chief Engineer / D.G. (O&M) if required. The expenses in this connection shall be borne by the Contractor.
7. The Contractor should submit appropriate plans detailing how they intend to coordinate the Works with the ongoing system so that the existing system is not disturbed in any manner, and how they will ensure that the necessary facilities are available to enable it.

Note

- The Bidder shall provide the methods for performing the work in such manner that the works falling under the Construction must be in compliance with the Technical Specifications. These shall form part of and be included at the relevant appendix in the respective Contracts.
- Import documents like bill of lading, custom clearance, Air-way bill, port of shipment etc. will be provided by the contractor to the consultant/employer for verification of imported plants & equipment prior to submit the bill invoice of the same.

LIST OF MAJOR EQUIPMENT – RELATED ITEMS

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

LIST OF MAJOR EQUIPMENT

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 CAMPS 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 Tenderer 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 sub-contractors. In my/our opinion, the sub-contractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of sub-contractors, 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)	Sub-Contractor (With Complete Address)
1	2

ESTIMATED PROGRESS PAYMENTS

Note: Appendix – J duly filled by the Contractor should only be included in the **Financial Proposal/Financial Bid**.

Month	Amounts (Million Rs.)
1	2
Ist	
2 nd	
3 rd	
4 th	
5 th	
6 th	
Bid Price	

ORGANIZATION CHART
FOR THE
SUPERVISORY STAFF AND LABOUR

(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 owned or controlled by GoP through any 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 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 from GoP.

Name of Employer:.....

Name of Contractor:.....

Signature:.....

Signature:

Seal/Stamp.....

Seal/Stamp.....

Eligibility Criteria

The Bidders (Firm/ Joint Venture) fulfilling the following basic eligibility criteria shall only be considered for further evaluation. (Relevant documents to be attached):

- a) A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be non-Responsive. The bidder must submit affidavit with these points mentioned in the affidavit:
 - a. The firm has no conflict of interest with one or more parties in this Bidding process.
 - b. The firm is not associated or have been associated, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design and other documents to be used.
 - c. The firm doesn't have controlling shareholders in common with one or more parties in this Bidding process.
 - d. The firm hasn't received or have received any direct or indirect subsidy from one or more parties in this Bidding process.
 - e. The firm has not the same legal representative, as that of, one or more parties in this Bidding process, for purposes of this Bid.
 - f. The firm doesn't have a relationship with one or more parties in this Bidding process, directly or through common third parties, that puts it in a position to have access to information about or influence on the Bid of another Bidder or influence the decisions of the Procuring Agency regarding this Bidding process.
- b) Valid legal entity of the bidder / firm/ company e.g. Certificate of registration from SECP or registrar of firms etc.
- c) Certificate of registration with active Income Tax & active Sales Tax under Relevant Authority.
- d) Affidavit on Non-Judicial Stamp paper for No litigation OR submission of Litigation History of last 10 years.
- e) Affidavit declaring "Neither the firms nor its Directors, Stakeholders, as a whole or as a part of the firm have ever been black listed/ defaulted by any government agency / department / organization / Donors or settled dispute in plea bargain or Volunteer recovery".

Un-signed and un-stamped bids will be rejected.

Note: In case of Joint Venture, all the members have to meet in full the afore-mentioned basic eligibility criteria.

Eligibility Criteria (Part-B)**TECHNICAL SPECIFICATIONS**

Sr. No.	Description / Specification	Bidder to Specify
1	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26" dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).	

Note:

1. This part of evaluation shall be of knock out basis if the bidder fails to provide the authorization from Original Equipment Manufacturer (**OEM**) / authorized distributor of OEM for items at Sr. No. 1 and fails to comply the given specifications he shall be considered as **non-responsive** and shall not be considered for further evaluation.
2. Similar to other than above or better specifications of an equivalent item will be accepted by the Procurement Committee / Bid Opening & Evaluation Committee, provided the bidder attaches brochure mentioning the relevant specifications. In absence of brochure the bid will be considered as non-responsive and the decision of the committee shall be final.

Qualification Criteria

Technical Evaluation will be based on the criteria given in succeeding paras regarding the Bidder’s General Experience, Specific Experience, Personnel Capabilities and Equipment Capabilities as demonstrated by the Bidder’s responses in the forms attached. The Procuring Agency reserves the right to waive minor deviations, if these don’t materially affect the capability of a Bidder to perform the contract. Sub-contractor’s experience and resources shall not be taken into account in determining the Bidder’s compliance with the qualifying criteria. However, Joint Venture experience & resources shall be considered. Consortium or Association of Contractors will be considered for similar treatment as in case of Joint Venture. The detailed qualification criteria for Technical Evaluation is provided as follows:

Sr. No.	Category	Weightage/Marks
1.	Financial Soundness	40
2.	General & Relevant Experience	45
3.	Personnel Capabilities	15
	Total:	100

The applicants must score total 65 marks and at least 50 % marks in each category, to qualify.

SUB CATEGORY A: FINANCIAL SOUNDNESS

For financial soundness, Letter from Banks and audited financial statements for *last five financial years shall be submitted. if Bank statement (In case of Cash), letter from Banks (In case of Credit Line) & audited financial statements of last five financial years are not attached, no consideration will be given to bidder.*

Sr. No.	Description	Maximum Marks
i)	<p>Available Cash / Bank Credit Line Limit (or combination of both)</p> <p>A= Available Cash/Bank Credit Line limit or combination of both (in PKR Million)</p> <p>(20 - Marks)</p>	<ul style="list-style-type: none"> • Full Marks will be given if “A” is PKR 10 Million or above. • For ‘A’ less than PKR 10 Million, marks will be awarded as: (A/10) *20 • No Marks will be given if “A” is less than PKR 5 Million. <p><u>No marks shall be allotted if Bank statement (In case of Cash) & letter from Bank (In case of Credit Line as proof of Credit Line) is not attached.</u></p>
ii)	<p>Average Working Capital in last Five financial years.</p> <p>A= Average Working Capital in last five financial years (in PKR Million)</p> <p>(20 - Marks)</p>	<ul style="list-style-type: none"> • Full Marks will be given if “A” is PKR 10 million or above. • For ‘A’ less than PKR 10 Million, marks will be awarded as: (A/10) *20 • No Marks will be given if “A” is less than PKR 5 Million. <p><u>No marks shall be allotted if audited financial statements of last five financial years are not attached.</u></p>
	Sub-total:	40

SUB-CATEGORY B: EXPERIENCE RECORD

Bidder must meet following criteria for evaluation of the experience of the Firm/JV.

Sr. No.	Description	Max. Marks
i)	<p>Projects of General Nature completed over last 05 years.</p> <p>a. Max 03-projects having minimum cost Rs. 10 Million each.</p> <p>(General nature project includes supplies, sewerage works)</p> <p>Each project having above-said minimum cost bracket; will have equal marks. (i.e. 3*10=30)</p>	30
ii)	<p>Any construction project with satisfactory completion certificates granted by the departments for the other projects enlisted at Sr. no. i). i.e 03 projects (3x5=15)</p>	15
	Sub-total:	45

SUB-CATEGORY C: PERSONNEL CAPABILITIES

The following key experts at a minimum shall be evaluated:

No personnel will be considered for evaluation if declaration of Professional Staff Employment & availability for this Project (**Form T11-12-13**) **duly signed by authorized signatory** is not attached. Bidder will also provide **affidavit of employee** on judicial stamp paper.

Bidders will submit the detailed particular of his experts considering that all staff **will serve at site full time during execution of works** In case bidder fails to appoint full time Project Manager at site, a penalty of PKR 100,000 will be imposed on monthly basis and in case bidder fails to appoint full time other supporting staff (all personnel or partly) mentioned below (other than Project Manager) at site, a penalty of Rs. 100,000/- will be imposed on monthly basis.

Sr. No.	Description	Maximum Points
i)	Personnel in employment of the contractor a) Number of Managers/Engineers (Min 01-No) b) Experience of Manager/Engineers (MBA Manager or PEC registered with 7 year experience)	 6 3
ii)	Number of support staff in Employment of the Contractor a) Number of Supervisors (Min 1-No.) b) Experience of Supervisors (Minimum 05 - years)	 3 3
Sub-total:		15

Bidders will provide **short CVs**, showing details of experts are desired by highlighting the name of expert, qualification, year of graduation or other degree(s), general experience, specific experience, designation, time of association with this firm. Experience certificates, affidavit of employee on judicial stamp paper. No marks if required documents are not attached.

Joint Venture (JV)

Joint Venture must comply with the following requirements: -

- a) Minimum qualification requirements: -
 - i) The lead partner shall meet not less than 50 percent of all qualifying criteria given in paras A to D heretofore.
 - ii) The joint venture must collectively satisfy the criteria of paras A to D, for which purpose the relevant figures for each of the partners shall be added together to arrive at the JV's total capacity.
- b) Any change in a qualified JV after qualification, shall be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval may be denied if:-
 - i) Partner(s) withdrawn from a JV and remaining partners do not meet the qualifying requirements;
 - ii) The new partners to a JV are not qualified individually or as another JV; or
 - iii) In the opinion of the Employer, a substantial reduction in competition would result.
- c) Bid shall be signed by all members in the JV so as to legally bind all partners, jointly and severally, and any bid shall be submitted with a copy of the JV agreement providing the joint and several liability with respect to the contract.

Conflict of Interest

The Bidder (including all members of a JV) must not be associated, nor have been associated in the past, with the consultant or any other entity that has prepared the design, specifications, and other prequalification and bidding documents for the project, or was proposed as Engineer for the contract, over the last Ten years. Any such association may result in disqualification of the Bidder.

Form -T-1

General Information

Bidder (or each Member of a Joint Venture) applying for qualification is required to complete the information in this form.

1.	Name of Firm:	
2.	Head Office Address:	
3.	Telephone:	
4.	Email:	
5.	Type of Organization:	
6.	Place of Incorporation/Registration:	Year of incorporation/registration:
7.	PEC Registration Category: PEC Registration No:	Validity:
8.	NTN#	
9.	Name, Designation, email and Mobile Number of Firm's Representative	

Detail of Owners/ Directors

Name	Designation	Nationality
1.		
2.		
3.		
4.		
5.		

Financial Soundness

Name of Bidder (Lead Member of a Joint Venture, in case of JV)
--

Bidder (Lead Member of a Joint Venture, in case of JV) applying for qualification is required to provide financial information to demonstrate that they meet the requirements of Evaluation Criteria. If necessary, use separate sheets to provide complete information. A copy of the audited financial statements of the past five (5) financial years must be attached.

Bidder’s Legal Name: _____

Date: _____

JV Members Legal Name: _____

Information Balance Sheet

	Year-1	Year-2	Year-3	Year-4	Year-5	Overall Average
Total Assets (TA)						
Total Liabilities (TL)						
Net Worth (TA-TL)						
Current Assets (CA)						
Current Liabilities (CL)						
Average Annual Turnover (AATO)						
Average Annual Turnover						
Financial Resources						
Cash/Bank Balance						
Credit Line Limit						

Form -T-4

Details of Similar Nature Projects Completed

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (**Completion Certificate indicating Cost of Project**) shall be provided for each project in **Form T-03**.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a) Sole Contractor (b) Sub-Contractor (c) Member in JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____ Years _____ Months

Form -T-6

Details of Similar Nature Projects in hand

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Letter of Award/ Agreement indicating Cost of Project) shall be provided for each project in Form T-5.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a)Sole Contractor (b)Sub-Contractor (c) Member in a JV
6.	Value of the total contract(in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Planned Date of Completion

Form -T-8

Details of General Nature Projects Completed in Last 5 Years

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-07.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of Works and special features of the contract
5.	Contract Role (Tick One) (a) Sole Contractor (b) Sub-Contractor (c) Member in a JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____ Years _____ Months

Summary of Fast Track Project Completed

Name of Bidder or Member of a Joint Venture

Bidder and each Member of a Joint Venture applying for qualification is required to complete the information in this form.

Use a separate sheet for each Member of a Joint Venture.

Project Name	Year of Completion	Location	Value in PKR (Million)	Completion Duration

NOT USED

Form -T-10

Details of Fast Track Similar Nature Projects Completed in Last Ten (10) Years

Name of Bidder or Member of a Joint Venture

A separate form with adequate documentary evidence (Completion Certificate indicating Cost of Project) shall be provided for each project in Form T-09.

1.	Name of Contract
	Location
2.	Name of Employer
3.	Employer Address
4.	Nature of
5.	Contr (a)Sole-C (b)Sub-Contractor (c) Member in a JV
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract PKR..... USD.....
7.	Date of Award
8.	Date of Completion
9.	Contract Duration (Years and Months) _____Years _____Months

NOT USED

List of Proposed Staff

Name of Bidder:

_____ *(Bidder or Member of Joint Venture)*

1	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	
2	Title of Position	
	Name of Candidate	
	Education	
	Experience	
	PEC Registration No.	

Candidate Summary

Name of Bidder: _____
(Bidder or Member of Joint Venture)

Position	Candidate	
	Prime	Alternate
Candidate Information	Name of Candidate	Date of Birth
	Professional Qualification:	
PEC Registration No. (Only for Engineer)		
Present Employer	Name of Employer:	
	Address of Employer	
	Telephone:	Fax:
	Job Title of Candidate	Years with Present Employer

Summarize professional experience in reverse chronological order.

From	To	Company	Project	Position	Relevant Technical & Management Experience

Form -T-13

DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT

[To be submitted on Company Letterhead]

TO WHOM IT MAY CONCERN

PROJECT: _____

SUBJECT: DECLARATION OF PROFESSIONAL STAFF EMPLOYMENT & AVAILABILITY

We hereby certify that the personnel nominated in Form-T-11 are employed by our firm and are available for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Equipment Detail

Name of Bidder or Member of Joint Venture

Bidder and each Member of Joint Venture is required to provide adequate information to demonstrate clearly that it has the sufficient capability to undertake the Project. A separate form shall be prepared for each item of equipment listed in the Evaluation Criteria.

Item of Equipment		
Equipment information	1. Name of manufacturer	2. Model and power rating
	3. Capacity	4. Year of manufacture
Current status	5. Current location	
	6. Details of current commitments	
Source	7. Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased	

Omit the following information if it is owned by the Bidder or Member of JV.

Owner	8. Name of owner	
	9. Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreement	Details of rental/lease specific to the Project.	

Affidavit of ownership/Availability of Equipment

PROJECT: _____

SUBJECT: DECLARATION OF OWNERSHIP/ LEASE OF EQUIPMENT

We hereby certify that the equipment nominated in T-14 is owned by/Leased by our firm and is available in Pakistan for the above-mentioned Assignment.

Yours Sincerely,

COMPANY NAME:

AUTHORIZED REPRESENTATIVE

Litigation History for the last Ten (10) Years

Name: _____
(Bidder or Member of Joint Venture)

Description of Contract	Year	Name of Client, Cause of litigation and matter in dispute	Disputed amount (Current value in PKR or US\$ equivalent)	Award FOR or AGAINST Bidder	Remarks by Bidder

Attach Affidavit/undertaking that non-performance of a contract did not occur within the last ten years based on information on all settled disputes or litigation.

AFFIDAVIT FOR CORRECTNESS OF INFORMATION

(To be printed on PKR 100 Stamp Paper)

Name: _____
(Bidder or member of Joint Venture)

I, the undersigned, do hereby certify that all the statements made in the Forms and in the supporting documents are true, correct and valid to the best of my knowledge and belief and may be verified by employer if the Employer, at any time, deems it necessary.

The undersigned hereby authorize and request the bank, person, firm or corporation to furnish any additional information requested by the Employer deemed necessary to verify this statement regarding my (our) competence and general reputation.

The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the Employer. Employer undertakes to treat all information provided as confidential.

Signed by an authorized Officer of the firm

Title of Officer

Name of Firm

Date

POSSESSION OF SITE HANDING / TAKING OVER

Name of Sub-Project / Contract Name:

Name of Contractor / Contracting Firm:

Date of Award of Work:

Date of Contract Agreement:

Contract number:

The sub-project (Name of subproject) which pertains to the sites as shown in drawings are integral part of this Contract is hereby handed over to the Contractor M/s _____ on (Date, day, year) in presence of witness.

(Plan attached list of sites being handed over / taken over)

Handed over by

Name:

Designation: Chief Officer MC _____

Cell:

Stamp:

CNIC No:

Witness (MOI)

Name:

Designation:

taken over by (Contractor / Firm)

Name:

Designation:

Cell No:

Stamp:

CNIC No:

PEC No:

I, hereby take over the sites as marked in the plan attached as Annexure-A of this document

Witness:

Designated approved Site Engineer of Contracting Firm

FORMS

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

BID SECURITY
(Bank Guarantee)

Security Executed on _____
(Date)

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

Name of Principal (Bidder) with Address _____

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

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at their quest 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, 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 Guarantee, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Guarantee 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 Guarantee 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.

WITNESS:	SURETY (Bank)
1. _____ _____	Signature _____
Corporate Secretary (Seal)	Name _____
	Title _____
	Corporate Guarantor (Seal)

2. _____

Name, Title & Address

**FORM OF PERFORMANCE GUARANTEE
(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.

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 _____

Corporate Secretary (Seal)

Name _____

Title _____

2. _____
Name, Title & Address

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

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

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

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda / Clarification as agreed or otherwise, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract, viz:
 - a. The Contract Agreement;
 - b. The Letter of Acceptance;
 - c. The completed Form of Bid;
 - d. Special Stipulations (Appendix-A to Bid);
 - e. Contract form for execution of work;
 - f. The priced Bill of Quantities (Appendix-D to Bid);
 - g. The completed Appendices to Bid (B, C, E to O);
 - h. Special Provisions;
 - i. The Drawings;
 - j. The Specifications;
 - k. Work Schedule;
 - l. (any other)
3. The contractor will have to complete the work within the stipulated period, according to specifications as mentioned in the acceptance letter and Contract Agreement to the entire satisfaction of the engineer in-charge
4. 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.
5. 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.

6. That if the contractor fails to comply with any of the conditions of the contract, he will be held liable for the consequences thereof which shall be either in the form of liquidated damages or allotment of work at his risk and cost or both. The damages so incurred shall be recovered from the contractor, either from his security money or his running/outstanding bills. Further, if any information/ document submitted by contractor/ firm, founds false, fabricated, materially incorrect at any stage, he/firm will be liable for blacklisting.
7. 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

(Seal)

Signature of Employer

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

(Name, Title and Address)

Witness:

(Name, Title and Address)

MOBILIZATION ADVANCE GUARANTEE/BOND

Guarantee No. _____ Date _____

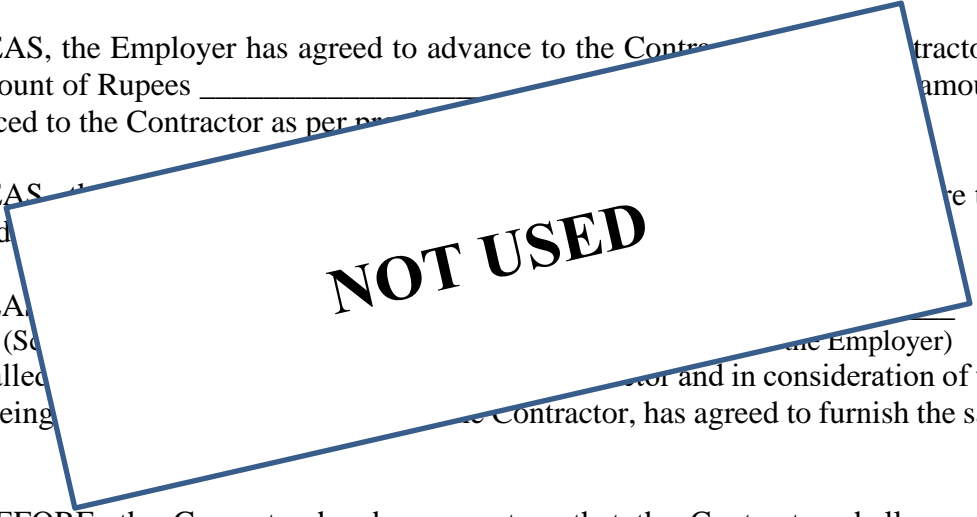
WHEREAS _____ (hereinafter called the 'Employer') has entered into a Contract for _____

(Particulars of Contract)
with _____ (hereinafter called the "Contractor").

AND WHEREAS, the Employer has agreed to advance to the Contractor _____ Contractor's
request, an amount of Rupees _____ amount
shall be advanced to the Contractor as per _____

AND WHEREAS _____ the
mobilization advance of _____

AND WHEREAS _____ the Employer)
(Hereinafter called _____ Contractor and in consideration of the
Employer agreeing _____ 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.

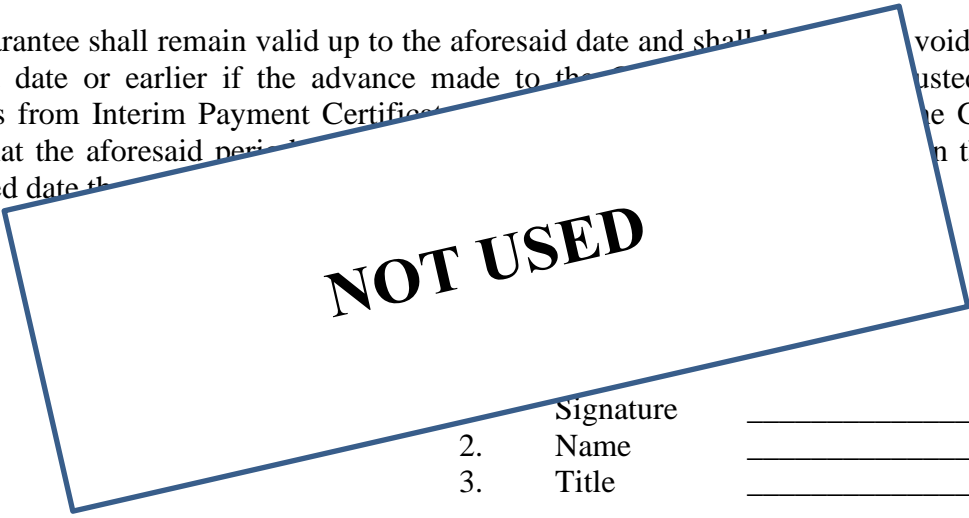
Notice in writing of any default, of which the Employer shall be the sole and final judge, on
the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first
written demand, payment shall be made by the Guarantor of all sums then due under this
Guarantee without any reference 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 void after the aforesaid date or earlier if the advance made to the _____ is not repaid against payments from Interim Payment Certificates. The Guarantor agrees that the aforesaid period shall be the period for which the above mentioned date shall be the date of expiry of the advance.



2. Signature _____
3. Name _____
Title _____

WITNESS

1. _____

Corporate Secretary (Seal)

2. _____
(Name Title & Address) _____
Corporate Guarantor(Seal)

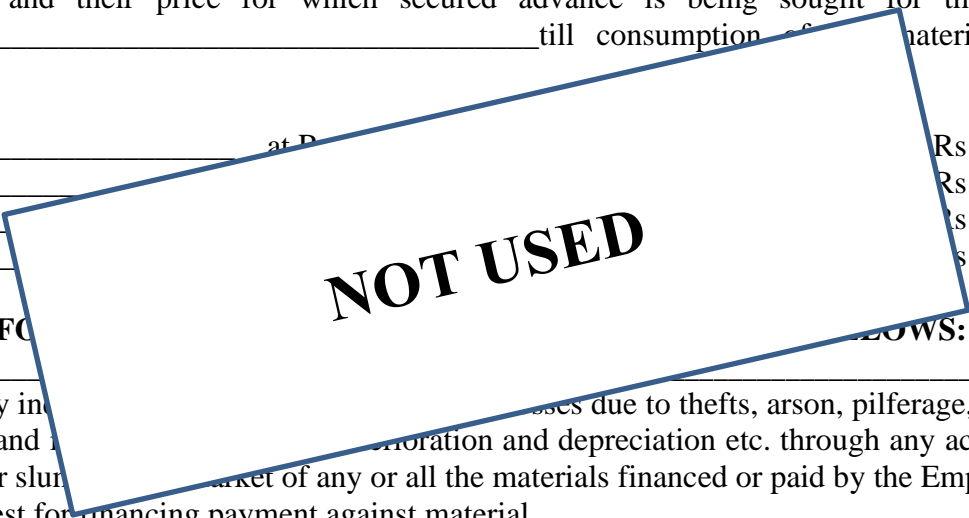
**INDEMNITY BOND
FOR SECURED ADVANCE
AGAINST MATERIALS BROUGHT AT SITE**

(ON RS.40 NON JUDICIAL STAMP PAPER)

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

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

- | | |
|----------|--------|
| 1. _____ | at Rs. |
| 2. _____ | Rs. |
| 3. _____ | s. |
| 4. _____ | s. |



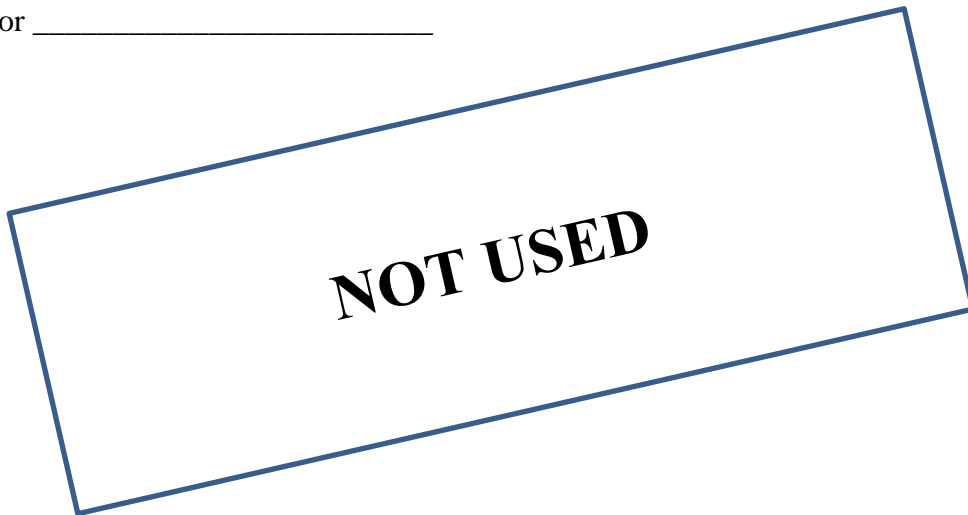
THEREFORE _____
I/We _____
do hereby indemnify _____ against all losses due to thefts, arson, pilferage, loss due to flood and _____ and depreciation etc. through any act of Man or God or slurr _____ of any or all the materials financed or paid by the Employer on our request for financing payment against material.
I/We _____ shall indemnify _____ against any or all claims, action damages arising out of or resulting to the said material.
I/We _____ further declare that we will faithfully abide by the above declaration and solemnly affirm that we will not remove, sell, pilferage any of the materials against which M/s _____ has paid us such a secured advance and will not pledge the same with any Bank, Finance Corporation, Firm, Company, Individual or the like agency or create any change whereon in any from what so ever.
I/We _____ do hereby also declare that in the event of my/our infringement of the declaration made above

_____ will be entitled to forfeit all such material and also proceed against me/us according to the relevant clause pertaining to breach of contract and further invoke the power or seek any remedies secured of _____ under the contract Agreement signed with us or otherwise

available under law.

Place _____ Dated _____

Contractor _____



GENERAL / PARTICULAR CONDITIONS OF CONTRACT FOR WORKS

GOVERNMENT OF THE PUNJAB

CONTRACT FORM FOR EXECUTION OF WORK

(To be procured by the Contractor)

Copies of the Contract Form for Execution of Work can be obtained from Finance Department Punjab's Website as well as from the Employer.

SPECIAL PROVISIONS

SPECIAL PROVISIONS (CIVIL WORKS)

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SPECIFICATIONS - SPECIAL PROVISIONS (CIVIL WORKS)

Okara is about 127km to the south-west of Lahore on the National Highway and on the main Lahore-Karachi railway track. Okara spreads between latitudes of 30°18' to 30°08' North, and the longitudes of 73°14' to 74°09' East. The current population of the city is 466,852 and the projected population by the year 2032 is 764,459.

Okara sewerage system covers about 70% population. The existing system consists of lateral sewers, mains, trunk sewers and disposal stations. No waste water treatment plant (WWTP) exists in Okara city.

Punjab Municipal Development Fund Company (PMDFC) has proposed the establishment of a waste water treatment plant (WWTP) at Okara city with the financial support of the World Bank (WB). The treatment facility will receive the municipal waste water generated from southern part of Okara City through a main sewer line and after treatment will dispose it of in the Sukhera Drain. The project will be supervised by Municipal Committee Okara. **“COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE – 4 PROVIDING AND FIXING OF RPC MANHOLE COVER”**

The Project aims at improvement of infrastructure of municipal services for sewerage system.

The Project has the following objectives;

1. Improvement of service delivery level of the municipal services in the served areas of the city or provision of better basic urban services for improved livability of the citizen.
2. Reduction in annual O&M charges of the infrastructure due to reduced repairs in the forthcoming years because of repair or replacement of infrastructure components.
3. Reduction and prompt addressal of the public complaints regarding municipal service delivery.
4. Reduction in surcharging and overflowing of sewers thus reducing waste water ponding in the city

SP-2 DESCRIPTION OF THE WORKS

2.1 The work included in this Contract are as follows but not limited to these items only:

SN	Description
1.	RPC Manhole Cover
2.	ESMMP Cost

SP-3 SITE OF WORKS

The work mainly comprising of “**COMPREHENSIVE SEWERAGE SYSTEM IN OKARA CITY, PACKAGE-4 PROVIDING AND FIXING OF RPC MANHOLE COVER**”

SP-4 SETTING OUT

Setting out data and control points for the construction of the road and allied works will be provided by the Engineer following the Notice to Commence but, in any case, prior to start of work.

SP-5 CLIMATOLOGICAL DATA

Not used.

SP-6 UTILITIES

The Contractor shall directly enquire from the utility companies about availability of connections of electric power supply and telephone lines for his use at the Site. In case of non-availability of electric power supply from national grid to meet his requirements the Contractor shall provide at his own cost electric power generators as necessary for supply of power for the various parts of the Works including his camps, offices, stores, workshops and other installations as well as for the Engineer’s Site office provided under Sub-Clause SP 20.1. The Contractor shall bear all costs for constructing, operating and maintaining the generation system, including the standby generation system, and distribution system including providing diesel, oil or other consumables and all services and necessary attendance to ensure uninterrupted power supply at all times.

The Contractor shall make his own investigations and arrangements for supply of water of acceptable quality for construction requirements and safe drinking water for his staff and workmen and for the staff of the Engineer.

No separate payment will be made to the Contractor for works performed under this Clause and the costs thereof shall be deemed to be included in the rates and prices of the various items in the Bill of Quantities.

SP-7 TOPOGRAPHY AND GEOLOGY OF THE SITE

The details of Topography is with the Employer / Engineer.

SP-8 EXTENT OF WORK

The Contractor shall remove all debris and unsuitable construction to the Engineer's satisfaction with no additional cost.

The Contractor shall construct the Works in accordance with the Drawings and Specifications and as directed by the Engineer. The Contractor shall procure, furnish, provide and arrange all the necessary construction materials, equipment, transportation, fuel, electric power, water and services; be responsible for the construction and maintenance of the construction camps, offices, workshops and warehouses that he may require, and perform all other work necessary for completion of the Works described herein, in complete conformity with the Contract.

SP-9 DRAWINGS

9.1 Bidding Drawings

The Drawings provided as separate volume of Bid Documents and hereinafter referred to as Bid Drawings show the scope of the work to be performed by the Contractor. The Bid Drawings shall not be used as a basis for fabrication or construction, but may be used as the basis for planning, scheduling and placing preliminary orders for materials, subject to corrections based on future issue of Construction Drawings. Any other Drawings if issued through Addenda, before opening of Tenders, shall become part of the Bid Drawings.

9.2 Construction Drawings

After award of Contract, Bidding Drawings will be replaced by Drawings issued by the Engineer for Construction, with such modifications as may be necessary. The Drawings Issued for Construction will include Bid Drawings re-issued, Bidding Drawings modified and additional Drawings as required to develop in greater detail the construction required and shall be referred to hereinafter as "Construction Drawings". The Construction Drawings that show changes from the Tender Drawings and Specifications, will be reviewed by the Engineer for determination of adjustments, if any, of the Contract Price in accordance with the provisions of Clause 51.1, Variations, of the Conditions of Contract. The work shall be executed in conformity with the Construction Drawings.

The Engineer and Contractor shall jointly prepare a schedule for issuance of Drawings Issued for Construction of the various parts of the Works based on a list of drawings provided by the Engineer.

9.3 Checking of Drawings

The Contractor shall carefully check all Construction Drawings as soon as practicable after receipt thereof, and shall promptly advise the Engineer of any errors if discovered.

SP-10 RIGHT TO CHANGE

The Engineer may find it desirable to change location, alignment, dimensions or design of one or more of the features of the Works to conform to the newly disclosed conditions. Toward this end, the Engineer reserves the right to make such reasonable changes, and the Contractor's operations shall be conducted so as to accommodate any such changes in the Works.

SP-11 DRAWINGS/DATA TO BE FURNISHED BY EMPLOYER /ENGINEER

11.1 Procedure for Submittal of Contractor's Drawings

All drawings showing construction details shall be provided by the Employer/Engineer.

11.2 Other Drawings

Other drawings additional to those referred to herein-above required by the Specifications showing proposed methods of constructing Temporary Works and all bar bending schedules shall be submitted by the Contractor to the Engineer for approval.

11.3 Ownership of Drawings etc.

All the drawings, details, and any other information or documents furnished by the Engineer shall become the property of the Employer.

SP-12 COOPERATION WITH OTHER CONTRACTORS

The Contractor shall cooperate and coordinate his work with that of the other contractors working at the Site, to whatever extent may be necessary to complete the Works in accordance with the approved programme and the Engineer's instructions.

SP-13 QUALITY OF MATERIALS

All materials, fixtures, fittings, and supplies furnished under the Contract shall be new and unused, of standard first grade quality and of the best workmanship and design. No inferior or low grade materials and supplies will be either approved or accepted, and all work of assembly and construction shall be done in a first class and workmanlike manner. In asking for prices of materials intended for delivery to the Site and incorporation in the Works under any portion of these Specifications, the Contractor shall provide the manufacturer or supplier with complete information as may be necessary to secure compliance with these requirements and, in every case, he shall quote this Clause in full to each such manufacturer or supplier.

Prior to procurement, the Contractor shall furnish to the Engineer, for his approval, the names of the manufacturers of all equipment and materials which he contemplates incorporating in the Works. With this information, the Contractor shall also furnish such pertinent information as to capacities, efficiencies and sizes, and such other information as may be required by the Engineer. Samples of materials shall be submitted to the Engineer for approval unless waived of by the Engineer. Equipment, materials, supplies and articles installed or used without the Engineer's approval shall be at the risk of subsequent rejection.

The Contractor shall use non-reactive aggregates from suitable quarries for concrete work. The Contractor shall use deformed steel reinforcement bars rolled from Pakistan Steel Mills billet or equivalent from re-rolling mills proposed by the Contractor and approved by the Engineer.

SP-14 INSPECTIONS AND TESTS

14.1 Inspection

All equipment and materials furnished under the Contract and all work performed in connection therewith under the Contract shall be subject to inspection and testing by the Engineer or his authorized agent at all times and in all stages of completion. Inspection at the manufacturer's plant may be made to determine that the equipment and materials meet the requirements of these Specifications. The Contractor shall notify the Engineer not less than 05 days in advance of the date and place that the equipment or materials will be available for inspection and testing. No equipment or materials shall be transported until inspection at the manufacturer's plant has been made. Acceptance of equipment and materials or the waiving of inspection and testing thereof shall in no way relieve the Contractor of the responsibility for furnishing equipment and materials meeting the requirements of the Contract Documents. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

Contractor will submit his submittal to Engineer/Employer in case of Non-scheduled items or Items to be imported for approval prior to booking to supplier/manufacturer before undertaking the item into execution. Submittal proposed from contractor must comprise minimum three proposed manufacturers to be submitted to Engineer for approval purposes. It will be discretion of Engineer to recommend for approval one of them or as contractor for other than those manufacturer proposed in shape of submittal by contractor for someone else on equivalency basis. Pre-shipment inspection of the selected manufacturer's equipment will be carried out by the engineer/employer. Contractor must submit Bill of lading of such imported equipment prior to transport to site. Confirmatory tests shall also be carried out at the Site or at an approved laboratory, as instructed by the Engineer. These tests shall be witnessed by the Engineer and performed at no additional cost to the Employer.

14.2 Testing

The Engineer will make such tests on concrete, aggregates, fill materials, reinforcing steel and other materials as he may from time to time select, and the Contractor shall provide at his own cost such samples or assistance in sampling materials at the Site as the Engineer may reasonably require. Testing by the Engineer shall in no way relieve the Contractor of his responsibility to test materials to ensure that they meet all the specified requirements and to control their quality. The Engineer may accept that items manufactured away from the Site meeting the specified requirements without further testing subject to the Contractor furnishing satisfactory proof of compliance with these Specifications in one or more of the ways described below.

The Contractor shall provide free of charge such material testing equipment, labour, materials, electricity, fuel, water, stores, apparatus and feedstock as may be reasonably required by the Employer to carry out the Tests as per the required frequency. Further contractor shall make all kind of arrangements for third party inspection/ Witnessing of Factory Acceptance Tests of major components of manufacturing factory whether located in Pakistan/abroad for four officials (02 from Employer and 02 from Engineer-In-charge side). All expanses regarding air tickets, visa in case of abroad, boarding/lodging, food, transport, hoteling etc. will be borne by the Contractor and no extra/additional payment will be made to contractor. Contractor shall quote his prices

keeping in view of such expanses.

Manufacturer's Certificate of Compliance

In the case of standard labelled stock products of standard manufacture which have a record of satisfactory performance in similar work over a period of not less than five years, the Engineer may accept a notarised statement from the approved manufacturer certifying that the product conforms to the applicable specifications.

Mill Certificates

Regarding materials for which such practice is usual, the Engineer may accept the approved manufacturer's certified mill and laboratory certificates.

Testing Laboratory Certificates

The Engineer may accept a certificate from a renowned commercial testing laboratory, satisfactory to him, certifying that the product has been tested within a period acceptable to the Engineer and that it conforms to the requirements of these Specifications.

Service Record

If a demonstrable satisfactory service record for a period not less than five (05) years is available for a material, certain specified tests may be waived off by the Engineer.

14.3 Cost

The cost of any laboratory, field and shop tests required from any agency of compliance with under Specifications shall be borne by the Contractor.

SP-15 CONSTRUCTION PROGRAMME

15.1 General

The Contractor shall submit his programme for execution of the Works in accordance with Clause 14.1 [*Programme to be Submitted*], under the Conditions of Contract, to the Engineer for approval. The programme may contain adjustments if any, to the CPM (Critical Path Method) based Bar Chart submitted with the Bid. The completion date, milestones, and key targets indicated in Appendix-E to Bid, or dates earlier than the said milestone and key target dates, shall be shown on the construction programme to be submitted by the Contractor. Other dates including rates of progress for various parts of the Works in the construction programme may be changed by the Contractor and submitted for approval. The operations under each section of the programme submitted by the Contractor shall be broken down in greater detail than those shown on the Schedule submitted with the Bid.

The programme shall also show the timing of provision of any facilities the Contractor is required to supply for use by the Employer and the Engineer, in such manner that these shall be available as stipulated in the Contract and instructed by the Engineer.

15.2 Submittals

(a) The initial submittal of network analysis shall include a description of the major

items of construction equipment planned to be used. The description of the equipment shall include the type, number of units, their capacity, etc. The forecast shall include the estimated dates on which each major item of construction equipment will be on the job. The Bar Chart and the Network Analysis shall be submitted within 14 days after receipt of the Letter of Acceptance.

The submittal shall consist of:

- (i) 4 copies of the Bar Chart.
- (ii) A narrative summary of the construction plan.
- (iii) A backup of the schedule files on re-writable CD disks or pen drive.

The Engineer will review the construction schedule and the approved initial submittal will be the Project Baseline Schedule by which the performance of the Contractor will be measured

- (b) Monthly submittals shall show completed progress of each activity during the past month, with forecast for the coming month. Hammock networks shall be incorporated on the Base Line Schedule of activities. Each monthly submittal shall contain:
 - (i) 4 copies of the Bar Chart.
 - (ii) 4 copies of a time scaled logic diagram for the next three months.
 - (iii) A narrative summary of the schedule related issues and status. The narrative shall include discussion of pending schedule changes submitted to the Engineer in the past month.
 - (iv) A backup of the schedule files on rewritable CDs or pen drive.
- (c) The successful bidder shall submit the supervision plan in respect of Environmental Health Safety SOPs and Environmental & Social Management & Monitoring Plan on monthly basis along-with other deliverables manifesting the progress activities as per schedule.

15.3 Progress Schedule

Both the bar charts and network analysis schedules shall be continuously monitored and kept current and updated by the Contractor throughout the work, and at least on every milestone date and submitted for approval. The Contractor's schedules shall be available for examination during normal business hours. All revisions shall be accompanied by a detailed explanation of the reasons for the changes and describing any new or modified construction procedure proposed and, if applicable, any steps being taken to improve progress to achieve completion within the Time for Completion.

SP-16 LAY OUT OF WORKS

16.1 Reference Points, Lines and Levels

The Engineer will lay out a reference line or lines in the field with accompanying points and/or bench-marks to enable the Contractor to establish there from survey control for construction.

16.2 Verification

The Engineer may make checks as the work progresses to verify lines, levels and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirements of the Specifications and the Drawings. Shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and Specifications and the lines, levels and grades given therein.

16.3 Primary Control Points

Based upon the Engineer's basic control, the Contractor shall provide his own primary control points, as needed for the Works, and shall preserve and maintain them until otherwise authorized.

The Contractor shall be responsible for maintaining all survey markers/monuments, and property corners. If any markers/monuments are disturbed or destroyed by the Contractor, the Contractor shall arrange, at his own cost, to retrace and replace them to the entire satisfaction of the Engineer. If a monument cannot be replaced in its original position, the Contractor shall install a witness corner. The Contractor shall complete and file monument reference cards on all monuments as per instructions of the Engineer.

16.4 Construction Surveyors

The Contractor shall provide experienced construction surveyor/s with adequate experience in the construction surveys similar in nature as required by this Contract.

16.5 Basic Control Monument

Based upon the Engineer's established basic control monuments, the Contractor shall establish all lines and grades necessary to control the Works, and shall be responsible for all measurements that may be required for execution of the Works to the tolerance prescribed in Sub-Clause 16.7 below.

16.6 Surveys and Computations

The Contractor shall perform such surveys and computations as are necessary to determine quantities of work performed or placed during each progress payment period, and shall also perform all surveys required by the Engineer to determine final quantities of work in place. The Engineer will determine final quantities based on original ground levels determined by the Contractor and agreed by the Engineer.

The Contractor shall notify the Engineer at least 24 hours before performing a quantity survey and, unless specifically waived, quantity surveys shall be performed in the presence of and agreed by an authorized representative of the Engineer.

16.7 Tolerances

Degree of accuracy for the survey works shall satisfy the following specified tolerances:

- (a) Alignment of tangents and curves shall be within 0.1 foot for 1,000 feet i.e., an accuracy of 1:10,000.
- (b) Structure points shall be set within 0.01 foot accuracy from point to point,

except where tighter tolerances are required.

- (c) Cross-section points shall be located within 0.10 foot, horizontally and 0.01 foot vertically.
- (d) Permissible closing error for a levelling line meant for establishing Temporary Bench Mark (TBMs) shall not exceed $0.045 \times \sqrt{M}$ foot, where M is in miles. The permissible closing error shall be duly adjusted.

16.8 Material and Equipment

The Contractor shall provide all materials, equipment and labour required for work.

SP-17 STANDARDS AND SPECIFICATIONS

Except as otherwise provided by these Specifications or the Drawings all materials, equipment and fabrication and testing thereof shall conform to the latest applicable Standards and Specifications contained in the following list or to equivalent applicable Standards and Specifications. Copies of these Standards and Specifications may be purchased from the indicated agency, which publishes them:

- | | | |
|---|--|------|
| - | British Standard | BS |
| - | American Concrete Institute | ACI |
| - | American Society for Testing and Materials | ASTM |

Where relevant Standards and Codes of Practice now quote metric units only, these are to be interpreted as required to the nearest equivalent imperial (foot/pound) unit for the purposes of this Contract.

All materials and workmanship not fully specified herein or covered by an approved Standard shall be of such a kind as is used in first class work and suitable to the climate in the Project Area.

If the Contractor, at any time and for any reason, wishes to deviate from the above standards or desires to use material or equipment not covered by the above standards, he shall state the exact nature of the changes, the reason for making the change and shall submit complete specifications of the materials and equipment to the Engineer for approval.

SP-18 ACCESS TO SITE

18.1 Right of Way for Access and Haul Routes

The Contractor shall be responsible for providing and maintaining access routes for the Works. The right of way for access to the Works from existing roads will be provided by the Employer. The Contractor shall make his own investigations of the condition of available public or private roads and of clearances, restrictions, bridge load limits and other limitations that affect or may affect transportation and ingress and egress at the job sites. The repair and reinstatement of roadways, drain and canal banks if damaged during operation shall be the responsibility of the Contractor without any additional cost to the Employer. The Employer controlled right of way shall be the Right of Way (ROW) available to the Contractor for carrying out the Works.

18.2 Restoration of Site

On completion of the Works, the Site shall be restored by the Contractor to its original conditions as far as practicable and left in tidy condition.

SP-19 FACILITIES TO BE PROVIDED BY THE CONTRACTOR AT SITE

19.1 Contractor's Camps

The Contractor is required to arrange the facility of housing in nearby area of the project for the labour through portable containers or house on rent in compliance with PMDFC SOPs for labour / construction worker including women worker. In case of failure and on lodging of complaint by the labour to the Engineer will result in fining of Rs. 5000 / day. Preference shall be given to utilization of local labour / construction workers.

19.2 Temporary Sanitary Facilities

- (a) The Contractor shall provide adequate temporary sanitary conveniences for the use of his employees and persons engaged on the work, including the Engineer and his employees. He shall ensure that his employees and labour make proper use of the latrines and do not foul the Site.
- (b) In addition to toilet facilities, suitable and adequate washing facilities shall be provided.
- (c) Sanitary facilities shall be located as directed or approved by the Engineer and shall be maintained in a clean and sanitary condition during the entire course of the work.
- (d) The septic tank and/or temporary holding tank(s) shall be kept pumped out at such intervals that the tank(s) will not overflow and contaminate the ground, flowing streams or surface drainage.
- (e) On completion of the Works, sanitary facilities shall be properly disinfected and all evidence of same including temporary buried tanks and foundations removed from the Site.

19.3 Medical Facilities

The Contractor shall arrange provision of adequate medical facilities for his employees.

Adequately equipped dispensary/ies with qualified and experienced staff shall be provided by the Contractor at his camps. In addition suitably equipped first aid stations manned by trained staff shall be provided at strategic locations, to administer first aid treatment at all times free of charge to all persons on the Site, including personnel of the Engineer and the Employer. The nature, number and location of facilities furnished and the Contractor's staff for administering first-aid treatment shall meet the requirements of the Health Services of the Government of Pakistan.

19.4 Operation and Maintenance of the Camps and Facilities

For the purpose of operation and maintenance of the camps and facilities provided as above, the Contractor shall comply with all applicable provisions of the Pakistani Labour Laws and specifically to the following requirements:

- (a) Camp areas shall be kept dry and free from dense vegetation. Measures shall be

taken to control dust within the camp area, by water or oil spraying or other approved means.

- (b) Any ponded water around a camp shall be sprayed weekly with oil or other approved anti-malaria liquid.
- (c) The Contractor shall provide garbage collection and disposal services for his construction camps and the Engineer's office. Disposal shall be by burial (landfill) and/or incineration. Disposal area shall be located a sufficient distance away and downwind from camp facilities and offices so as not to create objectionable odours or health hazards. Equipment, methods of collection and disposal and location of disposal areas shall be submitted to the Engineer for approval.
- (d) The interior walls and ceilings of buildings shall be lime washed or painted. The whole of the open spaces around the buildings shall be swept each day and all rubbish removed. The living areas shall be suitable for the climatic conditions. Roof height shall not be less than 10.5 ft. and adequate number of ceiling fans shall be provided.
- (e) Adequate sanitary conveniences, including washing and bathing places shall be maintained at each of the camps. All sanitary fixtures, receptacles, toilet rooms, lavatories and wash rooms shall be cleaned and disinfected at least once every day.

19.5 Drainage

The ground around the buildings shall be graded to slope away from building perimeters so as to provide adequate drainage and shall be thoroughly compacted. Excavated material shall be disposed of by filling in low areas or as otherwise directed by the Engineer.

19.6 Water Supply

The Contractor shall arrange for the water supply for his staff residences, labour camps, site offices, work yards, workshops, and various camp facilities. Construction of pumps, storage tanks, overhead tank, distribution system, and their proper running and maintenance shall be his responsibility. Water shall be supplied to the camps 24 hours a day. Adequate supply of water, cooled in summer, shall be ensured in camps and sites of work. Water samples shall be tested periodically to ensure that it is fit for human consumption.

19.7 Electricity Supply

The Contractor shall provide electricity required for the Works including labour camps, staff residences, offices including the Engineer's Site office and various camp facilities. The Contractor shall also provide sufficient standby electricity supply arrangements for his needs.

19.8 Utility Lines

The Contractor Shall conduct his operations, make necessary arrangements, take suitable precautions and perform all required work incidental to the protection of and avoidance of interference with power, telephone, water and other utilities within the

areas of his operations in connection with the Contract. No separate payment shall be made for such incidental work. In case the utility lines are required to be relocated the Contractor shall arrange their relocation with the concerned departments and organizations. The Contractor shall obtain cost estimates for relocation of utilities for the Engineer/Employer's approval before execution of the Work. The Contractor shall be reimbursed the actual approved cost carried in by him.

19.9 Handing Over/Removal after Completion

Upon completion of the Works, the Contractor shall remove all the Contractor's camps, labour and staff accommodation, site office, other installations and buildings constructed and all facilities provided by the Contractor under this Clause, and the Site cleared and reinstated to the satisfaction of the Engineer.

19.10 Measurement and Payment

Except as provided in SP-19.8 no separate payment will be made for the work included under the Clause SP-19; the cost thereof is deemed to be included in the rates and prices of other items entered in the Bill of Quantities. The contractor is bound to comply with all the instructions stated in SP-19 and in case of otherwise or if any complaint lodged by the labour to the Engineer / Client, the contractor will be penalized for amounting to Rs. 5000 / day.

SP-20 PROVISION OF FACILITIES FOR THE ENGINEER (FOR CONSULTANT STAFF) /EMPLOYER

20.1 Facilities for Engineer/Employer's Staff:

(a) **Site offices:**

One furnished portacabin with all the requisite accessories for the Engineer / Employer

20.2 Ownership of Site facilities

All facilities/utilities provided by the contractor as stated above in Clause-20.1 will be property of Engineer In charge after successful handing taking over of project and expiration of defect liability period considering that the said amount is included in all items listed in Bill of Quantities.

20.3 Measurement and Payment

No extra/separate payment will be made to Contractor considering that Contractor has quoted his bid keeping in view of such expanses.

SP-21 PROGRESS PHOTOGRAPHS

The Contractor shall furnish to the Engineer every month, for the site of Fifteen colour photographs on CD or pen drive and 4 colour prints of each photograph taken with a digital camera to clearly show the progress of construction. Each photograph shall be submitted in four prints of size 20 cm x 25 cm. Each print shall be marked on the back side with the caption of the activity, date and serial number. There shall be no writing, lettering or marking on the face of the photograph. Progress photographs shall be submitted from the month, following the month in which Notice to Commence is issued and continued till completion of the Works.

No separate payment will be made for the work specified herein and the cost thereof shall be deemed to be included in the other items of the Bill of Quantities.

SP-22 SITE FACILITIES TO BE PROVIDED BY THE EMPLOYER

22.1 General

Without prejudice to the generality of the various clauses of the Contract and except for the facilities referred to hereinafter, particular attention is drawn to the obligations of the Contractor to make his own arrangements for providing, maintenance and furnishing of labour camps, staff residences, offices, workshops, stores watching and guarding thereof.

The Contractor shall submit his written demand of his requirements of land for his Site Facilities as herein specified, at least 28 days in advance.

22.2 Area for Storage and Workshop

The contractor will arrange an open area of adequate size for the facilities listed in Appendix-H to Tender and approved by the Engineer, for use as storage, and workshop areas. The Contractor shall provide and maintain at his own cost, all fencing, any necessary clearing, land levelling, foundations and above ground structures for sheds, covered areas, workshops, electricity, telephone, water distribution and waste water disposal etc, as he may need to meet his requirements.

SP-23 SAFETY MEASURES AT CONSTRUCTION SITE

- a) Pursuant to the provisions of Sub-Clause, for Safety Measures the Contractor shall observe high standards of safety for men and machines at all times and with regard to safety.
- b) The Contractor shall take all possible measures to protect his personnel from harm. In case of any casualty or injury to any person due to the Contractor's operations, the Contractor shall ensure quality medical treatment and payment of due compensation.
- c) The Contractor shall not permit casual observers to come close to the sites where excavation and other hazardous operations are being performed.

SP-24 ENVIRONMENTAL PROTECTION

The Contractor shall exercise 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 the Permanent Works, approved construction roads and the Temporary Works, and for excavation operations, all 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 to the natural appearance of the landscape. Where unnecessary destruction, scarring, damage or defacing may occur as a result of the Contractor's operations, it shall be repaired, replanted, or otherwise corrected as directed by the Engineer at no additional cost to the Employer.

Contractor will get appreciation/performance certificate from Engineer in charge and reward of Rs. 200,000/- upon compliance with ESMMP attributes at the last IPC on

recommendation of DPO-ESM to engineering in charge

Contract may be terminated upon serving of 4th ESMMP Non-Compliance notice from the DPO-ESM to Engineer in charge.

The Environmental Health Safety SOPs for Labour / Construction Workers including Women workers and Environmental & Social Management And Monitoring Plan are attached with this bidding document as **Annexure-1** and **Annexure-II**

Comprehensive Sewerage System in Okara City

Package IV: Sewer Lines and Manholes

Summary of Cost

Part - IV

Sr. No	Description	Cost (Rs.)
A	RPC Manhole Cover	
B	Environmental & Social Management And Monitoring Plan (ESMMP) Cost	
	Grand Total Cost	

Comprehensive Sewerage System in Okara City

Sub Head A: RPC Manhole Cover

Sr. #	Description of items	Unit	Quantity	Rate	Amount
1	RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole No frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).	No	832.00		
Total					

ESMMP cost of Providing and Fixing of Manhole Covers

Item	Quantity	Tentative Cost/Item- PKR./-	Total Cost
A-PPEs for Health and Safety of Labor/Workers			
Face Masks (3 PLY) - box	5		
Safety Hard Helmets	5		
Safety Shoes	5		
Hand Gloves	10		
Ear Plugs	5		
Reflective Safety Vest	5		
Safety Goggles	5		
Total (PKR)			