

**BIDDING DOCUMENTS**

**FOR**

**REHABILITATION OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM  
ROAD IN DASKA CITY**



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

**JULY 2023**

**MC DASKA**

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# **INVITATION FOR BIDS**

**TENDER NOTICE**  
**FOR**  
**REHABILITATION OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD**  
**IN DASKA CITY**

Municipal Committee, Daska (MC Daska) (hereinafter referred to as the "client"), invites the sealed bids from Contractors / Firms / Manufacturer / Authorized dealers having valid License from **PEC** in category **C4 & Above** with relevant code **CE-01 & 09** registered with **FBR & PRA (NTN and PNTN)** concerning **REHABILITATION OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD IN DASKA CITY**

2. The bidding documents are available immediately after publication (2014 Punjab Procurement Rule 25(1)) at the office of **Municipal Officer (I&S), Municipal Committee Daska** 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 Daska for Rs.10,000/- (non-refundable fee). 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.

3. **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 **2%** of estimated cost in shape of CDR / Bank Guarantee from any Scheduled Bank in Pakistan, for an amount of **Rs. 1,504,283/-** in the name of the Chief Officer, Municipal Committee Daska. Last date for purchase of bidding documents is **27-07-2023**. The Bids (**Technical & Financial**) must be delivered in the office of Chief Officer, Municipal Committee Daska on **31.07.2023 at 11:00 A.M.** The Technical bids will be opened on the same day at **11:30 A.M** in presence of the bidder / bidder's representatives who choose to present.

4. 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).

5. 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**).

6. Conditional tender will not be accepted.

7. 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.

8. 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.

9. The bids will be valid for 120 days.

10. 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.

11. Estimated cost is Rs. **75,214,117/-**.

**Chief Officer**  
**Municipal Committee**  
**Daska**

**Administrator**  
**Municipal Committee**  
**Daska**

# **INSTRUCTIONS TO BIDDERS**

# INSTRUCTIONS TO BIDDERS

## A. GENERAL

### IB.1 Scope of Bid

The Client “Chief Officer MC Okara” intends **REHABILITATION OF 36” I/D DAMAGED SEWER LINE ALONG STADIUM ROAD IN DASKA CITY.**

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

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 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. 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 Daska

Mobile: 052-9200051

E-mail: mcdaska4@gmail.com

**Summary of Works**

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

- Replacement of damaged 36"i/d sewer line with new sewer line of the same size.
- Construction of manholes 6.5' diameter with average depth of 14 feet for 36" i/d under water sewer.
- Provision of RCC sullage carrier (3'×3'), from disposal works to existing drain along stadium road.
- Construction of RCC sullage carrier box culvert under Stadium Road

**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) Technical 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 75,214,117/- i.e (Rs. 1,504,283/-)**

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 20-07-2023 at 02:00 PM in the office of Chief Officer, Municipal Committee Daska 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:-**

Chief Officer, Municipal Committee Daska

Mobile: 052-9200051

E-mail: mcdaska4@gmail.com

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 Daska

Time: 11:00 AM,

Date: July 31, 2023

**Clause IB-23 Bid Opening:**

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

Venue: Chief Officer, Municipal Committee Daska

Time: 11:30 AM

Date: July 31, 2023

**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;
(b) We offer to execute and complete in conformity with the Bidding Documents the following Works: "REHABILITATION OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD IN DASKA CITY".
(c) 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;
(d) As security for due performance of the under takings and obligations of our bid, we submit here with a Bid security, in the amount specified in Bidding Data Sheet, which is valid (at least) 30 days beyond validity of Bid itself.
(e) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process, other than alternative offers submitted in accordance with IB16 (as applicable).
(f) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.

Name .....

In the capacity of .....

Signed .....

.....

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

Date .....

.....

Address.....



# 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	<b>2% of the Contract Price</b> 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 <b>05%</b> of <b>Contract Amount</b> 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 <b>14 days</b> 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	<b>04 Months</b> from the date of Commencement of the Project.
8.	a) Amount of Liquidated Damages	<b>0.1 %</b> of the Contract Price for each day of delay in completion of the Works subject to a maximum of <b>10%</b> of Contract Price stated in the Letter of Acceptance.
	b) Amount of Bonus for early completion	<b>Not Applicable.</b>
9.	Defects Liability Period	<b>365 days</b> from the effective date of Taking Over Certificate.
10	Percentage of Retention Money	<b>10 % on the amount of work done up to Rs. 5 million and 5 % on the amount of work done beyond 5 million</b>
11	Limit of Retention Money	<b>05%</b> of Contract Price stated in the Letter of Acceptance.
12	Minimum amount of Interim Payment Certificates (Running Bills)	Greater than <b>PKR. Five Million (05 Million) except last 2 IPC's</b>
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)	<b>Not Applicable</b>

16	Environment, Health & Safety	Contractor will be bound to comply the Environmental & Social Management & Monitoring Plan and Environmental Health Safety SOPs for Labor/Construction Workers including Women Workers to fulfill E&S 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**

<b>Sr. No.</b>	<b>Description</b>	<b>Amount (Rs)</b>
<b>1</b>	Replacement of damaged 36"i/d Sewer line with new 36" i/d Under water Sewer line.	<b>N/A</b>
<b>2</b>	Construction of Man hole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water Sewer.	
<b>3</b>	Dismantling of 36"i/d existing damaged Sewer line .	
<b>4</b>	Dismantling of Existing Man hole Chambers 6.5' DIA 14.42' Average depth for 36" i/d Sewer.	
<b>5</b>	Construction of RCC Sullage Carrier from Disposal works to existing drain along stadium road.	
<b>6</b>	Construction of RCC Sullage Box Culvert for Stadium road crossing.	
<b>7</b>	Construction of Stadium Road	
<b>8</b>	Electrical Works of Stadium Road	
<b>9</b>	Desilting of Existing Sullage Carrier/Storm Water Drain	
<b>10</b>	Tuff Pavers in Disposal Station	
<b>11</b>	Sewer House Connections	
<b>12</b>	Environmental & Social Management & Monitoring Cost	
<b>Total Amount (Rs)</b>		<b>N/A</b>
<b>Note:</b> 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):

<b><u>Description</u></b>	<b><u>Time for Completion</u></b>
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**

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

## **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.

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

**(2) ESTIMATED PROGRESS PAYMENTS**

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

<b>Month</b>	<b>Amounts (Million Rs.)</b>
<b>1</b>	<b>2</b>
1st	
2 <sup>nd</sup>	
3 <sup>rd</sup>	
4 <sup>th</sup>	
5 <sup>th</sup>	
6 <sup>th</sup>	
<b>Bid Price</b>	



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

(3)

**(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 **C4 & Above** with relevant code **CE-01 & CE-09** . In case of Joint Venture, the Lead partner must be registered in the category **C4 & 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) The bidder shall not have conflict of interest in the instant work. All the bidders found to have conflict of interest shall be considered as non-responsive.
- 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

ii) 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:

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

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

**iii)**

### 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.*

In case of a Joint Venture, lead Member is required to meet 70% OR as per his share (if share is more than 70%) of the given criteria whereas JV Member (Maximum one JV member) must meet 30% OR as per his share (if share is more than 30%) of the given criteria of financial soundness. Credit Marks shall be awarded on the basis of the following criteria:

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

**SUB-CATEGORY B: EXPERIENCE RECORD**

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

<b>Sr. No.</b>	<b>Description</b>	<b>Max. Mark</b>
i)	<p>Projects of General Nature completed over last 05 years.</p> <p>a. Max 03-projects having minimum cost Rs. 50 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 for Rehabilitation / Installation of Sewer Lines and allied works having Min Cost Rs. 30 Million each (completed over last 05 years)</p> <p>b. Max 02-projects Rehabilitation / Installation of Sewer Lines and allied works having Min Cost Rs. 30 Million each (in hand)</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 &amp; ii. (02-projects)</p>	10
	<b>Sub-total:</b>	<b>45</b>

**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.

<b>Sr. No.</b>	<b>Description</b>	<b>Maximum Points</b>
i)	Engineers in employment of the contractor & Registered with PEC a) Number of Civil Engineers (Max 01-No) b) Experience of Civil Engineers (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 (Civil) (Max 2-No) b) Experience of Engineers in number of Years (Minimum 05 -years)	3 3
	<b>Sub-total:</b>	<b>15</b>

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.*

<b>Sr. No</b>	<b>Equipment Type</b>	<b>Maximum Marks</b>
1	Surveying Equipment (Total Station) (01 Set)	2
2	Excavator (01 No.)	1
3	Tractor Trolley (02 No)	1.5
4	Dewatering Set	1.5
5	Loader (01 No)	1
6	Road Cutter (01 No)	1
7	Water Bowser (01 No.)	1
8	Generator (50/100 KVA, 01 No)	0.5
	<b>Sub-total:</b>	<b>10</b>

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) Each of the partners shall meet not less than 30 percent of all the qualifying criteria given in paras A to D heretofore.
  - iii) 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***

	<b>Name</b>	<b>Designation</b>	<b>Nationality</b>
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)						
<b>Average Annual Turnover (AATO)</b>						
(In case of a Joint Venture, lead Member is required to meet 70% OR as per his share (if share is more than 70%) whereas JV Member must meet 30% or as per their share (if share is more than 30%) (each member other than Lead member))						
Average Annual Turnover						
<b>Financial Resources</b>						
(In case of a Joint Venture, lead Member is required to meet 70% OR as per his share (if share is more than 70%) whereas JV Member must meet 30% or as per their share (if share is more than 30%) (each member other than Lead member))						
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

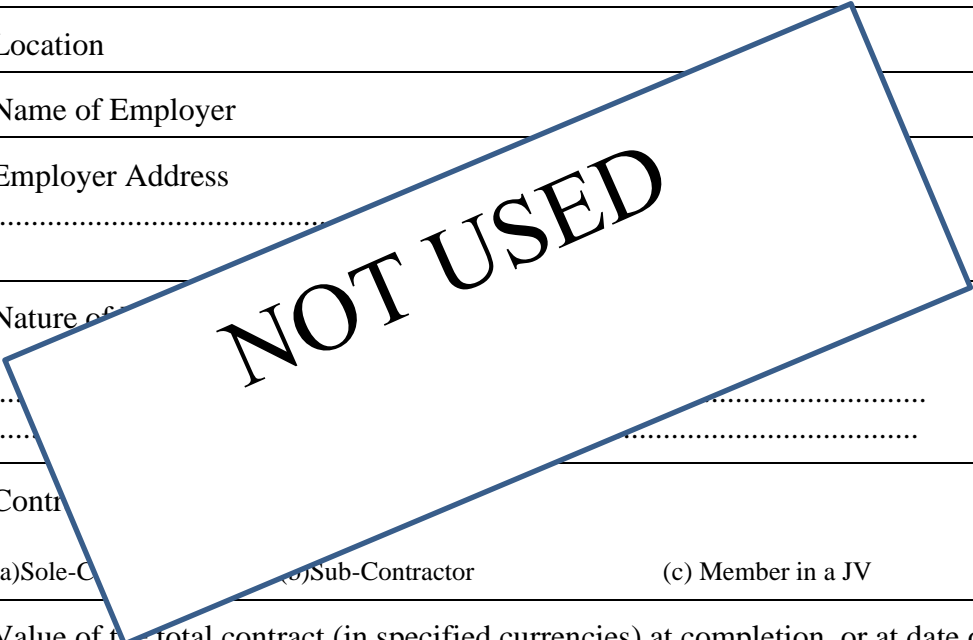
Form -T-10

**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



**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

v) 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:

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

Witness (MOI)

Name:

Designation:

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:	<b>SURETY (Bank)</b>
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)

*a.*

*b.*

*c.*

*d. CA-1*



## 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

Signature of Employer

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

Witness:

\_\_\_\_\_

\_\_\_\_\_

(Name, Title and Address)

(Name, Title and Address)

**MOBILIZATION ADVANCE GUARANTEE/BOND**

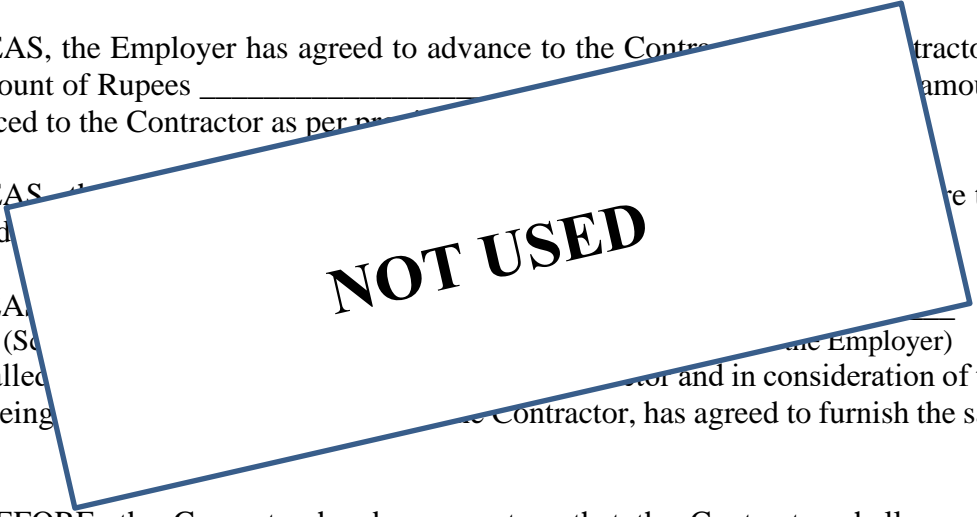
Guarantee No. \_\_\_\_\_ Date \_\_\_\_\_

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.

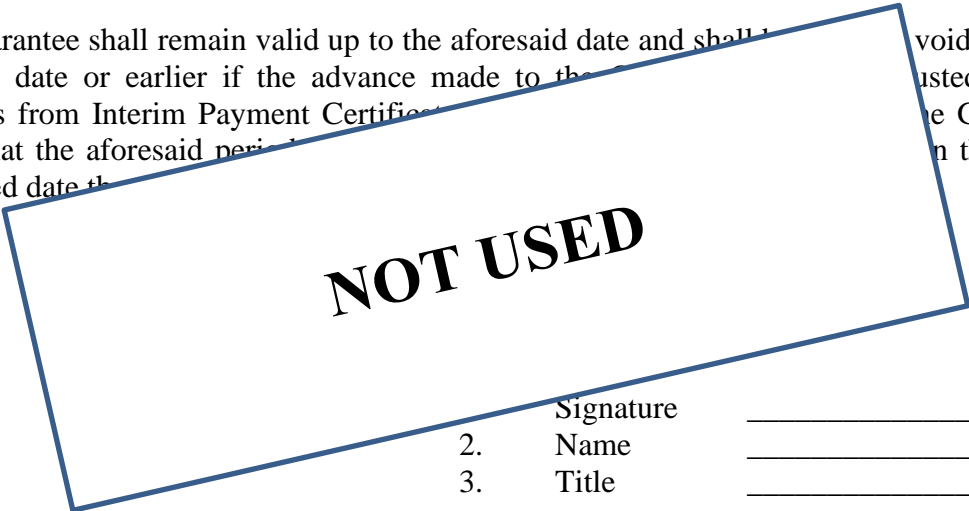
Notice in writing of any default, of which the Employer shall be the sole and final judge, on  
the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first  
written demand, payment shall be made by the Guarantor of all sums then due under this  
Guarantee without any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



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

**WITNESS**

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

2. \_\_\_\_\_  
(Name Title & Address) \_\_\_\_\_  
Corporate Guarantor(Seal)

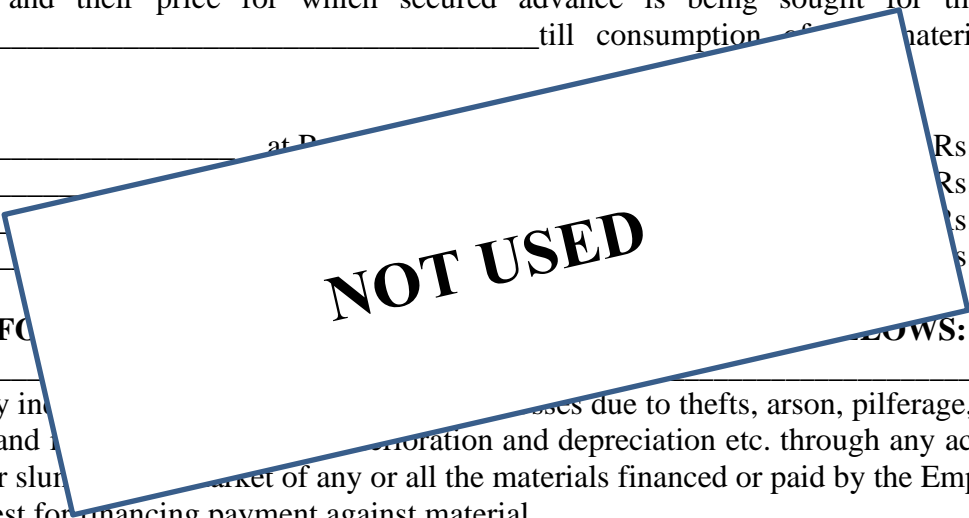
**INDEMNITY BOND  
FOR SECURED ADVANCE  
AGAINST MATERIALS BROUGHT AT SITE**

(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. _____ | s.     |
| 4. _____ | s.     |



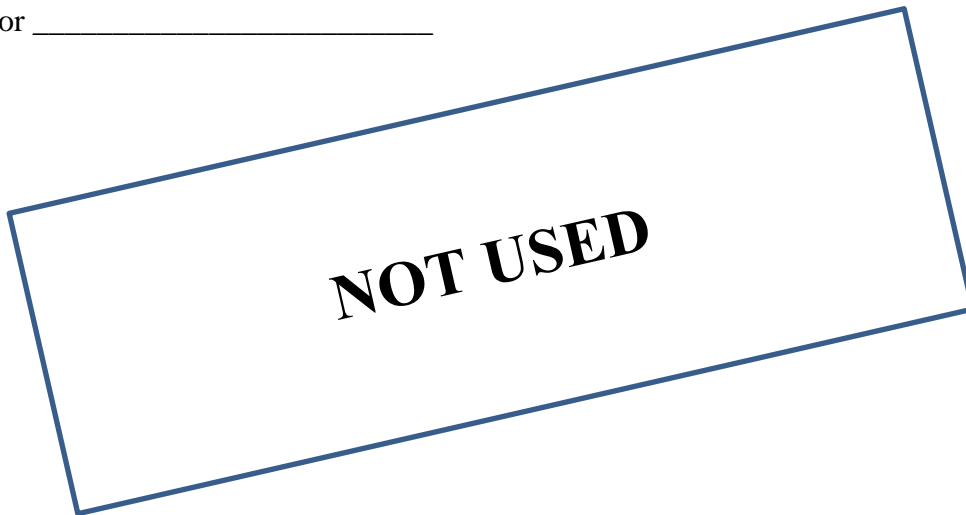
**THEREFORE** \_\_\_\_\_  
I/We \_\_\_\_\_  
do hereby indemnify \_\_\_\_\_ against all losses due to thefts, arson, pilferage, loss due to flood and fire, corrosion and depreciation etc. through any act of Man or God or slurrage or loss of any or all the materials financed or paid by the Employer on 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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<b>SP-4</b>	<b>Setting Out</b>
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**SP-20 Provision of Facilities for the Engineer/Employer**

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## **SPECIFICATIONS - SPECIAL PROVISIONS (CIVIL WORKS)**

Daska Town is located at 74°21' East and 32°20' North at a distance of 24 km in the north-east of Gujranwala City, 24 Km from Sialkot at its southwest and 24 KM from Wazirabad at its southeast. The present population of 282,911 and the projected population by the year 2032 is 344,866 at a growth rate of 2% per annum. The city's total area is 16.53 km<sup>2</sup>, in the built-up area is 13.00 km<sup>2</sup>.

### **Scope of the work for this particular project **REHABILITATION OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD IN DASKA CITY****

The project is of immense importance due to the following reasons:

1. Provision of efficient and effective municipality services to the masses.
2. Community development through improving basic infrastructure.
3. Clean and green environment for better living standards.
4. Effective use of land through master planning of urban areas.
5. Social uplifting and cohesion through provision of public open spaces and play grounds.
6. Efficient funeral and burial services.
7. Ease in mobility and communication.
8. Cost efficient Solid Waste Management through waste to energy initiatives.
9. Capacity building of Local Governments.

The Project aims at replacement of the damaged sewer line along Stadium Road for relieving the general public from waste water flooding in its catchment area. The outfall sewer of 36" dia. has settled down and is creating waste water flooding in its catchment area thus damaging the public as well as private properties. The objective of this sub project is to relieve the inhabitants from.

Presently, 36" dia. Sewer along the stadium road has settled down due to crown failures and bedding failure through a length of 1500 ft. This sewer requires replacement from Iqbal Hospital to 42" dia outfall sewer which ultimately discharges in disposal station near stadium chowk. Waste water from this disposal station is drained in existing Nullah of size 5'×4', toward Bambawala road. The existing 36" dia sewer is not working due to settlement and blockade. The catchment area of this sewer is under waste water flooding

### **SP-2 DESCRIPTION OF THE WORKS**

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

<b>Sr. No.</b>	<b>Detail of Work</b>
1	Replacement of damaged 36"i/d under water sewer line with new sewer
2	Construction of manhole chambers 6.5' diameter with average depth of 14 feet for 36" i/d under water sewer.
3	Construction of RCC sullage carrier from disposal works to existing drain along Stadium Road.

4	Construction of RCC box culvert for Stadium Road crossing.
5	Rehabilitation of Stadium Road

**SP-3 SITE OF WORKS**

The work mainly comprising of **REHABILITATION OF 36” I/D DAMAGED SEWER LINE ALONG STADIUM ROAD IN DASKA CITY**

**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 expenses.

### **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.

### **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 E&S attributes at the last IPC on recommendation of DPO-ESM to engineering in charge

Contract may be terminated upon serving of 4th E&S 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 & Monitoring Plan are attached with this bidding document as **Annexure-1** and **Annexure-II**.



## BILL OF QUANTITIES

**THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D  
OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.**

### Summary

S No.	Sub Heads	Description of items	Cost (PKR)
1	SUB HEAD NO.1	Replacement of damaged 36"i/d Sewer line with new 36" i/d Under water Sewer line.	
2	SUB HEAD NO.2	Construction of Man hole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water Sewer.	
3	SUB HEAD NO.3	Dismantling of 36"i/d existing damaged Sewer line .	
4	SUB HEAD NO.4	Dismantling of Existing Man hole Chambers 6.5' DIA 14.42' Avverage depth for 36" i/d Sewer.	
5	SUB HEAD NO.3	Construction of RCC Sullage Carrier from Disposal works to existing drain along stadium road.	
6	SUB HEAD NO.4	Construction of RCC Sullage Box Culvert for Stadium road crossing.	
7	SUB HEAD NO.5	Construction of Stadium Road	
8	SUB HEAD NO.6	Electrical Works of Stadium Road	
9	SUB HEAD NO.7	Desilting of Existing Sullage Carrier/Storm Water Drain	
10	SUB HEAD NO.8	Tuff Pavers in Disposal Station	
11	SUB HEAD NO.9	Sewer House Connections	
12	SUB HEAD NO.10	Environmental & Social Management & Monitoring Plan	
		<b>TOTAL</b>	

**Amount in words :-**

Note:- These rates are exclusive of PRA charges

BILL OF QUANTITIES												
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.												
SUB HEAD NO.1			Replacement of damaged 36"i/d Sewer line with new 36" i/d Under water Sewer line.									
	Total length including man holes.	36 "i/d	=	1500.0 ft	=	No.of MH	=	8 No	Cunet Depth at lower M.H	=	12.81 ft	
	No. & dia of M.H chamber for	36 "i/d	=	Sewer	=	8 No	Dia	=	6.5 ft	Cunet Depth at Upper M.H	=	12.85 ft
	Total length of sewer pipe.	36 "i/d	=	1500 ft	(-)	8 x	6.5 ft	=	1448.0 ft	Cunet Depth at Upper M.H	=	12.09 ft
	Total depth of sewer pipe.	36 "i/d	=	15.2 ft					Average depth	=	12.58 ft	
	Depth of sewer pipe in dry condition.	36 "i/d	=	15.17 ft	(-)	7.67 ft	=	7.5000 ft	Wall thickness	=	0.33 ft	
	Depth of sewer pipe in wet condition.	36 "i/d	=	15.17 ft	(-)	7.50 ft	=	7.666 ft	RCC block+Crush	=	2.25 ft	
									Total depth of cutting	=	15.17 ft	
									Average Depth above SSWL	=	7.50 ft	
									Average depth below SSWL	=	7.67 ft	
MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT												
S No	MRS, Reference Ch	It:No	Description of Items				Quantity	Unit	Rate	Amount		
1	4	45	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre). Length = 1500 - 8 No x 12.50 ft = 1400 Rft Quantity = 1200.00 x 5.500 x 0.83 = 5478.0 Cft = 5478.00 Total = 5478.00 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) <b>0 to 7.0 ft Depth</b> = <b>7.50</b> ft. Pipe length = 1500.0 - 8 No x 12.50 ft = 1400 Rft Quantity x 1400 x 5.500 x 7.50 = 57750 Cft = 57750.00 Total = 57750.00 Cft 1000									
3	3	43	Earthwork excavation of trenches in open cutting for sewers and manhole chambers, etc. below sub-soil water level to correct section and dimensions according to templates and levels, including shoring, timbering and shuttering of M.S.sheets on both sides of the trenches: (i) <b>i)0 ft. to 4.0 ft. (0 to 1.20 m) depth below SSWL.</b> = <b>4.00</b> ft. Pipe length = 1500 - 8 No x 12.50 ft = 1400 Rft Quantity x 1400.00 x 5.500 x 4.00 = 30800 Cft = 30800.00 Total = 30800.00 Cft 1000 (ii) <b>ii) 4.01 ft. to 8.0 ft.(1.22 to 2.4 m) depth below SSWL.</b> = <b>3.67</b> ft. Pipe length = 1500 - 8 No x 12.50 ft = 1400 Rft Quantity = 1400.00 x 5.500 x 3.67 = 28226 Cft = 28226.00 Total = 28226.00 Cft 1000									
4	21	6	Lowering of sub-soil water table, by installation of tube wells along sewer line and pumping out water, for excavation in open cutting below sub-soil water level, concreting, curing, laying and jointing pipes, filling haunches, etc. till the completion of sewer line, including disposal of pumped out water:- <b>7) 0-7 ft. (0 to 2170 mm) below SSWL</b> = <b>7.67</b> ft. Pipe length = 1500 - 8 No x 12.50 ft = 1400 Rft Total = 1400 Rft = 1400.00 Rft 1									
5	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. Pipe length = 1500 - 8 No x 12.50 ft = 1400 Rft RCC blocks = 1400 / 8.000 - 1.000 = 174 No Block length x 174 - 1.833 x = 172.2 Rft = Length of Crush 1400.0 - 172.167 = 1227.8 Rft (i) Crush bajri for pipe bedding. Qty.of crush x 1227.8 x 5.500 x 3.833 = 25886.82 Cft = Crush bajri under blocks									

**BILL OF QUANTITIES**  
**THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.**

SUB HEAD NO.1		Replacement of damaged 36"i/d Sewer line with new 36" i/d Under water Sewer line.									
Total length including man holes.	36 "i/d	=	1500.0 ft	=	No.of MH	=	8 No	Cunet Depth at lower M.H	=	12.81 ft	
No. & dia of M.H chamber for	36 "i/d	=	Sewer	=	8 No	Dia	=	6.5 ft	Cunet Depth at Upper M.H	=	12.85 ft
Total length of sewer pipe.	36 "i/d	=	1500 ft	(-)	8 x	6.5 ft	=	1448.0 ft	Cunet Depth at Upper M.H	=	12.09 ft
Total depth of sewer pipe.	36 "i/d	=	15.2 ft					Average depth	=	12.58 ft	
Depth of sewer pipe in dry condition.	36 "i/d	=	15.17 ft	(-)	7.67 ft	=	7.5000 ft	Wall thickness	=	0.33 ft	
Depth of sewer pipe in wet condition.	36 "i/d	=	15.17 ft	(-)	7.50 ft	=	7.666 ft	RCC block+Crush	=	2.25 ft	
								Total depth of cutting	=	15.17 ft	
								Average Depth above SSWL	=	7.50 ft	
								Average depth below SSWL	=	7.67 ft	

**MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT**

S No	MRS, Reference Ch	It:No	Description of Items	Quantity	Unit	Rate	Amount
6	6	6.a.iii	<p>Qty.of crush x 172.2 x 5.500 x 0.750 = 710.19 Cft =</p> <p align="right">Total = 26597.0 Cft</p> <p>Deductions of 1/2 od pipe</p> <p>3.143 x 1227.8 x ( <math>\frac{3.667}{4}</math> )<sup>2</sup> x 0.500 = - 6485.10 Cft =</p> <p align="right">Net Total = 20112 Cft =</p> <p>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.):-</p> <p>(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)&amp;(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-</p> <p>RCC blocks Type B (nominal mix 1: 1½: 3)</p> <p>No,s of blocks = 1400.0 / 8.000 - 1.000 = 174.0 No,s</p> <p>Length of blocks = 174.000 x 1.833 = 318.942 Rft</p> <p>174.000 = 5.000 x 1.833 x 3.08333 = 4917.023 Cft</p> <p>Deductions of 1/2 od pipe</p> <p>174.000 x 3.143 x ( <math>\frac{3.666}{4}</math> )<sup>2</sup> x 1.833 = - 1684 Cft</p> <p align="right">4.000 x 2.000</p> <p>Deductions of 1/2 slurry cavity around pipe</p> <p>174.000 x 3.143 x 3.910 x 0.25x1 = - 267 Cft</p> <p align="right">x 2.000</p> <p align="right">Net Total = 2965.79 Cft =</p> <p>(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)&amp;(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-</p> <p>(2) Type B (nominal mix 1: 1½: 3)</p> <p>No,s of blocks = 1400.0 / 8.000 - 1.000 = 174.0 No,s</p> <p>Length of collars = 174.0 x 1.000 = 174.0 Rft</p> <p>Top Collar on 1/2 od pipe</p> <p>174.000 x 3.143 x 4.333 x 0.667 = 789.8 Cft</p> <p align="right">2.000</p> <p align="right">Net Total = 789.84 Cft =</p>	20111.90	Cft	100	
6		(ii)	<p align="right">Net Total = 2965.79 Cft =</p> <p>(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)&amp;(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-</p> <p>(2) Type B (nominal mix 1: 1½: 3)</p> <p>No,s of blocks = 1400.0 / 8.000 - 1.000 = 174.0 No,s</p> <p>Length of collars = 174.0 x 1.000 = 174.0 Rft</p> <p>Top Collar on 1/2 od pipe</p> <p>174.000 x 3.143 x 4.333 x 0.667 = 789.8 Cft</p> <p align="right">2.000</p> <p align="right">Net Total = 789.84 Cft =</p>	2965.79	Cft	1	
			<p align="right">Net Total = 789.84 Cft =</p>	789.84	Cft	1	

BILL OF QUANTITIES												
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.												
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MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT												
S No	MRS, Reference Ch	It.No	Description of Items					Quantity	Unit	Rate	Amount	
6	12b		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):- (b) Deformed bars (Grade-40) 3755.63 x 4.75 = 17839.25					8094.03	Kgs	100		
7	Non MRS		Providing laying cement sand Slurry ratio 1:1:1 well compacted through vibrator between Rcc sewer pipe and Rcc block to blind the joint of both pipe up to half of pipe. Rate also includes the Providing ,mixing Concrete admixture Sika Rapid in the cement for rapid setting with labour @ 1 litter per bag of cement to be used. Complete in all respect to the Engineer Incharge .(Analysis attached) Pan concrete to be poured in the cavity of RCC block up to half of sewer pipe 36" i/d No,s of blocks = 1400.0 / 8.000 - 1.000 = 174.0 No,s Length of collars = 174.0 x 1.830 = 318.4 Rft 318.420 x 3.143 x 3.916 x 0.250 = 489.9 Cft x 2.000 Net Total = 489.87 Cft = 489.87 Cft					489.87	Cft	1		
8	21	3-xi)	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. ix) 910 mm (36") i/d Pipe length = 1500 ft - 8 No x 6.50 ft = 1448.00 Rft					1448.00	Rft	1		
9	3	13-a	Rehandling of earthwork: b) Upton a lead of 50 ft. (15 m). Qty as per item No. 2 (i) = 57750 Cft Qty as per item No. 3 (i) = 30800 Cft Qty as per item No. 3 (ii) = 28226 Cft Total = 116776 Cft Deductions As per sand filling Item No. 10 (i) = 31152 Cft As per Crushed stone bedding It.No. 5 (i) = 20112 Cft As per RCC blocks it.No 6 (i) 6 (i) = 2966 Cft As per RCC top collars it.No 6 (ii) 6 (ii) = 790 Cft Pipe volume 3.143 x 1227.83 x( 3.667 )²x 0.250 = 12970 Cft Total deductions = 67990 Cft Balance quantity. = 116776 (-) 67990 = 48786 Cft a) Lead up to a single throw of Kassi, phaorah or shovel = 50% = 24393 Cft = 24393.00 Cft 1000 b) Upton a lead of 50 ft. (15 m). = 50% = 24393 Cft = 24393.23 Cft 1000									
10	7	30	Supplying and filling sand under floor; or plugging in wells.									

BILL OF QUANTITIES													
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.													
SUB HEAD NO.1			Replacement of damaged 36"i/d Sewer line with new 36" i/d Under water Sewer line.										
		Total length including man holes.	36 "i/d	=	1500.0 ft	=	No.of MH	=	8 No	Cunet Depth at lower M.H	=	12.81 ft	
		No. & dia of M.H chamber for	36 "i/d	=	Sewer	=	8 No	Dia	=	6.5 ft	Cunet Depth at Upper M.H	=	12.85 ft
		Total length of sewer pipe.	36 "i/d	=	1500 ft	(-)	8 x	6.5 ft	=	1448.0 ft	Cunet Depth at Upper M.H	=	12.09 ft
		Total depth of sewer pipe.	36 "i/d	=	15.2 ft					Average depth	=	12.58 ft	
		Depth of sewer pipe in dry condition.	36 "i/d	=	15.17 ft	(-)	7.67 ft	=	7.5000 ft	Wall thickness	=	0.33 ft	
		Depth of sewer pipe in wet condition.	36 "i/d	=	15.17 ft	(-)	7.50 ft	=	7.666 ft	RCC block+Crush	=	2.25 ft	
										Total depth of cutting	=	15.17 ft	
										Average Depth above SSWL	=	7.50 ft	
										Average depth below SSWL	=	7.67 ft	
MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT													
S No	MRS, Reference Ch	It:No	Description of Items					Quantity	Unit	Rate	Amount		
11	3	(i)	Sand filling at trench top										
			1	x	1500.00	-	8.000	x	10.50	=	1416	Rft =	
			1	x	1416.00	x	5.500	x	4.00	=	31152	Cft =	
			Total = 31152					Cft =	31152.00	Cft	100		
12	3	24.c	Compaction of earthwork c) Ramming earthwork (all types of soil). Qty as per item No. = 9 = 48786					Cft =	48786.47	Cft	1000		
13	3	13-a	Making connection of 36"i/d RCC Sewer with man hole chambers by dismantling of brick masonry ,RCC core wall at desired depth and its restoration in original condition. Complete in all respect to the entire satisfaction of the Engineer In Charge.										
			At upper & lower ends = 36" i/d = 2					Job =	2.00	Job	1		
14	3	17-a.b.c	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 other means owned by the contractor.(Lead table attached)										
			Lead up to 170 K.m from Karana quarry Sargodha District .										
			6	(i)	2965.79	x	0.84	=	2491.26	Cft =			
			6	(ii)	789.84	x	0.84	=	663.47	Cft =			
			Quantity of total bajri. = 3154.73					Cft =	3154.73	Cft	100		
15	Material input Rate 158	6.003	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 up to 3 mile										
			a)up to ¼ mile(400 m)= 1 x 4584.6 = 4584.60										
			b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile (400m)up to one mile(1.6 Km) 12 x 29.30 = 351.60										
			for every ¼ mile(400 m)additional lead or part thereof, beyond one mile(1.6 Km)up to 5 mile(8 Km). 8 x 324.50 = 2596.00										
			Total = 7532.20										
			Quantity of deductions of item No. 9 = 67990					Cft =					
			Take 80% = 67990 x 0.80 = 54391.63					Cft =	54391.63	Cft	1000		
			Deduct cost of old material (Stone ballast)										
			Quantity as per item No. 1 = 5478					Cft					
			Quantity take 80% after deducting the dust stone used as blinding layer.										
			0% = 5478 x 80 / 100 = 4382					Cft					
			Input material rate as per item No.06.003 Net Total = 4382					Cft	4382.40	Cft	100		
			Total Cost of RCC Sewer = 36 "i/d = 1448					Rft =					
										<b>Total:-Rs</b>	-		
										<b>Total:-Rs</b>	-		

Carried over to the General Abstract of Cost

BILL OF QUANTITIES							
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.							
SUB HEAD NO.2		Construction of Man hole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water Sewer.					8 No
<b>Design Parameter</b>					<b>From RD.00 to RD.1500 upward = M.H .1 to M.H .8</b>		
Inside dia of man hole	= 6.50	ft.	Masonry depth	<b>Average Cunet depth</b>	= 12.58	ft.	
Size of man hole cover	= 1.83333	ft.		PCC benching below cunet	= 0.58	ft.	
Depth of excavation	= 14.75	ft.		Thickness of RCC base slab	= 1.00	ft.	
Wall thickness up to 8ft depth	= 0.75 to 1.875	= 1.50		Crushed stone Thickness	= 1.00	ft.	
Dome depth	= 0.75	ft.	= 4.50	<b>Total depth of excavation.</b>	= 15.17	ft.	
Thickness of PCC man hole cover	= 0.75	ft.	= 0.50	<b>Total depth of excavation.</b>	= 15.25	ft.	
Wall thickness out side the core wall	= 0.75	ft.	= 6.75	Depth excavation above SSWL	= 7.50	ft.	
Wall thickness in side core wall.	= 0.75	ft.	= 6.75	Depth excavation below SSWL	= 7.75	ft.	
Core wall thickness .	0.50	ft.	= 6.75	Depth of dewatering(Lowering of SSWL)	= 7.75	ft.	
Dia of excavation	= 12.500	ft.	= 15.25	Sewer line size	= 36.00	inch	
<b>MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT</b>							
S No	MRS		Description of Items	Quantity	Rate	Unit	Cost (Rs.)
	Ch	It-No					
<b>Carried over to the General Abstract of Cost.</b>							
1	4	45	<b>New Man hole under water</b> Dismantling and removing road metaling. Quantity 1 x 3.143 x 12.50 x 0.25 x 0.83 = 102.31 Cft = 102.31 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:- Excavation in dry condition (i) i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth = 7.5 Ft. Depth Quantity 1 x 3.143 x 12.50 x 12.50 x 0.25 x 7.50 = 920.76 Cft Total = 920.76 Cft = 920.76 Cft			1000	
3	3	43.i.ii	Earthwork excavation of trenches in open cutting for sewers and manhole chambers, etc. below sub-soil water level to correct section and dimensions according to templates and levels, including shoring, timbering and shuttering of M.S.sheets on both sides of the trenches: (i) j) 0 ft. to 4.0 ft. (0 to 1.20 m) depth below SSWL. = 4.0 Ft.Depth Quantity 1 x 3.143 x 12.50 x 12.50 x 0.25 x 4.00 = 491.07 Cft Total = 491.07 Cft = 491.07 Cft (ii) ii) 4.01 ft. to 8.0 ft.(1.22 to 2.4 m) depth below SSWL. = 3.75 Ft.Depth Quantity 1 x 3.143 x 12.50 x 12.50 x 0.25 x 3.75 = 460.38 Cft Total = 460.38 Cft = 460.38 Cft			1000	
4	21	6	Lowering of sub-soil water table, by installation of tube wells along sewer line and pumping out water, for excavation in open cutting below sub-soil water level, concreting, curing, laying and jointing pipes, filling haunches, etc. till the completion of sewer line, including disposal of pumped out water:- B) 0-8 ft. (0 to 2480 mm) below SSWL = 12.5 Ft.Depth Length 1 x 12.500 = 12.5 Cft Total = 12.5 Cft = 12.50 Cft			1	
5	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. Quantity 1 x 3.143 x 12.50 x 12.50 x 0.25 x 1.00 = 122.77 Cft = 122.77 Cft			100	
6	6	6	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, sh uttering, 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:- (2) Type B (nominal mix 1: 1½: 3) Base Slab 1 x 3.143 x 11.500 x 11.500 x 0.25 x 1.00 = 103.91 Cft Core wall 1 x 3.143 x 8.500 x 0.500 x 6.75 = 90.161 Cft Total = 194.07 Cft = 194.07 Cft			1	
7	6	6	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):- (a) Plain bars (b) Deformed bars (Grade-40)				

BILL OF QUANTITIES																
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.																
SUB HEAD NO.2		Construction of Man hole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water Sewer.						8 No								
<b>Design Parameter</b>				<b>From RD.00 to RD.1500 upward</b>		<b>= M.H .1 to M.H .8</b>										
Inside dia of man hole	=	6.50	ft.	Masonry depth	<b>Average Cunet depth</b>	=	12.58	ft.								
Size of man hole cover	=	1.83333	ft.		PCC benching below cunet	=	0.58	ft.								
Depth of excavation	=	14.75	ft.		Thickness of RCC base slab	=	1.00	ft.								
Wall thickness up to 8ft depth	=	0.75	to 1.875	= 1.50	Crushed stone Thickness	=	1.00	ft.								
Dome depth	=	0.75	ft.	= 4.50	<b>Total depth of excavation.</b>	=	15.17	ft.								
Thickness of PCC man hole cover	=	0.75	ft.	= 0.50	<b>Total depth of excavation.</b>	=	15.25	ft.								
Wall thickness out side the core wall	=	0.75	ft.	= 6.75	Depth excavation above SSWL	=	7.50	ft.								
Wall thickness in side core wall.	=	0.75	ft.	= 6.75	Depth excavation below SSWL	=	7.75	ft.								
Core wall thickness .	=	0.50	ft.	= 6.75	Depth of dewatering(Lowering of SSWL)	=	7.75	ft.								
Dia of excavation	=	12.500	ft.	= 15.25	Sewer line size	=	36.00	inch								
<b>MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT</b>																
S No	MRS		Description of Items				Quantity	Rate	Unit	Cost (Rs.)						
	Ch	It-No														
8	7	7	Steel bars	1 x 194.07 x 6.000 x 0.454	=	528.65	Kg	= 528.65	Kg	100						
							Total =				528.65	Kg				
			Pacca brick work other than building up to 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3 (Ch: 7 lt. 7)													
			1st.step													
			Out side C.wall	1 x 3.143 x 9.750 x		x 0.750 x 6.75	=				155.13	Cft				
			Inside C.wall	1 x 3.143 x 7.250 x		x 0.750 x 6.75	=				115.35	Cft				
			2rd .step	1 x 3.143 x 8.375 x		x 1.875 x 0.50	=				24.676	Cft				
			3rd.step	1 x 3.143 x 8.000 x		x 1.500 x 0.50	=				18.857	Cft				
			4th.step	1 x 3.143 x 7.625 x		x 1.125 x 0.50	=				13.48	Cft				
			Dome	1 x 3.143 x 7.250 + 2.583 x 0.75 x 4.50	=	52.152	Cft									
				2.000	Total =	379.65	Cft									
D/d pipe	2 x 3.143 x 3.667 x 3.667 x 0.25 x 1.500	=	31.69	Cft												
				Net Total =	347.96	Cft	=	347.96	Cft	100						
9	7	8	Add extra labour on item No. 7, for every 10ft.(3 m) additional height, or part thereof.													
<b>10-20 Height</b>																
Height above = 10 ft.																
Dome	1 x 3.143 x ( 4.431 + 2.583 )x 0.75 x 2.75	=	22.733	Cft												
				2.000	Total =	22.733	Cft	=	22.73	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 =	347.96	Cft	=	347.96	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													
(i) (f) Ratio 1: 1/2:3																
Benching	1 x 3.143 x 6.500 x 6.500 x 0.25 x 3.58	=	118.95	Cft												
				Total =	118.95	Cft										
D/d 1/2 pipe	1 x 0.786 x 3.00 x 3.00 x 0.50 x 6.500	=	22.982	Cft												
Above 1/2 pipe	1.0000 x 3.00 x 1.500 x 6.500	=	29.25	Cft												
				Net Total =	66.72	Cft	=	66.72	Cft	100						
(ii) (f) Ratio 1: 2: 4																
Around cover	1 x 3.143 x 2.583 x 0.750 x 0.50	=	3.0446	Cft												
				Total =	3.04	Cft	=	3.04	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	=	33.196	Sft												
Pipe shape portion	1 x 3.143 x 6.500 x 3.000 x 0.50 x 0.00	=	30.643	Sft												
Rectag.sides	1 x 2.000 x 6.500 x 1.500 x 0.00 x 0.00	=	19.50	Sft												
				Total =	83.339	Sft										
D/d Top	1 x 1.000 x 6.500 x 3.00 x	=	19.50	Sft												
				Net Total =	63.84	Sft	=	63.84	Sft	100						
13	21	13	Providing and fixing 1/4"x1/4"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 13.17 - 3.58	=	9.58 / 1 - 2.0	=	8.0	No	=	8.00	No	1						
14	11	7-b	Cement plaster 1:2 up to 20' (6.00 m) height:- b) 1/2" (13 mm) thick )													
Out side the man hole																
1st.step	1 x 3.143 x 10.50 x 6.75	=	222.75	Sft												
1st.step top	1 x 3.143 x 10.875 x 0.375	=	12.82	Sft												

BILL OF QUANTITIES																				
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.																				
SUB HEAD NO.2		Construction of Man hole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water Sewer.							8 No											
<b>Design Parameter</b>				From RD.00 to RD.1500 upward			=	M.H .1	to M.H .8											
Inside dia of man hole	=	6.50	ft.	Masonry depth	Average Cunet depth	=	12.58	ft.												
Size of man hole cover	=	1.83333	ft.		PCC benching below cunet	=	0.58	ft.												
Depth of excavation	=	14.75	ft.		Thickness of RCC base slab	=	1.00	ft.												
Wall thickness up to 8ft depth	=	0.75	to 1.875	= 1.50	Crushed stone Thickness	=	1.00	ft.												
Dome depth	=	0.75	ft.	= 4.50	<b>Total depth of excavation.</b>	=	15.17	<b>ft.</b>												
Thickness of PCC man hole cover	=	0.75	ft.	= 0.50	<b>Total depth of excavation.</b>	=	15.25	<b>ft.</b>												
Wall thickness out side the core wall	=	0.75	ft.	= 6.75	Depth excavation above SSWL	=	7.50	ft.												
Wall thickness in side core wall.	=	0.75	ft.	= 6.75	Depth excavation below SSWL	=	7.75	ft.												
Core wall thickness .	=	0.50	ft.	= 6.75	Depth of dewatering(Lowering of SSWL)	=	7.75	ft.												
Dia of excavation	=	12.500	ft.	= 15.25	Sewer line size	=	36.00	inch												
<b>MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT</b>																				
S No	MRS		Description of Items					Quantity	Rate	Unit	Cost (Rs.)									
	Ch	It-No																		
15	13	9-b	2nd.step	1	x	3.143	x	10.25	x	0.50	=	16.11	Sft	= 374.28	Sft	100				
			2nd.step top	1	x	3.143	x	10.625	x	0.375	=	12.52	Sft							
			3rd.step	1	x	3.143	x	9.50	x	0.50	=	14.93	Sft							
			3rd.step top	1	x	3.143	x	9.875	x	0.375	=	11.64	Sft							
			4rth.step	1	x	3.143	x	8.75	x	0.50	=	13.75	Sft							
			4rth.step top	1	x	3.143	x	9.125	x	0.375	=	10.75	Sft							
			(Dome)	1	x	3.143	x(	8.000	+ 3.333	)x	4.50	=	80.14				Sft			
			2										Total				=	395.41	Sft	
			D/d pipe area	1	x	3.143	x	3.667	x	3.667	x	0.25	x				2.00	=	21.13	Sft
			Net Total										=				374.28	Sft		
			Bitumen coating to plastered or cement concrete surface:-ii) 14 lbs. per 100 Sft. (6.35 Kg per Sq.m).														= 374.28	Sft	100	
Out side man hole chamber.																				
Quantity as per item No 14.00											=	374.28	Sft							
Total											=	374.28	Sft							
16	11	18.a	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:-a) ratio 1:2								= 154.26	Sft	100							
			In side the man hole																	
			Straight portion	=	1.00	x	3.143	x	6.50	x				4.667	=	95.33	Sft			
(Dome)	1	x	3.143	x(	6.500	+ 1.833	)x	4.50	=	58.93	Sft									
2										Total	=	154.26	Sft							
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 mound as per Standard Drawing STD/PD No. 6, of 1977, complete in all respect.								= 1.00	No	1							
			1 x 1.0 = 1.0 No																	
18	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.								= 221.75	Cft	100							
			Lead upto 170 K.m from Karana quarry Sargodha District Sargodha.																	
			PCC 1: 1.5:3 qty. as per item No. 11 (i)	=	66.72	x	84.0	/	100	=				56.046	Cft					
			PCC 1:2.4 qty. as per item No. 11 (ii)	=	3.04	x	88.0	/	100	=				2.679	Cft					
			RCC 1:1.5:3 qty. as per item No. 6 (i)	=	194.07	x	84.0	/	100	=				163.020	Cft					
Net Total										=	221.746	Cft								
19	3	13.a	Rehandling of earthwork: a) Lead up to a single throw of Kassi, phaorah or shovel a) Lead up to a single throw of Kassi, phaorah or shovel								= 102.67	Cft	1000							
			Around base slab	1	x	3.143	x	12.50	-	11.50				x	1.00	=	3.143	Cft		
			Around 1st step	1	x	3.143	x	12.50	-	10.50				x	6.75	=	42.429	Cft		
			Around 2nd step	1	x	3.143	x	12.50	-	-10.25				x	0.50	=	35.750	Cft		
			Around 3rd step	1	x	3.143	x	12.50	-	9.50				x	0.50	=	4.714	Cft		
			Around 4rth step	1	x	3.143	x	12.50	-	8.75				x	0.50	=	5.893	Cft		
			Around dome	1	x	3.143	x	12.50	-	8.00				+ 3.33	x	0.50	=	10.738	Cft	
			2.00											Total	=	102.67	Cft			



BILL OF QUANTITIES									
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.									
SUB HEAD NO.2		Construction of Man hole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water Sewer.						8 No	
<b>Design Parameter</b>				<b>From RD.00 to RD.1500 upward = M.H .1 to M.H .8</b>					
Inside dia of man hole	=	6.50	ft.	Masonry depth	<b>Average Cunet depth</b>	=	12.58	ft.	
Size of man hole cover	=	1.83333	ft.		PCC benching below cunet	=	0.58	ft.	
Depth of excavation	=	14.75	ft.		Thickness of RCC base slab	=	1.00	ft.	
Wall thickness up to 8ft depth	=	0.75	to 1.875	= 1.50	Crushed stone Thickness	=	1.00	ft.	
Dome depth	=	0.75	ft.	= 4.50	<b>Total depth of excavation.</b>	=	15.17	ft.	
Thickness of PCC man hole cover	=	0.75	ft.	= 0.50	<b>Total depth of excavation.</b>	=	15.25	ft.	
Wall thickness out side the core wall	=	0.75	ft.	= 6.75	Depth excavation above SSWL	=	7.50	ft.	
Wall thickness in side core wall.	=	0.75	ft.	= 6.75	Depth excavation below SSWL	=	7.75	ft.	
Core wall thickness .	=	0.50	ft.	= 6.75	Depth of dewatering(Lowering of SSWL)	=	7.75	ft.	
Dia of excavation	=	12.500	ft.	= 15.25	Sewer line size	=	36.00	inch	
<b>MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT</b>									
S No	MRS		Description of Items	Quantity	Rate	Unit	Cost	(Rs.)	
	Ch	It-No							
20	7	30	Supplying and filling sand under floor; or plugging in wells. (Dome) $1 \times 3.143 \times (8.000 + 3.333) \times 4.00 = 71.24$ Cft	71.24		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 up to 3 mile a) up to ¼ mile (400 m). = 1.00 x 4,585 = 4584.60 Rs. b) for every 330 ft.(100 m) additional lead or part thereof, beyond ¼ mile(400 m) up to one mile.(1.6 Km.) = 12.00 x 29.30 = 351.60 Rs. c. for every ¼ mile (400 m) additional lead or part thereof, beyond one mile(1.6 Km) up to 5 mile(8 Km). = 8.00 x 324.50 = 2596.00 Rs. Total = 7532.20 Rs. Quantity as per item No 2 = 920.76 Cft Quantity as per item No 3 (i) = 491.07 Cft Deduct quantity rehandled as item No. 3 (ii) = 460.38 Cft Total = 1943.45 Cft Deduct quantity of sand as item No. 20 = 71.24 Cft Balance quantity . = 389.14 Cft Take 80% quantity to be transported. 0.80 = 311.31 = 311.31 Cft	311.31		Cft	1000		
				<b>Total Amount (Rs.)</b>					
22	Material		Deduct cost of old material (Stone ballast) =						
	input Rate		Quantity as per item No. = 1 = 102.31 Cft =						
158	6.003		Quantity take 80% after deducting the dust stone used as blinding layer. Quantity as per item No. Quantity = 102.31 x 80 / 100 = 81.85 Cft = input material rate as per item No.06.003 = Net Total = 81.85 Cft =	81.85		Cft	100		
<b>Cost Per Manhole</b>									
<b>Total Cost of 8 Nos of Man Holes</b>									

BILL OF QUANTITIES														
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.														
Sub Head No.3		Construction of RCC Sullage Carrier from Disposal works to existing drain along stadium road.												
MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT														
		Sullage carrier length = 300		ft.	Size =		3 ft	x	3 ft	x	Wall Thickness =		0.50	
Sr No.	MRS Ch	It-No	Description of Item								Quantity	Rate	Unit	Cost (Rs.)
1	4	20	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same. Existing Sullage Carrier Top & Bottom Slab = 2 x 300 x 4 x 0.5 = 1200 Cft Existing Sullage Carrier Walls = 2 x 300 x 0.5 x 3 = 900 Cft Existing Sullage Carrier 20% of Top Slab In Stadium = 1 x 52 x 4 x 0.5 = 104 Cft Total = 2204.0 Cft = 2204.0 Cft										100	
2	4	19-a	a) Dismantling cement concrete plain 1:4:8. Existing PCC (1:4:8) = 1 x 300.0 x 6.000 x 0.250 = 450.0 Cft = 450.00 Cft										100	
3	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 300.0 x 6.000 x 0.250 = 450.0 Cft Total = 450.0 Cft = 450.00 Cft										100	
4	6	6	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 0 x 1 x 300.0 x 5.000 x 0.500 = 750.00 Cft Filets at base slab 0.50 x 2 x 300.0 x 0.333 x 0.333 = 33.27 Cft Total = 783.3 Cft = 783.27 Cft ii) (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) Walls 1.0 x 2 x 300 x 0.500 x 3.00 = 900.00 Cft Total = 900.0 Cft = 900.00 Cft iii) (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 C (nominal mix 1: 2: 4) Top Slab . x 1 x 300.0 x 4.00 x 0.500 = 600.00 Cft Filets at top slab 0.50 x 2 x 300.0 x 0.333 x 0.333 = 33.27 Cft Total = 633.27 Cft Deduct grating 300 / 25 = 12 x 3.00 x 3.000 x 0.500 = -54.00 Cft Existing Sullage Carrier 20% of Top Slab In Stadium 1 x 52.0 x 4.000 x 0.500 = 104.00 Cft Total = 683.3 Cft = 683.27 Cft										1	
5			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. 4 i) = 783 x 6.75 / 2.204 2398.84 Kg Quantity as per item No. 4 iii) = 900 x 6.75 / 2.204 2756.35 Kg Quantity as per item No. 4 iii) = 683 x 6.75 / 2.204 2092.58 Kg Total = 7247.8 Kg = 7247.78 Kg										100	
6			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) 200 Km Lead up to 200 Km from Karana quarry District Sargodha. Pcc 1:4:8 item No. 3 6 = 450 x 84.00 / 100.00 378.00 Cft											

BILL OF QUANTITIES																	
THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.																	
Sub Head No.3 Construction of RCC Sullage Carrier from Disposal works to existing drain along stadium road.																	
MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT																	
Sullage carrier length = 300 ft. Size = 3 ft x 3 ft x Wall Thickness = 0.50																	
Sr No.	MRS Ch	It-No	Description of Item										Quantity	Rate	Unit	Cost (Rs.)	
7	6	31	Pcc 1:1.5:3 item No. 4 i) = 783 x 84.00 / 100.00 657.94 Cft											2393.22 Cft		100	
			Pcc 1:1.5:3 item No. 4 ii) = 900 x 84.00 / 100.00 756.00 Cft														
			Pcc 1:2.4 item No. 4 iii) = 683 x 88.00 / 100.00 601.27 Cft														
			Total = 2393.22 Cft														
7	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.											657.00 Rft		1	
			Longitudinal length = 1 x 300 x 2 = 600.00 Rft														
			Horizontal length = 300.00 / 50 x 9.500 = 57.00 Rft														
			Total = 657.00 Rft														
8	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, rebitting, handling, assembling and fixing, but excluding erection in position.													100	
			<b>M.S Grating 3 x 3 ft. Weight analysis attached =</b>														
			Weight of gratings = #REF! Kg														
9	25	11	Erection and fitting in position iron trusses, staging of water tanks, etc.											#REF! Kg		100	
			<b>M.S Grating 5 x 3 ft. Weight analysis attached =</b>														
			Weight of gratings 300 / 33.00 = 9 x #REF! = #REF! Kg														
			Total = #REF! Kg														
10	3	13.1+24.c	Rehandling of earthwork a) Lead up to a single throw of Kassi, phaorah or shovel: Compaction of earthwork(soft, ordinary or hard soil):-c)Ramming earthwork (all types of soil).											1950.00 Cft		1000	
			1 step 2.0 x 300.00 x 0.50 x 0.500 = 150.00 Cft														
			2nd step 2.0 x 300.00 x 1.00 x 3.000 = 1800.00 Cft														
			Total = 1950.00 Cft														
11	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 up to 3 mile											563.20 Cft.		1000	
			a)up to ¼ mile(400 m) = 1 x 4,584.60 = 4584.60														
			b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile (400m)up to one mile(1.6 Km) = 12 x 29.3 = 351.60														
			for every ¼ mile(400 m)additional lead or part thereof, beyond one mile(1.6 Km)up to 5 mile(8 Km). = 8 x 324.5 = 2596.00														
			Total Rs. = 7532.20														
			Quantity of item No. 1 and 2 = 2654.00 Cft.														
			Deduct qty:as per rehandling item No. = 1950.00 Cft.														
			Balance = 704.00 Cft.														
			Take 80% = 563.2 Cft.														
12			Deduction the cost of old Steel # 4 = 2204 x 3.75 / 2.204 3750.00 Kg = 3750.00 Kg													1	
												<b>Total</b>		-			
Rate per Rft = 0.00 / 300.00 = 0.00												<b>Say</b>		-			
<b>Carried over to the general abstract of cost</b>																	

**ROUGH COST ESTIMATE FOR THE IMPROVEMENT OF EXISTING SEWERAGE SYSTEM BY PROVIDING , LAYING AND REPLACEMENT OF OUT LIVED LINES AND IMPROVEMENT & EXTENSION OF DISPOSAL STATION CAPACITY AT OKARA CITY DISTRICT OKARA.**

Sub Head No.4		Construction of RCC Sullage Box Culvert for Stadium road crossing.												
MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT														
Culvert length		=	50 ft	Size of Culvert	=	3 ft	x	3 ft	x		Wall Thickness	=	0.67	
Sr No.	MRS Ch	It-No	Description of Item								Quantity	Rate	Unit	Cost (Rs:)
1	4	45	Dismantling and removing road metaling. Length = 50 ft Quantity = 1 x 50.0 x 6.333 x 0.830 = 262.8 Cft								262.83 Cft		100	
2	4	20	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same. Existing Sullage Culvert Top & Bottom Slab = 2 x 50 x 4 x 0.5 = 200 Cft Existing Sullage Culvert Walls = 2 x 50 x 0.5 x 3 = 150 Cft Total = 150.0 Cft								150.0 Cft		100	
3	3	21.a.ii	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead up to one chain (30 m) and lift up to 5 ft. (1.5 m) a) By Manual ii) in ordinary soil. = Total Length = 50 ft Excavation of foundation = 1 x 50.0 x 6.333 x 4.833 = 1530.5 Cft								1530.45 Cft		1000	
4	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 50.0 x 6.333 x 0.333 = 105.5 Cft Under Side slabs on both side of Culvert. 1.00 x 2 x 50.0 x 5.50 x 0.500 = 275.00 Cft Total = 380.5 Cft								380.45 Cft		100	
5	6	6	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 of Culvert 0 x 1 x 50.0 x 5.333 x 0.667 = 177.78 Cft Filets at base slab 0.50 x 2 x 50.0 x 0.500 x 0.500 = 12.50 Cft Total = 190.3 Cft ii) (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) Walls of Culvert 1.0 x 2 x 50.000 x 0.667 x 3.00 = 200.00 Cft Total = 200.0 Cft iii) (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 C (nominal mix 1: 2: 4) Top Slab of Culvert = 1 x 50.0 x 4.33 x 0.667 = 144.44 Cft Filets at top slab 0.50 x 2 x 50.0 x 0.500 x 0.500 = 12.50 Cft Total = 156.94 Cft								190.28 Cft		1	
6	6	12c	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. 5 i) = 190 x 8.00 / 2.204 = 690.66 Kg Quantity as per item No. 5 iii) = 190 x 8.00 / 2.204 = 690.66 Kg Quantity as per item No. 5 iii) = 157 x 6.75 / 2.204 = 480.66 Kg Total = 1861.99 Kg								1861.99 Kg		100	
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. Carriage for Bajri quarry sargodha (Sikhani Wali) to site of work (Analysis Attached)											

ROUGH COST ESTIMATE FOR THE IMPROVEMENT OF EXISTING SEWERAGE SYSTEM BY PROVIDING , LAYING AND REPLACEMENT OF OUT LIVED LINES AND IMPROVEMENT & EXTENSION OF DISPOSAL STATION CAPACITY AT OKARA CITY DISTRICT OKARA.																	
Sub Head No.4				Construction of RCC Sullage Box Culvert for Stadium road crossing.													
MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT SIALKOT																	
		Culvert length		=	50 ft	Size of Culvert	=	3 ft	x	3 ft	x	Wall Thickness		=	0.67		
Sr No.	MRS		Description of Item											Quantity	Rate	Unit	Cost (Rs:)
	Ch	It-No															
8	6	31	Lead up to 200 Km from Karana quarry District Sargodha. Pcc 1:4:8 item No. 4 i) = 380 x 94.77 / 100.00 360.55 Cft Pcc 1:1.5:3 item No. 5 i) = 190 x 84 / 100.00 159.83 Cft Pcc 1:1.5:3 item No. 5 ii) = 200 x 84.00 / 100.00 168.00 Cft Pcc 1:2.4 item No. 5 iii) = 157 x 88.00 / 100.00 138.11 Cft Total = 826.50 Cft											826.50	Cft	100	
			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. Longitudinal length = 1 x 50 x 2.00 = 100.00 Rft Horizontal length = 50.00 / 2 x 9.667 = 241.67 Rft Total = 341.67 Rft											341.67	Rft	1	
9	3	13.1+24.c	Rehandling of earthwork a) Lead up to a single throw of Kassi, phaorah or shovel: Compaction of earthwork(soft, ordinary or hard soil):-c)Ramming earthwork (all types of soil). 1 step 2.0 x 50.00 x 0.50 x 0.667 = 33.33 Cft 2nd step 2.0 x 50.00 x 1.00 x 3.000 = 300.00 Cft Total = 333.33 Cft											333.33	Cft	1000	
10	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 up to 3 mile a)up to ¼ mile(400 m) = 1 x 4,584.60 = 4584.60 b)for every 330 ft.(100 m)additional lead or part thereof, beyond ¼ mile (400m)up to one mile(1.6 Km) = 12 x 29.3 = 351.60 for every ¼ mile(400 m)additional lead or part thereof, beyond one mile(1.6 Km)up to 5 mile(8 Km). = 8 x 324.5 = 2596.00 Total Rs. = 7532.20 Quantity of deductions of item No. 3 = 1530.45 Cft. Deduct qty:as per rehandling item No. 9 = -333.33 Cft. Balance = 1197.12 Cft. Take 80% = 957.693333 Cft.											957.69	Cft.	1000	
11			<b>Material Deduct cost of old material</b> input Rate Quantity as per item No. 1 = 262.83 Cft														
	158	6.003	Quantity take 80% after deducting the dust stone used as blinding layer. Quantity as per item No. (Stone ballast) Quantity = 262.83 x 80 / 100 = 210.27 Cft Input material rate as per item No.06.003 Net Total = 210.27 Cft = 210.27 Cft											210.27	Cft	100	
12			Deduct cost of old Steel # 4 = 150 x 3.75 / 2.204 255.22 Kg = 255.22 Kg											255.22	Kg	1	
													<b>Net Total</b>		-		
Rate per Rft = 0.00 / 50.00 = 0.00													<b>Say</b>		-		
<b>Carried over to the general abstract of cost</b>																	

**BILL OF QUANTITIES**  
**THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.**

Sub Head No.4

Rehabilitation of Stadium road.

**MRS-1st BI-Annual-2023 (01-01-23 to 30-06-23) District Sialkot**

Sr No.	MRS		Description of Item	Quantity	Rate	Unit	Cost (Rs.)
	Ch	It-No					
1	18	11	Scarifying old road surface including removal of debris within 1 chain (30 m).  Stadium Road = 1 x 1200.0 x 18.500 = 22200.0 Sft = 22200 Sft			100	
2	3	7-i	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:-  Stadium Road Shoulders = 2 x 1500.0 x 8.00 x 1.00 = 24000.0 Cft Total = 24000.0 Cft = 24000 Cft			1000	
4	18	5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.  Stadium Road Rehab = 2 x 1500.0 = 3000.0 Rft Stadium Road Rehab = 2 x 450.0 = 900.0 Rft 3900.0 Rft = 3900 Rft			1	
5	18	3a-i	Laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge.  Stadium Road Dismantled = 1 x 1200.0 x 5.500 x 0.500 = 3300.0 Cft Stadium Road New = 1 x 750.0 x 24.000 x 0.500 = 9000.0 Cft Stadium Chowk = 1 x 60.0 x 32.000 x 0.500 = 960.0 Cft Stadium Road Shoulders = 2 x 1500.0 x 8.000 x 0.330 = 7920.0 Cft Total = 21180.0 Cft = 21180 Cft			100	
6	18	4a	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha quarry to site, actual compacted depth shall be considered for payment)  Stadium Road Dismantled = 1 x 1200.0 x 5.500 x 0.500 = 3300.0 Cft Stadium Road New = 1 x 750.0 x 24.000 x 0.500 = 9000.0 Cft Stadium Chowk = 1 x 60.0 x 32.000 x 0.500 = 960.0 Cft Stadium Road Shoulders = 2 x 1500.0 x 8.000 x 0.330 = 7920.0 Cft Total = 21180.0 Cft = 21180 Cft			100	

**BILL OF QUANTITIES**  
**THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADIUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.**

Sub Head No.4

Rehabilitation of Stadium road.

**MRS-1st BI-Annual-2023 (01-01-23 to 30-06-23) District Sialkot**

Sr No.	MRS		Description of Item	Quantity	Rate	Unit	Cost (Rs.)	
	Ch	It-No						
7	18	6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square meter. Stadium Road Rehab = 1 x 1200.0 x 24.000 = 28800.0 Sft Stadium Road Rehab = 1 x 750.0 x 24.000 = 18000.0 Sft Stadium Chowk = 1 x 60.0 x 32.000 = 1920.0 Sft Total = 48720.0 Sft = 48720 Sft	48720	Sft	100		
8	18	10a	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (ABC-2 inch thick) (iii) 4% Bitumen Stadium Road = 1 x 1200.0 x 24.000 = 28800.0 Sft Stadium Road New = 1 x 750.0 x 24.000 = 18000.0 Sft Stadium Chowk = 1 x 60.0 x 32.000 = 1920.0 Sft Total = 48720.0 Sft = 48720 Sft	48720	Sft	100		
9	18	10a	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (AWC-2 inch thick) (iii) 4.5% Bitumen Stadium Road Rehab = 1 x 1200.0 x 24.000 = 28800.0 Sft Stadium Road Rehab = 1 x 750.0 x 24.000 = 18000.0 Sft Stadium Chowk = 1 x 60.0 x 32.000 = 1920.0 Sft Total = 48720.0 Sft = 48720 Sft	48720	Sft	100		
10	13	35	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge. ii) 6" wide Stadium Road Rehab = 3 x 1200.0 = 3000.0 Rft Stadium Road Rehab = 3 x 750.0 = 1875.0 Rft Total = 4875.0 Rft = 4875 Rft	4875	Rft	1		
11	10	41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured) c) 80-mm thick Stadium Road Rehab = 2 x 1500.0 x 8.000 = 24000.0 Sft Total = 24000.00 Sft	24000	Sft	1		
<b>Total Cost</b>								

**BILL OF QUANTITIES**  
**THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.**

Sub Head No.4

Electrical Works of Stadium road.

**MRS-1st BI-Annual-2023 (01-01-23 to 30-06-23) District Sialkot**

Sr No.	MRS		Description of Item	Quantity		Rate	Unit	Cost (Rs.)
	Ch	It-No						
1	24	13	Supply and erection of copper conductor cables for service connection, in pre-laid pipe/G.I. wire / trenches, etc. (rate for cable only):-					
			a) PVC insulated, PVC sheathed twin core, 250/440 volts. v) 7/1.12 mm (7/0.044") = 2250.0 Rft	2250.00	Rft		1	
			vi) 7/1.63 mm (7/0.064") = 1200.0 Rft	1200.00	Rft		1	
2	24	51-ii	Supply and erection of street light pole bracket 30 mm (1¼") G.I. pipe 2 metre long, complete with 2 No. pole clamp.	20.00	Nos		1	
3	24	69	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/Osram/Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.					
			c) 120 Lm/Watt (vi) 120 Watt with 14400 Lumens	20.00	Nos		1	
4	24	77	Supply and erection of electric energy meter, including meter testing fee, etc.					
			b) three phase, 4 wires: ii) 3x50 Amp, 400 volts	1.00	Nos		1	
5	24	161	Supply, Installation, Testing & Commissioning of complete grounding system: ii) 6 mm <sup>2</sup> CU bare conductor	200.00	Rft		1	
6	Non	MRS	Fabrication, Supply of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 magnetic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.					
			(a) LCP	1.00	Nos		1	
			(b) Same as above but three phase DB.as per SLD	1.00	Nos		1	
<b>Total Cost</b>								



<b>BILL OF QUANTITIES</b>									
<b>THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SJALKOT.</b>									
SUB HEAD- 7			Desilting of Existing Drains and Sullage Carrier in Daska City District Sial Kot.						
Sr.No	MRS Ref		Item Description	Quantity	Unit	Rate	Amount		
	Ch.No	Ite.No							
1	21	26b	Desilting including disposal of sludge upto one Chain (30 Meters).						
			b) Covered Drain						
			Storm Water Drain    1    3,937 x 4.00 x 2.50 = 39,372.00	39,372.00	Cft	100.00		Rs	
			Storm Water Drain    1    546 x 3.00 x 2.00 = 3,276.00	3276.00	Cft	100.00		Rs	
2	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 up to 2.0 miles						
			a. a) up to ¼ mile (400 m). = 1.000 x 4,584.60 = 4584.60 =						
			b. b) for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) up to one mile. (1.6 Km.) = 12.000 x 29.3 = 351.60 =						
			c. c) for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) up to 5 mile (8 Km.) = 8.000 x 324.5 = 2596.00 =						
			Total = 7532.20						
			Take 80% of quantity of item No. = 42648.00 x 0.80 = 34118.40 =	34118.40	Cft	1000.00		Rs	
<b>TOTAL</b>							Rs		-
<b>Add 16 % PST</b>									-
<b>Grand Total</b>							Rs		-

**BILL OF QUANTITIES**  
**THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.**

Sub Head No.8		Tuff Pavers in Disposal Station					
MRS-1st BI-Annual-2023 (01-01-23 to 30-06-23) District Sialkot							
Sr No.	MRS		Description of Item	Quantity	Rate	Unit	Cost (Rs.)
	Ch	It-No					
1	3	24c	Compaction of earthwork (soft, ordinary or hard soil) :- c) Ramming earthwork (all types of soil). Total Area of Disposal Station 19497.00 x 0.50 = 9748.5 Cft <b>Less Area of Screening Chamber, Pump House and Wet Wells 3647.00 0.50 = -1823.5 Cft</b>  Total = 7925.0 Cft = 7925.00 Cft	Cft		1000	
		18 3a-i	Laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge.  Total Area of Disposal Station 19497.00 x 0.33 = 6434.0 Cft <b>Less Area of Screening Chamber, Pump House and Wet Wells 3647.00 0.33 = -1203.5 Cft</b>  Total = 5230.5 Cft = 5230.50 Cft				
2	10	41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured) c) 80-mm thick  Total Area of Disposal Station = 19497.0 Sft <b>Less Area of Screening Chamber, Pump House and Wet Wells = -3257.0 Sft</b>  Total = 16240.00 Sft	Sft		1	
<b>Total Cost</b>							

**BILL OF QUANTITIES**  
**THE REPLACEMENT OF 36" I/D DAMAGED SEWER LINE ALONG STADUM ROAD UPTO 42" I/D OUT FALL SEWER (AT STADIUM CHOWK) DASKA CITY DISTRICT SIALKOT.**

Sub Head No.8

Sewerage House Connections

MRS-1st BI-Annual-2023 (01-01-23 to 30-06-23) District Sialkot

Sr No.	MRS		Description of Item	Quantity		Rate	Unit	Cost (Rs.)
	Ch	It-No						
1	3	7-i	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:- Stadium Road = 12 x 12.0 x 1.330 x 4.250 = 814.0 Cft	813.96	Cft		1000	
		5.f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (i) Ratio 1: 4: 8 = 12 x 12.0 x 1.330 x 0.250 = 47.9 Cft Total = 47.9 Cft = 47.88 Cft	47.88	Cft		100	
2	21	3-i	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 = 12 x 11.0 = 132.0 Rft Total = 132.0 Rft = 132.00 Rft	132.00	Rft		1	
3	3	13-a	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel Stadium Road = 12 x 12.0 x 1.330 x 4.250 = 814.0 Cft Total = 814.0 Cft = 813.96 Cft	813.96	Cft		1000	
4	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. Stadium Road = 1950 / 45.0 = 43.3 Total = 43.3 = 43.33 Each	43.33	Each		1	
<b>Total Cost</b>								

**Environmental & Social Management & Monitoring Plan**

<b>Item</b>	<b>Quantity</b>	<b>Tentative Cost /Item (Rs)*</b>	<b>Total Cost</b>
<b>Labor Safety</b>			
Face Masks (3 PLY)	40 Packs		
Safety Gum Shoes	35		
Hand Gloves	35		
*First Aid Box (Including essential Medicine)	04		
*Safety Hard Helmets MSA	35		
Safety Goggles	35		
*Reflective Safety Vests	35		
*Infrared Thermometer (Benetech GM-2200 OR equivalent)	01		
<b>Working Site Safety</b>			
*Reflective Safety Signs Boards	10		
*Reflective Safety PVC Cones (18 inch)	20		
*Road Guiding Portable Delineators with Chain	20		
*Reflective Safety Barricading Tape	50		
*Emergency Portable Light	03		
Solid Waste Collection Drums	02		
*Fire Extinguishers DCP AFO Balls eq.	05		
<b>Sub-Total</b>			
<b>Grand Total</b>			

**Annexure-B1**

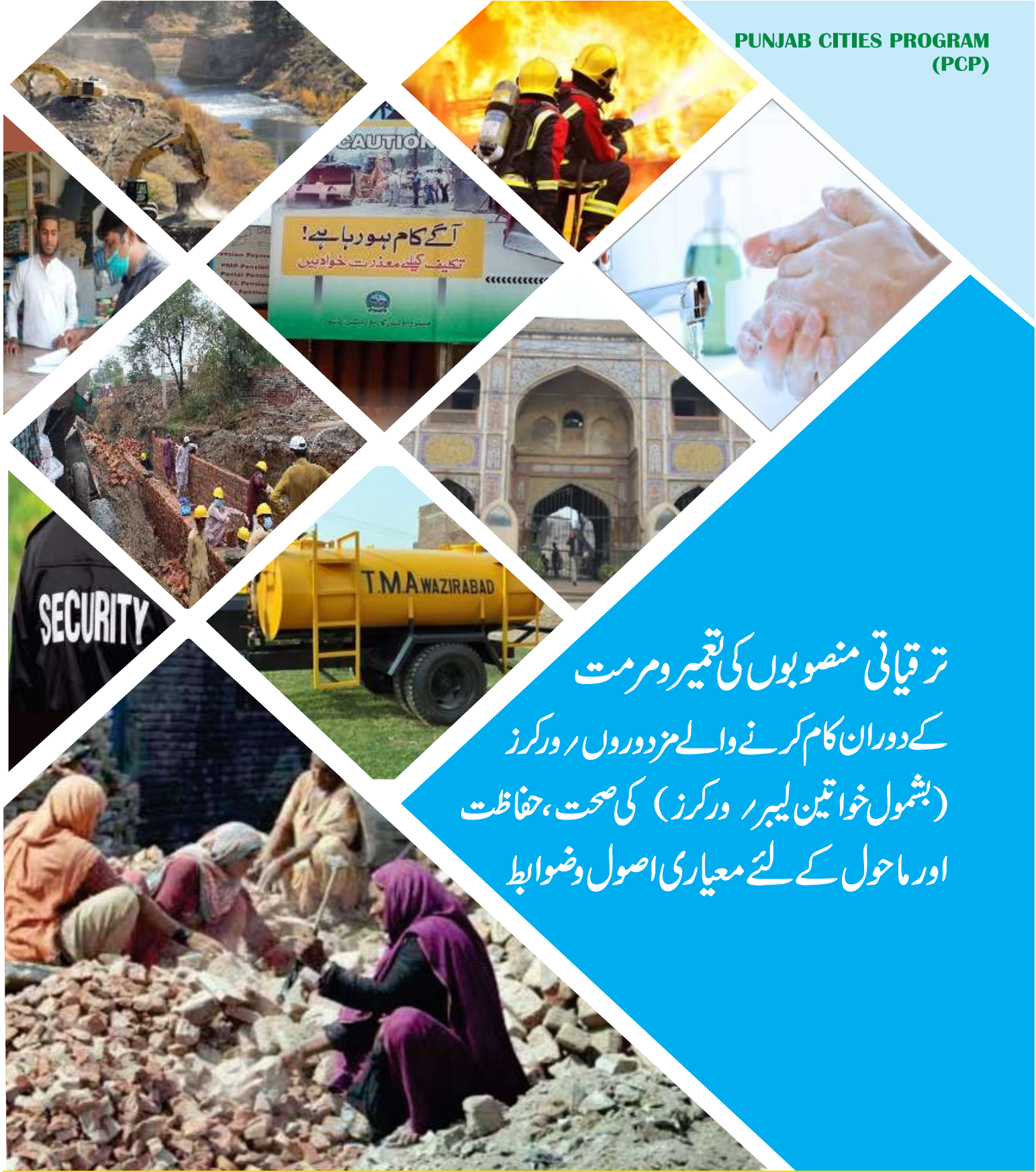
**Depth Statement of 36" i/d sewer line to be replaced along Stadium Road Daska From Rd.00 to Rd 2500 to Rd.4000**

S.#		Reduced distance(RD)		Length	area served			Population		Discharge @ 50 GPCD			Storm water @50%		Proposed size	Slope		Area of pipe	Vetted parameter	Hydraulic radius	
					On line	Other	Total	Density/acre	Population	Take 80%	Peak factor	Peak discharge	Take 50%of peak flow	Total discharge							
1	Stadium Chowk to stadium gate	RD. 0.0	RD. 310.0	310.0	152.90	679.99	832.89	100	83289	6.170	2	12.34	6.170	18.509	36	1	/	1400	7.07	9.43	0.75
1	Stadium gate to near Iqbal Hospital	RD. 310.0	RD. 1500.0	1190.0	152.90	679.99	832.89	100	83289	6.170	2	12.34	6.170	18.509	36	1	/	1400	7.07	9.43	0.75

Annexure-B1

Depth Statement of 36" i/d sewer line to be replaced along Stadium Road Daska From Rd.00 to Rd 2500 to Rd.4000

Velocity	Carrying Capacity=area velocity	Fall in line	Ground Level		Invert Level		Avera Depth up to cunet		Average depth up to cunet	SSWL Level		Depth of cutting above SSWL			Depth of cutting below SSWL					
			Lower G.L	Upper G.L	Lower I.L	Upper I.L	Lower I.L	Upper I.L		Lower end	Upper end	Lower end	Upper end	Average depth above SSWL	Lower end	Upper end	Average depth above SSWL	Wall thickness	Bedding	Total depth of cutting
					770.09															
2.73	19.32	0.22	783.40	783.66	770.59	770.81	12.81	12.85	12.829	776.07	776.07	7.33	7.59	7.460	5.48	5.26	5.369	0.333	2.25	7.953
2.73	19.32	0.85	783.66	783.75	770.81	771.66	12.85	12.09	12.469	776.07	776.07	7.59	7.68	7.635	5.26	4.41	4.834	0.333	2.25	7.417



ترقیاتی منصوبوں کی تعمیر و مرمت  
کے دوران کام کرنے والے مزدوروں / ورکرز  
(بشمول خواتین لیبر / ورکرز) کی صحت، حفاظت  
اور ماحول کے لئے معیاری اصول و ضوابط

# حق اشاعت

جملہ حقوق محفوظ ہیں۔

اس اشاعت کا کوئی بھی حصہ پی ایم ڈی ایف سی (PMDFC) کی پیشگی اجازت کے بغیر کسی بھی شکل میں الیکٹرانکس، مکینیکل، فوٹوکاپی، ریکارڈنگ یا کسی اور طرح سے دوبارہ بنایا یا منتقل نہیں کیا جاسکتا۔





## پیش لفظ

لوکل گورنمنٹ اینڈ کمیونٹی ڈویلپمنٹ ڈیپارٹمنٹ اور پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) نے ورلڈ بینک کے اشتراک سے پنجاب سٹیٹس پروگرام (PCP) کا کامیابی سے اجرا کر دیا ہے۔ اس منصوبے کے تحت صوبہ پنجاب کے 16 چھوٹے شہروں (MCs) بشمول بہاولنگر، بوریوالا، خانیوال، کوٹ ادو، وہاڑی، گوجرہ، جھنگ، کمالیہ، اوکاڑا، ڈسکہ، حافظ آباد، جہلم، کاموکی، مرید کے اور وزیر آباد کے ترقیاتی کاموں پر کامیابی سے کام جاری ہے۔ ان ترقیاتی منصوبوں میں ویسٹ مینجمنٹ، پانی کی فراہمی، نکاسی آب کا نظام، سڑکوں کی مرمت، کمیونٹی پارکس کی بحالی اور قدرتی آفات کی روک تھام کے منصوبہ جات شامل ہیں۔

پنجاب سٹیٹس پروگرام (PCP) کے منصوبہ جات کی تکمیل کے دوران سماجی اور ماحولیاتی مسائل کی جانچ پڑتال اور اس کے حل کے لئے انوائرنمنٹل اینڈ سوشل سیف گارڈز (ESSs) ٹیم نے انوائرنمنٹل اینڈ سوشل مینجمنٹ فریم ورک (ESMF) بنایا ہے۔ مختلف منصوبہ جات اسی فریم ورک کی رو سے پایہ تکمیل تک پہنچ رہے ہیں۔

تعمیراتی اور ترقیاتی کاموں کی تکمیل میں تعمیراتی جگہوں پر کام کرنے والے مزدوروں رلیبر (بشمول خواتین) کی صحت اور کام کرنے کے دوران حفاظت بہت اہمیت رکھتی ہے۔ اس اہم مسئلہ کو ملحوظ خاطر رکھتے ہوئے، پی ایم ڈی ایف سی کے زیر اہتمام پنجاب سٹیٹس پروگرام کی انوائرنمنٹل اینڈ سوشل مینجمنٹ ٹیم نے "ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں، ورکرز (بشمول خواتین لیبر ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول و ضوابط" مرتب کیے ہیں تاکہ متعلقہ میونسپل کمیٹی/کارپوریشنز (MCs) کے عہدیداران اور ٹھیکیداران کو آگاہی فراہم کی جائے۔



## اغراض و مقاصد

۱۔ مجوزہ معیاری اصول و ضوابط پنجاب سیٹیز پروگرام (PCP) کے تحت پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) کے ماہرین ماحولیات نے پروگرام ڈائریکٹر (PCP) اور ڈپٹی پروگرام ڈائریکٹر (PCP) کی زیر نگرانی تشکیل دیئے ہیں۔

۲۔ شہری ترقی کے ترقیاتی منصوبہ جات کی تعمیر و مرمت میں مزدور ورکرز بنیادی کردار ادا کرتے ہیں۔ ان (SOPs) کا بنیادی مقصد مزدور ورکرز (بشمول خواتین لیبر ورکرز) کو تعمیراتی جگہوں (Construction sites) اور لیبر کیمپس میں ماحولیاتی اور سماجی تحفظ فراہم کرنا اور صحت، ماحولیات اور کسی خطرناک صورتحال سے بچنے کے لئے حفاظت فراہم کرنا ہے۔

۳۔ یہ SOPs (PCP) پنجاب سیٹیز پروگرام کے تحت 16 شہروں کی میونسپل کمیٹیوں/کارپوریشنز میں تعمیر و مرمت کے تمام پراجیکٹس پر لاگو ہوں گے۔

۴۔ یہ SOPs مزدوروں/کام کرنے والوں/دیہاڑی دار (بشمول خواتین) پر بلا تخصیص لاگو ہوں گے۔

۵۔ ان SOPs کو موثر اور یقینی بنانے کے لئے انھیں ٹھکیداروں کے کنٹریکٹ کا حصہ بنانا اور ان پر عمل درآمد کرنا میونسپل کمیٹیوں/کارپوریشنز کی ذمہ داری ہے۔ جسے پی ایم ڈی ایف سی کی متعلقہ پروگرام ٹیم یقینی بنائے گی۔

## پیغام

پاکستان کی ترقی میں تعمیراتی کاموں کے دوران کام کرنے والا مزدور طبقہ نہایت اہمیت کا حامل ہے اور انکے صحت و تندرستی سے متعلق مسائل کا مؤثر حل انتہائی ضروری ہے۔ "ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں / ورکرز (بشمول خواتین لیبر ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول و ضوابط" کی اشاعت و



ترویج اور ان پر بروقت عمل درآمد بے حد ضروری ہے جس سے اس طبقے کے بنیادی حقوق کا تحفظ یقینی بنایا جا سکے گا اور اس طرح اس طبقے کی کارکردگی میں بھی بہتری نظر آئے گی۔ ان اصولوں کے تحت ہر ٹھیکیدار کو ورکرز کی صحت اور حفاظت کی ذمہ داری دی گئی ہے۔ مزدور تعمیراتی کاموں کے دوران خطرات کے مطابق ذاتی حفاظتی سامان بھی استعمال کریں گے جس سے دوران کام حادثات میں بھی نمایاں کمی نظر آئے گی۔ ماحولیات اور صحت کے اصولوں کو مد نظر رکھتے ہوئے ہر سطح پر ہم اس بات کو یقینی بنانے کی کوشش کریں گے کہ ہماری پالیسیاں اور طرز عمل فعال ہوں۔ ماحولیات، صحت اور حفاظت (EHS) کے اصولوں کو اپنانے میں کسی بھی قسم کا سمجھوتہ نہیں کیا جائے گا۔ میں امید کرتا ہوں کہ ان اصول و ضوابط کی روشنی میں مزدور ورکرز (بشمول خواتین لیبر) کے حقوق کی پاسداری کو ایک نیا رخ ملے گا اور حکومتی عہدیداران اور ٹھیکیداران بھی اپنی ذمہ داریوں کا احساس کریں گے۔ اور اس سلسلے میں پی ایم ڈی ایف سی اور پنجاب سٹیٹس پروگرام کی انوائرنمنٹ اینڈ سوشل سیف گارڈز (ESSs) ٹیم بلاشبہ مبارکباد کی مستحق ہے اور یہ توقع کی جا سکتی ہے کہ وہ مستقبل میں ان قواعد و ضوابط کی نگرانی کے لئے بھرپور اقدامات کریں گے۔

محمد عامر نذیر

پروگرام ڈائریکٹر  
پنجاب سٹیٹس پروگرام (PCP)



## زیر نگرانی

### عاشق چوہدری

سینئر پروگرام آفیسر (انفراسٹرکچر)  
پنجاب سیٹیز پو/وک/ام (PCP)

### افتخار رسول

ڈپٹی پروگرام ڈائریکٹر  
پنجاب سیٹیز پو/وک/ام (PCP)

## تکنیکی ٹیم

### رضوانہ انجم

پروگرام آفیسر (انوائرنمنٹ اینڈ سوشل سیف گارڈز)  
پنجاب سیٹیز پروگرام (PCP)

### کنزئی ندیم

ریسرچ اینالسٹ  
پنجاب سیٹیز پو/وک/ام (PCP)

### تہمینہ کرن

ڈپٹی پروگرام آفیسر (ESSs)  
پنجاب سیٹیز پو/وک/ام (PCP)



# (۱) لیبر کیمپس کے لئے معیاری اصول و ضوابط

## سرگرمیاں

۱۔ مزدور / لیبر کیلئے عارضی کیمپ / رہائش گاہ کے انتظام و قیام کے لئے جگہ کا انتخاب

## مسائل

- ◆ مقامی آبادی کے وسائل پر اضافی بوجھ
- ◆ مقامی آبادی سے تنازعات کا خدشہ
- ◆ سماجی، مذہبی، اور سکیورٹی کے مسائل۔

## حفاظتی اقدامات

ٹھیکیدار لیبر کیمپس کے قیام کے وقت مندرجہ ذیل باتوں کا خیال رکھے گا :

- ◆ کیمپس ایسی جگہوں پر لگائے جائیں جو ماحولیاتی، مذہبی، سماجی اور ثقافتی نقطہ نظر سے قابل قبول ہوں۔
- ◆ مقامی آبادی کے ساتھ کسی تنازعہ سے بچنے کے لئے آبادی سے دور جگہ کا انتخاب کیا جائے
- ◆ لیبر کیمپ کی جگہ اور سہولیات سے متعلق ایک تفصیلی نقشہ تیار کر کے متعلقہ میونسپل کمیٹی رکارڈ پوریشن میں جمع کرایا جائے۔
- ◆ دیگر مقامی ادارے جیسے صحت، سکیورٹی وغیرہ کو لیبر کیمپ کے مقام اور مدت کے بارے میں مطلع کیا جائے تاکہ کسی ناگہانی صورتحال سے بچا جاسکے۔
- ◆ لیبر کیمپس کے قیام کیلئے عارضی جگہ زمین کا حصول زمین کے مالک کی مرضی، طے کردہ کرایہ اور باقاعدہ تحریری معاہدے کی صورت میں کیا جائے۔
- ◆ لیبر کیمپس سے ملحقہ بنیادی سہولتوں جیسے پینے کا پانی اور نکاسی آب کے انتظامات سے ماحولیاتی آلودگی میں اضافہ نہ ہو



## سرگرمیاں

۲۔ لیبر کیمپ میں مہیا کی جانے والی سہولیات

### مسائل

- ◆ مناسب انفراسٹرکچر کی کمی
- ◆ بنیادی ضروریات اور سہولیات جیسے پانی اور بجلی کی فراہمی، صفائی ستھرائی کی سہولیات اور نکاسی آب کی فراہمی

### حفاظتی اقدامات

ٹھیکیدار کیمپ سائٹس پر درج ذیل باتوں کا خیال رکھے گا:

- ◆ ہوادار اور صاف ستھری رہائش گاہ
- ◆ عارضی کمروں کیلئے ایسے میٹریل کا استعمال جو جلد آگ نہ پکڑیں۔
- ◆ نہانے، دھونے اور پانی پینے کیلئے صاف اور مناسب پانی کی فراہمی۔
- ◆ تمام مزدوروں کیلئے مناسب جگہ کی موجودگی اور محفوظ ماحولیاتی معیار۔
- ◆ صاف ستھرے واش رومز اور نکاسی آب کا مناسب انتظام۔
- ◆ خواتین لیبر کیلئے پردے اور پرائیویسی کا انتظام اور الگ کمروں کا قیام مزید براں خواتین لیبر کی موجودگی کی صورت میں اُنکے لیے علیحدہ ٹوائٹلس رومز کا انتظام۔
- ◆ بین الاقوامی معیار کے مطابق ہر دس افراد کیلئے مطلوبہ ٹوائٹلس کی سہولت کی تعداد ایک ہے۔
- ◆ اگر لیبر کیمپ طویل مدت کیلئے لگایا جانا ہو تو بارشوں، سیلاب کے پانی سے بچنے کیلئے مناسب انتظامات کا ہونا اور نکاسی آب کی فراہمی بے حد ضروری ہے۔
- ◆ ٹوائٹلس اور عارضی رہائش گاہوں میں بجلی کی فراہمی کو یقینی بنایا جائے۔

## سرگرمیاں

۳۔ لیبر کیمپ سے پیدا ہونے والا سالڈ اور لیکوئڈ ویسٹ

### مسائل

- ◆ تعفن اور بدبو
- ◆ صحت کے لئے نقصان
- ◆ ماحولیات کے لئے نقصان
- ◆ مقامی آبادی کے لئے نقصان
- ◆ بیماریاں پیدا کرنے والے بیکٹیریا اور مچھروں کا ذریعہ





## حفاظتی اقدامات

- ◆ روزمرہ پیدا ہونے والے کوڑا کرکٹ اور پکن کے کوڑا کرکٹ کے لیے الگ الگ کوڑا دانوں کا انتظام
- ◆ میونسپل کمیٹی/کارپوریشن کی جانب سے منتخب کردہ جگہ پر روزانہ کی بنیاد پر کوڑے کو اٹھانے اور تلف کرنے کا مناسب انتظام۔
- ◆ عارضی ٹوائلٹس سے پیدا شدہ فضلہ اور لیکویڈ ویسٹ کو حفظانِ صحت کے اصولوں کے مطابق ٹھکانے لگانے کا انتظام۔
- ◆ فضلہ کو ٹھکانے لگانے کے لیے رہائش گاہ سے کم از کم 500 میٹر دور جگہ کا انتخاب کیا جائے جس کے ارد گرد لوگوں کی رہائش نہ ہو۔
- ◆ عارضی ٹوائلٹس سے پیدا شدہ فضلہ کو ٹھکانے لگانے کے لیے منتخب کردہ جگہ کے ارد گرد باڑ لگائی جائے یا درخت لگا دے جائیں تاکہ بچے اور دیگر رہائشی داخل نہ ہوں اور مچھر اور بدبو بھی پیدا نہ ہو۔



## سرگرمیاں

### ۴۔ کھانا پکانے کے لیے ایندھن کی فراہمی

## مسائل

- ◆ گیس اور دیگر ایندھن سے چلنے والے چولہوں کے پھٹنے کا اندیشہ
- ◆ ایندھن کے لیے لکڑی کے حصول کے لیے درختوں کی کٹائی

## حفاظتی اقدامات

### ٹھیکیدار کیمپ سائٹس پر درج ذیل سہولیات مہیا کرے گا۔

- ◆ لیبر کیمپس میں کھانا پکانے، کمروں کہ گرم رکھنے نیز سردیوں میں نہانے اور دھونے کے لیے گرم پانی کے لیے ایندھن کی لکڑی یا دیگر بائیو گیس استعمال کرنے کی حوصلہ شکنی کریں اور ایندھن کیلئے درختوں کی کٹائی نہ کریں۔
- ◆ درختوں اور ارد گرد جنگلات کی حفاظت کیلئے مزدوروں/لیبر کو آگاہی دی جائے۔
- ◆ کھانا پکانے کے لیے قدرتی گیس یا مٹی کے تیل کے محفوظ چولہے استعمال کیے جائیں۔



## سرگرمیاں

5۔ جانوروں / پرندوں کا شکار خرید و فروخت

## مسائل

- ◆ جنگلی حیات کو خطرات
- ◆ ماحولیاتی وسائل کو خطرات

## حفاظتی اقدامات

- ◆ لیبر مزدوروں کو گاہی فراہم کی جائے کیونکہ ارد گرد موجود کسی بھی قسم کی جنگلی حیات کو نقصان پہنچانا، ان کے گھونسلوں / پناہ گاہوں میں کوئی مداخلت کرنا، شکار کرنا یا جانوروں / پرندوں کو قید کرنا اور خرید و فروخت کرنا پنجاب وائلڈ لائف (پروٹیکشن، پریزرویشن، کنزرویشن اینڈ مینجمنٹ ایکٹ 1974) کے مطابق ممنوع اور سزا قابل تعزیر جرم ہے۔

## سرگرمیاں

6۔ حفظانِ صحت کے اصول

## مسائل

- ◆ حفظانِ صحت کے رہنما اصولوں پر عملدرآمد کرنے کی صورت میں مختلف بیماریاں مثلاً کرونا وائرس، ملیریا، ایچ آئی وی ایڈز اور دیگر انفیکشنز کے پھیلنے کا خطرہ

## حفاظتی اقدامات

ٹھیکیدار لیبر کیمپس میں درج ذیل انتظامات مہیا کرے گا:

- ◆ لیبر کیمپس میں صحت و صفائی کی مناسب سہولیات کی فراہمی
- ◆ بیرونی علاقوں سے آنے والے مزدوروں کی صحت کی ابتدائی سکریننگ



- ◆ چوبیس گھنٹے لیبر کیمپس میں پرفرسٹ ایڈ بکس کی سہولت موجود ہو۔ کیمپ سائنس میں ابتدائی طبی امداد سے متعلقہ دواؤں کا موجود ہونا یقینی بنایا جائے۔ اور طویل المدتی کیمپ کی صورت میں کسی ڈسپنسر، ڈاکٹر کا کیمپ میں موجود ہونا چاہیے۔
- ◆ کسی ایمر جنسی کے دوران مزدوروں کے لیے ایسبولینس کی سہولت فراہم کی جائے اور ایمر جنسی سروسز 1122 یا 15 پر کال کرنے کے لیے ٹیلیفون / موبائل کی سہولت مہیا کی جائے۔
- ◆ حفظانِ صحت کے بہترین اصولوں، صفائی ستھرائی اور صحت کی دیکھ بھال کے امور کیلئے مزدوروں / لیبر کو تربیت فراہم کی جائے جس میں تمام مزدوروں کی شرکت کو یقینی بنایا جائے۔
- ◆ جنسی طور پر منتقل ہونے والی بیماریوں اور ایڈز وغیرہ کے بارے میں مزدوروں کو مکمل معلومات فراہم کی جائیں اور ان بیماریوں سے بچنے کے لیے حفاظتی اصول اپنانے پر زور دیا جائے۔
- ◆ مچھروں اور دیگر بیکٹیریا کو پیدا ہونے سے روکنے کیلئے حفاظتی سپرے لازمی کرائے جائیں۔
- ◆ کرونا سے بچنے کے لیے ابتدائی سکریننگ یقینی بنائیں اور بار بار ہاتھ دھونے پر زور دیں اور علامات ظاہر ہونے پر فوری طور پر دیگر مزدوروں سے آئسولیشن کے مکمل اصولوں پر سختی سے عمل کیا جائے۔
- ◆ لیبر کیمپس کے اندر مناسب مقامات پر حفظانِ صحت کے اصولوں سے متعلقہ پیغامات اور طریقے ڈسپلے کیے جائیں اور تربیتی پروگرام کا اہتمام کیا جائے۔
- ◆ قریبی ڈسپینسری، ریلیف کلب، ہسپتال کے رابطہ نمبر وغیرہ واضح مقامات پر آویزاں کئے جائیں۔





## سرگرمیاں

۷. سکیورٹی اور حفاظت کی سہولیات

## مسائل

- ◆ سکیورٹی کے مسائل
- ◆ چوری کا خطرہ
- ◆ دہشت گردی کا خطرہ
- ◆ آگ لگنے کے خطرات

## حفاظتی اقدامات

- ◆ کیمپ کے گرد حفاظتی باڑی کی فراہمی
- ◆ حفاظتی اہلکار (پولیس یا نجی سکیورٹی گارڈز اور ہوم گارڈ وغیرہ) کی تعیناتی
- ◆ کیمپ میں موجود افراد کی صحیح تعداد اور آمدورفت کا حساب کتاب رکھنے کے لیے رجسٹر میں اندراج۔
- ◆ آگ سے بچاؤ کے لیے لیبر کیمپ بنانے میں ایسا کوئی میٹیریل استعمال نہ کیا جائے جس سے آگ لگنے کا اندیشہ ہو۔
- ◆ بارش، طوفان، سیلاب وغیرہ سے بچنے کیلئے اس بات کو یقینی بنایا جائے کہ کیمپ سائٹ اور عارضی کمرے رہائش گاہیں محفوظ رہیں۔
- ◆ لیبر کیمپس میں آگ بجھانے والا آلات موجود ہوں جن پر انکی آخری معیاد کی تاریخ درج ہو۔ اور سکیورٹی گارڈ یا لیبر وغیرہ میں سے تین یا چار افراد کو آگ بجھانے والے آلہ استعمال کرنے کی تربیت دی جائے۔
- ◆ لیبر کیمپ میں واضح مقامات پر ہنگامی ایمرجنسی رابطہ نمبر نمایاں درج ہوں۔
- ◆ ٹھیکیدار، لیبر کے ساتھ ماہانہ میٹنگز میں ایمرجنسی کی صورت میں ہر ایک مزدور کو اسکی ذمہ داریوں اور تربیت سے آگاہ کرے اور اسکی تفصیل متعلقہ کنسلٹنٹ اور میونسپل کمیٹی/کارپوریشن کو فراہم کرے۔ اور کسی بھی قسم کی شکایات ایک رجسٹر میں درج کرے۔



## سرگرمیاں

۸. حفظانِ صحت کے اصولوں پر مبنی خوراک (Food Safety)

### مسائل

- ◆ فوڈ پوائزنگ کا خدشہ
- ◆ بیماری کا ڈر

### حفاظتی اقدامات

- ◆ مزدوروں کو صاف ستھرے اور تازہ کھانے کی فراہمی کو یقینی بنایا جائے۔

## سرگرمیاں

۹. مذہبی و سماجی میل جول

### مسائل

- ◆ مذہبی عبادات میں رکاوٹ
- ◆ سماجی تعلقات میں دشواری
- ◆ سماجی، ثقافتی اور مذہبی خیالات میں شدت پسندی یا لڑائی جھگڑا وغیرہ

### حفاظتی اقدامات

- ◆ مزدوروں رلیبر کو ان کے مذہب اور فرقے کے مطابق مذہبی عبادات کی سہولیات فراہم کرنا۔
- ◆ خواتین لیبر کی موجودگی کی صورت میں ان کے لیے علیحدہ وضو، نماز اور پردے کا اہتمام کیا جائے۔
- ◆ تمام مزدوروں کی مذہبی، ثقافتی یا فرقے کی وابستگی سے قطع نظر غیر متعصبانہ اور برابری کا سلوک کیا جائے۔
- ◆ مزدوروں کو تعمیراتی کام کے دوران نماز میں شرکت کرنے یا دیگر عبادات کی اجازت دی جائے اور اس سلسلے میں مذہبی اور سکیورٹی امور کے ذمہ دار مقامی حکام کو تعمیراتی کاموں کے آغاز سے پہلے باضابطہ طور پر آگاہ کیا جائے تاکہ صحت عامہ، معاشرتی اور حفاظتی امور پر موثر نگرانی برقرار رہ سکے۔





## سرگرمیاں

10. تعمیراتی کام ختم ہونے کے بعد کی ذمہ داریاں

## مسائل

◆ فالتو سامان اور کوڑا کرکٹ کی گندگی

## حفاظتی اقدامات

- ◆ کیپ سائٹ کو اصل حالت میں بحال کیا جائے۔
- ◆ تعمیراتی کام کے مکمل ہونے پر فریم اور باڈ لگنے والے دروازوں سمیت لیبر کیمپ میں قائم تمام سہولیات کو ایسے ختم کیا جائے کہ وہاں کا ٹھکبٹ نہ رہے۔
- ◆ کام ختم ہونے کے ساتھ لیبر کیمپ کو مرحلہ وار ختم کیا جائے (پورے کام کی تکمیل کا انتظار نہ کریں)
- ◆ لیبر کیمپ کو مسما کر کرنے کے دوران شور اور کسی بھی قسم کی آلودگی مثلاً گرد و غبار، آبی آلودگی وغیرہ پھیلانے سے گریز کریں۔
- ◆ مسما شدہ ملبہ کو دوبارہ استعمال کرنے اور دوبارہ قابل استعمال کرنے کیلئے کسی لوکل ڈیلر ٹھیکیدار کی خدمات حاصل کریں۔
- ◆ کوڑا کرکٹ اور دوبارہ ناقابل استعمال سامان کو متعلقہ میونسپل کمیٹی رکارپوریشن کی جانب سے مقرر کردہ مقام پر مناسب طریقے سے تلف کیا جائے۔
- ◆ لیبر کیمپ کی زمین رجگہ کے مالک کے ساتھ طے شدہ معاہدے کے مطابق کام کریں اور کسی بھی قسم کے اختلاف یا جھگڑے سے گریز کریں۔ اور اسکی جگہ کو متفقہ منصوبہ کے مطابق اسکے حوالے کیا جائے۔
- ◆ لیبر مزدوروں سے آئندہ کام یا مراعات کے جھوٹے وعدے ہرگز نہ کیے جائیں۔



## (2) تعمیراتی جگہوں (Construction sites) پر مزدوروں / لیبر کی صحت اور ماحولیات کے رہنما اصول اور حفاظتی اقدامات

### سرگرمیاں

۱۔ تمام قسم کے تعمیراتی سرگرمیاں اور کام

### مسائل

◆ انجریز اور چوٹیں وغیرہ

◆ نامناسب دیکھ بھال اور بروقت امداد نہ ملنے کا باعث ہلاکت

◆ دہشت گردی اور سکیورٹی سے متعلق خطرات

### حفاظتی اقدامات

◆ تمام مزدوروں / لیبر سے مقامی رہین الاقوامی معیار کے مطابق مناسب حفاظتی اور قانونی ضوابط کی پیروی کروائی جائے۔

◆ کام کی جگہ پر ارد گرد کے علاقوں میں موجود دہشت گردی اور سکیورٹی کے خطرات کے مطابق حکمت عملی کی بروقت تیاری اور ایک محفوظ و صحت مند ماحول مہیا کیا جائے۔

◆ مزدوروں / لیبر کیلئے ذاتی حفاظت کے سامان (PPE) کی فراہمی مثلاً حفاظتی جوتے، ہیلمٹ، ماسک، دستا، حفاظتی لباس، چشمے، چہرے اور کان کی حفاظت کے سامان وغیرہ کی فراہمی

◆ تمام مزدوروں / لیبر کو ذاتی حفاظت کے ساز و سامان کے بارے میں مکمل آگاہی اور استعمال کے طریقے کار کے بارے میں تربیت کا انتظام۔

◆ اگر تعمیراتی کام ایک ماہ سے زائد عرصہ کیلئے جاری رہنا ہو تو تمام مدت کے لیے صحت، صفائی اور تربیت یافتہ ماحولیات کی تعیناتی کی جائے جو مزدوروں کی صحت، صفائی اور ماحولیات کے امور کی نگرانی کرے اور انہیں تربیت آگاہی فراہم کرے۔

◆ تعمیراتی کاموں کے دوران کسی چوٹ لگنے یا انجریز کی صورت میں مزدور / لیبر کے علاج معالجے کی سہولت مہیا کرنا اور بروقت ہسپتال / ڈسپنسری وغیرہ پہنچانا ٹھیکیدار کی ذمہ داری ہے۔

◆ مزید برآں دوران تعمیراتی کام کی وجہ سے لگنے والی چوٹ یا انجریز کے نتیجے میں ہلاکت ہو جانے کی وجہ سے مزدور / لیبر کی انشورنس اور اس کی بروقت ادائیگی کو یقینی بنایا جائے۔

◆ ایمر جنسی رابطہ نمبر مثلاً ریسکیو 1122 یا 151 اور دیگر قریبی ہسپتالوں / ڈسپنسری وغیرہ کے نمبر تعمیراتی جگہوں پر واضح درج ہونے چاہیں اور کال کیلئے سہولت فراہم کی جائے۔

◆ شہری ترقی کے تعمیراتی منصوبہ جات کے آغاز سے قبل صحت، مذہبی امور اور شہری تحفظ / سکیورٹی فراہم کرنے والے مقامی اداروں کو آگاہ رکھا جائے اور اس سلسلے میں متعلقہ مینسٹری / کمیٹی / کارپوریشن کے تعاون سے موثر حکمت عملی تشکیل دی جائے۔



## سرگرمیاں

۲۔ تمام قسم کی تعمیراتی سرگرمیاں اور کنسٹرکشن کے کام

## مسائل

- ◆ 15 سال سے کم عمر بچوں کی صحت اور تعلیم کا نقصان
- ◆ 18 سال اور اس سے کم عمر بچوں کی صحت کا نقصان
- ◆ حاملہ مزدور عورتوں کی صحت سے متعلقہ خطرات

## حفاظتی اقدامات

- ◆ دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 15 سال سے کم عمر بچوں کو مزدوری یا کسی سرگرمی کے لیے کام پر نہیں رکھا جاسکتا۔
- ◆ ویسٹ پاکستان میٹرنٹی بٹیفٹ آرڈیننس 1958 کے مطابق حاملہ خواتین یا ایسی خواتین جنہوں نے چھ ہفتے قبل بچے کو جنم دیا ہو، کو مزدوری یا کسی سرگرمی کے لیے کام پر نہیں رکھا جاسکتا۔
- ◆ دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 18 سال اور اس سے کم عمر کے بچوں کو محنت مزدوری کے ایسے کام کے لیے نہیں رکھا جاسکتا جن میں صحت کو نقصان پہنچنے یا چوٹ لگنے یا کسی کیمیائی زہریلے مادے سے نقصان پہنچنے یا جہاں ہڈی ٹوٹنے کا اندیشہ ہو۔







## سرگرمیاں

۳۔ دوران تعمیر حادثات کا پیش آنا

## مسائل

- ◆ فوری طبی امداد کی کمی
- ◆ اردگرد کے علاقوں میں ابتدائی طبی سہولیات اور صحت عامہ کا فقدان

## حفاظتی اقدامات

- ◆ تعمیراتی جگہ پر فرسٹ ایڈ باکس کی موجودگی کو یقینی بنایا جائے اور فرسٹ ایڈ باکس میں تمام ضروری ادویات اور طبی امداد کا ضروری سامان موجود ہو۔
- ◆ تعمیراتی کاموں کے دوران پیش آنے والے حادثات بیماریوں اور واقعات کا مکمل ریکارڈ رکھا جائے۔ اسی طرح حادثات کی نوعیت و وجوہات کا مکمل ریکارڈ موجود ہو۔
- ◆ مزدوروں کی صحت و سکيورٹی سے متعلق ممکنہ خطرات کی بروقت نشاندہی کی جائے خاص کر وہ خطرات جو جان لیوا ثابت ہو سکتے ہیں۔ اور ضروری حفاظتی اقدامات بروقت کئے جائیں۔
- ◆ تعمیراتی کاموں سے متعلق مشینری چلانے والے ڈرائیوروں کو دوران ڈرائیونگ قواعد و ضوابط پر سختی سے عملدرآمد کرانے کے لئے آگاہی فراہم کی جائے۔
- ◆ تعمیراتی علاقوں اور سڑکوں کے ساتھ ساتھ روشنی کا معقول انتظام ہو۔





## سرگرمیاں

۴۔ تعمیراتی مقامات پر پانی اور صفائی ستھرائی کی سہولیات اور سالڈ ویسٹ مینجمنٹ

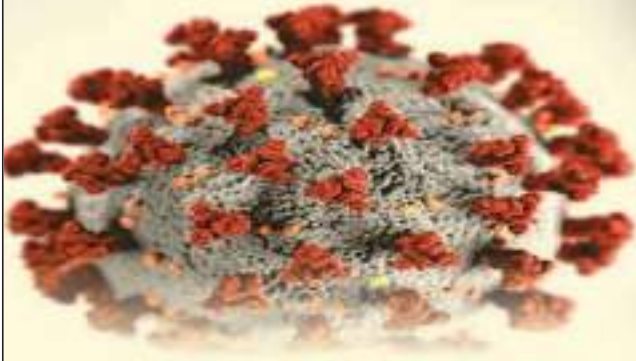
## مسائل

- ◆ صحت کو خطرہ
- ◆ ارد گرد علاقے کے لوگوں کے لئے ناگواری کا باعث
- ◆ مچھروں اور دیگر بیکیٹیریا کی افزائش نسل کا ذریعہ

## حفاظتی اقدامات

- ◆ تعمیراتی جگہوں پر تمام مزدوروں کے لئے پینے کے لئے صاف ستھرا پانی مہیا کیا جائے۔
- ◆ اگر تقریباً 25 مزدور ایک مہینہ کے لئے سارا دن کام کر رہے ہوں تو ان کے لیے تعمیراتی جگہوں پر پورٹ ایبل ٹوائلٹ کا انتظام کیا جائے جو مقامی ڈریج سسٹم سے ملحق ہوں اور مقامی ڈریج سسٹم کی غیر موجودگی میں مقامی ندی نالوں وغیرہ سے کم از کم 6 میٹر کے فاصلے پر ہوں۔ مزید برآں پورٹ ایبل ٹوائلٹس کی صفائی ستھرائی کو روزانہ کی بنیاد پر یقینی بنایا جائے۔
- ◆ تعمیراتی کاموں کے دوران کھدائی سے حاصل شدہ گارباہٹی، ریت، کنکریٹ وغیرہ کو تعمیراتی جگہ پر ایک دن سے زائد مدت کے لئے کھلا نہ رہنے دیا جائے۔ اور روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی رکارپوریشن کی جانب سے مقرر کردہ جگہ پر مناسب طریقے سے ٹھکانے لگایا جائے۔





# COVID-19

CORONAVIRUS DISEASE 2019

## سرگرمیاں

کرونا وائرس کی وبا کے دوران حفاظتی تدابیر

## حفاظتی اقدامات

گورنمنٹ آف پنجاب اور ورلڈ بینک کی ہدایات کے مطابق کرونا کی وبا کے دوران درج ذیل

حفاظتی اقدامات کی پابندی کروانا کنٹریکٹر کی ذمہ داری ہے :

- ◆ کرونا وائرس کی وبا کے دنوں میں کنسٹرکشن سائٹ پر ہاتھ دھونے کیلئے پانی (پورٹ ایبل ہینڈ واشنگ کی سہولت) اور صابن مہیا کیا جائے اور لیبر کو بار بار صابن سے ہاتھ دھونے کی تلقین کی جائے۔
- ◆ لیبر کیمپس میں اور کنسٹرکشن سائٹ پر سوشل ڈیسٹیننگ (6m کا فاصلہ) کے اصولوں کو مدنظر رکھا جائے۔
- ◆ کرونا وائرس کی وبا کے دوران اس بات کا خاص خیال رکھا جائے کہ اگر کنسٹرکشن سائٹ پر آبادی میں وبا پھیلی ہوئی ہے تو آبادی اور مقامی لوگوں سے دور رہیں اور کسی قسم کا میل جول نہ رکھیں۔ اسی طرح اگر کوئی مزدور وبا کے علاقے سے روزانہ کی بنیاد پر آ رہا ہے تو اسے باقی لوگوں/مزدوروں سے میل جول سے دور رکھا جائے۔
- ◆ اگر کسی مریض میں وائرس کی علامات (خشک کھانسی، نزلہ، زکام، بخار وغیرہ) پائی جائیں تو اسے فوراً دوسرے مزدوروں سے آئسولیٹ کر دیا جائے اور ٹیسٹ کروانے کیلئے کہا جائے۔
- ◆ وبا کے دوران کنسٹرکشن سائٹ پر دیگر PPEs کے ساتھ ساتھ مزدوروں کو ماسک لازمی استعمال کرایا جائے۔



## تعمیراتی کاموں کے دوران خطرات/حادثات سے بچنے کیلئے سامان برائے ذاتی حفاظت کا خلاصہ

تصویریں	تجویز کردہ سامان برائے ذاتی حفاظت	تعمیراتی کام	مقصد
	حفاظتی عینکیں	اڑنے والے ذرات کا استعمال جیسے پگھلی ہوئی دھات مائع کیمیکل، گیسوں، اور بخارات، روشنی کی شعاعیں۔	آنکھوں اور چہرے کی حفاظت/تحفظ
	اوپر اور اطراف سے نقصان سے بچاؤ کیلئے پلاسٹک کے ہیلمٹ	ایسے تمام کام جن میں گرنے کا خطرہ ہو، بلندی پر کام کرنا، تعمیراتی کام کو سنبھالنے اور دوسری جگہ پر منتقل کرنے والے کام۔	سر کی حفاظت/تحفظ
	ساعت کی حفاظت کے آلات جیسے کن پوش یا ایئر پلگ	کھدائی/شور پیدا کرنے والے کام یا بھاری مشینوں کی استعمال کرنے کی وجہ سے شور۔	سماعت کی حفاظت/تحفظ
	پلنے اور گرنے والی اشیاء، مائع اور کیمیائی مواد سے بچاؤ کیلئے حفاظتی جوتے یا بوٹ	تمام تعمیراتی کام جن میں چیزوں کا گرنا یا گھمانا، نوکیلی اشیاء شامل ہوں۔ گلانے والا یا گرم مائع، کچرے کے ڈھیر سے کچرا اٹھانا۔	پاؤں کی حفاظت/تحفظ
	ربڑ یا مصنوعی مواد (نیوروپین)، چمڑا، سٹیل، غیر موصل مواد سے بنے گلووز	جسمانی صحت کیلئے نقصان دہ سامان جیسے کچرے کو سنبھالنا، ایسے کام جس میں کاٹ یا گہرے زخم لگنے کا اندیشہ ہو، ارتعاش، بہت زیادہ درجہ حرارت۔	ہاتھوں کی حفاظت/تحفظ
	ایک جگہ سے دوسری جگہ لے جانے والے یا ایک ہی جگہ پڑے مواد کی فراہمی تعمیراتی جگہ پر بچاؤ کا سامان	دھول، دھند، شعلے، گیسوں، دھواں، بخارات	تحفظ تنفس
	چہرے کے ماسک جن میں دھول ہٹانے اور ہوا کو صاف رکھنے کیلئے (کیمیائی مواد، دھند، بخارات اور گیسوں سے) مناسب فلٹر لگے ہوں	آکسیجن کی کمی	
	مناسب میٹریل سے بنے غیر موصل کپڑے، ایپران وغیرہ	تمام کام جن میں شدید درجہ حرارت، نقصان دہ مواد، حیاتیاتی ایجنٹ، چھوٹے یا گہرے زخم لگنے کا اندیشہ ہو	جسم / ٹانگوں کی حفاظت/تحفظ
	ہیلمٹ، حفاظتی عینکیں، ربڑ کے گلووز اور ربڑ کے بوٹ	تمام تعمیراتی کام جو 4 فٹ یا اس سے زیادہ کی اونچائی پر کے جانے ہوں بشمول سٹریٹ لائٹس وغیرہ	اونچائی پر کام کرتے ہوئے حفاظت
	اسکر، ہیلمٹ، رسی، کنیکٹر، طے شدہ جگہ اور ایک ساتھی فرد	تمام تعمیراتی کام جو 4 فٹ یا اس سے زائد اونچائی پر مسلسل ایک دن کیلئے کیے جانے ہوں	اونچائی پر کام کرتے ہوئے حفاظت

## Summary of Recommended Personal Protective Equipment According to Hazard

Objective	Workplace Hazards	Suggested PPE	Pictures
<b>Eye and face protection</b>	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.	
<b>Head protection</b>	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.	
<b>Hearing protection</b>	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).	
<b>Foot protection</b>	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.	
<b>Hand protection</b>	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.	
<b>Respiratory protection</b>	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.	 
	Oxygen deficiency	Portable or supplied air (fixed	
<b>Body/leg protection</b>	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits, aprons etc.	
<b>Working at *height</b>	Rehabilitation Projects	Helmet, Safety glasses,	
	New Construction Projects	Anchor, belt, lanyard,	

\*In general, use of PPEs is required for any height of 4 ft or more. Ref: OSHA standards



### (3) مقامی آبادی / دکانداروں اور رہائشیوں کی صحت، ماحولیات اور سماجیات سے متعلق رہنما اصول و حفاظتی تدابیر



## سرگرمیاں

۱۔ تعمیراتی کاموں کے لئے منتخب کردہ مقام / جگہ پر کام کا آغاز

## مسائل

- ◆ مقامی آبادی / رہائشیوں کیلئے تعمیراتی کام کی عدم آگاہی
- ◆ لیبر / مزدوروں کے داخلے سے رہائشی عورتوں کے پردے اور پرائیویسی کے مسائل
- ◆ مقامی آبادی کے ثقافتی، سماجی، مذہبی ورثہ، اور تاریخی مقامات / عمارتوں کو نقصان

## حفاظتی اقدامات

ٹھیکیدار کو چاہئے کہ:

- ◆ متعلقہ میونسپل کمیٹی کے انوائرنمنٹ اینڈ سوشل فوکل پرسن (ز) منتخب کردہ اور متعلقہ ریجنل آفس میں موجود ڈپٹی پروگرام آفیسر (انوائرنمنٹ اینڈ سوشل سیف گارڈز) کی موجودگی میں مقامی آبادی / رہائشیوں اور دکانداروں کو تعمیراتی کام کے آغاز سے قبل تعمیراتی کام کی نوعیت، اغراض و مقاصد اور تکمیل کی معینہ مدت کے بارے میں مکمل آگاہی فراہم کرے۔
- ◆ تعمیراتی کام کے دوران پیش آنے والے ممکنہ سماجی اور ماحولیاتی مسائل اور ان کے مطابق حفاظتی اقدامات کے بارے میں مقامی رہائشیوں / دکانداروں کو کام کے آغاز سے قبل مکمل آگاہی دی جائے۔
- ◆ تعمیراتی کام کے آغاز سے پہلے مقامی رہائشیوں اور دکانداروں کو تعمیراتی کاموں کی وجہ سے سماجی اور ماحولیاتی مسائل کی نشاندہی / شکایات / تجاویز کیلئے مندرجہ ذیل رابطہ نمبرز کے بارے میں مکمل آگاہی فراہم کی جائے۔
  - (a) ٹھیکیدار کا موبائل / ٹیلیفون نمبر
  - (b) متعلقہ میونسپل کمیٹی / رکارپوریشن کے فوکل پرسن (ز) کے رابطہ نمبرز
  - (c) متعلقہ (PCP) / ریجنل آفس میں تعینات ڈپٹی پروگرام آفیسر (ESSS) کے رابطہ نمبرز
- ◆ تعمیراتی کام کے آغاز سے پہلے تعمیراتی مقام / جگہ کو فیتہ کی مدد سے باقی علاقہ سے الگ کر دیا جائے۔



تعمیراتی جگہ/مقام پر واضح بورڈ نصب کر دیئے جائیں، جن پر درج ذیل پیغامات/احکامات لکھے ہوں:

(a) تعمیراتی کام کی نوعیت

(b) ٹریفک میں رکاوٹ کی صورت میں متبادل راستے کا نشان اور عارضی رکاوٹ کا پیغام

(c) ایمر جنسی اور شکایت کیلئے رابطہ نمبرز

(d) (PMDFC) کی جانب سے جاری کردہ سماجی و ماحولیاتی پیغامات پڑنی پوسٹرز۔

تعمیراتی کام کی جگہ کے ارد گرد 100 میٹر تک کی حدود میں موجود ثقافتی، سماجی، مذہبی ورثہ، تاریخی عمارتوں اور مذہبی مقامات جیسے قبرستان، مساجد، مندر، گرجا گھروں وغیرہ کو کسی قسم کا نقصان نہ پہنچایا جائے اور ان کی حدود میں کوڑا کرکٹ ڈالنے یا فالتو پانی چھوڑنے سے گریز کیا جائے۔ مزید برآں کھدائی کے دوران کسی نئے آثارِ قدیمہ ملنے کی صورت میں متعلقہ مقامی محکمے سے رجوع کیا جائے اور کھدائی کا کام بند کر کے تعمیراتی کام روک دیا جائے۔

## سرگرمیاں

2- کھدائی کی جگہ اور اس سے متعلقہ کام اور فالوں کی صفائی اور اس سے حاصل شدہ بھل وغیرہ

## مسائل

- ◆ کھدائی سے حاصل شدہ مٹی/کنکر کے ڈھیر (Debris) سے رہائشیوں کی آمدورفت اور ٹریفک میں رکاوٹ
- ◆ مقامی رہائشیوں کیلئے ناگواری کا باعث
- ◆ پھروں اور دیگر بیماری پھیلانے والے جراثیم کی افزائش کا ذریعہ
- ◆ کھدائی کی جگہ پر گرنے اور حادثات کے خطرات

## حفاظتی اقدامات

- ◆ تعمیر کے دوران کھدائی کے تمام مقامات کے ارد گرد حفاظتی ٹیپ رپٹی لگائی جائے اور کھدائی کی جگہ کو عارضی طور پر بند کر دیا جائے جس کے باہر اس جگہ سے دور رہنے کیلئے واضح پیغامات لکھے ہوں۔
- ◆ کھدائی سے حاصل شدہ مٹی/کنکر/پتھر وغیرہ کو ایک دن سے زیادہ اس جگہ پر موجود نہ رہنے دیا جائے بلکہ روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی/کارپوریشن کی منتخب کردہ جگہ پر محفوظ طریقے سے ٹھکانے لگایا جائے۔
- ◆ نالوں کی صفائی سے حاصل شدہ بھل ریت وغیرہ کو ایک دن سے زیادہ اس جگہ پر موجود نہ رہنے دیا جائے بلکہ روزانہ کی بنیاد پر اٹھوایا جائے اور بھل کو ایک جگہ سے دوسری جگہ منتقلی کے دوران ٹریکٹر/ٹریلر کو ترپال کی مدد سے ڈھانپ کر لے جایا جائے۔

## سرگرمیاں

3- تعمیراتی مشینری / تعمیراتی مٹیریل اور تعمیراتی کاموں کی وجہ سے عارضی بندش

## مسائل

- ◆ ٹریفک میں رکاوٹ۔

## حفاظتی اقدامات

- ◆ ٹریفک میں ممکنہ رکاوٹ کے پیش نظر متبادل راستے کا انتخاب اور اس کی نشاندہی کیلئے پیغامات واضح درج کیے جائیں۔
- ◆ ٹریفک کونز (cones) کی مدد سے رکاوٹ والی جگہ کو الگ کر دیا جائے تاکہ حادثات سے بچا جاسکے۔
- ◆ ٹریفک میں زیادہ دنوں تک مسلسل رکاوٹ کی صورت میں مقامی ٹریفک پولیس کو آگاہ کیا جائے اور ان کے ساتھ مل کر ٹریفک مینجمنٹ پلان کو تشکیل دیا جائے جس کو واضح مقام پر نصب کیا جائے اور مقامی آبادی/رہائشیوں کو اس کے بارے میں مکمل آگاہی دی جائے۔





## سرگرمیاں

4- تعمیراتی کاموں کی وجہ سے راستوں میں عارضی رکاوٹ اور زمین کا عارضی حصول

### مسائل

- ◆ روزمرہ معمولات اور کاموں میں رکاوٹ
- ◆ رہائشی خواتین کیلئے آنے جانے میں رکاوٹ
- ◆ دکانداروں کے دکانوں کے آگے رکاوٹیں اور گاہکوں کیلئے مشکلات
- ◆ مستقل و عارضی سٹالز کا کرینچنے والے چھوٹے بڑے مستقل دکانداروں کا گاہک کم ہو جانے کی وجہ سے مالی نقصان

### حفاظتی اقدامات

- ◆ تعمیراتی علاقے میں ارد گرد موجود تمام چھوٹی بڑی دکانوں، ٹھیلوں، عارضی خوانچہ فروشوں اور گھروں کا مکمل سروے (تعداد اور مالی حیثیت وغیرہ) اور ان پر ممکنہ سماجی اور ماحولیاتی اثرات کا جائزہ لے کر ایک تفصیلی رپورٹ اور متعلقہ پلان میونسپل کمیٹی/کارپوریشن کے دفتر میں موجود ہونی چاہئے۔ جو کہ فوکل پرسنز، متعلقہ علاقائی آفس میں موجود ڈپٹی پروگرام آفیسر (ESSs) کے ساتھ تعمیراتی کاموں کی مالیت کا اندازہ لگائے وقت تیار کی جائیگی۔ اس رپورٹ اور پلان میں موجود سماجی اور ماحولیاتی مسائل کے حل کیلئے مختص رقم اور ان کا صحیح طریقے سے استعمال ٹھیکیدار کے کنٹریکٹ کا حصہ ہوگا۔
- ◆ رہائشیوں کیلئے آنے جانے اور دکانوں/گھروں تک رسائی کے لیے متبادل راستے مہیا کرنا ٹھیکیدار کی ذمہ داری ہے۔
- ◆ دکانوں/ٹھیلوں وغیرہ کے باہر کسی بھی قسم کے نقصان یا توڑ پھوڑ کی صورت میں ٹھیکیدار طے شدہ ضوابط کے مطابق اس کی قیمت متاثرہ لوگوں کو ادا کرے گا۔
- ◆ لیبر مزدور کو تربیت دی جائے کہ وہ ارد گرد رہائشی عورتوں اور بچوں کے آنے جانے میں کوئی رکاوٹ نہ بنیں اور رہائشیوں کے ساتھ بلا ضرورت کوئی میل جول نہ رکھیں۔
- ◆ تعمیراتی کیمپ لگانے، تعمیراتی کام کرنے یا مشینری اور تعمیراتی سامان رکھنے کے لیے عارضی طور پر حاصل کی گئی زمین کا کرایہ مالک مکان کو وقت پر ادا کی جائے گا۔ اور تحریری معاہدے کی صورت میں ٹھیکیدار تمام قواعد و ضوابط کا پابند ہوگا۔
- ◆ تعمیراتی کاموں/کیمپ وغیرہ لگانے کے لیے عارضی زمین حاصل کرنے کے لئے مقامی رہائشیوں سے مشاورت اور دنوں کے حساب سے کرایہ اور اس کا مکمل طریقہ کار وضع کر کے باقاعدہ لکھا جائے گا۔ اور خلاف ورزی کی صورت میں ٹھیکیدار ذمہ دار ہوگا۔



## سرگرمیاں

### 5- تعمیراتی کام اور حیوی مشیری کا استعمال

#### مسائل

- ◆ شورغل
- ◆ پانی کی آلودگی
- ◆ ہوائی آلودگی
- ◆ دیگر ماحولیاتی مسائل

#### حفاظتی اقدامات

- ◆ تعمیراتی علاقے میں موجود ہسپتالوں، سکولوں، کالجوں وغیرہ اور رہائشی گھروں، رکنوں کی تمام تفصیلات کی رپورٹ متعلقہ میونسپل کمیٹی کے دفتر میں موجود ہونی چاہئے جو کہ ٹھیکیدار کے کنٹریکٹ کا حصہ ہوگی۔ اور ٹھیکیدار ان تفصیلات کے مطابق ایسا پلان ترتیب دے گا جس سے ارد گرد عمارتوں اور رہائشیوں اور دکانداروں کو کم سے کم پریشانی کا سامنا کرنا پڑے مثلاً زیادہ شور پیدا کرنے والے کام دن کے اس حصے میں کئے جائیں جب ہسپتالوں، اور سکولوں، کالجوں وغیرہ کے مصروف اوقات کار نہ ہوں اور ایسے کام جن کی وجہ سے راستوں کی عارضی بندش ضروری ہوں وہ رات کو کیئے جائیں جب رہائشیوں کی آمدورفت نہ ہو۔
- ◆ تعمیراتی کاموں کے دوران پیدا شدہ فاضل پانی یا پورٹیبل ٹوائٹلٹس کا پانی، فضلہ وغیرہ کا محفوظ اور مناسب طریقے سے ٹھکانے لگانے کا بندوبست کیا جائے اور فاضل پانی کو پینے کے صاف پانی کے ساتھ شامل ہونے سے بچانے کا ہر ممکن قدم اٹھایا جائے۔
- ◆ واٹر سپلائی کی سیکموں یا ایسی تمام کام جن کی وجہ سے رہائشیوں کو پانی یا سیوریج وغیرہ میں عارضی بندش کا سامنا کرنا پڑ سکتا ہو، ایسے تمام کاموں کے آغاز سے پہلے رہائشیوں کو پیشگی اطلاع دی جائے اور متبادل انتظامات کا خاطر خواہ انتظام کیا جائے۔
- ◆ تعمیراتی کاموں کی وجہ سے درختوں کی کٹائی سے ہر حال میں گریز کیا جائے اور ناگزیر صورت حال میں ایک درخت کی کٹائی کے متبادل کے طور پر چار درخت لگانا ضروری ہیں۔
- ◆ تعمیراتی جگہ پر پیدا ہونے والے کوڑا کرکٹ کو ٹھکانے لگانے کیلئے ڈسٹ بن لگائے جائیں اور ان کو روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی کی طرف سے مقرر کردہ مقام پر ٹھکانے لگایا جائے۔
- ◆ کوڑا کرکٹ اور فاضل پانی ارد گرد موجود فصلوں اور ندی نالوں میں پھینکنے سے گریز کریں۔
- ◆ گرد و غبار اور ہوائی آلودگی کی صورت میں پانی کا باقاعدہ چھڑکاؤ کریں۔
- ◆ تعمیراتی کام کی مدت اور نوعیت کے مطابق کام کے آغاز سے پہلے، کام کے دوران اور کام کے بعد شوری آلودگی، ہوائی آلودگی اور آبی آلودگی کے نمونہ جات حاصل کر کے ان کی جانچ پڑتال کرنا ٹھیکیدار کی ذمہ داری ہے۔ اس سلسلے میں ریجنل آفس میں موجود ڈپٹی پروگرام آفیسر (ESSs) سے مزید رہنمائی حاصل کریں۔
- ◆ تعمیراتی کام مکمل ہو جانے کے بعد علاقے کی صفائی ستھرائی اور ماحولیاتی خوبصورتی کا خاص خیال رکھیں اور پہلے سے بہتر حالت میں چھوڑیں۔

\* پریم کورٹ آف پاکستان کے سومونڈیکس نمبر 25 برطان 2009 جوائنڈ نمبر "کنگ آف ٹریڈ فاریکینال ووائیڈنگ پراجیکٹ لاہور" تعمیراتی کاموں کے دوران ہر ایک درخت کی کٹائی کے متبادل چار درخت لگانے کا جسٹس ہے۔



ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے  
مزدوروں، ورکرز، (بشمول خواتین لیبر / ورکرز) کی صحت، حفاظت  
اور ماحول کے لئے معیاری اصول و ضوابط درج ذیل پالیسیز،  
قوانین اور نوٹیفیکیشنز کا تجزیہ کر کے تجویز کئے گئے ہیں۔

- ◆ The Punjab Occupational Health & Safety Act, 2019
- ◆ General Environment, Health & Safety (EHS) Guidelines by International Finance Corporation (IFC), World Bank
- ◆ International Labour Standards of International Labour Organization (ILO)
- ◆ Punjab Tehsil/Town Municipal Administration (Works) Rules 2003 (Amendments 2016)
- ◆ The Punjab Restriction on Employment of Children Act, 2016
- ◆ The West Pakistan Maternity Benefit Ordinance, 1958
- ◆ ESF/Safeguards Interim Note: COVID-19 Considerations in Construction / Civil Works Projects - World Bank Guidelines
- ◆ Health & safety SOPs for Construction Workers/Sector for COVID 19
- ◆ Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974





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# Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska City

## Environmental and Social Management Plan (ESMP)

June 2023

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June 2023

PUNJAB  
MUNICIPAL DEVELOPMENT FUND  
COMPANY



MM Pakistan (Pvt.) Limited, Registered in Pakistan No. K-527/9363  
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## List of Abbreviations

Acronym	Definition
Ahs	Affected Households
DPO	Deputy Program Officer
CO	Chief Officer
CPMT	Central Program Management Team
CTS	Complaints Tracking System
EHS	Environment Health & Safety
ESMP	Environment & Social Management Plan
EMMP	Environment Management and Monitoring Plan
EPA	Environment Protection Agency
ESFPs	Environment & Social Focal Persons
ESM	Environment & Social Management
ESMF	Environment & Social Management Framework
ESMP	Environment & Social Management Plan
ESMMP	Environment & Social Management and Monitoring Plan
ESSs	Environment & Social Safeguards
GoP	Government of the Punjab
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HSE	Health Safety & Environment
IEE	Initial Environmental Examination
LG & CDD	Local Government & Community Development Department
MC	Municipal Corporation/Committee
MO-I	Municipal Officer Infrastructure
MO-P	Municipal Officer Planning
NEQS	National Environmental Quality Standards
NOC	No Objection Certificate
OHS	Occupational Health & Safety
OPs	Operational Polices
PAPs	Project Affected Persons
PC-I	Planning Commission Form-I
PCP	Punjab Cities Program
PCRs	Physical Cultural Resources
PD	Project Director
PDO	Program Development Objectives
PEPA	Punjab Environment Protection Act
PHED	Punjab Health Engineering Department
PMDFC	Punjab Municipal Development Fund Company
PMU	Project Management Unit
PPEs	Personal Protective Equipment
PO	Program Officer
RoW	Right of Way
RPF	Resettlement Policy Framework

Acronym	Definition
SMP	Social Management Plan
SOPs	Standard Operating Procedures
SPO	Senior Program Officer
TORs	Term of References
WB	World Bank

## Executive Summary

Government of Punjab (Govt. of Punjab) sought support from the World Bank for the economic growth of urban sectors in Punjab and launched Punjab Cities Program (PCP). Program is expected to achieve overarching goals of ending poverty and promoting shared prosperity by delivering improved urban infrastructure inclusively and in ways that enhance economic growth and development in the participating cities. The Project has a number of financial, social, economic and environmental benefits, including institutional development, rehabilitation and improvement of municipal services, capital investments, better quality of life and employment generation. In addition, a large number of secondary benefits are also likely to accrue in the medium to long term such as institutional reforms at the local level. Environmental and social management under the program will be largely based on the existing legal, regulatory and institutional systems in Pakistan and in the Punjab province. PCP IPF Window (technical assistance component) supports the strengthening of social and environmental risk management systems in the participating cities. It will finance the strengthening of: a) social and environmental focal points in each city; b) the creation of social and environmental management system at the city level; and c) rolling out a training program by PMDFC for city officials.

This Environmental and Social Management Plan (ESMP) is prepared according to the World Bank Core Principles for PforR financing modality and Environmental and Social laws of Government of Punjab (GoPb). It will be used to identify and mitigate the environmental and social impacts that may emerge during implementation of proposed Sub-project “Rehabilitation of 36" i/d Damaged Sewer Line Along Stadum Road in Daska City.” which will be executed by MC Daska from the financial grant of PCP. This ESMP follows the social and environmental appraisal and compliance as mentioned in the Environmental and Social Management Framework (ESMF) of PCP.

### Sub-project Summary:

<b>Scope of Work</b>	<b>Rehabilitation of 36" i/d Damaged Sewer Line Along Stadum Road in Daska City.</b>
<b>Location</b>	Daska Town is located at 74°21' East and 32°20' North at a distance of 24 km in the north-east of Gujranwala City, 24 Km from Sialkot at its south-west and 24 KM from Wazirabad at its southeast.  The present population of 282,911 and the projected population by the year 2032 is 344,866 at a growth rate of 2% per annum. The city's total area is 16.53 km, in the built-up area is 13.00 km <sup>2</sup>
<b>Sub-project Cost</b>	PKR 80.369 Million
<b>ESMP Implementation Cost</b>	0.559 Million
<b>Sub-project Duration</b>	Six months approx.

	15/20 workers/labor will be engaged
<b>Major Work Activities</b>	<ul style="list-style-type: none"> <li>➤ Replacement of damaged 36" i/d Sewer line with new 36" i/d Under water Sewer line.</li> <li>➤ Construction of Manhole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water sewer.</li> <li>➤ Construction of RCC Sullage Carrier from Disposal works to existing drain along Stadium Road.</li> <li>➤ Construction of RCC Sullage Box Culvert for Stadium Road crossing.</li> <li>➤ Rehabilitation of Stadium Road.</li> <li>➤ Electrical Works of Stadium Road.</li> <li>➤ Laying of tuff pavers around the waste water collection wells.</li> <li>➤ Desilting of storm water drain at Stadium Road.</li> <li>➤ Sewer house connections.</li> </ul>
<b>Executing Agency</b>	MC Daska
<b>Monitoring Agency</b>	Punjab Municipal Development Fund Company (PMDFC)
<b>Sub-project Financed By</b>	World Bank under Punjab Cities Program (PCP)
<b>Environmental Category</b>	E-2
<b>Social Category</b>	S-2

**Environment & Social Management:**

This ESMP report presents the Sub-project site-specific baseline data, identification, assessment and evaluation of project impacts and preparation of environmental management and monitoring plan for mitigation of adverse impacts that may arise due to the proposed project interventions.

**Screening of Impacts:**

Environment and Social Screening Checklist and Involuntary Resettlement Checklist included in the ESMF are used to screen the impacts of Rehabilitation of 36" i/d Damaged Sewer Line Along Stadium Road in Daska City and filled as per the environmental and social survey conducted in the Sub-project area. The screening checklist suggested that environmental and social impacts of the Sub-project are minor to moderate and temporary and can be mitigated and managed with prevailing good civil construction measures.

**Impact Assessment:**

Overall, the subproject will be beneficial. However, during construction phase, there will be some negative environmental and social impacts including construction waste generation during dismantling, noise pollution, obstruction in vehicular and pedestrian movement, and temporary disturbance in the accessibility of residents due to road closure. Alternate routes will be provided at Ramzan Town and Lodhi town with proper signage. There will be no impact on PCRs as project interventions are outside of the PCR boundaries. There are no environmentally sensitive receptors inside the RoW of the Sub-project. Only one school and 1 clinic is outside the RoW. Land acquisition is not required in the sub-project.

**Mitigation Measures:**

These impacts require appropriate mitigation and management measures to curtail them. The Sub-project specific measures suggested are; a) ESFPs (environmental and social focal persons, MOI will be the focal person for environment and MOP will be the focal person for social issues) will conduct regular visit to the construction sites and fortnightly by DPO ESM to monitor the compliance of E & S aspects (b) dismantling material will be disposed of simultaneously (c) it will be ensured to execute the work in portions to minimize the temporary disturbance in accessibility (d) public safety will be ensured (e) workforce will be provided with the PPEs (f) COVID SOPs will be followed (g) contractor will use efficient machinery and equipment's to reduce noise and air pollution impacts (h) contractor will ensure public convenience during the course of Sub-project.

**Grievance Redress Mechanism (GRM):**

GRM for Sub-project implementation will cater to all Sub-project beneficiaries. The GRM mechanism is based on two-tier grievance redress committees at MC Daska, PMDFC/LG&CDD level. At construction site number of GRC members will be displayed.

**Stakeholder Consultations:**

Direct stakeholders can be defined as those stakeholders who are likely to be directly impacted by the Sub-project and have livelihood restoration measures targeted towards them. Participants of consultation were first briefed about the Sub-project objectives and major interventions associated with the Sub-project implementation. Afterward, people were asked to express their views regarding the proposed Sub-project. In general participants appreciated the Sub-project and offered comments & suggestions to enhance the expected environmental and social benefits and to mitigate the adverse impacts. The community perception of the Sub-project is very good and most of the people wish to implement the Sub-project through sustainable and safety manner.

# 1 Introduction

## 1.1. Punjab Cities Program (PCP)

Punjab Cities Program (PCP) Program-for-Results (PforR) will support participating MC Daska to improve their urban management and service delivery performance. The operation will provide capacity-building and institutional support to 16 secondary cities in Punjab, with an estimated total population of 4.1 million, half of whom are female.

**Program Development Objectives (PDO)** is to strengthen the performance of participating urban local governments in urban management and service delivery.

By achieving the Program Development Objective (PDO), the operation is expected to contribute to the overarching goals of ending extreme poverty and promoting shared prosperity by delivering improved urban infrastructure on an inclusive basis and in ways that enhance economic growth and development in the participating cities. Achievement of the PDO will also make a significant contribution to attaining Sustainable Development Goal-11 (sustainable cities and communities).

### 1.1. Environment & Social Management Framework (ESMF)

An Environmental and Social Management Framework (ESMF) has been prepared for Punjab Cities Program (PCP). ESMF will facilitate and technically assist the MCs in better understanding and compliance of social and environmental management processes and procedures as per WB policies, local policies and legal framework. Under ESMF procedures, each Sub-project will be screened for the severity and extent of environmental and social impacts. All the Sub-projects will be screened through an environmental and social screening checklist and those having negligible environmental and or social impacts will require no further assessment. Sub-projects having some negative but localized environmental and or social impacts will require a generic Environmental and Social Management Plan (ESMP) or SMP, while those having environmental impacts of significant nature or they come under Schedule I or II of PEPA Review of IEE/EIA Regulation 2022 will require to conduct the detailed studies (IEE/EIA) and further submission of reports to PEPA for review and to obtain NOC/environmental approval.

## 1.3.Environment & Social Assessment Categories

### 1.3.1. Environmental Categories:

Depending on size, cost, location and the nature, scheme will have varying impacts on city environment. The rigorousness of environmental assessment requires identifying and mitigating the impacts, largely dependent upon the complexities of scheme. To facilitate effective screening, ESMF categorized schemes into three categories viz. E-1, E-2 and E-3.

E-1 schemes are those wherein major environmental impacts are foreseen;

E-2 schemes are expected to have only moderate environmental impacts; and

E-3 schemes are the schemes with negligible environmental impacts and hence, these can be termed as “environmentally benign”.

### 1.3.2. Social Categories:

Based on the number of households that may be affected by the Sub-project, i.e. Affected Households (AHs) and magnitude of impacts, schemes are categorized as S-1, S-2 and S-3.

S-1 schemes are those schemes that will impact more than 40 households, and are expected to have significant negative social consequences;

S-2 schemes are those which will impact less than 40 households and are expected to have significant social consequences affecting local inhabitants

S-3 schemes are not expected to have any significant adverse social impacts;

## 1.2. Environment & Social Assessment Category of the Sub-project

Sub-project has been screened to assess the environment and social impacts anticipated as per scope of work. As per findings of the multiple site visits conducted, discussion with officials and stakeholder consultations, Sub-project area does not fall in any of the wildlife habitat or reserve area/environmental sensitive areas; therefore, it will not cause any harmful impact directly or indirectly during execution of civil works. Sub-project will have no irreversible environmental and social impacts. There are some moderate environmental impacts as per scope of work which will be minimized by following mitigation measures mentioned in Table 03. **Sub-project categorized as E-2 and ESMP is prepared under this category.** Involuntary land acquisition is not required, and therefore there will be no physical displacement or impacts on livelihoods nor restrictions on access of the local community. Anyhow, sub-project may have temporary social impacts related to community health and safety and accessibility **Therefore, Sub-project is categorized as S-2. As there no negative impact in terms of livelihood and means of livelihoods, business loss and any other economic loss is anticipated, Social Management Plan has made part of the ESMP.** Environmental & Social Screening and Involuntary Resettlement Screening Checklists is attached As Annexure A.

## 1.3. Environment and Social Management Plan (ESMP)

The Environmental and Social Management Plan (ESMP) is prepared in compliance with the guidelines provided in the Environmental and Social Management Framework (ESMF) for the following Sub-project:

“Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska Cit

## 1.4. Objective of ESMP

The primary objectives of the ESMP are as follows:

- ❖ To facilitate the implementation of the identified mitigation measures.
- ❖ To define responsibilities of the project proponents, Contractor, and other members of the project team.
- ❖ To define a monitoring mechanism and identify monitoring parameters in order to ensure complete implementation of all mitigation measures and ensure effectiveness of the mitigation measures

### 1.5. Sub-Project Team

The Consultant has mobilized a team comprising of following staff for preparation of this report.

- ❖ Ihsan-ul-Haq Qamar (Team Leader)
- ❖ Azmat Beg (Environment Specialist)
- ❖ Muhammad Hannan Yousaf (Environmentalist)
- ❖ Nasir Altaf (Sociologist)



## 2 Sub-project Description

### 2.1. Area Description

Presently, 36" dia. Sewer along the stadium road has settled down due to crown failures and bedding failure through a length of 1500 ft(0.4572km). This sewer requires replacement from Iqbal Hospital to 42" dia outfall sewer which ultimately discharges in disposal station near Stadium Chowk. Waste water from this disposal station is drained in existing Nullah of size 5' x 4', toward Bambawala Road. The existing 36" dia sewer is not working due to settlement and blockade. The catchment area of this sewer is under waste water flooding. 36" i/d R.C.C. sewer along Stadium Road was laid during the year 2006-2007 with length of 4000 Rft. starting from College Road to Stadium Chowk upto 42" i/d trunk sewer. The spring level at the site of this sewer as determined by small size drilling at two different points i.e. at Main Stadium Site & Stadium Chowk was checked. The bore log data indicates that during the moon soon season, SSWL raised to an average depth of 7.75 ft. below ground level whereas the normal water table is at depth of 13.3 to 14.5 ft. below GL. Keeping in view the above situation, the damaged sewer of 36" i/d from Iqbal Hospital to Stadium Chowk having length of 1500 Rft(0.4572km). is required to be replaced with same size along with under water crushed stone bedding to cater for the raised water table to eliminate the chances of settling down again. Each joint will be provided with RCC surround for water tightness of the joints to avoid exfiltration and infiltration to eliminate the inflow of the fine soil particles which is responsible for settlement of the under-water sewers. Detailed design drawing is attached in Annexure I.

### 2.2. Problem Statement

This Sub-project has been formulated on the basis of demand from communities residing along with the alignment of the Sub-Project. Damaged sewer line along Stadium Road for relieving the general public from waste water flooding in its catchment area. The outfall sewer of 36" dia has settled down and is creating waste water flooding in its catchment area thus damaging the public as well as private properties. The objective of this sub-project is to relieve the inhabitants from the frustration of obnoxious smell, refusal of approach to commercial and domestic areas and other issue related with it.

### 2.3. Description of Work Activities

Keeping in view of the objectives following works have been proposed project:

- Replacement of damaged 36" i/d Sewer line with new 36" i/d Under water Sewer line.
- Construction of Manhole Chambers 6.5' DIA 14.14' Average depth for 36" i/d under water sewer.
- Construction of RCC Sullage Carrier from Disposal works to existing drain along Stadium Road.
- Construction of RCC Sullage Box Culvert for Stadium Road crossing.
- Rehabilitation of Stadium Road.
- Electrical Works of Stadium Road.
- Laying of tuff pavers around the waste water collection wells.
- Desilting of storm water drain at Stadium Road.
- Sewer house connections.

### 2.4. Sub-project Location

The Location Map of Sub-project is shown in **Figure 2.1**.

Figure 2.1: Location Map of Sub-project.



**Figure 2.2: Current Situation of Stadium Road**



**2.5. Area of Influence (AOI)**

The zone of impact would be 20 ft. in the periphery of the Sub-project. The construction activities are reserved to reduce impact on the surrounding area and public.

**2.6. Capital Cost of the Sub-project:**

The summary of the works included in the Sub-project is given below:

Sr. No.	Description	Cost (Million Rs.)	Cost (Million Rs.)
1.	Replacement of damaged 36"i/d under water sewer line.	24.404	24.404
2.	Construction of manholes	5.019	5.019
3.	Construction of RCC sullage carrier	4.548	4.548
4.	Rehabilitation of RCC box culvert for Stadium Road crossing.	1.243	1.243
5.	Rehabilitation of Stadium Road	30.727	30.727



6.	Electrical Works of Stadium Road	2.098	2.098
7.	Desilting of Existing Sullage Carrier/ Storm Water Drain	1.426	1.426
8.	Tuff Pavers in Disposal Station	4.296	4.296
9.	Sewer House Connections	0.889	0.889
<b>Sub-Total:</b>		<b>74.655</b>	<b>74.655</b>
	Environment & Social Management cost	0.559	0.559
	Contingencies &PRA	5.155	5.155
<b>Total Cost</b>		<b>80.369</b>	<b>80.369</b>

## 2.7. Sub-project Alternatives

Sub-project involves Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska City.

### 2.1.1 Do Nothing Scenario

The no-build alternative involves letting the current situation continue without addressing the on-going deterioration of the air quality, level of service and other environmental and social impacts occurring in the Sub-project area. If the project is not carried out the expected consequences are:

- Deterioration in water and air quality, and increase in noise levels due to traffic jam.
- An increase in the severity of socio-economic impacts in the surrounding area.
- The project shall eventually have to be undertaken as the demand from the communities shall soon reach its peak levels.
- The cost of the proposed design shall increase in future due to inflation, social issues, environmental impacts etc.

### 2.1.2 Site Alternative

Sub-project involves Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska City.

so there is no site alternative envisaged because no other site available to serve this purpose.

### 3 Legal and Policy Framework

#### 3.1. Introduction

The Government of Pakistan and Government of Punjab (GOP) have enacted a range of laws, regulations, policies and procedures for management and mitigation of social and environmental impacts for infrastructure development projects. This chapter discusses the relevant and applicable laws and WB Core Principles for PforR financing modality applicable for PCP to deal with the environmental and social issues.

#### 3.2. Policy and Legal Framework dealing with the Environmental & Social Aspects

Sr#	Applicable laws, regulations, Guidelines	Relevancy/Applicability
I.	Punjab Environmental Protection Act 2012	PEPA does not require IEE or EIA of rehabilitation projects. This sub-project doesn't come under the preview of IEE/EIA
II.	PEPA Review of IEE/EIA Regulations, 2022	IEE/EIA regulations do not require IEE or EIA for rehabilitation projects.
III.	Notification No. SO (Tech)/EPD/1-26/2004 issued by Government of Punjab, Environment Protection Department "Delegation of Powers for Environmental Approvals Rules 2017	ESMP do not require review and subsequent NOC from the relevant authority
IV.	Punjab Local Government Act, 2019	Sub-project will follow the PLGA
V.	The Punjab Occupational Safety and Health Act, 2019	Compliance is required during construction as well as operational activities as per PEQS.
VI.	Punjab Environmental Quality standard 2016 for Drinking Water	Compliance is required during construction as well as operational activities as per PEQS.
VII.	Punjab Environmental Quality Standards 2016 for Motor Vehicle Exhaust and Noise, Ambient Air, Noise	Compliance is required during construction activities as per PEQS.
VIII.	Punjab Restriction of Employment of Children Act 2016	Compliance required during construction activities as per ECA 2016
IX.	Protection Against Harassment of Women at the Workplace Act, 2010	Compliance is required during construction activities as per the Act.

Sub-project does not fall in any schedule of IEE/EIA project categories; thus, it does not require any NOC from Punjab- EPA.

**3.3. World Bank Environment and Social Core Principles for PforR**

Core Principles	Applicability
<p><b>Core Principle 1</b></p> <p>Environmental and social management procedures and processes are designed to</p> <p>(a) avoid, minimize, or mitigate against adverse impacts;</p> <p>(b) promote environmental and social sustainability in program design; and</p> <p>(c) promote informed decision-making relating to a program’s environmental and social effects.</p>	<p>ESMP was prepared under the light of this Principle in order to mitigate the negative impacts envisaged in this Sub-project. ESMP implementation will help in achieving environmental and social sustainability</p>
<p><b>Core Principle 2</b></p> <p>Environmental and social management procedures and processes are designed to avoid, minimize, and mitigate adverse effects on natural habitats and physical and cultural resources resulting from the program.</p>	<p>Environmental and social mitigation measures have been incorporated for all impacts anticipated during the course of the Sub-project.</p>
<p><b>Core Principle 3</b></p> <p>Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with (a) construction and/or operations of facilities or other operational practices developed or promoted under the Program and (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials.</p>	<p>All the mitigation measures have been incorporated to address risks associated with workers' and community health and safety. The contractor will ensure compliance with these attributes.</p>
<p><b>Core Principle 4</b></p> <p>Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards</p>	<p>No land acquisition is required in this subproject. There is no loss of any natural resources and livelihoods.</p>
<p><b>Core Principle 5</b></p> <p>Due consideration is given to cultural appropriateness of, and equitable access to, program benefits, giving special attention to the rights and interests of indigenous peoples and the needs or concerns of vulnerable groups.</p>	<p>No indigenous/vulnerable groups exist in the subproject area. If any cultural heritage is discovered during execution of project Chance find Procedures will be followed as attached as Annexure B.</p>
<p><b>Core Principle 6</b></p> <p>Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</p>	<p>This principle is not relevant to this Sub-project.</p>

### **3.4. World Bank Environmental, Health and Social Guidelines**

The principal World Bank publications that contain environmental and social guidelines are listed below.

- Environment, Health, and Safety (EHS) Guidelines prepared by International Finance Corporation and World Bank in 2007
- Pollution Prevention and Abatement Handbook 1998: Towards Cleaner Production
- Environmental Assessment Sourcebook, Volume I: Policies, Procedures, and Cross-Sectoral Issues.
- Social Analysis Sourcebook
- WB Group Gender Strategy

Detailed related EHS is attached as Annexure C.

### **3.5. PMDFC EHS SOPs for labor/workers (including Women)**

EHS SOPs for labor/workers (including women workers) will be applied during the labor work and made part of the contractual agreement of the contractor these SOPs has been developed in URDU for understandable for contractor. SOPs are attached as Annexure D.

### **3.6. COVID-19 SOPs**

During the construction and implementation of the Sub-project, the Standard Operating Procedures (SOPs) will be strictly followed during construction activities, stakeholder consultations, or applicable in any other relevant aspect. The SOPs are attached as Annexure-E.

## 4 Baseline

This section describes the baseline conditions, which cover the existing physical, ecological and socio-economic environment of the project as well as study area. Data was collected by reviewing secondary data and field survey.

### 4.1. Physical Environment<sup>1</sup>

Daska is a city in the Punjab province of Pakistan. The city is the capital of Daska Tehsil, one of four tehsils of Sialkot District. It is the 50th largest city of Pakistan by population. It is 29th largest by population in Punjab. Daska tehsil was once the biggest tehsil of Pakistan, containing almost 400 villages. There are a number of farm machinery manufacturers based in Daska. Being surrounded by big industrial cities such as Gujranwala and Sialkot, Daska has a very healthy employment rate. The urban area of Daska is no more than 3 kilometres (1.9 mi) in length but it still manages to hold the title of an industrial city which contributes a lot in national economy. Mughal, Kashmiri, Rajpoot, Arain and Malik tribes are prominent in the urban area and several Jatt tribes are in the majority in rural areas. The Bambawali-Ravi-Bedian Canal flows through its centre which makes the surrounded area fertile and rich for crops.

The land-use pattern in Daska is generally undefined. The central part of the city is very congested area. This is because of major commercial activities are concentrated in the centre of the city. The industrial activities are mixed up with the commercial activities in the residential areas. A number of new residential areas are being developed in the outer peripheral areas, i.e., along Sialkot, Sambrial road in the north and east directions respectively. Some schemes have also started emerging in along Gujranwala road.

The BRB canal is situated to the south west of the town. The area adjacent to it is densely populated. Nisbat Road runs towards the north and touches the Fawara Chowk. Along this road, Girls primary school, mosques, madrassas like, Dar ul Uloom, Masjid Umer, Imam Bar Gah etc are mainly located. To the south east, most of the land is vacant and some of the land is used for agricultural purposes.

Daska is not a planned city. Many important roads that lead to neighbouring cities come out of the city. The internal road pattern is haphazard and accommodated randomly developed residential and commercial built up area. Unfortunately, the same pattern of growth is taking place in either direction of the town. Due to the lack of planning, the latest developments are sporadically occurring.

Though the development is taking in all the directions, but the major direction of growth is in the east. Some growth has been noticed in north direction also.

But most rapid expansion is taking place towards the north along Sambrial Road and in the east along Sialkot Road. Most of the new houses are being constructed in these directions. In the south west a canal is a natural barrier to the growth of the town. However, some of the growth is also taking place on the either side of the water channel. The main built up area is seen along the Gujranwala Road.

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<sup>1</sup> (Source: Inception report of Package -1 PCP 16 cities)



#### 4.1.1. Topography<sup>2</sup>

Daska Town is located at 74°21' East and 32°20' North at a distance of 24 Km in north- east of Gujranwala City, 24 Km from Sialkot at its south-west and 24 KM from Wazirabad at its south east. This Town is Tehsil Headquarter of Daska Tehsil falling under the jurisdiction of Sialkot District. Daska is bounded by district Faisalabad and Sheikhpura on the north-west where river Ravi forms the natural boundary. On the north-east lies the district of Kasur, on the south is located the district of Ferozpur (India). On the south is the district of Bahawalnagar and south-west is Pakpattan district and the boundary of Sahiwal district on the west. On the south runs the river Satluj with some area of Tehsil Depalpur across the river along with Indo-Pak border.

#### 4.1.2. Climate<sup>3</sup>

The climate of the city is hot in summer and cool in winter. The summer season starts from April and continues till August while the duration of the winter season is from November to February. June is the hottest month. The mean maximum and minimum temperature during the month of June is about 40 and 25 degree Celsius respectively. January is the coldest month. The months of November and March are pleasant. The average annual rainfall is about 980 millimeters. The highest rainfall is from July to September. Average humidity level is 62%.

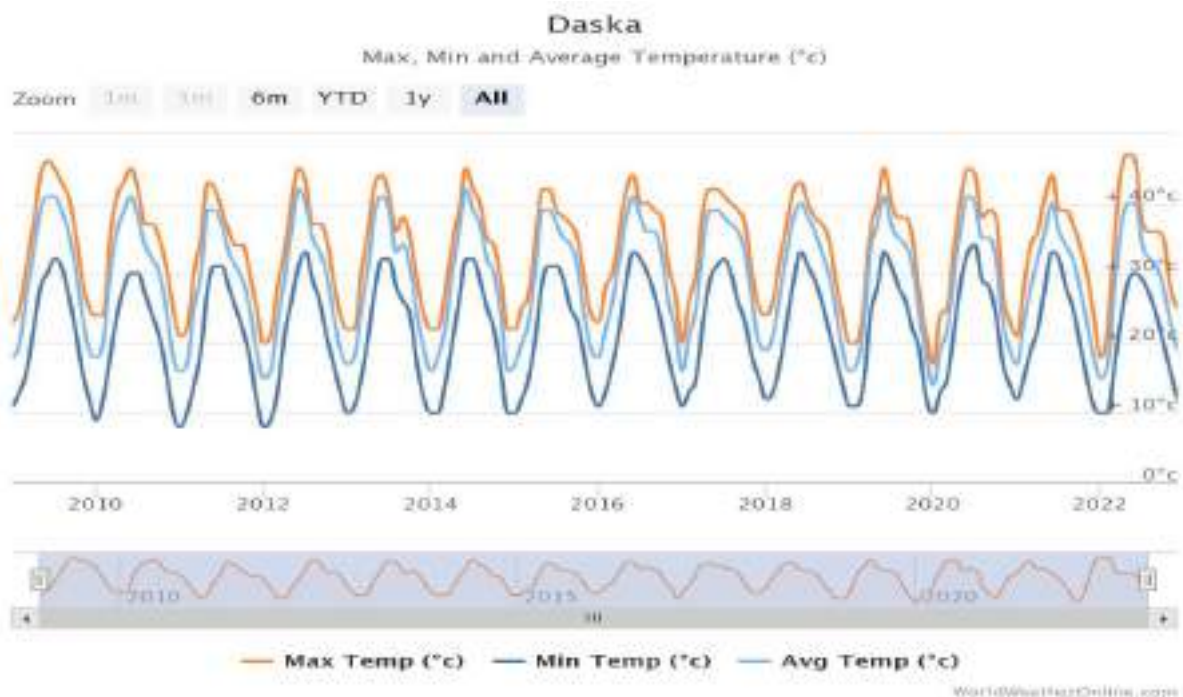
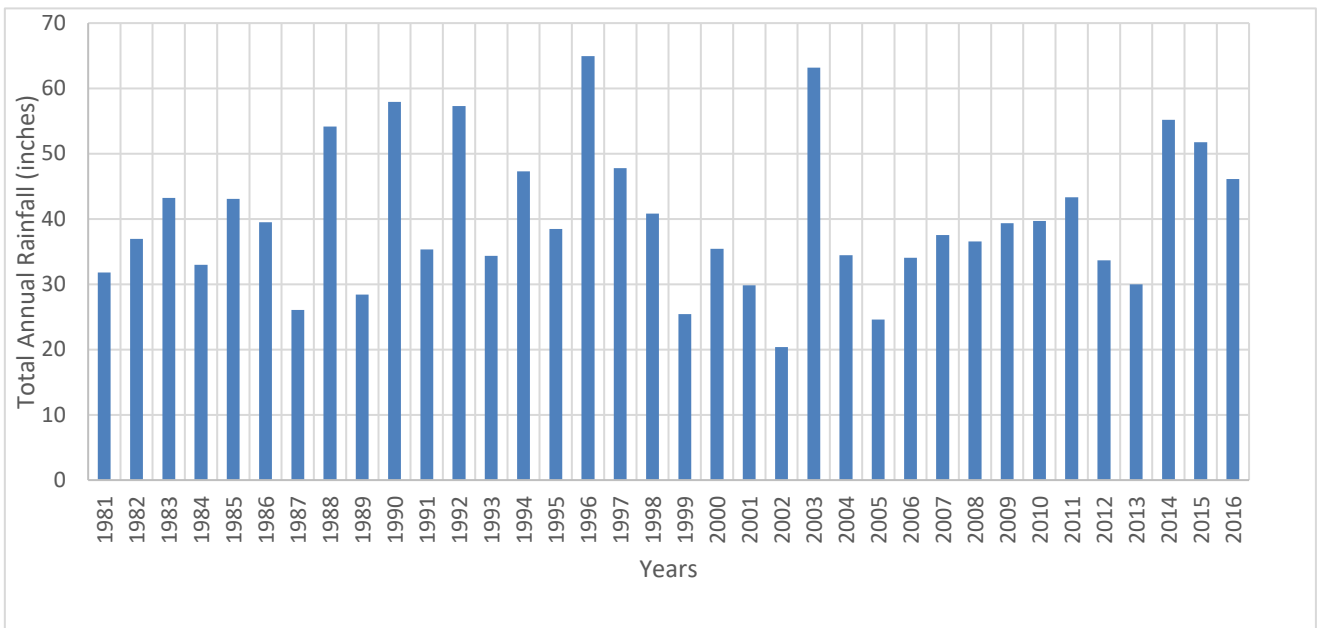
Table 3.1 Average rainfall data Daska from 2009-2022<sup>4</sup>

Precip. (mm)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2009	31.8	60.22	17.4	4.9	0.3	0.1	34.5	44.3	37	1.7	3.8	0
2010	3.9	69.68	10.3	2.9	4.6	3.2	267.7	201.1	125.5	53.2	1	50.8
2011	21	191.75	28.37	88.7	71.1	63.12	103.29	316.37	295.7	21.6	2.4	1.6
2012	76.44	64.9	60.5	158.1	45.1	5	66.71	191.69	138.7	24.1	5	43.9
2013	38.4	220.8	89.8	34.7	18.3	71.1	117.9	404.08	34.6	51	10.3	8.6
2014	14.45	70.3	172.09	86.9	95.4	34.2	103.43	83.26	489.84	19.5	4	3.91
2015	18.5	82.29	195.36	55.39	15.2	31.62	237.76	201.93	88.6	7.51	7.2	17.77
2016	8.35	16.3	103.4	15.99	23.61	16.77	73.41	65.48	17	0	0.4	0.6
2017	111.54	18.6	42.8	79.1	18.5	63.9	54.7	105.9	27.5	0	4.7	51.4
2018	1.8	54.5	19.9	52.37	31.9	177.6	140.4	151.7	49.73	4.2	23.4	10.4
2019	41.5	227.6	101.4	65.9	50.4	26.8	198.9	211.5	89.9	2.1	67.3	52.8
2020	96.6	21.5	106.5	22	51.7	33	71.3	307.2	112.1	0	8.5	28.8
2021	80.8	8.8	36.5	25.9	76.1	86.7	296.5	186.4	22.9	12.1	0	0.3
2022	64.5	8.7	1.1	0.8	0.4	36.3	77.4	38.2	10.8	0	2.1	0

<sup>2</sup> (Source: Inception report of Package -1 PCP 16 cities)

<sup>3</sup> (Source: Inception report of Package -1 PCP 16 cities)

<sup>4</sup> Source: Worldweatheronline.com



#### 4.1.3. Agriculture

The major crops and fruit of district Sialkot are wheat, rice, citrus and guava. Their average annual production over the period 1998-2001 was 453, 242, 6 and 11 thousand Metric Tons, respectively. A variety of vegetables are also grown in the district. There are 14 flour mills, 57 rice husking units, one sugar mill, one vegetable ghee unit and one fruit juice unit already working in the district. However, there exist good prospects for rice bran oil, rice husk briquettes, maize products, dal mills, etc. There are number of major factories which are contributing to make the economy stronger.

#### 4.1.4. Water Resources <sup>5</sup>

BRBD (Bambawali-Ravi Bedian-Depalpur) canal is major surface water source which is flowing at the south-western periphery of the city. Other sources of surface water available at near vicinity of the city are Marala-Ravi link canal and upper Chenab canal flowing from western and eastern site respectively. These canal are also a source of recharge of the groundwater. At present, major water supply source is groundwater for domestic purpose. The tubewells have been used, the number of which has increased with the increased demand, Presently, tubewells in the city are installed by Public Health Engineering Department (PHED) and then handed over to Municipal Committees (MCs) to run these tubewells and maintain operations of the same to meet the demand of consumers. At present, there are about 7 tubewells in the city. The depth of water table in the city varies from 50ft to 70ft. It is shallow towards canal side and deep in center of the city. The city has been divided into two zones i.e Zone-1 (Northern Zone) and Zone 2 (Southern Zone). Based on working hours and capacity of tube wells, the total water abstraction from 6 operational tubewells is about 1.89 MGD. The Depth of these tubewells ranges between 400-500 feet. The installed tubewells are mostly of 1 cusecs capacity. However, these tubewells are not working with their hundred percent efficiency.

The drinking water samples were collected and analyzed by Pak Green Company to determine the quality of water available at Project site. In general, thirty-three (33) parameters were analyzed for 8 sites in Daska City for drinking water quality. The parameters include E. Coli, Total Coli-form, Fecal coliform, Color, Taste, Odor, TDS, Total Hardness, pH, Turbidity, Chloride, Sodium, Nitrogen, Phenolic compounds, Cyanide, Aluminum, Antimony, Cadmium, Chromium, Copper, Lead, Potassium, Nickel, Zinc, Total Iron, Manganese, Selenium, Arsenic, Barium, Boron, Mercury, Fluoride, Nitrites, Nitrates and Residual Chlorine, as per PEQS. The analysis showed that all parameters tested were within PEQS of drinking water the map of water quality analysis is given below.

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<sup>5</sup> (Source: Inception report of Package -1 PCP 16 cities)

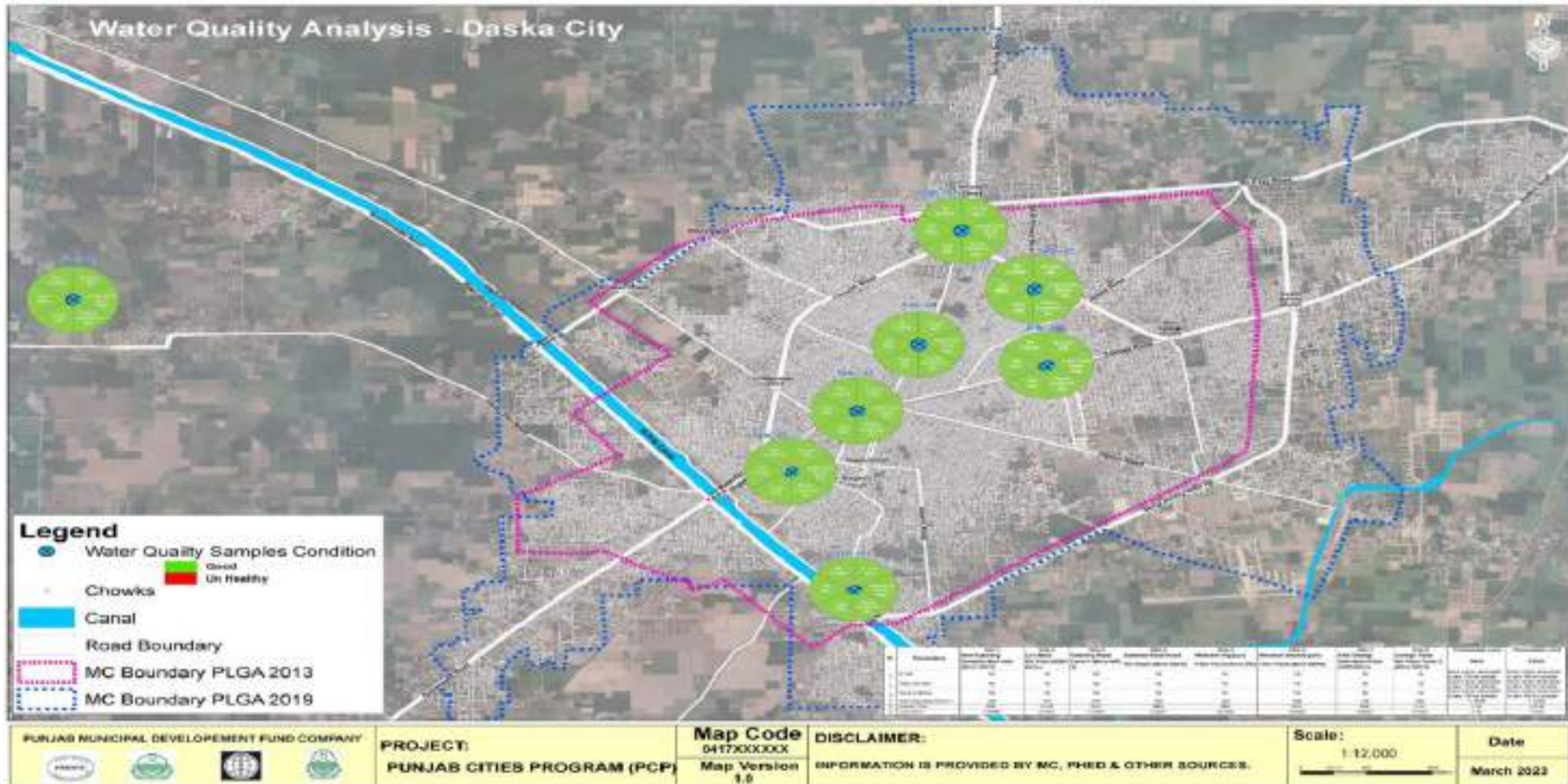


Figure 3: Water Quality Analysis Daska City

#### 4.1.5. Sewerage System <sup>6</sup>

The existing sewerage system of Daska city encompasses area under jurisdiction of Municipal Committee (MC). The existing sewerage system caters for about 0.14 million people which are about 70% of the present MC population. At present, the increased population and improved socio-economic conditions have exerted immense pressure on the city sewerage system. A part of the system is outlived and its capacity has decreased due to additional built-up area and with little capacity available in sewers due to saturation of population for which it was designed. As a result, sewer chocking causing unhygienic conditions are evident in the city. This situation warrants to improve existing sewerage system as well as to enhance the sewerage coverage in unserved areas.

#### 4.1.6. Solid Waste Management

The existing situation of solid waste management in the city is not satisfactory. Most of the city is partially served and complete service is being provided in few areas. The partially served areas are attended on the complaints of the citizens as regular and daily service cannot be given. Some areas of the city are still not served because of limited resources available with MC Daska.

#### 4.1.7. Air Quality

Study on air quality status in the vicinity of the proposed projects is an essential and primary requirement for assessing the impacts on air quality due to any proposed developmental activity as degradation of air quality is a predominant environmental concern these days. Air quality analysis has been carried out by EPA certified laboratory. However, the quality of air was assessed by measuring its various parameters which are important contributors in air pollution when they exceed specific limits. According to Air quality analysis reports of Daska city, five (05) different locations named as point 1 to 5 respectively was analyzed, that are College Road, Larri Adda, 8-Number Chungi, Near Fawara Chowk, THQ Hospital, location map for Air quality analysis is given figure 2.

Parameters covered in analysis report are CO, NO, NO<sub>2</sub>, SO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and SPM. The Carbon Monoxide is within permissible limits at 04 points except at THQ Hospital. The NO is within permissible at all points. The NO<sub>2</sub> & SO<sub>2</sub> is within at 04 except at Larri adda chowk. PM 10 and PM 2.5 found exceeded the limits of PEQs at all points. SPM is also found exceeded the limits at 4 points. O<sub>3</sub> is within permissible limits.

**Construction Dust**—Construction materials and construction and demolition activities may contribute to windblown dust problems also called fugitive dust

**Mitigation** – Water sprinkling and dispose of the excavated material to MC designated site within 24 hours

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<sup>6</sup> (Source: Inception report of Package -1 PCP 16 cities)



**Construction Equipment/Machinery** – The use of plant and vehicles on construction site involves the use of Diesel. Depending on the activities on the site the machinery can include, breakers, dumpers, excavator’s generators.

**Mitigation-** minimize waste and energy consumption at construction site; covering **wall, roof and façade**; use well-tuned and new equipment/machinery

**Operation Phase-** at operation phase most possible impacts of this sub project is the vehicles emissions.

**Mitigation-** Plantation/vegetation cover around the Roads; strict monitoring of vehicle fitness certification as per PEQs for Motor Vehicles Exhaust and Noise,2016

**4.1.8. Noise Level Analysis**

Noise is considered to be a source of environmental pollution even though it is contemplated to be less damaging for humans when comparison is made with water, air or land pollution. However, it can have temporary or permanent impacts on effectees, when it comes project activities, noise will not be the major concern as there is no nearby residential areas that is likely to be affected due to generation of noise. At this stage, noise monitoring and analysis has been carried out and will be done during execution phase, if level exceeds to certain limit, then effective noise abatement measures are to be implemented to minimize the impact. Noise analysis has been carried out by EPA certified laboratory.

4 different point have been chosen for the monitoring of noise level in every hour of a day. These analysis reports are showing Noise level at 8 No Chungi and Fawara Chowk relatively high than other points. Noise level is little exceeding limit in night time around 1:45 to 2:45 at point 3.

*Table 1: Results of Noise Analysis*

Point	Location	Equivalent Noise dB (A)
01	College Road, Daska	62.6
02	Near Clock Tower	57.9
03	8-Number Chungi	60.2
04	Near Fawara Chowk	58.1
PEQs	Commercial Area (C)	Day time 65 Day time 55

Mitigation Measures:

- Normal working hours of the contractor will be in day light hours from Monday to Sunday. If work needs to be undertaken outside these hours, it should be limited to activities that do not lead to exceedance of the noise criteria at nearby sensitive receptors
- Regular maintenance of equipment including lubricating moving parts, tightening loose parts and replacing worn out components should be conducted;

- Low noise equipment should be used as far as practicable;
- The number of equipment operating simultaneously should be reduced as far as practicable;
- Equipment known to emit noise strongly in one direction should be orientated so that the noise is directed away from nearby sensitive receptors settlement as far as practicable;
- Acoustic enclosure should be erected around DG sets and other stationary noise generating equipment;
- There would be proper monitoring to avoid any discomfort

The Air, Noise & Water analysis are attached as **Annexure F**.

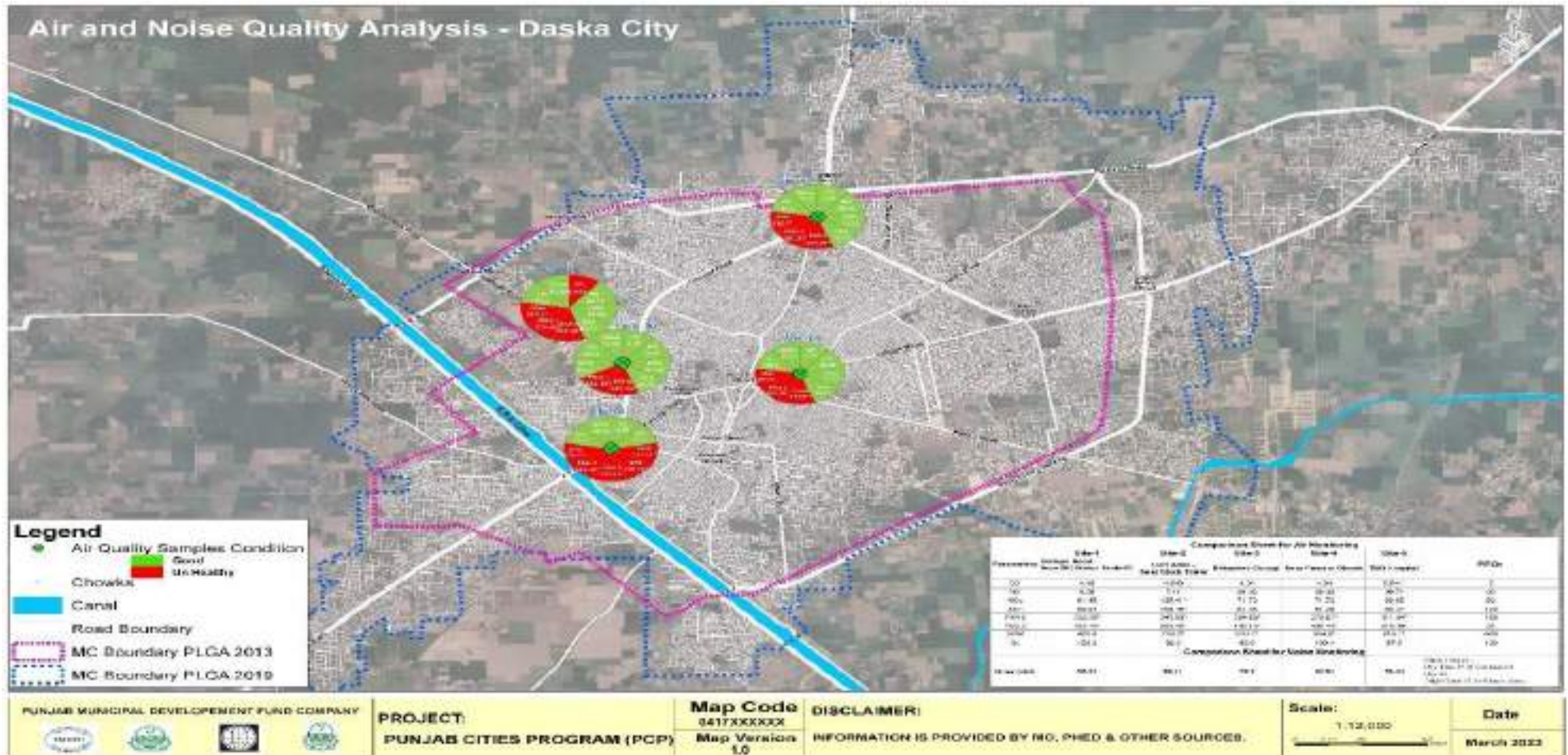


Figure 4: Air and Noise Quality Map



## 4.2. Ecological Environment

### 4.2.1. Fisheries<sup>7</sup>

The project area is almost free from any commercial fishing activity. There are no lakes, even natural water ponds in the vicinity. Bambanwali-Ravi-Bedian-Depalpur (BRBD) canal is flowing at the South-Western periphery of the city with quite high discharge which is recharging the aquifer. Therefore, Fishery or any worth mentioning aquatic biology are not found in this area.

### 4.2.2. Biodiversity

Natural capital of a country mainly includes all of the country's wilderness areas and scenic landscapes, including also with their associated flora and fauna. Pakistan has a total of nine major ecological zones. The contribution of the "Natural Capital" is recognized at three distinct levels: species, genera, and communities (habitat and ecosystem) both collectively and within each level, the range or variety of the resources are referred to as the "Biological Diversity". The term has relevance for each of Pakistan's administrative units district, province, and particularly country. The more the number of species, genera, and habitats and ecosystems present within these units, the greater is said to be the Biodiversity. The biodiversity of the area, with this background, is discussed as under.

### 4.2.3. Flora<sup>8</sup>

The agriculture is by far the main economic activity in the central/ southern Punjab. The main crops during Rabi are wheat, gram, rape, mustard, barley and oil seeds. In Kharif, cotton, jawar, sugarcane, bajra, maize and rice are grown. In addition, there are subsidiary crops known as Zaid Rabi like Kharbooza, tobacco and potatoes and ZaidKharif like potatoes and chilies. There is no wildlife except jackals, dogs and snakes etc. Common species of birds found in the project area are Sparrows, Crows, Pigeon, Dove, Tiliar (starling), Parrot, Quail, Pintail and Humming bird etc. Common trees present in and around the area include:

- ❖ *Acacia Arabica*- locally known as Kikar
- ❖ *Alstonia scholaris* - locally termed ditabark
- ❖ *Bombax malabaricum*- locally termed sunbalar silk cotton tree
- ❖ *Callistemon citrinus* - locally termed bottle brush
- ❖ *Dalbergia sissoo* - locally termed shisham
- ❖ *Delonix regia* - locally termed gulmohar
- ❖ *Erythrina suberosa* - locally termed coral or gul-e- nister
- ❖ *Ficus benghalensis* - locally termed banyan
- ❖ *Ficus religiosa* - locally termed pipal
- ❖ *Ficus retusa* - locally termed bobari
- ❖ *Kigelia pinnata* - locally termed gul-e-fanoos or sausage
- ❖ *Livistona chinensis* - locally termed bottle palm
- ❖ *Mangifera indica* - locally termed aam

<sup>7</sup> Information obtained during field visit

<sup>8</sup> <https://en.wikipedia.org/wiki/Daska>

- ❖ *Mimusops elengi* - locally termed molseri
- ❖ *Pongamia pinnata* - locally termed sukh chayn or Indian beech
- ❖ *Syzygium cumini* - locally termed jamu
- ❖ *Ziziphus zizyphus* - locally termed jujube



#### 4.2.4. Fauna

There are number of birds, reptiles and mammals are present in the project area but there is no protected species.

#### 4.2.5. Rare or endangered species

There are no game reserves or protected lands/areas or endangered or rare species in the area.

### 4.3. Socioeconomic Environment

Social change is the consequence of almost any intrusion into the community life of any society. The intrusion can be in the form of any developmental projects or nonspecific, less tangible forms such as increased exposure to other cultures, technological changes and so on. The social change that results from intrusion into community life can also be beneficial, but can have undesirable or negative outcomes. Even that change in the long run may have positive effect on the social well-being of a community.

Social Impact Assessment is a methodology used for examining social change due to external sources, especially specific developmental projects, but also government policies, technological changes and social processes or anything that has a social impact.

The objectives of the given study are outlined as follow:

- ❖ To carry out the assessment of social impact.
- ❖ Acquire socioeconomic data to evaluate and identify the project interventions.
- ❖ Assess needs of community related environmental concerns.
- ❖ To assess adverse and beneficial socioeconomic and health impacts of the activity.

- ❖ To suggest remedial measures and solutions to improve socio economic conditions.
- ❖ To analyze socio economic conditions of community, with special reference to environment and conservation of natural resources.

#### **4.3.1. Administrative Setup<sup>9</sup>**

The Daska MC is presently headed by the Administrator, Vice Administrator, Chief Officer, 4 Municipal Officers and other officials of the Local Council Service and officials of the offices delegated to the Municipal Committee. Administrator is the head of Municipal Committee and exercises all functions and powers as have been assigned to him under the PLGA 2013. The Chief Officer is acting as coordinating and administrative officer in-charge of the Municipal Officers.

#### **4.3.2. Socially Sensitive Receptors**

According to the MMP social survey, 1 school and 1 clinic was observed at civil chowk however these are not within 100 meters of the proposed subproject and no impact is envisaged.

#### **4.3.3. Demographic Status<sup>10</sup>**

The available population data for MC Daska is as per 2017 census is 204 ,016.

#### **4.3.4. Community Structure**

According to MMP's socio-economic survey, the main ethnic communities in the Sub-project area are Mughal, Kashmiri, Rajput, Arain, and Malik tribes are prominent in the urban area and several Jatt tribes are in the majority in rural areas. Between the urban and rural population of the Sub-project area there is a marked contrast regarding gender equality, population composition and traditions. In the Sub-project area, majority of the people are Muslims with different cast systems.

#### **4.3.5. Education<sup>11</sup>**

Academic institutions are thriving and imparting quality education. Students from other regions also come here to seek knowledge. Educational institutions are:

- ❖ Government High School, Kalan
- ❖ Government Christian High School
- ❖ APEX college
- ❖ Aspire College
- ❖ Government Post Graduate College for Women
- ❖ NIMS College
- ❖ Hailey Wisher College for women
- ❖ Government College for Boys
- ❖ The Punjab College
- ❖ Al Shamas Education Center
- ❖ Allama Iqbal Ideal High School

<sup>9</sup> (Source: Inception report of Package -1 PCP 16 cities)

<sup>10</sup> [https://www.pbs.gov.pk/sites/default/files/population/2017/punjab\\_tehsil.pdf](https://www.pbs.gov.pk/sites/default/files/population/2017/punjab_tehsil.pdf)

<sup>11</sup> <https://www.ilmkidunya.com/colleges/colleges-in-daska.aspx>

- ❖ Angels School System
- ❖ Brain School Of Sciences
- ❖ Angels School System Boys Campus
- ❖ City Model Boys High School
- ❖ Educators Girls College

#### 4.3.6. Health<sup>12</sup>

At district headquarter Sialkot there is a civil hospital known as Allama Iqbal Memorial Hospital, a civil hospital for women, a Mission hospital, a police hospital, district jail hospital and a combined Military hospital in Sialkot cantonment. There is a civil hospital at each Tehsil headquarters of the district. At Daska there is an eye hospital. There are tuberculosis clinics at Daska.

#### 4.3.7. Transportation<sup>13</sup>

Sialkot is about two hours from Lahore and four hours from Islamabad. Sialkot is linked with the National Highway N-5 through Gujranwala and Wazirabad and M-11 motorway from Lahore to Sialkot also available which is now the fastest route to these locations such as Daska.

Sialkot International Airport is the closest airport, 15 km away from the city centre. It currently handles only cargo but passenger flights are planned to start at the end of 2009. On September 28, 2007, Airblue operated its first test flight to Sialkot. The aircraft was an A321, (AP-BJB) with more than 30 passengers on the route between Jinnah and Sialkot.

Pakistan International Airline (PIA) has announced its tentative flight schedule for flights between Islamabad-Sialkot-Islamabad. PIA started initially three flights weekly between Islamabad-Sialkot Islamabad.

#### 4.3.8. Language<sup>14</sup>

The mother tongue in the area is Punjabi with Urdu spoken as the national language.

#### 4.3.9. Economic Conditions<sup>15</sup>

The surgical instruments and sports industry has spread towards Daska from Sialkot along Daska-Sialkot Road. An industrial corridor along this road has emerged and this industry is earning appreciable foreign exchange. Rice husking and polishing is another industry flourishing around this city. The area is irrigated by upper Chenab canal system, enabling cultivation of cash crops and vegetables. . Some dairy farming is also developing in the surrounding areas of Daska. Pakistan Agriculture Research Council (PARC), works towards the growth of agriculture and related fields.

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<sup>12</sup> <https://pwd.punjab.gov.pk/daska>

<sup>13</sup> <https://www.urbanunit.gov.pk/Download/publications/Files/8/2021/Sialkot%20Pilot%20Project%20Urban%20Planning.pdf>

<sup>14</sup> <https://pakistanourguide.blogspot.com/2011/05/daska-city.html>

<sup>15</sup> <https://mcdaska.lgpunjab.org.pk/industry/>

#### 4.3.10. Industrial Activities<sup>16</sup>

Daska a tehsil of Sialkot district, which is a region well-known for its commercial activities. Daska is surrounded by cities like Wazirabad, Sialkot and Gujranwala. The city has Punjab Small Industries Corporation located along Gujranwala Road, Daska. There are many manufacturing factories for production of Sports goods, Kitchen utensils, Cutlery, Surgical Instruments in the city. The economic base of Daska region is strong due to its industrial advancement and it also provide employment opportunities to the residents. These manufacturing activities plays a vital role in increasing the economy of the nation. The major concentration of industries is along Circular Road. Most of the Agro Engineering units, Flour and rice mills, steel works are located along this road The hub of commercial activities is the Fawara chowk. From this chowk emerge four important roads i.e. Sambrial Road, which is towards north of the town, college road runs towards the Sialkot to the east. The other two roads are Pasrur Road and Nisbat Road towards south east and south direction respectively. This is very congested area. In Daska city the commercial activity is taking place along the major corridors including Gujranwala road, By-pass road and Wazirabad road. Numerous commercial plazas, malls and other activities are present along the corridor. Thus, has abundant prospect for development of an ultimate commercial base.

#### 4.4. Suitability of the Site

The site does not fall in environmental sensitive area and all commodities are at a suitable distance from project site as they will not have impacted by the construction activities even locals will get more benefits and job opportunities. No replacement, relocation is required for the development of proposed project.

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<sup>16</sup> (Source: Inception report of Package -1 PCP 16 cities)

## 5 Stakeholder Consultation

Timely and broad-based stakeholder involvement is an essential element for an effective environmental and social assessment. Stakeholder engagement during Environmental & Social Assessment contributes in the improvement of the project design, environmental compliance and social acceptability.

### 5.1. General

This section describes the outcomes of the public consultation sessions held within MC Daska of the proposed project area that can be affected by the project. The objectives of this process were to:

1. Share information with stakeholders on the rehabilitation of the proposed project and expected impacts on the physical, biological and socio-economic environment of the project;
2. Understand stakeholder's concerns regarding various aspects of the project and the likely impacts of construction related activities and operation of the project;
3. Understand the perceptions, assessment of social impacts and concerns of the affected people/ MC Daska of the proposed project;
4. Provide an opportunity to the public regarding their valuable suggestions in a positive manner; and
5. Reduce the chances of conflict through the early identification of controversial issues, and consult them to find acceptable solutions.

In preparation for the ESMP, two major groups of stakeholders were identified: (i) local communities who are the direct beneficiaries of the project interventions and therefore identified as the primary stakeholders (ii) institutions who have an important role in enabling the realization of the project interventions and therefore identified as the secondary stakeholders.

### 5.2. Public Consultation

For public information/ consultation, visits were made in the proposed project areas at different times to record their concerns regarding Sub-project activities. Local communities have been consulted about proposed project interventions during consultation process. Methodology selected for selection of interviewee was Random Sampling/Focus Group Discussion. Figure 4 shows pictorial record of public consultation.

### 5.3. Consultation with Community

Consultations mainly in form of "Focus Group Discussions" (FGD) with Primary Stakeholders in those communities which is near to the Sub-project (sewerage line). It was important to provide meaningful input for the public into the decision-making process through consultation. This will enable meaningful participation. The findings and recommendations have been discussed and disclosed in an open and transparent manner with the communities in order to solicit their comments and suggestions in the studies.

Participants were first briefed about the Sub-project objectives and major interventions associated with the Sub-project implementation. Afterward, people were asked to express their views regarding the proposed Sub-project. In general participants appreciated the Sub-project and offered comments and suggestions to enhance the expected environmental and social benefits and to mitigate the adverse impacts. The community perception of the Sub-project is very good but most of the people wish to

implement the Sub-project through sustainable and safety manner. Addressing community concerns is crucial for the successful implementation of any sewerage project. Local authorities, project managers, and stakeholders should actively engage with the community, listen to their concerns, and incorporate their feedback to develop solutions that prioritize the community's well-being and meet their needs. The digest of major issues raised by communities during meetings are given below: list of consulted community is attached as annexure H.

Feedback and Concerns	Proposed Measures to address the Stakeholders' Concerns
<ul style="list-style-type: none"> <li>❖ Construction impacts, particularly in regard to amenity.</li> </ul>	<ul style="list-style-type: none"> <li>❖ The contractor will put in place measures to minimize effects and provide regular information to local residents on construction activities and their impacts.</li> <li>❖ Comment has been incorporated in the ESMP report</li> </ul>
<ul style="list-style-type: none"> <li>❖ What is the objective of this consultation?</li> </ul>	<ul style="list-style-type: none"> <li>❖ This consultation process was held with the objectives of sharing information with stakeholders on proposed improvement works and expected impacts on the physical, biological and socio-economic environment; understanding stakeholder concerns regarding various aspects of the project; providing an opportunity to the public to influence project design in a positive manner; and creating a sense of ownership of the proposal in the mind of the stakeholders.</li> </ul>
<ul style="list-style-type: none"> <li>❖ Equal and fair job opportunities for local residents.</li> </ul>	<ul style="list-style-type: none"> <li>❖ The contractor will be contractually bound to disclose the "Recruitment Policy" that specifically includes a requirement to prioritise local employment for unskilled and semi-skilled positions that become available.</li> </ul>
<ul style="list-style-type: none"> <li>❖ HSE awareness should be provided to the local public being directly affected by the construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>❖ It should be the implemented during the construction activities to save local community spatially women, old people and children.</li> <li>❖ Comment has been incorporated in the ESMP report</li> </ul>
<ul style="list-style-type: none"> <li>❖ What is expected time for completion of project?</li> </ul>	<ul style="list-style-type: none"> <li>❖ The Subproject will be complete within 6 months.</li> </ul>
<ul style="list-style-type: none"> <li>❖ Is work delay where do we register complaint?</li> </ul>	<ul style="list-style-type: none"> <li>❖ There is a grievance redress mechanism in place. community can register complaint through app. Furthermore, the number of officer who are responsible to handle the complaint will be display at sun project site.</li> </ul>
<ul style="list-style-type: none"> <li>❖ One of the participants told that before start of construction activities for the project, The Contractor will inform residents of the area about detail of work, likely disturbances and their duration and as to whom they should address their complaints.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Prior to starting of work, the contractor shall prepare a method statement for major construction activities and share with all stakeholders. This shall be simple and explain the contractor's work process that is actually conducted on site, with safety and safeguard concerns.</li> <li>❖ Comment has been incorporated in the ESMP report</li> </ul>
<ul style="list-style-type: none"> <li>❖ One of the participants said that the safety of the public at all stages of the construction will be ensured.</li> </ul>	<ul style="list-style-type: none"> <li>❖ During the project implementation stage, measures will be prepared that will include GRM and institutional arrangements.</li> <li>❖ Comment has been incorporated in the ESMP report</li> </ul>
<ul style="list-style-type: none"> <li>❖ Safety while crossing the road especially students/pupils, old and women.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Alternative routes will be provided for safe passage. After consultation with Municipal Officials, it is decided that Ramzan Town and Lodhi Town will be used as alternate route. The sign boards will be display at site for guidance.</li> </ul>
<ul style="list-style-type: none"> <li>❖ People were of the strong apprehension that upon completion of the project, the local crossings available on the road may be disturbed and they will be put to trouble by way of long distances for crossing or otherwise.</li> </ul>	<ul style="list-style-type: none"> <li>❖ The Contractor will take proper safety measures (placing warning tapes around excavations) to avoid people, especially children, accidentally falling into excavations and during all the construction activities.</li> <li>❖ Environmental impacts on local communities related to traffic, air quality and noise have been assessed and mitigation measures in ESMP</li> </ul>



Feedback and Concerns	Proposed Measures to address the Stakeholders' Concerns
<ul style="list-style-type: none"> <li>❖ What consultation and participation has been performed?</li> </ul>	<ul style="list-style-type: none"> <li>❖ The ESMP has been prepared based on consultation with concerned communities and government departments.</li> </ul>
<ul style="list-style-type: none"> <li>❖ The people told us that, the old Sewerage pipes collapse, blocking the Sewerage line. Most of city's sewer pipes are old, and have outlived their potential utility.</li> </ul>	<ul style="list-style-type: none"> <li>❖ This project will improve the city Sewerage system problems drastically.</li> <li>❖ Comment has been incorporated in the ESMP report</li> </ul>

#### 5.4. Institutional Consultation

MMP Environmental and Social Team visited various organizations and offices located in the tehsil and district level for information disclosure and to get feedback. Institutional stakeholder consultations were more formal as they involved government personnel and non-governmental organization, who were consulted.

The public sector representatives of the different line departments expressed their complete support and efforts towards the Sub-project development and mentioned the intent to ensure the Sub-project was completed at the earliest to the highest quality standards. In addition, these officials expressed the commitment to ensuring the support and would adhere to all environmental and social compliance standards with no leniency in this regard to be expected from the relevant Government line departments.

Departments	Feedback and Concerns	Proposed Measures to address the Stakeholders' Concerns
<b>MC, Daska</b>	<ul style="list-style-type: none"> <li>❖ Minimize the effects of noise, dust, vibration, traffic and lightening associated with construction activities on the communities living near the project area that can cause disturbances and emotional stress</li> </ul>	<ul style="list-style-type: none"> <li>❖ Construction machinery will be placed in an adequate location away from the sensitive areas to minimize the impacts related to the noise.</li> </ul>
	<ul style="list-style-type: none"> <li>❖ Solid waste produced due to construction activities should be disposed of properly</li> <li>❖ Sewerage issue at stadium road will be addressed as early as possible.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Solid waste generated during construction will be disposed of safely at the waste disposal sites approved by the relevant Government authority;</li> </ul>
<b>Environment Protection Department</b>	<ul style="list-style-type: none"> <li>❖ What are the objectives of the project?</li> </ul>	<ul style="list-style-type: none"> <li>❖ The proposed project will provide a socially, environmentally and economically sustainable solution for disposal of sewerage and wastewater. The Project intends to ensure efficiency in safe and quick disposal of sewage/wastewater by laying of Trunk Sewerage System.</li> </ul>
	<ul style="list-style-type: none"> <li>❖ Where are the project activities to be implemented during the construction?</li> </ul>	<ul style="list-style-type: none"> <li>❖ Project activities will be implemented within and outside the existing residential and commercial areas. In order to avoid restricting the mobility of the local stakeholders, construction vehicles will remain confined within their designated areas of movement;</li> </ul>



Departments	Feedback and Concerns	Proposed Measures to address the Stakeholders' Concerns
	<ul style="list-style-type: none"> <li>❖ What are the solution of traffic problem during the construction?</li> </ul>	<ul style="list-style-type: none"> <li>❖ All necessary measures will be taken to ensure the safety of traffic during construction, including barricades (including signs, pavement markings, flags, and lights). All such barricades will be set up to facilitate the local traffic.</li> </ul>
<p><b>Public Health Engineering</b></p>	<ul style="list-style-type: none"> <li>❖ The proposed project is essential for the improvement of public health and socio-economic development, particularly in Daska city with a high incidence of water-related diseases, which affect particularly children. This actually is not new as drinking water and waste have already been recognised as key health issues in Daska city and the proposed project will effectively change the present scenario.</li> <li>❖ Traditionally in this proposed project, improvements in Sewerage system have been promoted as essential public health measures to improve the population's health status and reduce the burden of disease.</li> </ul>	<ul style="list-style-type: none"> <li>❖ The proposed Sewerage Networks Rehabilitation project is aimed towards the introduction of a sustainable sewerage infrastructure that will be able to fulfil the city needs for the next many decades. The project will result in the drastic improvement of sewage collection and conveyance system to cater the existing and future drainage needs and will help towards the development of infrastructure, business and routine life in these regions especially the project area which is very much populated. Locals will be benefited by this, as this will contribute to their livelihoods.</li> </ul>
	<ul style="list-style-type: none"> <li>❖ What are the benefits of the project on the local population?</li> </ul>	<ul style="list-style-type: none"> <li>❖ With the improvement in sewerage system, improvement in health, hygiene and sanitation will also be observed.</li> </ul>



**Pictorial View of Public Consultation**





## 6 Grievance Redress Mechanism

In order to receive and facilitate the resolution of affected people concerns, compliments, and grievance about the project’s environmental and social performance an Environmental Grievance Redress Mechanism (GRM) has already been established. The GRM will address affected people’s concerns and complaints proactively and promptly, using an understandable and transparent process that is gender responsive, culturally appropriate and readily accessible to all segments of the affected people at no costs and without retribution.

The GRM will address affected people’s concerns and complaints proactively and promptly, using an understandable and transparent process that is gender responsive, culturally appropriate and readily accessible to all segments of the affected people at no costs and without retribution.

The Grievance Redress Mechanism (GRM) will be consistent with the requirements of the World Bank Core Principle “1.2f Responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and through responsive grievance redress measures”. Under Core Principle 1: “Environmental and social management procedures and processes are designed to:

- ❖ Avoid, minimize or mitigate adverse impacts;
- ❖ Promote environmental and social sustainability in program design; and
- ❖ Promote informed decision making relating to a program’s environmental and social effects” to ensure mitigation of community concerns, risk management, and maximization of environmental and social benefits.

The overall objective of the GRM is therefore to provide a robust system of procedures and processes that provides for transparent and rapid resolution of concerns and complaints identified at the local level. The GRM will be accessible to diverse members of the community, including women, senior citizens, and people with disabilities, laborers/ workers, and other vulnerable groups. Culturally appropriate communication mechanisms will be used at all Sub-project sites both to spread awareness regarding the GRM process as well as complaints management. *ESMF GRM will be integrated with the PCP’s overall program GRM hotline to be developed by the Consultants under the scope of PCP.*

### 6.1. GRM at Sub-Project Site

Grievance Redress Mechanism (GRM) is to provide a robust system of procedures and processes that provides for transparent and rapid resolution of concerns and complaints identified at the local level. For integration of GRM into existing Complaint Tracking System (CTS), Grievance Redress Committee (GRC) - MC will be notified under umbrella of Punjab Cities Program (PCP) comprising of the following members and TORs.

Chief Officer MC	Chairperson
Municipal Officer (Infrastructure Development)	Convener
Municipal Officer (Planning)	Member
Municipal Officer (Regulation)	Member
Environmental/Social Expert (PMDFC)	Member

TORs of GRC-MC are as followed:



- ❖ ESFPs designated by the MCs for environmental and social management will be responsible to manage the GRM effectively. The ESFPs with the support of DPO-ESM will play an instrumental role in steering the GRC functions both at city and regional level.
- ❖ CO MC will be responsible to share monthly recorded grievances data with regional GRC.

### 6.2. GRM at Regional Level

Grievance Redress Committee at Regional level will also be notified under umbrella of Punjab Cities Program (PCP) comprising of the following members and TORs:

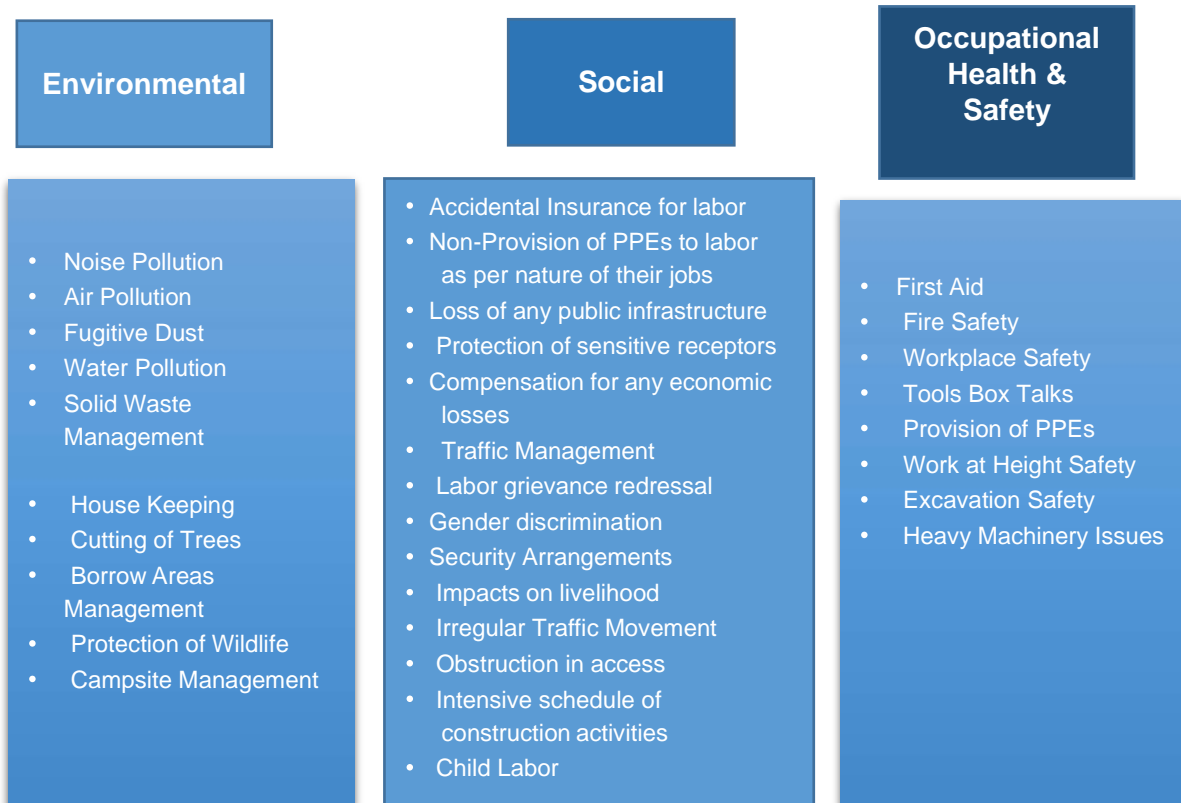
Deputy Program Officer	(Environmental & Social Management)
Chairperson & Convener Deputy Program Officer	(Infrastructure Development)
Member Deputy Program Officer	(Institutional Strengthening)

Member TORs of GRC-Regional are as followed:

- ❖ Committee will be responsible to manage the GRM effectively as per data provided by MC GRC.
- ❖ DPO-ESM will support ESFPs in steering the GRC functions both at city and regional level.
- ❖ DPO ESM will maintain monthly complaint records from ESFPs.

A Grievance Redress Committee (GRC-PMDFC/LG & CDD) will be responsible to oversee the overall functions of the GRM at a strategic level including monthly reviews. It will be headed by the Secretary LG &CDD.

#### 6.2.1. Types of Grievances



## 7 Environmental and Social Management and Monitoring Plan

### 7.1. Objective

The purpose of Environmental and Social Management and Monitoring Plan (ESMMP) for improving in quality life for community for the Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska City, to ensure that all necessary identified measures have been adopted in order to protect the environment and social situations and to comply with country environmental legislation and applicable World Bank Core Principles. After the preparation of ESMF, PMDFC ESM Wing outlined site-specific ESMMP for the Contractors and executing agency. Environmental and social checklist was prepared by MMP and PMDFC ESM Wing with the help of the field teams and was used to assess the potential impacts of Sub-project on the basis of its scale/size, nature and significant negative impacts.

### 7.2. Institutional Arrangements

#### 7.2.1. MC Daska

Overall responsibility for Environmental Management and Monitoring will rest with the MC Daska. ESM Wing of PMDFC will provide support to ESFPs for managing environment and social aspects of the subproject and implementation of the present ESMP. The specific responsibilities of the institutions involved in the ESMP implementation are described below:

#### 7.2.2. PMDFC ESM Wing

MC will be responsible for implementation of ESMP with the technical assistance of ESM Wing PMDFC throughout the Sub-project period. ESM Wing would also support community participation, consultations and other social activities from the Sub-project identification to completion stage.

#### 7.2.3. The Contractor

The Contractor will be responsible for on-field implementation of the ESMP and environmental protection liabilities under the Punjab Environmental Protection Act (Amendment 2012) and World Bank's Environmental and Social Core Principles for PforR financing. He will also be responsible for compliance of ESMP provisions keeping in view his contract with the MC Daska. The Contractor will train his crews in all aspects for implementation of the ESMP.

Contractors have to comply with the following responsibilities:

- Observation of timings and make a schedule that the surrounding communities should not affect from noise pollution, air emissions and disturbances in their routine work.
- Usage of machinery/equipment's producing negligible/low noise.
- Ensure health, safety and protective measures including safety equipment, safe drinking water, first aid boxes etc. to the workforce as per nature of their jobs.
- Water sprinkling to avoid air pollution.
- Indicate alternate routes and provide indicators on suitable places during work timings.
- Local labor should be preferred to work.

- Child labor is strictly prohibited as per labor law. All labor should be more than 14 years of age individually.
- Minimize livelihood disturbance of hawkers and shopkeepers.
- Proper disposal of wastes and garbage.
- Health, safety and protective measures for the labor.
- Notice board of emergency numbers should be placed on proper place.
- Contractors shall also provide safety equipment's i.e., PPEs, safe drinking water, first aid boxes etc. to the workforce as per nature of their jobs. By ensuring all these mitigation measures; not only their company profile shall boost up but also enable them to qualify and win the future Sub-projects.

#### 7.2.4. Supervisory Consultant

Compliance of ESMP all attributes will be ensured by Resident Supervision Consultant.

### 7.3. Monitoring Mechanism

Safeguards implementation monitoring is an essential tool for testing whether the adopted environmental and social management measures are meeting their stated objectives. Two complementary methodology approaches are being applied to monitor the proposed actions under the ESMP:

- ❖ **Compliance monitoring;** which checks whether the actions proposed by the ESMMP have been carried out by visual observation, photographic documentation and the use of checklists prepared for the ESMMP; and
- ❖ **Effects monitoring;** which records the consequences of program activities on the biophysical and social environment; as applicable, these effects are repeatedly measured by applying selected indicators.

The plan also defines the monitoring mechanism and identifies a set of verifiable monitoring parameters to ensure that all proposed mitigation measures laid down in the ESMMP are completely and effectively implemented.

Monitoring will be carried out to ensure that the mitigation plans are regularly and effectively implemented. It will be performed at two levels. At the PMDFC, the environmental team will do ESMP compliance monitoring to ensure that the mitigation plans are being effectively implemented. At Contractor's level, the Environmental monitoring checklist will be filled on weekly basis by their Environmental Manager.

#### 7.3.1. Reports

The Contractor will submit weekly compliance monitoring checklist and PMDFC ESM Wing will submit quarterly and annual monitoring reports as well as a final report of the Sub-project based on safeguard implementation status. The monitoring reports will also include process and outcome of consultations with the Sub-project Affected Persons if any. The distribution of periodic reports is given below:

**Table 7.1: Reports**

Distribution of Periodic Reports Report	Prepared by	Reviewed by	Distribution
<b>Weekly</b>	Contractor	PMDFC DPO ESM	PMDFC ESM team
<b>Quarterly</b>	MC with the support of PMDFC DPO ESM	PMDFC SPO ESM	The World Bank
<b>Annual</b>	MC with the support of PMDFC DPO ESM	PMDFC SPO ESM	The World Bank
<b>Final</b>	MC with the support of PMDFC DPO ESM	PMDFC SPO ESM	The World Bank

**7.4. Inclusion of ESMP in Bidding/Contract Documents**

The present ESMP will be included in the bidding/ contract documents and their implementation will be a contractual binding for the Contractors. In addition, the Contractor's guidelines prepared by PMDFC/ safeguards procedures will also be made part of contractual agreement.

**7.5. Monitoring of Environmental and Social Non-Compliance**

Any environmental and social non-compliance during first half of the reporting month will be considered as a "minor deviation". In case the non-compliance attains the status of "non-mitigation" during the second half of the reporting month, it would be considered a "moderate non-compliance". In case non-compliance continues in the second month, it will fall in the category of "undone" and as such would be considered as a major non-compliance and eventually leading to serious punitive action including the suspension of Contractor's payment or any other penalty as may be considered appropriate with the recommendation of the DPO ESSs/Engineer. No payment will be made to Contractor against non-compliance and no arrears will be paid thereof.

**7.6. Environmental and Social Management and Monitoring Plan**

The impacts, mitigation measures, monitoring indicators, frequency and responsibility has been discussed in Environmental and Social Management and Monitoring Plan (ESMMP).



**Table 7.2: Environmental & Social Management & Monitoring Plan**

**Sub-project:** Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska City.

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
<b>Design Phase</b>							
	<b>Conflict on design</b>	<b>Negligible</b>	To avoid conflicts at design phase PMDFC technical staff, MC and community representatives were consulted	MC ESFPs	Consensus on the design	Design E&S Consultants	ESM team of PMDFC
<b>Construction Phase</b>							
Dismantling, Excavation, and filling operations	<b>a) Environmental Issues:</b> <ul style="list-style-type: none"> <li>Dust which may affect visibility</li> <li>Noise from machineries/ equipment</li> <li>Soil erosion</li> <li>Contamination of surface water</li> <li>Vibration (Shock waves can be produced due to heavy machinery working)</li> <li>Solid waste/pipe cuttings/sludge may be generated due to these activities</li> <li>Safety hazards to labor and nearby resident population.</li> <li>Worse House Keeping</li> </ul>	<b>Medium</b>	<ul style="list-style-type: none"> <li>Broken pipes will be disposed of as per directions of MO-I at nearby pumping station</li> <li>Solid waste will be properly disposed of at designated place of MC.</li> <li>Updated and tuned machinery will be used to control noise.</li> <li>Water sprinkling will be carried out at consecutive intervals as per instruction</li> <li>Avoiding construction activities during nights.</li> <li>Removal of excess matter/ debris/ waste water from the site immediately.</li> <li>To avoid any disturbance to electric poles excavation will be started at least 2 feet away.</li> <li>Operation of excavator machine will be monitored by a helper to avoid the electrocution impact caused by contact of jib of excavator with electric wires</li> </ul>	Contractor	Visual/ Photographic record, Public consultation, Environment Quality Analysis reports, GRM Complaints record	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/ Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<p><b>b) Social Issues:</b></p> <ul style="list-style-type: none"> <li>• Solid waste may cause disturbance in mobility</li> <li>• Temporary blockage of road may restrict mobility</li> <li>• Conflict with public and public complaints</li> </ul>		<ul style="list-style-type: none"> <li>• 10 feet area around excavator will be barricaded to avoid any accident/injury due to movement of excavator</li> <li>• Provide PPEs (<b>See Annexure G</b>).</li> <li>• Provide appropriate signage near the construction activities to sensitize the community and minimize accidents.</li> <li>• Noise monitoring will be done on daily basis at strategic locations to monitor the level of noise produced from equipment and machinery at site.</li> <li>• Public must be informed about project major activities, duration of scheme, time and schedule, anticipated impacts and their proposed Mitigation Measures. The contact Nos. of focal person of Grievance Redress Committee will be displayed at different locations and residents will also be informed about it.</li> <li>• No PCR will be affected during construction activities. If there will be any PCR found during excavation; Contractor will follow guidelines (<b>see Annexure B</b>) of chance find procedure.</li> </ul>				
Civil work, Laying of sewer lines/ network	<p><b>Environmental Issues:</b></p> <ul style="list-style-type: none"> <li>• Sludge waste</li> <li>• Earth material</li> </ul>	Medium	<ul style="list-style-type: none"> <li>• Immediately transport the accumulated construction waste/ debris or waste water/</li> </ul>	Contractor	Visual/Pictures	<ul style="list-style-type: none"> <li>• Daily site visit during construction phase</li> <li>• Fortnightly/Weekly</li> </ul>	<ul style="list-style-type: none"> <li>• ESFPs</li> <li>• DPO ESM</li> </ul>

Proposed Sub-project activities	Potential Environmental/ Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<ul style="list-style-type: none"> <li>Noise and vibration disturbances to residents and businesses</li> <li>Sewage may contain both chemicals such as toxic trace elements and biological traits, if these elements/ chemicals enter in food chain can cause health hazards</li> <li>Road side visibility can be reduced and dusty environment leads to respiratory diseases.</li> <li>Safety issues</li> <li>Health problems or immediate risk may take place</li> <li>Spillage of fuel and oil</li> <li>Traffic jams and congestion may take place and cause inconvenience to the people where the construction of sewer lines will take place.</li> </ul>		<ul style="list-style-type: none"> <li>sludge to a site identified by the implementing MC</li> <li>If not immediately removed the de-silted material will be temporarily dumped at site preferably near any surface drain so that the waste water is drained to avoid water stagnation and breeding habitat for mosquitos as well as it does not hinder the passage of pedestrians and will be covered with plastic sheets to stop the windblown dispersal of dry silt and avoid nuisance due to bad odor.</li> <li>Removal of excavated materials or use as construction material with the approval of the Engineer.</li> <li>Where deep excavation is involved shuttering and scaffolding will be used to avoid collapse of trenches</li> <li>No one will be allowed to work alone in trenches without the supervision of a person.</li> <li>Necessary PPEs will be provided to workers working in trenches <b>(See Annexure G)</b>.</li> <li>Cleaning of sites upon completion of sub-projects.</li> <li>Establish schedule and others specific restrictions</li> </ul>			<ul style="list-style-type: none"> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Supervision Consultants E&amp;S team</li> </ul>

Proposed Sub-project activities	Potential Environmental/ Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<ul style="list-style-type: none"> <li>• Worse House Keeping</li> <li><b>Social Issues:</b></li> <li>• Reduced pedestrian access to residences and businesses</li> <li>• Temporary passage way interruption Conflicts.</li> <li>• Dissatisfaction for the project</li> <li>• Scattered construction material may obstruct mobility.</li> </ul>		<ul style="list-style-type: none"> <li>• Limit work to day light hours as possible</li> <li>• Barricade tape, safety/ caution sign boards and glowing tape/ stickers will be installed near excavated area to avoid fall of pedestrians and vehicles in trenches during night time</li> <li>• Use of less noise generating equipment</li> <li>• Regular water sprinkling with the help of water bowsers</li> <li>• Cordon off construction area</li> <li>• All sludge or waste water produced during construction works will be removed immediately</li> <li>• PPEs (<b>See Annexure G</b>) will be provided to workers</li> <li>• Availability of safe drinking water and food for the workers.</li> <li>• Pedestrian access roads will be kept clear, if the passage way may be temporarily disturbed due to construction works alternate routes will be provided to facilitate commutation</li> <li>• Construction material will not be dumped on the road or pedestrian access roads, and all construction material or debris will be removed after completion of day's work</li> </ul>				

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
Construction material storage, handling and use	<p><b>Environmental Issues:</b></p> <ul style="list-style-type: none"> <li>Water may also be contaminated due to any oil spillages from machinery.</li> <li>Health risk to workers and local inhabitants.</li> </ul> <p><b>Social Issues:</b></p> <ul style="list-style-type: none"> <li>Land acquisition for storage of construction material</li> <li>Accidents/Injuries expected if neglected</li> <li>Blockage of passage for pedestrians</li> <li>Haphazard arrangement of construction material</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Material will be appropriately secured to ensure safe passage between the destinations during transportation</li> <li>Loads/heaps will have appropriate cover to prevent spillage and contractor should be responsible for any clean up resulting from any failure.</li> <li>Materials will not be loaded to a higher level than the side and tail boards and shall be covered with a good quality tarpaulin;</li> <li>If land acquired for storage of machinery &amp; materials on temporarily basis: Contractor is liable to compensate the land owner according to agreement/ negotiations</li> <li>Contractor will lay/ utilize construction materials as per work requirement from his store.</li> <li>Contractor will submit satisfactory rehabilitation or satisfactory condition handing over certificate to Supervision consultants duly signed by land owner and verified ESFPs</li> <li>Contractor will prepare Traffic Management Plan and submit it to ESFPs for approval. The approved Traffic Management Plan will be implemented by the contractor at site.</li> </ul>	Contractor	Visual/Pictures	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
			<ul style="list-style-type: none"> <li>Contractor will use night vision reflective signboards/ reflective tapes to cordon off the area during construction activities.</li> </ul>				
Labor Camp (if established by Contractor)	Health impacts due to absence of housing and sanitation facilities in labor camp.	Medium	<ul style="list-style-type: none"> <li>Contractor will prepare Occupational Health and safety Plan and submit it to ESFPs for approval. The approved OHS plan will be implemented by the contractor at site.</li> <li>Contractor will ensure provision of appropriate housing, water supply, and sanitation facilities to construction labor.</li> <li>Good housekeeping will be ensured inside campsite</li> <li>Labor will be provided with quality food.</li> <li>Better heating &amp; cooling facilities will be provided by the Contractor as per season accordingly.</li> </ul>	Contractor	Visual/Pictures, Vehicle emission tests reports, GRM Complaints record	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>
Vehicle Movements	<ul style="list-style-type: none"> <li>Traffic congestion</li> <li>Conflicts</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Alternative routes will be provided.</li> <li>Sign boards and posters will also be displayed at project site and adjacent areas as well. Inform the residents about timing, schedule and construction work duration.</li> <li>Work will be done in portions so that the alternate road may be used safely and vehicles movement will not be disturbed.</li> </ul>	Contractor	Visual/Pictures	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
Safety Issues	<p>Open Manholes without covers</p> <p>Health and safety impacts on sanitary workers</p>	Medium	<p>Manhole will not be open more than 24 hours during this period barriers will be provided and reflective tapes will be used. Public will be informed timely. Before replacement of suction and delivery pipes it will be made sure that the power supply to pumping station is completely shut down. To avoid health and safety hazard it will be ensured that the waste water is fully pumped and pipes of disposal station are completely emptied. All workers will be required to wear face masks and disposable gloves to avoid health hazards. At disposal stations no one will be allowed to work solitary, all pipes replacement activities will be supervised of a person who will observe all activities and will guide the workers accordingly. Emergency contact numbers will be displayed at site and first aid facility will be made available at site throughout the project cycle.</p>	Contractor	Visual/Pictures	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>
Public access	Problems for pedestrians. Normal mode of transport may be disturbed during Sub-project execution.	Medium	<ul style="list-style-type: none"> <li>Alternate access route will be made sure. At Ramzan Town an Lodhi town will be used as alternate route.</li> <li>Construction works will be done within the premises of MC facility area.</li> <li>Cordon off excavated area.</li> </ul>	Contractor	Visual/Pictures	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
Drinking water contamination	<ul style="list-style-type: none"> <li>Health issues.</li> <li>Public Conflicts with labor.</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Control of waste water with Sucker machines to avoid drinking water contamination.</li> <li>Contact Nos. of MC help line will be displayed at project site and public may contact on these Nos. in case of any emergency.</li> <li>Minor leakage control with tapes.</li> <li>Disposal of construction waste in environment friendly way.</li> </ul>	Contractor	Visual/Pictures	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>
Sexual Harassment & Labor Influx	<ul style="list-style-type: none"> <li>Social Conflicts</li> </ul>	Low	<ul style="list-style-type: none"> <li>Contractor will give behavioral training to the workforce.</li> <li>Contractor will hire local labor for un-skilled works.</li> </ul>	Contractor	Visual/Pictures	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>
CoViD-19 SOPs implementation	<ul style="list-style-type: none"> <li>Spread of Corona among the labor</li> </ul>	Low	<ul style="list-style-type: none"> <li>Contractor will provide face masks to the labor on daily basis to reduce Corona impact.</li> <li>Contractor will follow CoViD-19 guidelines during construction works (<b>Annexure E</b>)</li> </ul>	Contractor	Visual/Pictures/ Reported/ Complains by public during visit	<ul style="list-style-type: none"> <li>Daily site visit during construction phase</li> <li>Fortnightly/Weekly</li> <li>Once during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>ESFPs</li> <li>DPO ESM</li> <li>Supervision Consultants E&amp;S team</li> </ul>
<b>Operational Phase</b>							
Seepage/Spill water	<b>Environmental issues:</b> <ul style="list-style-type: none"> <li>Increase moisture content in soil which affects the structures/ foundation of buildings in nearby</li> </ul>	Medium	<ul style="list-style-type: none"> <li>MC will maintain road lighting system for night vision.</li> <li>Road surface will be repaired/ maintained by MC.</li> <li>Road furniture will be maintained by MC.</li> <li>Sewerage disposal connections to the</li> </ul>	Contractor	Visual/Pictures		<ul style="list-style-type: none"> <li>MC Officials</li> </ul>



Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<p>areas. Contaminate the water</p> <p><b>Social issues:</b></p> <ul style="list-style-type: none"> <li>• No significant impacts will arise</li> <li>• Unhygienic condition, public health risks</li> </ul>		<p>periphery wastewater system shall be maintained properly with routine maintenance of plumbing/pumps diligently carried out.</p> <ul style="list-style-type: none"> <li>• Trees shall be managed properly that includes watering, fertilizing, weeding, pest controlling, pruning and training of trees timely.</li> <li>• MCD shall take necessary actions to prevent the breeding of mosquitoes where stagnation of water in any areas along the sewerage system</li> </ul>				

## 7.7. Environmental Implementation Budget

**Sub-project:** Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska City

**Table 7.3: Environmental Implementation Budget**

Item	Quantity	Tentative Cost /Item (Rs)*	Total Cost
<b>Labor Safety</b>			
Face Masks (3 PLY)	40 Packs		
Safety Gum Shoes	35		
Hand Gloves	35		
*First Aid Box (Including essential Medicine)	04		
*Safety Hard Helmets MSA	35		
Safety Goggles	35		
*Reflective Safety Vests	35		
*Infrared Thermometer (Benetech GM-2200 OR equivalent)	01		
<b>Sub-Total</b>			
<b>Working Site Safety</b>			
*Reflective Safety Signs Boards	10		
*Reflective Safety PVC Cones (18 inch)	20		
*Road Guiding Portable Delineators with Chain	20		
*Reflective Safety Barricading Tape	50		
*Emergency Portable Light	03		
Solid Waste Collection Drums	02		
*Fire Extinguishers DCP AFO Balls eq.	05		
<b>Sub-Total</b>			
<b>Grand Total</b>			

## 8 Capacity Building

### 8.1. General

A comprehensive program will be followed to strengthen the technical and institutional capacities of the executing agency (MC Daska), contractors, and laborers.

**Table 8.1: Training / Awareness and Sensitization Plan**

Sr. No	Components	Audience	Level	Modality	Frequency	Responsibility	
1	ESMF Site Specific requirements and E&S Management and Mitigation Plan	MO-1 MO-P MC and field staff	Training	Briefing Presentations Mock Activities	Before execution of sub-project and time to time instructions	PMDFC team	ESM
2	ESMP Implementation and Monitoring Plan	MO-1 MO-P MC staff field	Training	Briefing Presentations Mock Activities			
		Contractor	Awareness and sensitization	Briefing	At the time of Contract signing and before execution	DPO-ESM ESFPs	
		Labor	Awareness and sensitization	Briefing	Before execution and time to time during execution	DPO-ESM ESFPs	
3	EHS SOPs for Labor/Workers (including women workers)	Contractor	Awareness and sensitization	Briefing and Illustrations	Before execution and time to time during execution	DPO-ESM ESFPs	
		Labor/workers	Awareness and sensitization on SOPs Training on Use of PPEs	Presentations Illustrations Mock activities Resource material	Before execution and time to time during execution	DPO-ESM ESFPs	
4	GRM	Contractor	Awareness and sensitization	Briefing	Before execution and time to time during execution	DPO-ESM ESFPs	
5	GRM, Environmental Pollution, Social issues	Local communities	Awareness Sensitization	Public consultation Awareness Messages Traffic Signage Temporary cardon of the construction area	Throughout the cycle of execution of sub-project	MC DPO-ESM	

# ANNEXURES

**Annexure A: Environmental and Social Screening Checklists of the Sub-project  
Environmental & Social Screening Checklist**

Based on the following Environmental and Social Screening Checklist E & S Categorization of subproject has been carried out. It is concluded that this subproject will have non-significant negative environmental impacts so it is categorized as Environmental **Category E-3** therefore no further process will be required. However, the subproject will require construction labor/workers for the execution therefore Environment, Health and Safety SOPs given in Annex - E will be followed by the contractor.

Moreover, the subproject has no negative social impacts and is not involved in displacement/resettlement of any nature, therefore it is categorized as Social **Category S3** and No further process will be required. The cost for the implementation of the Environment, Health and Safety SOPs will be made part of the bidding document and contractors term of reference for the subproject.

**Instructions:**

Environmental and Social Focal Persons (ESFPs)<sup>17</sup> nominated by the MCs for PCP environmental and social management, will use this checklist in field for environmental and social screening and categorization of each and every sub-project proposed to be executed under the Program.

Deputy Program Officers-Environmental and Social Management deputed by PMDFC in regional offices will technically assist and support the ESFPs/MCs in filling in of this Checklist

It is to be attached with the main document<sup>18</sup> of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used

(iii) The purpose of this E&S Screening Checklists is to identify potential “Negative” impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the “remarks” section to discuss any anticipated mitigation measures.

<b>Name of ESFP:</b>	Mr. Uzair MO (I)
<b>Name of MC:</b>	Daska
<b>Sub-Project Sector:</b>	Sewerage
<b>Sub-Project Title:</b>	Rehabilitation of 36" i/d Damaged Sewer Line Along Stadium Road in Daska City
<b>Sub- Project Categorization:</b>	E2,S2

<sup>17</sup> In all MCs, ESFPs are notified by Local government; MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for social sectors.

<sup>18</sup> It is meant as PC-I and/or engineering estimates of sub-project

<b>Date of Screening:</b>	15-02-2023
<b>Anticipated Project Activities</b>	<ul style="list-style-type: none"> <li>➤ Replacement of damaged Sewer line with new under water Sewer line</li> <li>➤ Construction of Man hole Chambers under water sewer</li> <li>➤ Construction of RCC Sullage Carrier</li> <li>➤ Construction of RCC Sullage Box Culvert for Stadium road crossing</li> <li>➤ Rehabilitation of Stadium road</li> <li>➤ Electrical Works of Stadium Road</li> <li>➤ Desilting of Existing Sullage Carrier/Storm Water Drain</li> <li>➤ Tuff Pavers in Disposal Station</li> <li>➤ Sewer House Connections</li> </ul>
<b>Estimated Cost of PC-I</b>	80.369 Million PKR
<b>Estimated Cost of E&amp;S Mitigation</b>	559,000/-PKR
<b>Completion Time/Duration</b>	4 months
<b>Estimated Labor for Subproject</b>	10-15 Max

**CHECKLIST**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b>			
<b>Is the Sub-Project area adjacent to or within any of the following?</b>			
<b>Environmentally sensitive areas?</b>			
Legally protected Area			Not observed in sub project area
Any surface water body (river, canal, stream, lake, wetland) within 200 meters of the proposed sub project			Not observed in sub project area

Estuarine			Not observed in sub project area
Special area for protecting biodiversity			Not observed in sub project area
Buffer zone of protected area			Not observed in sub project area
Mangroves Forest			Not observed in sub project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance			Not observed in sub project area
<b>Socially sensitive /important areas/communities/ people?</b>			
Physical Cultural Resources (PCRs) and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject			No PCRs observed
Sensitive receptors (Schools, colleges, Shrine, Mosque, Church, hospitals and clinics) within 100 meters of the proposed sub project		✓	1 school and 1 clinic was observed at civil chowk however are not within 100 meters of the proposed subproject and no impact is envisaged.
Any graveyard of local community (Muslims or Christians)			Not observed in sub project area
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments <sup>19</sup> of the society and women or children)?			Not observed
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?			Not observed

<sup>19</sup> Due to caste, creed, religion or gender e.g. transgender

<b>B. Potential Environmental Impacts</b>			
Will the Sub-Project cause...			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?			Not observed
2. Cutting of trees?			Not observed
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?			Not observed

4. Generation of wastewater during construction or operation?		✓	No such impact is envisaged
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?		✓	Domestic wastewater will be produced during construction but the waste will be collected in septic tanks.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		✓	No such impact foreseen, as work activities are away from the surface water bodies so no other significant adverse impacts on Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers during construction Phase.
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction.		✓	No construction labor camps envisaged and unskilled local labor will be engaged locally for the construction activities.
8. Over pumping of ground water, leading to salinization and ground subsidence?		✓	No over pumping/pumping involved in scope of construction activities.
9. Serious contamination of soil due to construction works.		✓	Construction materials should be stored properly, no leakage or leaching Process involve so contamination of soil not observed
10. Aggravation of solid waste problems in the area?		✓	Municipal Solid waste and mud excavated from the existing drains to be disposed at proper disposal sites.



11. Generation of hazardous waste?			No hazardous waste will be generated.
12. Increased air pollution due to sub-project construction and operation?	✓		Increased air pollution due to smoke and dust generated by the movement of vehicles and construction machinery at project site is expected. The mitigation measures include control on speed limit of project vehicles and use of construction machinery in good working condition and regular sprinkling of water at dust prone roads/site.
13. Noise and vibration due to sub-project construction or operation?	✓		The noise pollution during construction phase because of project vehicles and construction machinery is expected. The mitigation includes use of vehicles and machinery in good running condition. The working hours shall be restricted during daytime only.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	The stagnant water in construction areas may create temporary breeding habitat for mosquitoes and resulting in dengue issue. Proper management and tidy conditions will avoid the creation of breeding habitats. Ensure mosquitoes spray at site on regular basis.
15. Use of chemicals during construction?		✓	The use of chemicals in construction Phase are not expected.
<b>C: Potential Social Impacts</b>			
Will the Sub-Project cause...			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		✓	Not Applicable
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	Not Applicable

3. Disproportionate impacts on the poor, women and children and or other vulnerable groups 20(mentioned above)?		✓ There will be no Impact on the poor women, children and or other vulnerable groups
4. Temporary impediments in movements of people/transport and animals?	✓	The movement of people may put some impediments during dismantling of existing drain and construction of new drains.  Traffic management Training will be provided to drivers.
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		✓ The proposed intervention of construction of storm water drains requires 15 working staff at a time and thus largescale population influx is not foreseen The contractor to establish  construction camp at appropriate place at open place sufficiently away from the populated area
6. Social conflicts if workers from other areas are hired.		✓ Contractor will hire local worker for unskilled construction activities
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓	Binding of supervision consultants is compulsory. SOP's for H&S must be followed by the contractor.
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel, and other chemicals during construction and operation?	✓	There would be some safety issue during martial transportation, during construction phase. The SOPs for health and safety have been included in the PC-I that have to be followed by the contractors
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation, and decommissioning.	✓	There would be safety issues in Construction phase, During storage of fuel and other chemicals and transport. The SOPs for health and safety have been included in the PC-I that have to be followed by the contractors

20 Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

10. Any impact on sensitive receptors (mentioned above)		✓No impact on sensitive receptors foreseen
11. Any impact of negative nature on already existing infrastructure including public amenities		✓Not applicable

**Pictures of Field Visit**





<b>Prepared By:</b>	<b>Endorsed By:</b>	<b>Reviewed By:</b>
<b>Name:</b> M. Hannan Yousaf	<b>Name:</b> Mr. Uzair MO (I)	<b>Name:</b> Tehmina Kiran
<b>Signature:</b>	<b>Signature:</b>	<b>Signature:</b>
<b>Date:</b> 15-02-2023	<b>Date:</b>	<b>Date:</b>

**INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST**

**Name of City/MC/LG:** Daska

**Sub-Project Sector:** Sewerage

**Sub-Project Title:** Rehabilitation of 36" i/d Damaged Sewer Line along Stadium Road in Daska City

**Sub- Project Categorization:** E2,S2

**Date of Screening:** 15-02-2023

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No				Project does not require land acquisition.
If yes, then describe the type of land being acquired from the categories below:				Not applicable
Has any AED been conducted at the proposed location by the government? Yes/No				No AED has been conducted at the proposed location by the Government.
Land (Quantify and describe types of land being acquired in "remarks column".				Not applicable
Government and LG owned land free of occupation (agriculture or settlement)				Not applicable
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)				Not applicable
Private land				Not applicable
Residential				Not applicable
Commercial				Not applicable
Agricultural				Not applicable
Communal				Not applicable
Others (specify in "remarks").				Not applicable

Name of owner/owners and type of ownership document if available.				Not applicable
If land is being acquired, describe any structures constructed on it				Not applicable
Land-based assets:				Not applicable
Residential structures				Not applicable
Commercial structures (specify in "remarks")				Not applicable
Community structures (specify in "remarks")				Not applicable
Agriculture structures (specify in "remarks")				Not applicable
Public utilities (specify in "remarks")				Not applicable
Others (specify in "remarks")				Not applicable
If agricultural land is being acquired, specify the following:				Not applicable
Agriculture related impacts				Not applicable
Crops and vegetables (specify types and cropping area in "remarks").				Not applicable
Trees (specify number and types in "remarks").				Not applicable
Others (specify in "remarks").				Not applicable
Affected Persons (APs)				Not applicable
Will any people be displaced from the land when acquired? Yes/No				Not applicable
Number of Aps				Not applicable
Males				Not applicable
Females				Not applicable
Titled landowners				Not applicable
Tenants and sharecroppers				Not applicable
Leaseholders				Not applicable

Agriculture wage laborers				Not applicable
Encroachers and squatters (specify in remarks column)				Not applicable
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in "remarks".				Not applicable
Others (specify in "remarks")				Not applicable

<p><b>Prepared By:</b></p> <p><b>Name: Nasir Altaf</b></p> <p><b>Signature:</b></p> <p><b>Date: 15-02-2023</b></p>	<p><b>Endorsed By:</b></p> <p><b>Name: Ms. Mariam Sadiqa (MOP)</b></p> <p><b>Signature:</b></p> <p><b>Date:</b></p>	<p><b>Endorsed By:</b></p> <p><b>Name: Tehmina Kiran</b></p> <p><b>Signature:</b></p> <p><b>Date:</b></p>
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### Annexure B: Chance find Procedures



Chance finds procedures which will be used during this Project are as follows:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry in charge of Department of Archaeology take over;
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry immediately (within 24 hours or less);
- Responsible local authorities and the Ministry in charge of Department of Archaeology would oversee protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the Department of Archaeology and Museums (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible authorities and the Ministry in charge of Department of Archaeology. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry in charge of Department of Archaeology; and
- Construction work could resume only after permission is given from the responsible local authorities and the Ministry in charge of Department of Archaeology concerning safeguard of the heritage.

These procedures will be referred to as standard provisions in construction contracts, when applicable. During project supervision, the Site Engineer will monitor the above regulations relating to the treatment of any chance find encountered are observed.



**Annexure C: IFC EHS Guidelines for Construction and Decommissioning**

General EHS Guidelines [Complete version] at: <a href="http://www.ifc.org/ehsguidelines">www.ifc.org/ehsguidelines</a>		
	<b>Environmental, Health, and Safety (EHS) Guidelines</b> GENERAL EHS GUIDELINES: CONSTRUCTION AND DECOMMISSIONING	

## 4.0 Construction and Decommissioning

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### Applicability and Approach

This section provides additional, specific guidance on prevention and control of community health and safety impacts that may occur during new project development, at the end of the project life-cycle, or due to expansion or modification of existing project facilities. Cross-referencing is made to various other sections of the General EHS Guidelines.

### 4.1 Environment { TC "4.1 Environment" \FC \| "2" }

#### Noise and Vibration

During construction and decommissioning activities, noise and vibration may be caused by the operation of pile drivers, earth moving and excavation equipment, concrete mixers, cranes and the transportation of equipment, materials and people. Some recommended noise reduction and control strategies to consider in areas close to community areas include:

- Planning activities in consultation with local communities so that activities with the greatest potential to generate noise are

planned during periods of the day that will result in least disturbance

- Using noise control devices, such as temporary noise barriers and deflectors for impact and blasting activities, and exhaust muffling devices for combustion engines
- Avoiding or minimizing project transportation through community areas

#### Soil Erosion

Soil erosion may be caused by exposure of soil surfaces to rain and wind during site clearing, earth moving, and excavation activities. The mobilization and transport of soil particles may, in turn, result in sedimentation of surface drainage networks, which may result in impacts to the quality of natural water systems and ultimately the biological systems that use these waters.

Recommended soil erosion and water system management approaches include:

#### Sediment mobilization and transport

- Reducing or preventing erosion by
  - Scheduling to avoid heavy rainfall periods (i.e., during the dry season) to the extent practical
  - Contouring and minimizing length and steepness of slopes
  - Mulching to stabilize exposed areas
  - Re-vegetating areas promptly
  - Designing channels and ditches for post-construction flows
  - Lining steep channel and slopes (e.g. use jute matting)
- Reducing or preventing off-site sediment transport through use of settlement ponds, silt fences, and water treatment, and modifying or suspending activities during extreme rainfall and high winds to the extent practical.



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**GENERAL EHS GUIDELINES: CONSTRUCTION AND DECOMMISSIONING**



*Clean runoff management*

- Segregating or diverting clean water runoff to prevent it mixing with water containing a high solids content, to minimize the volume of water to be treated prior to release

*Road design*

- Limiting access road gradients to reduce runoff-induced erosion
- Providing adequate road drainage based on road width, surface material, compaction, and maintenance

*Disturbance to water bodies*

- Depending on the potential for adverse impacts, installing free-spanning structures (e.g., single span bridges) for road watercourse crossings
- Restricting the duration and timing of in-stream activities to lower flow periods, and avoiding periods critical to biological cycles of valued flora and fauna (e.g., migration, spawning, etc.)
- For in-stream works, using isolation techniques such as berms or diversion during construction to limit the exposure of disturbed sediments to moving water
- Consider using trenchless technology for pipeline crossings (e.g., suspended crossings) or installation by directional drilling

*Structural (slope) stability*

- Providing effective short-term measures for slope stabilization, sediment control and subsidence control until long-term measures for the operational phase can be implemented
- Providing adequate drainage systems to minimize and control infiltration

*Air Quality*

Construction and decommissioning activities may generate emission of fugitive dust caused by a combination of on-site excavation and movement of earth materials, contact of construction machinery with bare soil, and exposure of bare soil and soil piles to wind. A secondary source of emissions may include exhaust from diesel engines of earth moving equipment, as well as from open burning of solid waste on-site. Techniques to consider for the reduction and control of air emissions from construction and decommissioning sites include:

- Minimizing dust from material handling sources, such as conveyors and bins, by using covers and/or control equipment (water suppression, bag house, or cyclone)
- Minimizing dust from open area sources, including storage piles, by using control measures such as installing enclosures and covers, and increasing the moisture content
- Dust suppression techniques should be implemented, such as applying water or non-toxic chemicals to minimize dust from vehicle movements
- Selectively removing potential hazardous air pollutants, such as asbestos, from existing infrastructure prior to demolition
- Managing emissions from mobile sources according to Section 1.1
- Avoiding open burning of solid (refer to solid waste management guidance in Section 1.6)

*Solid Waste*

Non-hazardous solid waste generated at construction and decommissioning sites includes excess fill materials from grading and excavation activities, scrap wood and metals, and small concrete spalls. Other non-hazardous solid wastes include office, kitchen, and dormitory wastes when these types of operations are part of construction project activities. Hazardous solid waste includes contaminated soils, which could potentially be encountered on-site due to previous land use activities, or small



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amounts of machinery maintenance materials, such as oily rags, used oil filters, and used oil, as well as spill cleanup materials from oil and fuel spills. Techniques for preventing and controlling non-hazardous and hazardous construction site solid waste include those already discussed in Section 1.6.

### Hazardous Materials

Construction and decommissioning activities may pose the potential for release of petroleum based products, such as lubricants, hydraulic fluids, or fuels during their storage, transfer, or use in equipment. These materials may also be encountered during decommissioning activities in building components or industrial process equipment. Techniques for prevention, minimization, and control of these impacts include:

- Providing adequate secondary containment for fuel storage tanks and for the temporary storage of other fluids such as lubricating oils and hydraulic fluids.
- Using impervious surfaces for refueling areas and other fluid transfer areas.
- Training workers on the correct transfer and handling of fuels and chemicals and the response to spills.
- Providing portable spill containment and cleanup equipment on site and training in the equipment deployment.
- Assessing the contents of hazardous materials and petroleum-based products in building systems (e.g. PCB-containing electrical equipment, asbestos-containing building materials) and process equipment and removing them prior to initiation of decommissioning activities, and managing their treatment and disposal according to Sections 1.5 and 1.6 on Hazardous Materials and Hazardous Waste Management, respectively.
- Assessing the presence of hazardous substances in or on building materials (e.g., polychlorinated biphenyls, asbestos-containing flooring or insulation) and decontaminating or properly managing contaminated building materials.

### Wastewater Discharges

Construction and decommissioning activities may include the generation of sanitary wastewater discharges in varying quantities depending on the number of workers involved. Adequate portable or permanent sanitation facilities serving all workers should be provided at all construction sites. Sanitary wastewater in construction and other sites should be managed as described in Section 1.3.

### Contaminated Land

Land contamination may be encountered in sites under construction or decommissioning due to known or unknown historical releases of hazardous materials or oil, or due to the presence of abandoned infrastructure formerly used to store or handle these materials, including underground storage tanks. Actions necessary to manage the risk from contaminated land will depend on factors such as the level and location of contamination, the type and risks of the contaminated media, and the intended land use. However, a basic management strategy should include:

- Managing contaminated media with the objective of protecting the safety and health of occupants of the site, the surrounding community, and the environment post construction or post decommissioning.
- Understanding the historical use of the land with regard to the potential presence of hazardous materials or oil prior to initiation of construction or decommissioning activities.
- Preparing plans and procedures to respond to the discovery of contaminated media to minimize or reduce the risk to health, safety, and the environment consistent with the approach for Contaminated Land in Section 1.6.
- Preparation of a management plan to manage obsolete, abandoned, hazardous materials or oil consistent with the approach to hazardous waste management described in Section 1.6.





**Environmental, Health, and Safety (EHS) Guidelines**  
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Successful implementation of any management strategy may require identification and cooperation with whoever is responsible and liable for the contamination.

**4.2 Occupational Health and Safety**  
**TC "4.2 Occupational Health and Safety" \FC \I "2" }**

**Over-exertion**

Over-exertion, and ergonomic injuries and illnesses, such as repetitive motion, over-exertion, and manual handling, are among the most common causes of injuries in construction and decommissioning sites. Recommendations for their prevention and control include:

- Training of workers in lifting and materials handling techniques in construction and decommissioning projects, including the placement of weight limits above which mechanical assists or two-person lifts are necessary
- Planning work site layout to minimize the need for manual transfer of heavy loads
- Selecting tools and designing work stations that reduce force requirements and holding times, and which promote improved postures, including, where applicable, user adjustable work stations
- Implementing administrative controls into work processes, such as job rotations and rest or stretch breaks

**Slips and Falls**

Slips and falls on the same elevation associated with poor housekeeping, such as excessive waste debris, loose construction materials, liquid spills, and uncontrolled use of electrical cords and ropes on the ground, are also among the most frequent cause of lost time accidents at construction and decommissioning sites.

Recommended methods for the prevention of slips and falls from, or on, the same elevation include:

- Implementing good house-keeping practices, such as the sorting and placing loose construction materials or demolition debris in established areas away from foot paths
- Cleaning up excessive waste debris and liquid spills regularly
- Locating electrical cords and ropes in common areas and marked corridors
- Use of slip resistant footwear

**Work in Heights**

Falls from elevation associated with working with ladders, scaffolding, and partially built or demolished structures are among the most common cause of fatal or permanent disabling injury at construction or decommissioning sites. If fall hazards exist, a fall protection plan should be in place which includes one or more of the following aspects, depending on the nature of the fall hazard<sup>41</sup>:

- Training and use of temporary fall prevention devices, such as rails or other barriers able to support a weight of 200 pounds, when working at heights equal or greater than two meters or at any height if the risk includes falling into operating machinery, into water or other liquid, into hazardous substances, or through an opening in a work surface
- Training and use of personal fall arrest systems, such as full body harnesses and energy absorbing lanyards able to support 5000 pounds (also described in this section in Working at Heights above), as well as fall rescue procedures to deal with workers whose fall has been successfully arrested. The tie in point of the fall arresting system should also be able to support 5000 pounds
- Use of control zones and safety monitoring systems to warn workers of their proximity to fall hazard zones, as well as

<sup>41</sup> Additional information on identification of fall hazards and design of protection systems can be found in the United States Occupational Health and Safety Administration's (US OSHA) web site: <http://www.osha.gov/SLTC/fallprotection/index.html>



**Environmental, Health, and Safety (EHS) Guidelines**  
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securing, marking, and labeling covers for openings in floors, roofs, or walking surfaces

**Struck By Objects**

Construction and demolition activities may pose significant hazards related to the potential fall of materials or tools, as well as ejection of solid particles from abrasive or other types of power tools which can result in injury to the head, eyes, and extremities. Techniques for the prevention and control of these hazards include:

- Using a designated and restricted waste drop or discharge zones, and/or a chute for safe movement of wastes from upper to lower levels
- Conducting sawing, cutting, grinding, sanding, chipping or chiseling with proper guards and anchoring as applicable
- Maintaining clear traffic ways to avoid driving of heavy equipment over loose strap
- Use of temporary fall protection measures in scaffolds and out edges of elevated work surfaces, such as hand rails and toe boards to prevent materials from being dislodged
- Evacuating work areas during blasting operations, and using blast mats or other means of deflection to minimize fly rock or ejection of demolition debris if work is conducted in proximity to people or structures
- Wearing appropriate PPE, such as safety glasses with side shields, face shields, hard hats, and safety shoes

**Moving Machinery**

Vehicle traffic and use of lifting equipment in the movement of machinery and materials on a construction site may pose temporary hazards, such as physical contact, spills, dust emissions, and noise. Heavy equipment operators have limited fields of view close to their equipment and may not see pedestrians close to the vehicle. Center-articulated vehicles create a significant impact or crush hazard zone on the outboard side of

a turn while moving. Techniques for the prevention and control of these impacts include:

- Planning and segregating the location of vehicle traffic, machine operation, and walking areas, and controlling vehicle traffic through the use of one-way traffic routes, establishment of speed limits, and on-site trained flag people wearing high-visibility vests or outer clothing covering to direct traffic
- Ensuring the visibility of personnel through their use of high visibility vests when working in or walking through heavy equipment operating areas, and training of workers to verify eye contact with equipment operators before approaching the operating vehicle
- Ensuring moving equipment is outfitted with audible back-up alarms
- Using inspected and well-maintained lifting devices that are appropriate for the load, such as cranes, and securing loads when lifting them to higher job-site elevations

**Dust**

- Dust suppression techniques should be implemented, such as applying water or non-toxic chemicals to minimize dust from vehicle movements
- PPE, such as dust masks, should be used where dust levels are excessive

**Confined Spaces and Excavations**

Examples of confined spaces that may be present in construction or demolition sites include: silos, vats, hoppers, utility vaults, tanks, sewers, pipes, and access shafts. Ditches and trenches may also be considered a confined space when access or egress is limited. In addition to the guidance provided in Section 2.5 the occupational hazards associated with confined spaces and excavations in construction and decommissioning sites should be prevented according to the following recommendations:



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- Controlling site-specific factors which may contribute to excavation slope instability including, for example, the use of excavation dewatering, side-walls support, and slope gradient adjustments that eliminate or minimize the risk of collapse, entrapment, or drowning
- Providing safe means of access and egress from excavations, such as graded slopes, graded access routes, or stairs and ladders
- Avoiding the operation of combustion equipment for prolonged periods inside excavations areas where other workers are required to enter unless the area is actively ventilated

**Other Site Hazards**

Construction and decommissioning sites may pose a risk of exposure to dust, chemicals, hazardous or flammable materials, and wastes in a combination of liquid, solid, or gaseous forms, which should be prevented through the implementation of project-specific plans and other applicable management practices, including:

- Use of specially trained personnel to identify and remove waste materials from tanks, vessels, processing equipment or contaminated land as a first step in decommissioning activities to allow for safe excavation, construction, dismantling or demolition
- Use of specially trained personnel to identify and selectively remove potentially hazardous materials in building elements prior to dismantling or demolition including, for example, insulation or structural elements containing asbestos and Polychlorinated Biphenyls (PCBs), electrical components containing mercury<sup>89</sup>
- Use of waste-specific PPE based on the results of an occupational health and safety assessment, including

respirators, clothing/protective suits, gloves and eye protection

**4.3 Community Health and Safety** { TC "4.3 Community Health and Safety" \f C \l "2" }

**General Site Hazards**

Projects should implement risk management strategies to protect the community from physical, chemical, or other hazards associated with sites under construction and decommissioning. Risks may arise from inadvertent or intentional trespassing, including potential contact with hazardous materials, contaminated soils and other environmental media, buildings that are vacant or under construction, or excavations and structures which may pose falling and entrapment hazards. Risk management strategies may include:

- Restricting access to the site, through a combination of institutional and administrative controls, with a focus on high risk structures or areas depending on site-specific situations, including fencing, signage, and communication of risks to the local community
- Removing hazardous conditions on construction sites that cannot be controlled effectively with site access restrictions, such as covering openings to small confined spaces, ensuring means of escape for larger openings such as trenches or excavations, or locked storage of hazardous materials

**Disease Prevention**

Increased incidence of communicable and vector-borne diseases attributable to construction activities represents a potentially serious health threat to project personnel and residents of local communities. Recommendations for the prevention and control of communicable and vector-borne diseases also applicable to

<sup>89</sup> Additional information on the management and removal of asbestos containing building materials can be found in ASTM Standard E2398 and E1369



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construction phase activities are provided in Section 3.6 (Disease Prevention).

#### Traffic Safety

Construction activities may result in a significant increase in movement of heavy vehicles for the transport of construction materials and equipment increasing the risk of traffic-related accidents and injuries to workers and local communities. The incidence of road accidents involving project vehicles during construction should be minimized through a combination of education and awareness-raising, and the adoption of procedures described in Section 3.4 (Traffic Safety).

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**Annexure D:EHS SOPS for Labors/Workers (including Women Labors/Workers) for Construction of Development Project (in URDU)**



**Annexure E: COVID-19 Pandemic and Health Safety Measures**

Given the unprecedented nature of the COVID-19 pandemic, contractors are bound to take all necessary precautions to maintain the health and safety related measures at site and to ensure suitable arrangements regarding hygiene requirements for the prevention of pandemic.

Following are the measures that should be implemented at the construction site to avoid the spread of Covid-19:

Activities	Adaptive Measures
<b>Pre- Execution Phase</b>	
<b>A. Profile preparation</b>	<ul style="list-style-type: none"> <li>• Detail profile of project workforce</li> <li>• Enlist the names, addresses and contact #</li> <li>• Breakdown of the workforce (workers from local communities and those who have on site accommodation)</li> <li>• Assigning the task against each person</li> <li>• Schedule the key activities and their duration at site</li> </ul>
<b>B. Initial Screening</b>	<ul style="list-style-type: none"> <li>• All enlisted workforce should go through initial screening process</li> <li>• Ensuring the availability of Thermogun at site</li> <li>• Record keeping against initial screening</li> <li>• Identifying all workers who are initially at more risk of contracting Covid-19</li> </ul>
<b>During Execution Phase</b>	
<b>A. Preliminary Screening</b>	<p><b>Regular Screening:</b></p> <ul style="list-style-type: none"> <li>• Regular screening by using Thermogun on daily basis before starting civil work at site</li> <li>• Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site.</li> <li>• If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on designated site.</li> <li>• Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and to quarantine themselves for 14 days, even if they have no symptoms.</li> </ul> <p><b>Sequential Screening:</b> Concerned DHQ medical staff is requested for screening at regular intervals. List should also be shared with DHQ for avoiding future inconvenience <b>or hire health safety officer on weekly basis.</b></p>
<b>B. Special Arrangements regarding PPEs</b>	<ul style="list-style-type: none"> <li>• Ensuring availability of handwashing facilities (sanitizers/soaps) at site</li> <li>• Presence of closed waste bins at key places throughout site, including at entrances/exits to work areas (toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces).</li> <li>• Special arrangements regarding PPEs and sanitation at site</li> <li>• Record keeping of stock availability on daily basis</li> </ul>
<b>C. Restricted Movement/ Demobilization of staff</b>	<ul style="list-style-type: none"> <li>• Encourage employees to wash their hands at least for 20 seconds with soap and stay at least one meter away from people who are coughing or sneezing</li> <li>• Breakdown of workers who reside at home (i.e. workers from the communities), workers who lodge within the local communities and workers in on-site accommodation. Workers accommodated on site should be required to minimize contact with people near the site, and</li> </ul>

Activities	Adaptive Measures
	<p>in certain cases be prohibited from leaving the site for the duration of their contract, so that contact with local communities is avoided.</p> <ul style="list-style-type: none"> <li>Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work.</li> <li>All workers should be provided separate accommodation.</li> </ul>
<p><b>D. Training sessions</b></p>	<ul style="list-style-type: none"> <li>Health and safety training for Contractor’s Personnel (which include project workers and all personnel that the Contractor uses on site, including staff and other employees of the Contractor and Subcontractors and any other personnel assisting the Contractor in carrying out project activities.</li> <li>Sessions related to safety procedures, use of construction PPEs, occupational health and safety issues, and code of conduct specially privacy issues including social distancing.</li> <li>Arranging daily briefings with workforce, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.</li> <li>Placing posters and sign boards around the site in local languages.</li> <li>Appointing one person on daily basis among the workforce who will serve as trainer for conducting awareness session and encouraging the rest to take preventive measures.</li> </ul>
<p><b>E. Operationalization of Grievance Redress Mechanism</b></p>	<ul style="list-style-type: none"> <li>Effective implementation of GRM at site</li> <li>Encouraging to report any COVID-19 related health issue and concerns about the health of their co-workers and other staff as well.</li> <li>In case of unavailability of the PPEs at site, grievance would be lodged directly to PMU.</li> </ul>
<p><b>F. Role of PMU</b></p>	<ul style="list-style-type: none"> <li>PMU is required to arrange regular meetings with Contractors and workforce to monitor all procedural implementation of COVID-19 prevention related mechanism.</li> <li>Arrange meeting with concerned DHQs for immediate support and guidance in case of emergency.</li> </ul> <p>During inspection visit by PMU Staff, if a worker is found to has symptoms of COVID-19, the worker should be removed immediately from work activities and isolated on designated site.</p>
<p><b>Post Execution Phase</b></p>	
<p><b>A. Post Screening</b></p>	<ul style="list-style-type: none"> <li>Screening should be done at the end of the day on daily basis, if a worker is found to have any symptoms of COVOD-19, he should be immediately reported to concerned health department.</li> </ul>
<p><b>B. Cleaning and waste disposal</b></p>	<ul style="list-style-type: none"> <li>All waste (PPEs and sanitation related) shall be disposed properly at designated sites.</li> </ul>

Annexure F:Water, Air, & Noise Analysis



**PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.**

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

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**TEST REPORT**

Ref: PGG/LAB/2023-1306/GW

Date: 08-Mar-23

Name of Project: PMDFC  
 Site Location: Darba  
 Nature of sample: Drinking Water  
 Source Name: College Road  
 Source: BO Plant Tank-2 (Bore-500 ft)  
 Coordinates: N 32.316494 E 74.568864  
 Sampling By: Pak Green Laboratories  
 Sampling type (Drain/Composite): Grab  
 Sample Code: GW-007  
 Date of sampling: 28-Feb-23

Name of Project: PMDFC  
 Site Location: Darba  
 Nature of sample: Drinking Water  
 Source Name: College Road  
 Source: BO Plant Tank-2 (Bore-500 ft)  
 Coordinates: N 32.316494 E 74.568864  
 Sampling By: Pak Green Laboratories  
 Sampling type (Drain/Composite): Grab  
 Sample Code: GW-007  
 Date of sampling: 28-Feb-23

**Results**

Sl. No.	Parameter	Unit	WHO	PIQS	Method / Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	ND
2.	Total Coliforms	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	ND
3.	Fecal Coliforms	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	ND
4.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
5.	Taste	-	None-Objectively / Acceptable	None-Objectively / Acceptable	APHA-2140 C	None-Objectively
6.	Odor	-	None-Objectively / Acceptable	None-Objectively / Acceptable	APHA-2130 B	None-Objectively
7.	Turbidity	NTU	≤ 5	≤ 5	APHA-2150 B	0.70
8.	Total Hardness <sup>a</sup>	mg/L	-	≤ 500	APHA-2540 C	290
9.	Total Dissolved Solids <sup>a</sup>	mg/L	≤ 5000	≤ 1000	APHA-2540 C	390
10.	pH <sup>a</sup>	-	6.5-8.5	6.5-8.5	APHA-4500-10 <sup>-b</sup>	7.530 at 21.4°C
11.	Aluminum (Al)	mg/L	≤ 0.3	≤ 0.3	APHA-3111 D	NDL
12.	Ammonia (NH <sub>3</sub> )	mg/L	0.02	0.005	APHA-3511 F	0.01
13.	Ammonia (As)	mg/L	0.01	0.005	APHA-3514 E	0.000
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3111 D	NDL
15.	Boron (B)	mg/L	0.5	0.5	APHA-3111 D	NDL
16.	Cadmium (Cd) <sup>a</sup>	mg/L	0.005	0.01	APHA-3111 B	NDL
17.	Chloride (Cl) <sup>a</sup>	mg/L	200	≤ 250	APHA-3200 C1 B	19
18.	Chromium (Cr) <sup>a</sup>	mg/L	0.05	0.05	APHA-3111 B	0.0019





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EPA Certified

Ref #: PGG/LAB/2023-1217/GW

Date: 06-Mar-25

Sr. No.	Parameters	Unit	WHO	PEQS	Method/Technique	Results
19	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	BDL
20	Fluoride (F)	mg/L	1.5	≤ 1.5	APHA-4500-F-D	0.2
21	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.0337
22	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0655
23	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-3112 B	BDL
24	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	BDL
25	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> <sup>-</sup> -E	0.102
26	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> <sup>-</sup> -B	BDL
27	Selenium (Se)	mg/L	0.01	0.01	APHA-3114 C	BDL
28	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-Cl-B	0.16
29	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
30	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5550 D	BDL
31	Sodium (Na)^	mg/L	200	-	APHA-3111 B	46.5611
32	Potassium (K)	mg/L	200	-	APHA-3111 B	7.3258
33	Iron	mg/L	0.3	-	APHA-3111 B	BDL

End of Report




PEQS: Punjab Environmental Quality Standards WHO: World Health Organization

MPN: Most Probable Number ^ PNAC Accredited

Remarks: All Parameters are in compliance with PEQS Limits

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Lab. Analyst	Chief Analyst	Laboratory Incharge
		







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Doc. # PGG/MS/FF/063 Rev. Date 27-Jan-22 Rev. # 01

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EPA Certified

Ref #: PGG/LAB/2023-1287/GW

## TEST REPORT

Date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of sample:	Drinking Water
Station Name:	S No Changi
Source:	Filtration Plant (400ft Bore)
Coordinates:	E 32.343682 N 74.355982
Sampling By:	Pak Green Laboratories
Sampling type (Grab/Composite):	Grab
Sample Code:	GW-338
Date of sampling:	18-Feb-23

### Results:

Sl. No.	Parameters	Unit	WHO	FEQS	Method / Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	Nil
2.	Total Coli-form	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	Nil
3.	Fecal Coliform	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	Nil
4.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
5.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
6.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
7.	Turbidity	NTU	< 5	< 5	APHA-2150 B	2.30
8.	Total Hardness ^	mg/L	-	< 900	APHA-2340 C	290
9.	Total Dissolved Solids ^	mg/L	< 1000	< 1000	APHA-2540 C	306
10.	pH ^	-	6.5-8.5	6.5-8.5	APHA-4500-H <sup>+</sup> B	7.346 at 20.6°C
11.	Aluminum (Al)	mg/L	0.2	≤ 0.2	APHA-3111 D	BDL
12.	Antimony (Sb)	mg/L	0.02	≤ 0.005	APHA-3111 B	BDL
13.	Arsenic (As)	mg/L	0.01	≤ 0.05	APHA-3114 B	BDL
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3111 D	BDL
15.	Boron (B)	mg/L	0.3	0.3	APHA-3111 D	BDL
16.	Cadmium (Cd) ^	mg/L	0.005	0.01	APHA-3111 B	BDL
17.	Chloride (Cl <sup>-</sup> ) ^	mg/L	250	< 250	APHA-4500-Cl <sup>-</sup> B	0.947
18.	Chromium (Cr) ^	mg/L	0.05	≤ 0.05	APHA-3111 B	03





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Ref #: PGG/LAB/2023-1208/GW

Date: 06-Mar-23

Sr. No.	Parameters	Unit	WHO	PEQS	Method/Technique	Results
19	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	BDL
20	Fluoride (F)	mg/L	1.5	≤ 1.5	APHA-4500-F-D	0.2
21	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.0295
22	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0305
23	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-3112 B	BDL
24	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	BDL
25	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> <sup>-</sup> -E	0.214
26	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> <sup>-</sup> -B	BDL
27	Selenium (Se)	mg/L	0.01	0.01	APHA-3114 C	BDL
28	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-Cl-B	0.12
29	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
30	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5500 D	BDL
31	Sodium (Na)^	mg/L	200	-	APHA-3111 B	51.3628
32	Potassium (K)	mg/L	200	-	APHA-3111 B	8.1495
33	Iron	mg/L	0.3	-	APHA-3111 B	0.1192

End of Report




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MPN: Most Probable Number ^ PNAC Accredited

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Lab. Analyst	Chief Analyst	Laboratory Incharge
		







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Ref #: PGG/LAB/2023-1208/GW

## TEST REPORT

Date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of sample:	Drinking Water
Station Name:	Mohallah Shahab pura
Source:	Filter Plant (Sore 400Ft)
Sample Coordinates:	N 32.338966 E 74.304761
Sampling By:	Pak Green Laboratories
Sampling type (Grab/Composite):	Grab
Sample Code:	GW-339
Date of sampling:	18-Feb-23

### Results:

Sl. No.	Parameter	Unit	WHO	PEQS	Method / Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	Nil
2.	Total Coli-form	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	Nil
3.	Fecal Coliform	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	Nil
4.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
5.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
6.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
7.	Turbidity	NTU	< 5	< 5	APHA-2130 B	0.85
8.	Total Hardness ^	mg/L	-	<500	APHA-2340 C	250
9.	Total Dissolved Solids ^	mg/L	< 1000	< 1000	APHA-2540 C	360
10.	pH ^	-	6.5-8.5	6.5-8.5	APHA-4500-H <sup>+</sup> B	7.358 at 20.5°C
11.	Aluminum (Al)	mg/L	0.2	≤ 0.2	APHA-3111 D	BDL
12.	Antimony (Sb)	mg/L	0.02	≤ 0.05	APHA-3111 B	BDL
13.	Arsenic (As)	mg/L	0.01	≤ 0.05	APHA-3114 B	BDL
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3111 D	BDL
15.	Boron (B)	mg/L	0.3	0.3	APHA-3111 D	BDL
16.	Cadmium (Cd) ^	mg/L	0.003	0.01	APHA-3111 B	BDL
17.	Chloride (Cl <sup>-</sup> ) ^	mg/L	250	< 250	APHA-4500-Cl B	06
18.	Chromium (Cr) ^	mg/L	0.05	≤ 0.05	APHA-3111 B	0.0948





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MS/FF/06 | Rev. Date: 27-Jan-22 | Rev. # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref #: PGG/LAB/2023-1209/GW

Date: 06-Mar-23

Sr. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
19	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	BDL
20	Fluoride (F)	mg/L	1.5	≤ 1.5	APHA-4500-F-D	0.1
21	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.0206
22	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0249
23	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-3112 B	BDL
24	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	BDL
25	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> -E	BDL
26	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> -B	BDL
27	Selenium (Se)	mg/L	0.01	0.01	APHA-3114 C	BDL
28	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-Cl-B	0.14
29	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
30	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5530 D	BDL
31	Sodium (Na)^	mg/L	200	-	APHA-3111 B	46.1748
32	Potassium (K)	mg/L	200	-	APHA-3111 B	7.3350
33	Iron	mg/L	0.3	-	APHA-3111 B	BDL



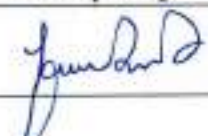
End of Report

PEQS: Punjab Environmental Quality Standards WHO: World Health Organization  
MPN: Most Probable Number ^ PNAC Accredited

Remarks: All Parameters are in compliance with PEQS Limits

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- The report is not valid for any negotiations.

Lab. Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MS/FF/003 | Rev. Date: 27-Jan-22 | Rev # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref #: PGG/LAB/2023-1209/GW

## TEST REPORT

Date: 06-Mar-23

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	Daska
<b>Nature of sample:</b>	Drinking Water
<b>Station Name:</b>	Mohallah Hajjura
<b>Source:</b>	Filter Plant (Bole-350)
<b>Coordinates :</b>	N 32.339662 E 74.360174
<b>Sampling By:</b>	Pak Green Laboratories
<b>Sampling type (Grab/Composite):</b>	Grab
<b>Sample Code:</b>	GW-340
<b>Date of sampling:</b>	18-Feb-23

### Results:

Sr. No.	Parameters	Unit	WHO	FEQS	Method/Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	Nil
2.	Total Coli-form	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	Nil
3.	Fecal Coliform	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	Nil
4.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
5.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
6.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
7.	Turbidity	NTU	< 5	< 5	APHA-2130 B	1.40
8.	Total Hardness ^	mg/L	-	<500	APHA-2340 C	220
9.	Total Dissolved Solids ^	mg/L	< 1000	< 1000	APHA-2540 C	290
10.	pH ^	-	6.5-8.5	6.5-8.5	APHA-4500-H <sup>+</sup> B	7.416 at 21.5°C
11.	Aluminum (Al)	mg/L	0.2	≤ 0.2	APHA-3111 D	BDL
12.	Antimony (Sb)	mg/L	0.02	≤ 0.05	APHA-3111 B	BDL
13.	Arsenic (As)	mg/L	0.01	≤ 0.05	APHA-3114 B	BDL
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3111 D	BDL
15.	Boron (B)	mg/L	0.3	0.3	APHA-3111 D	BDL
16.	Cadmium (Cd) ^	mg/L	0.005	0.01	APHA-3111 B	BDL
17.	Chloride (Cl <sup>-</sup> ) ^	mg/L	250	< 250	APHA-4500-Cl <sup>-</sup> B	07
18.	Chromium (Cr) ^	mg/L	0.05	≤ 0.05	APHA-3111 B	0.0947





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/PP/063 | Rev. Date: 27-Jan-22 | Rev. #: 11

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref #: PGG/LAB/2023-1210/GW

Date: 06-Mar-23

Sr. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
19	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	0.0015
20	Fluoride (F)	mg/L	1.5	< 1.5	APHA-4500-F-D	0.1
21	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.0374
22	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0338
23	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-3112 B	BDL
24	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	BDL
25	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> <sup>-</sup> -E	BDL
26	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> <sup>-</sup> -B	BDL
27	Selenium (Se)	mg/L	0.01	0.01	APHA-3114 C	BDL
28	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-Cl-B	0.19
29	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
30	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5530 D	BDL
31	Sodium (Na)^	mg/L	200	-	APHA-3111 B	34.7144
32	Potassium (K)	mg/L	200	-	APHA-3111 B	3.8392
33	Iron	mg/L	0.3	-	APHA-3111 B	BDL

End of Report

PEQS: Punjab Environmental Quality Standards WHO: World Health Organization


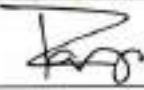

MPN: Most Probable Number

^ PNAC Accredited

Remarks: All Parameters are in compliance with PEQS Limits.

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Lab. Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MSLFF/003 Rev. Date: 27-Jan-22 | Rev # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref #: PGG/LAB/2023-1210/GW

Date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of sample:	Drinking Water
Station Name:	Sambrial Road Road
Source:	RO Water (Bore-500 ft)
Coordinates:	N 32.339920 E 74.383491
Sampling By:	Pak Green Laboratories
Sampling type (Grab/Composite):	Grab
Sample Code:	GW-341
Date of sampling:	18-Feb-23

### Results:

Sl. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	Nil
2.	Total Coli-form	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	Nil
3.	Fecal Coliform	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	Nil
4.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
5.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
6.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2130 B	Non-Objectionable
7.	Turbidity	NTU	< 5	< 5	APHA-2130 B	0.20
8.	Total Hardness ^	mg/L	-	<500	APHA-2540 C	140
9.	Total Dissolved Solids ^	mg/L	< 1000	< 1000	APHA-2540 C	180
10.	pH ^	-	6.5-8.5	6.5-8.5	APHA-4500-H <sup>+</sup> B	7.526 at 21.1°C
11.	Aluminum (Al)	mg/L	0.2	≤ 0.2	APHA-3111 D	BDL
12.	Antimony (Sb)	mg/L	0.02	≤ 0.05	APHA-3111 B	BDL
13.	Arsenic (As)	mg/L	0.01	≤ 0.05	APHA-3114 B	BDL
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3111 D	BDL
15.	Boron (B)	mg/L	0.3	0.3	APHA-3111 D	BDL
16.	Cadmium (Cd) ^	mg/L	0.003	0.01	APHA-3111 B	BDL
17.	Chloride (Cl <sup>-</sup> ) ^	mg/L	250	< 250	APHA-4500-Cl B	06
18.	Chromium (Cr) ^	mg/L	0.05	≤ 0.05	APHA-3111 B	0.0965





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MS/FF/063 Rev. Date: 27-Jan-22 [Rev: # 01]

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref #: PGG/LAB/2023-1211/GW

Date: 06-Mar-23

Sl. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
49.	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	BDL
50.	Fluoride (F)	mg/L	1.5	≤ 1.5	APHA-4500-F-D	0.2
51.	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.046
52.	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0501
53.	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-3112 B	BDL
54.	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	0.0035
55.	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> -E	0.255
56.	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> -B	BDL
57.	Selenium (Se)	mg/L	0.01	0.01	APHA-3114 C	BDL
58.	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-Cl-B	0.20
59.	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
60.	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5530 D	BDL
61.	Sodium (Na)^	mg/L	200	-	APHA-3111 B	49.3104
62.	Potassium (K)	mg/L	200	-	APHA-3111 B	7.7805
63.	Iron	mg/L	0.5	-	APHA-3111 B	0.0135

End of Report




PEQS: Punjab Environmental Quality Standards WHO: World Health Organization

MPN: Most Probable Number ^ PNAC Accredited

Remarks: All Parameters are in compliance with PEQS Limits.

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Lab. Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc #: PGG/MS/FF/002 | Rev. Date: 27-Jan-22 | Rev # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Date: 06-Mar-25

Ref #: PGG/LAB/2025-1211/GW

Name of Project:	PMDFC
Site Location:	Daska
Nature of sample:	Drinking Water
Station Name:	Katchery Road
Source:	Tank-1 (Bore-300 ft)
Coordinates :	N 32.31346 E 74.349952
Sampling By:	Pak Green Laboratories
Sampling type (Grab/Composite):	Grab
Sample Code:	GW-342
Date of sampling:	18-Feb-25

### Results:

Sr. No.	Parameters	Unit	WHO	PEQS	Method/Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	Nil
2.	Total Coli-form	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	Nil
3.	Focal Coliform	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	Nil
4.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.00
5.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
6.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
7.	Turbidity	NTU	< 5	< 5	APHA-2130 B	0.05
8.	Total Hardness ^	mg/L	-	<500	APHA-2540 C	280
9.	Total Dissolved Solids ^	mg/L	< 1000	< 1000	APHA-2540 C	375
10.	pH ^	-	6.5-8.5	6.5-8.5	APHA-4500-H <sup>+</sup> B	7.366 at 20.6°C
11.	Aluminum (Al)	mg/L	0.2	≤ 0.2	APHA-3111 D	BDL
12.	Antimony (Sb)	mg/L	0.02	≤ 0.05	APHA-3111 B	BDL
13.	Arsenic (As)	mg/L	0.01	≤ 0.05	APHA-3114 B	BDL
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3111 D	BDL
15.	Boron (B)	mg/L	0.3	0.3	APHA-3111 D	BDL
16.	Cadmium (Cd) ^	mg/L	0.003	0.01	APHA-3111 B	BDL
17.	Chloride (Cl <sup>-</sup> ) ^	mg/L	250	< 250	APHA-4500-Cl B	10
18.	Chromium (Cr) ^	mg/L	0.05	≤ 0.05	APHA-3111 B	0.0913





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc #: PGG/IMS/FF/0813 Rev. Date: 27-Jan-22 (Rev. 4.01)

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref #: PGG/LAB/2023-1212/GW

Date: 06-Mar-23

Sr. No.	Parameters	Unit	WHO	PEQS	Method/Technique	Results
34.	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	BDL
35.	Fluoride (F)	mg/L	1.5	≤ 1.5	APHA-4500-F-D	0.3
36.	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.0372
37.	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0135
38.	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-5112 B	BDL
39.	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	BDL
40.	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> <sup>-</sup> -E	0.246
41.	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> <sup>-</sup> -B	BDL
42.	Selenium (Se)	mg/L	0.01	0.01	APHA-3134 C	BDL
43.	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-CL-B	0.23
44.	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
45.	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5530 D	BDL
46.	Sodium (Na)^	mg/L	200	-	APHA-3111 B	48.4689
47.	Potassium (K)	mg/L	200	-	APHA-3111 B	7.4936
48.	Iron	mg/L	0.3	-	APHA-3111 B	BDL

End of Report


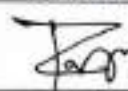
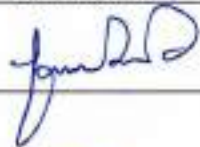
PEQS: Punjab Environmental Quality Standards WHO: World Health Organization

MPN: Most Probable Number ^ PNAC Accredited

Remarks: All Parameters are in compliance with PEQS Limits.

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Lab. Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/FF/053 | Rev. Date: 27-Jan-22 | Rev. #: 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref #: PGG/LAB/2023-1212/GW

Date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of sample:	Drinking Water
Station Name:	Lari Adda
Source:	RO Plant (300ft Bores)
Coordinates:	N 32.327181 E 74.346195
Sampling By:	Pak Green Laboratories
Sampling type (Grab/Composite):	Grab
Sample Code:	GW-343
Date of sampling:	18-Feb-23

### Results:

Sl. No.	Parameters	Unit	WHO	PEQS	Method/Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	Nil
2.	Total Coli-form	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	Nil
3.	Fecal Coliform	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	Nil
4.	Coloe	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
5.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
6.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
7.	Turbidity	NTU	< 5	< 5	APHA-2150 B	0.10
8.	Total Hardness ^	mg/L	-	<500	APHA-2340 C	290
9.	Total Dissolved Solids ^	mg/L	< 1000	< 1000	APHA-2540 C	570
10.	pH ^	-	6.5-8.5	6.5-8.5	APHA-4500-H <sup>+</sup> B	7.396 at 21.3°C
11.	Aluminum (Al)	mg/L	0.2	≤ 0.2	APHA-3111 D	BDL
12.	Antimony (Sb)	mg/L	0.02	≤ 0.05	APHA-3111 B	BDL
13.	Arsenic (As)	mg/L	0.01	≤ 0.05	APHA-3114 B	0.0140
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3111 D	BDL
15.	Boron (B)	mg/L	0.3	0.3	APHA-3111 D	BDL
16.	Cadmium (Cd) ^	mg/L	0.003	0.01	APHA-3111 B	BDL
17.	Chloride (Cl <sup>-</sup> ) ^	mg/L	250	< 250	APHA-4500-Cl <sup>-</sup> B	03
18.	Chromium (Cr) ^	mg/L	0.05	≤ 0.05	APHA-3111 B	0.0653





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MS/FF/001 Rev. Date: 27-Jan-22 Rev # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref #: PGG/LAB/2023-1213/GW

Date: 06-Mar-23

Sr. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
19.	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	BDL
20.	Fluoride (F)	mg/L	1.5	≤ 1.5	APHA-4500-F-D	0.3
21.	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.0366
22.	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0081
23.	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-3112 B	BDL
24.	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	BDL
25.	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> <sup>-</sup> -E	0.214
26.	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> <sup>-</sup> -B	BDL
27.	Selenium (Se)	mg/L	0.01	0.01	APHA-3114 C	BDL
28.	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-Cl-B	0.21
29.	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
30.	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5530 D	BDL
31.	Sodium (Na)^	mg/L	200	-	APHA-3111 B	41.9244
32.	Potassium (K)	mg/L	200	-	APHA-3111 B	6.5063
33.	Iron	mg/L	0.3	-	APHA-3111 B	BDL


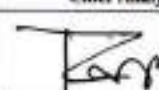
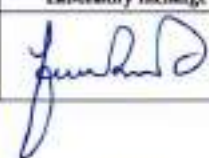
End of Report

PEQS: Punjab Environmental Quality Standards WHO: World Health Organization  
MPN: Most Probable Number ^ FNAC Accredited

Remark: All Parameters are in compliance with PEQS Limits.

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- The report is not valid for any negotiations.

Lab. Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/FF/083 | Rev. Date: 27-Jan-22 | Rev. # 01

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EPA Certified

## TEST REPORT

Ref #: PGG/LAB/2023-1213/GW

Date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of sample:	Drinking Water
Station Name:	New Katchery
Source:	Mohallah Bun wala (Bose-500 ft)
Coordinates:	N 32.319074 E 74.349777
Sampling By:	Pak Green Laboratories
Sampling type (Grab/Composite):	Grab
Sample Code:	GW-344
Date of sampling:	18-Feb-23

### Results:

Sr. No.	Parameters	Unit	WHO	FEQS	Method/Technique	Results
1.	E Coli	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 F	Nil
2.	Total Coli-form	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 D	Nil
3.	Fecal Coliform	MPN/100ml	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	APHA-9221 E	Nil
4.	Color	TCU	≤ 15	≤ 15	APHA-2120 C	0.000
5.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
6.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
7.	Turbidity	NTU	< 5	< 5	APHA-2130 B	0.05
8.	Total Hardness ^	mg/L	-	<500	APHA-2540 C	240
9.	Total Dissolved Solids ^	mg/L	< 1000	< 1000	APHA-2540 C	320
10.	pH ^	-	6.5-8.5	6.5-8.5	APHA-4500-H+ B	7.490 at 20.4°C
11.	Aluminum (Al)	mg/L	0.2	≤ 0.2	APHA-3111 D	BDL
12.	Antimony (Sb)	mg/L	0.02	≤ 0.05	APHA-3111 B	BDL
13.	Arsenic (As)	mg/L	0.01	≤ 0.05	APHA-3114 B	BDL
14.	Barium (Ba)	mg/L	0.7	0.7	APHA-3113 D	BDL
15.	Boron (B)	mg/L	0.3	0.5	APHA-3111 D	BDL
16.	Cadmium (Cd) ^	mg/L	0.003	0.01	APHA-3111 B	BDL
17.	Chloride (Cl <sup>-</sup> ) ^	mg/L	250	< 250	APHA-4500-Cl B	10
18.	Chromium (Cr) ^	mg/L	0.05	≤ 0.05	APHA-3111 B	0.0823





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/FF/063 | Rev. Date: 27-Jan-22 | Rev. #: 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA CEN-REG/LAB/2023-1206/GW

Date: 06-Mar-23

Sr. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
19	Copper (Cu) ^	mg/L	2	2	APHA-3111 B	BDL
20	Fluoride (F)	mg/L	1.5	≤ 1.5	APHA-4500-F-D	0.2
21	Lead (Pb) ^	mg/L	0.01	≤ 0.05	APHA-3111 B	0.0332
22	Manganese (Mn) ^	mg/L	0.5	≤ 0.5	APHA-3111 B	0.0727
23	Mercury (Hg)	mg/L	0.001	≤ 0.001	APHA-3112 B	BDL
24	Nickel (Ni)	mg/L	0.02	≤ 0.02	APHA-3111 B	BDL
25	Nitrate^	mg/L	50	≤ 50	APHA-4500-NO <sub>3</sub> <sup>-</sup> -E	0.308
26	Nitrite^	mg/L	3	≤ 3	APHA-4500-NO <sub>2</sub> <sup>-</sup> -B	BDL
27	Selenium (Se)	mg/L	0.01	0.01	APHA-3114 C	BDL
28	Residual Chlorine (Cl <sub>2</sub> )	mg/L	-	0.2-0.5 at consumer end 0.5-1.5 at source	APHA-Cl-B	0.16
29	Zinc (Zn) ^	mg/L	3	5.0	APHA-3111 B	BDL
30	Phenolic Compound (As Phenol)	mg/L	0.002	-	APHA-5500 D	BDL
31	Sodium (Na)^	mg/L	200	-	APHA-3111 B	46.3909
32	Potassium (K)	mg/L	200	-	APHA-3111 B	8.5395
33	Iron	mg/L	0.3	-	APHA-3111 B	BDL

End of Report

PEQS: Punjab Environmental Quality Standards WHO: World Health Organization


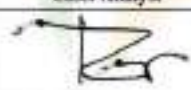

MPN: Most Probable Number

^ PNAC Accredited

Remarks: All Parameters are in compliance with PEQS Limits

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Lab. Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/MS/FF/0631 Rev. Date: 27-Jan-22 Rev.# 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1217/AA

Issue date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of Monitoring:	Ambient Air
Monitoring By:	Pak Green Laboratories
Monitoring Location:	THQ Hospital
Coordinates:	N 32.333325 E 74.344719
Name of Sampling Person:	Mr. Arsalan
Monitoring Instrument:	AQMS
Monitoring Duration:	24 hours
Monitoring Date:	22-Feb-23 to 23-Feb-23

### Results:

Sr. No.	Time	CO	NO	NO <sub>x</sub>	SO <sub>2</sub>	PM10	PM2.5	SPM	O <sub>3</sub>
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1.	4:00 PM	6.5313	21.912	24.969	80.48	308.80	293.70		
2.	5:00 PM	6.9987	11.616	73.080	69.40	317.00	251.50		
3.	6:00 PM	7.2281	11.220	88.711	61.50	343.70	286.10		
4.	7:00 PM	7.2570	14.388	86.478	71.32	308.10	216.00		
5.	8:00 PM	7.104	48.02	45.06	88.55	317.70	264.70		
6.	9:00 PM	7.084	46.70	83.03	80.05	294.92	258.64		
7.	10:00 PM	7.073	43.38	82.42	86.65	293.73	243.63		
8.	11:00 PM	6.957	44.06	81.40	95.25	314.94	227.96		
9.	12:00 AM	6.928	43.38	79.98	91.25	319.29	218.28		
10.	1:00 AM	6.865	41.42	79.58	72.15	325.04	213.15		
11.	2:00 AM	7.146	42.74	78.97	78.65	323.95	205.13		
12.	3:00 AM	7.772	45.38	78.76	64.35	330.39	199.05		
13.	4:00 AM	7.212	39.23	52.45	89.84	322.36	193.10	615.1*	97.5
14.	5:00 AM	6.762	47.43	54.54	96.84	335.71	190.82		
15.	6:00 AM	7.072	39.71	45.20	86.84	334.71	187.32		
16.	7:00 AM	7.092	46.47	43.79	89.38	336.44	182.67		
17.	8:00 AM	7.002	49.34	42.40	89.45	332.53	181.28		
18.	9:00 AM	7.042	46.78	51.17	90.45	348.24	176.98		
19.	10:00 AM	6.192	49.69	62.38	94.04	272.92	186.17		
20.	11:00 AM	7.002	49.36	53.32	89.76	280.56	212.75		
21.	12:00 PM	6.872	49.30	44.14	78.91	276.04	242.40		
22.	1:00 PM	6.172	38.42	30.76	78.63	263.09	239.09		
23.	2:00 PM	7.012	35.75	54.54	77.09	278.43	226.35		
24.	3:00 PM	6.212	43.35	55.31	78.25	264.57	171.01		
Average (24 Hours)		6.941*	39.71	63.85	82.67	311.84*	219.49*		
FEQS		5 24 hours	40 24hours	80 24hours	120 24hours	150 24hours	35 24hours	500 24hours	130 1 hour





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/IMS/FF/083 Rev. Date: 27-Jan-22 Rev. # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

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Ref. #: PGG/LAB/2023-1201/AA


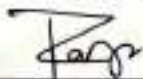
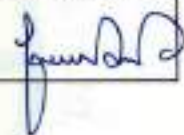
Issue date: 06-Mar-23

**PEQS: Punjab Environmental Quality Standards**

Remarks: Parameters with \* are exceeding with PEQS Limits

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Field Analyst	Chief Analyst	Laboratory Incharge
		





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/FF/063 | Rev. Date: 27-Jan-22 | Rev. # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1201/AA

Issue date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of Monitoring:	Ambient Air
Monitoring By:	Pak Green Laboratories
Monitoring Location:	Near Fawara Chowk
Coordinates:	N 32.332547 E 74.354962
Name of Sampling Person:	Mr. Arsalan
Monitoring Instrument:	AQMS
Monitoring Duration:	24 hours
Monitoring Date:	21-Feb-23 to 22-Feb-23

### Results:

Sr. No.	Time	CO	NO	NO <sub>2</sub>	SO <sub>2</sub>	PM10	PM2.5	SFM	O <sub>3</sub>
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1.	4:00 PM	3.64	10.428	44.274	80.48	274.30	234.90	554.6*	100.4
2.	5:00 PM	3.90	12.276	37.372	69.40	294.80	281.70		
3.	6:00 PM	3.95	13.332	52.394	61.50	264.20	234.50		
4.	7:00 PM	4.48	16.368	44.215	71.32	269.50	239.80		
5.	8:00 PM	4.82	44.60	75.94	51.40	243.31	212.32		
6.	9:00 PM	4.91	45.81	74.92	66.80	252.29	227.72		
7.	10:00 PM	5.04	36.97	63.73	51.79	251.10	212.71		
8.	11:00 PM	4.66	38.42	64.94	56.12	309.31	197.04		
9.	12:00 AM	4.58	37.19	79.29	46.44	313.66	187.36		
10.	1:00 AM	4.05	46.53	55.94	41.31	292.31	182.23		
11.	2:00 AM	4.31	45.14	75.95	33.29	280.32	174.21		
12.	3:00 AM	4.34	37.22	65.99	47.21	304.76	168.13		
13.	4:00 AM	4.08	37.68	64.36	41.26	251.73	162.18		
14.	5:00 AM	4.32	39.66	65.71	38.98	243.08	159.90		
15.	6:00 AM	4.42	41.45	74.71	35.48	269.08	156.40		
16.	7:00 AM	4.31	44.22	75.44	30.83	299.81	151.75		
17.	8:00 AM	4.21	45.96	79.53	29.44	303.90	150.36		
18.	9:00 AM	4.04	45.47	73.24	25.14	329.61	146.06		
19.	10:00 AM	4.38	45.11	74.02	34.33	289.29	155.25		
20.	11:00 AM	4.33	39.78	82.56	66.91	334.93	181.83		
21.	12:00 PM	4.11	39.58	78.04	90.56	332.41	211.48		
22.	1:00 PM	3.88	38.18	75.09	87.25	242.46	208.17		
23.	2:00 PM	3.72	39.50	80.43	84.51	237.80	195.43		
24.	3:00 PM	3.81	41.92	66.57	29.17	233.94	140.09		
Average (24 Hours)		4.340	39.42	71.72	51.75	279.91*	190.68*		
PEQS		5 24 hours	40 24hours	80 24hours	120 24hours	150 24hours	35 24hours	500 24hours	130 1 hour







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.# PGG/MS/FF/063 | Rev. Date: 27-Jan-22 | Rev. # 01

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EPA Certificate: PGG/LAB/2023-1200/AA


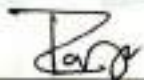

Issue date: 06-Mar-23

**PEQS: Punjab Environmental Quality Standards**

Remarks: Parameters with \* are exceeding with PEQS Limits

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Field Analyst	Chief Analyst	Laboratory Incharge
		





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/MS/FF/053 | Rev. Date: 27-Jan-22 | Rev. # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1200/AA

Issue date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Daska
Nature of Monitoring:	Ambient Air
Monitoring By:	Pak Green Laboratories
Monitoring Location:	B-Number Chungi
Coordinates:	N 32.343682 E 74.333982
Name of Sampling Person:	Mr. Arsalan
Monitoring Instrument:	AQMS
Monitoring Duration:	24 hours
Monitoring Date:	20-Feb-23 to 21-Feb-23

### Results:

Sr. No.	Time	CO	NO	NO <sub>2</sub>	SO <sub>2</sub>	PM10	PM2.5	SPM	O <sub>3</sub>
		mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1.	4:00 PM	4.10	18.876	55.622	51.89	133.76	241.30	510.7*	55.6
2.	5:00 PM	4.82	26.064	64.757	58.94	134.80	218.90		
3.	6:00 PM	4.69	32.076	70.411	68.33	149.40	228.90		
4.	7:00 PM	4.11	35.808	81.809	80.37	164.30	231.10		
5.	8:00 PM	4.82	44.60	75.94	51.60	238.94	183.24		
6.	9:00 PM	4.91	45.81	74.92	66.80	247.92	198.64		
7.	10:00 PM	5.04	36.97	63.73	51.79	246.73	203.63		
8.	11:00 PM	4.68	38.42	64.94	56.12	304.94	167.96		
9.	12:00 AM	4.58	37.19	79.29	46.44	309.29	158.28		
10.	1:00 AM	4.05	46.53	55.94	41.31	287.94	143.15		
11.	2:00 AM	4.34	45.14	75.95	33.29	275.95	135.13		
12.	3:00 AM	4.34	37.22	65.39	47.21	360.39	129.05		
13.	4:00 AM	4.08	37.68	64.36	41.26	247.36	202.18		
14.	5:00 AM	4.32	39.68	65.71	38.98	238.71	199.90		
15.	6:00 AM	4.42	41.45	74.71	35.48	264.71	196.40		
16.	7:00 AM	4.31	44.22	75.44	30.83	295.44	172.67		
17.	8:00 AM	4.21	45.98	79.53	29.44	299.53	171.28		
18.	9:00 AM	4.04	45.47	75.24	25.14	325.24	166.98		
19.	10:00 AM	4.38	45.11	74.92	34.33	284.92	156.17		
20.	11:00 AM	4.33	39.78	82.56	60.91	330.56	182.75		
21.	12:00 PM	4.11	39.58	78.04	90.36	328.04	212.40		
22.	1:00 PM	3.88	38.18	75.09	87.25	238.09	209.09		
23.	2:00 PM	3.72	39.50	80.43	84.51	233.43	196.35		
24.	3:00 PM	3.81	41.92	66.57	29.17	229.57	141.01		
Average (24 Hours)		4.340	39.42	71.72	51.75	254.58*	185.10*		
PEQS		5 24 hours	60 24hours	80 24hours	120 24hours	190 24hours	35 24hours	500 24hours	130 1 hour





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/MS/FF/003 | Rev. Date: 27-Jan-22 | Res. # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref. #: PGG/LAB/2025-1199/AA


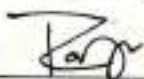
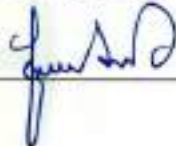
Issue date: 06-Mar-23

PEQS: Punjab Environmental Quality Standards

Remarks: Parameters with \* are exceeding with PEQS Limits.

Terms & Conditions:

- Analysis was conducted on the request of proponent for his own use or PEQS compliance.
- Report cannot be used regarding compliance of any complaint, EPO or any other court case.
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- The responsibility of the ethical use of the results reported in this report lies with the client. Consequently, the laboratory is absolved of its responsibility for any claim that may result through the use by the client or others of the results appearing in this report.
- The left-over sample (if so available) shall be retained for fifteen days after the issuance of the report unless otherwise negotiated between the client and the laboratory.  
The report is not valid for any negotiations

Field Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.# PGG/IMS/FF/063 | Rev. Date: 27-Jan-22 | Rev.# 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1199/AA

Issue date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	Larni Adda, Daska
Nature of Monitoring:	Ambient Air
Monitoring By:	Pak Green Laboratories
Monitoring Location:	Near Clock Tower
Coordinates:	N 32.327256 E 74.544016
Name of Sampling Person:	Mr. Asadun
Monitoring Instrument:	AQMS
Monitoring Duration:	24 hours
Monitoring Date:	19-Feb-23 to 20-Feb-23

### Results:

Sr. No.	Time	CO	NO	NO <sub>2</sub>	SO <sub>2</sub>	PM10	PM2.5	SPM	O <sub>3</sub>
		mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
1.	4:00 PM	5.34	9.28	103.80	180.93	349.30	290.50		
2.	5:00 PM	4.15	6.32	153.17	193.96	436.60	390.90		
3.	6:00 PM	3.98	5.13	148.47	216.04	379.90	363.40		
4.	7:00 PM	5.16	3.37	130.30	162.77	384.30	396.20		
5.	8:00 PM	4.91	7.07	138.58	151.28	353.31	301.32		
6.	9:00 PM	5.25	8.71	140.80	130.94	362.29	316.72		
7.	10:00 PM	4.76	6.08	136.79	192.10	361.10	301.71		
8.	11:00 PM	4.65	4.76	145.77	218.70	339.31	286.04		
9.	12:00 AM	4.62	6.08	134.35	231.70	343.66	276.36		
10.	1:00 AM	4.55	5.12	148.95	192.60	322.31	271.23		
11.	2:00 AM	4.83	7.44	133.34	149.10	310.32	263.21		
12.	3:00 AM	5.46	6.08	153.13	194.80	334.76	257.13		
13.	4:00 AM	4.90	8.93	126.82	209.84	281.73	231.18	750.2*	92.3
14.	5:00 AM	4.45	8.13	128.91	216.84	273.08	248.90		
15.	6:00 AM	4.76	5.41	139.57	209.84	299.08	245.40		
16.	7:00 AM	4.78	7.17	138.16	191.20	329.81	240.75		
17.	8:00 AM	4.69	10.04	136.77	232.45	333.90	239.36		
18.	9:00 AM	4.73	7.48	125.54	185.45	359.61	235.06		
19.	10:00 AM	5.88	10.39	136.75	189.04	319.29	244.25		
20.	11:00 AM	4.69	8.06	127.69	184.76	364.93	270.83		
21.	12:00 PM	4.56	8.00	118.51	231.91	362.41	300.48		
22.	1:00 PM	5.86	6.32	125.13	231.63	352.66	297.17		
23.	2:00 PM	4.70	7.45	148.91	230.09	347.80	284.43		
24.	3:00 PM	5.90	8.05	129.68	207.67	343.94	229.09		
Average (24 Hours)		4.648	7.11	135.41*	198.15*	343.53*	283.48*		
PEQS		5 24 hours	40 24hours	80 24hours	120 24hours	150 24hours	35 24hours	500 24hours	130 1 hour





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/IMS/FF/083 Rev. Date: 27-Jan-22 Rev. # 01

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Ref. #: PGG/LAB/2023-1198/AA

Issue date: 06-Mar-23


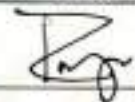
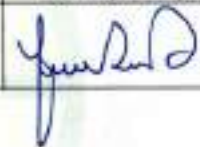
FEQS: Punjab Environmental Quality Standards

Remarks:  $PM_{2.5}$  &  $PM_{10}$  is exceeding with FEQS Limits.

Terms & Conditions:

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The report is not valid for any negotiations

Field Analyst	Chief Analyst	Laboratory Incharge
		





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/MS/IFF/063 | Rev. Date: 27-Jan-22 | Rev. # 01

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EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1198/AA

Issue date: 06-Mar-23

Name of Project:	PMDFC
Site Location:	College Road, Daska
Nature of Monitoring:	Ambient Air
Monitoring By:	Pak Green Laboratories
Monitoring Location:	Near MC water Tanks-02
Sample Coordinates:	N 32.533325 E 74.344719
Name of Sampling Person:	Mr. Arsalan
Monitoring Instrument:	AQMS
Monitoring Duration:	24 hours
Monitoring Date:	18-Feb-23 to 19-Feb-23

Results:

Sl. No.	Time	CO	NO	NO <sub>x</sub>	SO <sub>x</sub>	PM10	PM2.5	SPM	O <sub>3</sub>
		mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>		
1.	4:00 PM	4.34	7.03	51.13	64.16	277.10	199.30	462.6	103.2
2.	5:00 PM	3.37	4.79	75.45	68.78	186.50	176.90		
3.	6:00 PM	3.23	3.89	73.14	76.61	185.00	161.80		
4.	7:00 PM	4.19	2.55	64.19	57.72	240.60	161.10		
5.	8:00 PM	4.72	3.78	68.58	71.28	224.90	205.10		
6.	9:00 PM	5.06	5.42	70.83	70.94	247.10	207.72		
7.	10:00 PM	4.76	6.08	73.42	62.10	208.10	192.71		
8.	11:00 PM	4.65	4.76	68.77	68.70	209.31	177.04		
9.	12:00 AM	4.82	6.08	67.35	61.70	215.66	167.36		
10.	1:00 AM	4.55	5.12	66.95	72.60	232.31	162.23		
11.	2:00 AM	4.83	7.44	66.34	79.10	230.32	154.21		
12.	3:00 AM	5.46	6.08	66.13	64.80	209.76	148.13		
13.	4:00 AM	4.90	8.93	56.82	69.84	218.73	142.18		
14.	5:00 AM	4.45	8.13	58.91	76.84	220.08	139.90		
15.	6:00 AM	4.76	5.41	49.57	76.84	219.08	136.40		
16.	7:00 AM	4.78	7.17	48.16	71.58	219.81	131.75		
17.	8:00 AM	4.69	10.04	46.77	69.45	225.90	130.36		
18.	9:00 AM	4.73	7.48	55.54	67.45	229.61	126.06		
19.	10:00 AM	3.88	10.39	66.75	69.04	229.29	135.25		
20.	11:00 AM	4.69	8.06	57.69	59.76	236.93	161.83		
21.	12:00 PM	4.56	8.00	48.51	68.91	252.41	191.48		
22.	1:00 PM	3.86	6.12	55.13	71.63	264.46	188.17		
23.	2:00 PM	4.70	7.45	58.91	67.09	269.80	175.43		
24.	3:00 PM	3.90	8.05	59.68	69.25	255.94	120.09		
Average (24 Hours)		4.49	6.59	61.45	69.01	229.20*	162.19*		
PEQS		5 24 hours	40 24hours	80 24hours	120 24hours	150 24hours	35 24hours	500 24hours	130 1 hour







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/FP/003 Rev. Date: 27-Jan-22 Rev. # 01

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Ref. #: PGG/LAB/2023-1217/AA


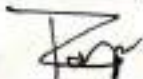

Issue date: 06-Mar-23

PEQS: Punjab Environmental Quality Standards

Remarks: Parameters with \* are exceeding with PEQS Limits.

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- The report is not valid for any negotiations.

Field Analyst	Chief Analyst	Laboratory Incharge
		





# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. # PGG/MSL/FF/005 Rev. Date: 27-July-22 Rev. # 01

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EPA Certified

## TEST REPORT

Issue date: 06-Mar-23

Ref. #: PGG/LAB/2023-1215/NL

Name of Project:	PMDFC
Site Location:	Daska
Nature of Monitoring:	Noise Level
Monitoring By:	Pak Green Laboratories
Monitoring Location:	THQ Hospital
Coordinates:	N 32.333325 E 74.344719
Name of Sampling Person:	Mr. Arsalan
Monitoring Instrument:	Noise Level Meter Land Tek SL-5868-P
Monitoring Duration:	24 hours
Monitoring Date:	22-Feb-23 to 23-Feb-23

Results:

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	1:00 PM	70.8
2.	2:00 PM	64.1
3.	3:00 PM	72.7
4.	4:00 PM	69.3
5.	5:00 PM	71.2
6.	6:00 PM	74.2
7.	7:00 PM	71.5
8.	8:00 PM	70.0
9.	9:00 PM	69.6
10.	10:00 PM	66.8
11.	11:00 PM	66.2
12.	12:00 AM	64.0
13.	1:00 AM	62.3
14.	2:00 AM	60.6
15.	3:00 AM	60.3
16.	4:00 AM	57.7
17.	5:00 AM	57.0
18.	6:00 AM	57.1
19.	7:00 AM	58.1
20.	8:00 AM	61.8
21.	9:00 AM	64.0
22.	10:00 AM	63.0
23.	11:00 AM	65.3
24.	12:00 PM	67.3
Average		65.34

End of Report



Page 1 of 2



# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc# PGG/IMS/FF/003 | Rev. Date: 27-Jan-22 | Rev: 9/01

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Ref. #: PGG/LAB/2023-1205/NL

Issue date: 06-Mar-23

PEQS: Punjab Environmental Quality Standards

Sr. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	65

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- The report is not valid for any negotiations.
- Dually calibrated instruments were used during monitoring.

Field Analyst	Chief Analyst	Laboratory Incharge
		



Page 2 of 2



# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MS/IFF/063 | Rev: Date 23-Jan-22 | Rev # 01

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EPA Certified

## TEST REPORT

Ref: # PGG/LAB/2023-1205/NL

Issue date: 06-Mar-23

Name of Project:	FMDPC
Site Location:	Daska
Nature of Monitoring:	Noise Level
Monitoring By:	Pak Green Laboratories
Monitoring Location:	Near Pansara Chowk
Coordinates:	N 32.332547 E 74.354962
Name of Sampling Person:	Mr. Arsalan
Monitoring Instrument:	Noise Level Meter Land Tek SL-5968-P
Monitoring Duration:	24 hours
Monitoring Date:	23-Feb-23 to 23-Feb-23

**Results:**

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	1:00 PM	86.1
2.	2:00 PM	79.4
3.	3:00 PM	84.0
4.	4:00 PM	84.6
5.	5:00 PM	86.5
6.	6:00 PM	89.5
7.	7:00 PM	86.8
8.	8:00 PM	85.3
9.	9:00 PM	84.9
10.	10:00 PM	82.1
11.	11:00 PM	81.5
12.	12:00 AM	79.3
13.	1:00 AM	77.6
14.	2:00 AM	75.9
15.	3:00 AM	75.6
16.	4:00 AM	73.0
17.	5:00 AM	72.3
18.	6:00 AM	72.4
19.	7:00 AM	73.4
20.	8:00 AM	77.1
21.	9:00 AM	79.3
22.	10:00 AM	80.3
23.	11:00 AM	81.8
24.	12:00 PM	82.6
Average		80.64

End of Report







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.# PGG/MS/IFF/003 | Rev. Date: 27-Jan-22 | Rev. # 01

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EPA Certificate #: PGG/LAB/2023-1204/NL


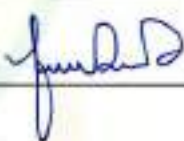
Issue date: 06-Mar-23

**FEQS: Punjab Environmental Quality Standards**

Se. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	65

**Terms & Conditions:**

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- The report is not valid for any negotiations.
- Dually calibrated instruments were used during monitoring.

Field Analyst	Chief Analyst	Laboratory Incharge
		







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/PP/055 | Rev. Date: 27-Jun-22 | Rev. # 01

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Ref. #: PGG/LAB/2023-1204/NL

## TEST REPORT

Issue date: 06-Mar-23

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	Daska
<b>Nature of Monitoring:</b>	Noise Level
<b>Monitoring By:</b>	Pak Green Laboratories
<b>Monitoring Location:</b>	#-Number Chungi
<b>Coordinates:</b>	N 32.343682 E 74.555982
<b>Name of Sampling Person:</b>	Mr. Ansalan
<b>Monitoring Instrument:</b>	Noise Level Meter Land Tek SL-5868-P
<b>Monitoring Duration:</b>	24 hours
<b>Monitoring Date:</b>	20-Feb-23 to 21-Feb-23

Results:

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	1:00 PM	80.8
2.	2:00 PM	74.1
3.	3:00 PM	82.7
4.	4:00 PM	79.3
5.	5:00 PM	81.2
6.	6:00 PM	84.2
7.	7:00 PM	81.5
8.	8:00 PM	80.9
9.	9:00 PM	79.6
10.	10:00 PM	76.8
11.	11:00 PM	76.2
12.	12:00 AM	74.0
13.	1:00 AM	72.3
14.	2:00 AM	70.6
15.	3:00 AM	70.3
16.	4:00 AM	67.7
17.	5:00 AM	67.0
18.	6:00 AM	67.1
19.	7:00 AM	68.1
20.	8:00 AM	71.8
21.	9:00 AM	74.0
22.	10:00 AM	75.0
23.	11:00 AM	76.5
24.	12:00 PM	77.3
Average		75.3

.....End of Report.....



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MS/FF/03 | Rev. Date: 27-Jan-22 | Rev # 01

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Ref #: PGG/LAB/2023-1203/NL


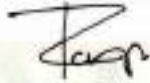
Issue date: 06-Mar-23

### PEQS: Punjab Environmental Quality Standards

Sr. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	65

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- Dually calibrated instruments were used during monitoring.

Field Analyst	Chief Analyst	Laboratory Incharge
		



Page 2 of 2



# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/MS/FF/003 Rev. Date: 27-Jan-22 Rev # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref. #: PGG/LAB/2023-1208/NL

## TEST REPORT

Issue date: 06-Mar-23

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	Larni Adda, Daska
<b>Nature of Monitoring:</b>	Noise Level
<b>Monitoring By:</b>	Pak Green Laboratories
<b>Monitoring Location:</b>	Near Clock Tower
<b>Coordinates:</b>	N 32.327256 E 74.344016
<b>Name of Sampling Person:</b>	Mr. Arsalan
<b>Monitoring Instrument:</b>	Noise Level Meter Land Tek SL-5868-P
<b>Monitoring Duration:</b>	24 hours
<b>Monitoring Date:</b>	19-Feb-23 to 20-Feb-23
<b>Results:</b>	

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	1:30 PM	66.4
2.	2:30 PM	70.2
3.	3:30 PM	61.5
4.	4:30 PM	65.2
5.	5:30 PM	69.2
6.	6:30 PM	70.7
7.	7:30 PM	69.0
8.	8:30 PM	65.5
9.	9:30 PM	62.1
10.	10:30 PM	60.1
11.	11:30 PM	59.0
12.	12:30 AM	59.6
13.	1:30 AM	58.8
14.	2:30 AM	58.4
15.	3:30 AM	57.1
16.	4:30 AM	57.2
17.	5:30 AM	54.9
18.	6:30 AM	57.5
19.	7:30 AM	54.2
20.	8:30 AM	57.1
21.	9:30 AM	61.0
22.	10:30 AM	64.1
23.	11:30 AM	62.8
24.	12:30 PM	69.1
<b>Average</b>		62.11

End of Report



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/ML/FF/001 | Rev. Date: 27-Jan-22 | Rev. #: 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

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Ref. #: PGG/LAB/2023-1202/NL


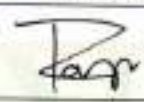
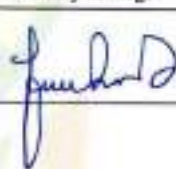
Issue date: 06-Mar-23

FEQS: Punjab Environmental Quality Standards

Sr. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	68

**Terms & Conditions:**

- Analysis was conducted on the request of project proponent for his own use/FEQS Compliance.
- Report cannot be used regarding compliance of any complaint, EPO or any other court case.
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- The report is not valid for any negotiations.
- Dually calibrated instruments were used during monitoring.

Field Analyst	Chief Analyst	Laboratory Incharge
		



Page 1 of 2



# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MSLFF/003 Rev. Date: 27-Jan-23 Rev. #: 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Issue date: 06-Mar-23

Ref. #: PGG/LAB/2023-1202/NL

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	College Road, Daska
<b>Nature of Monitoring:</b>	Noise Level
<b>Monitoring By:</b>	Pak Green Laboratories
<b>Monitoring Location:</b>	Near MC water Tanks-02
<b>Sample Coordinates:</b>	N 32.333325 E 74.344719
<b>Name of Sampling Person:</b>	Mr. Arsalan
<b>Monitoring Instrument:</b>	Noise Level Meter Land Tek SL-5668-P
<b>Monitoring Duration:</b>	24 hours
<b>Monitoring Date:</b>	18-Feb-23 to 19-Feb-23
<b>Results:</b>	

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	2:00 PM	67.3
2.	3:00 PM	71.1
3.	4:00 PM	62.4
4.	5:00 PM	66.1
5.	6:00 PM	70.1
6.	7:00 PM	71.6
7.	8:00 PM	69.9
8.	9:00 PM	66.4
9.	10:00 PM	63.0
10.	11:00 PM	61.0
11.	12:00 AM	59.9
12.	1:00 AM	60.5
13.	2:00 AM	59.7
14.	3:00 AM	59.3
15.	4:00 AM	58.0
16.	5:00 AM	58.1
17.	6:00 AM	55.8
18.	7:00 AM	58.4
19.	8:00 AM	55.1
20.	9:00 AM	58.0
21.	10:00 AM	61.9
22.	11:00 AM	65.0
23.	12:00 PM	63.7
24.	1:00 PM	70.0
<b>Average</b>		63.01

End of Report



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc# PGG/MS/FF053 Rev. Date: 27-Jan-22 | Rev: #01

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Ref. #: PGG/LAB/2023-1205/NL


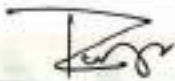
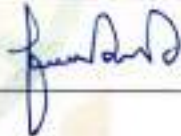
Issue date: 06-Mar-23

**PEQS: Punjab Environmental Quality Standards**

Sr. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	65

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- Dually calibrated instruments were used during monitoring.

Field Analyst	Chief Analyst	Laboratory Incharge
		





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[Doc # PGG/MS/003] [Rev. Data: 27-Jan-22] [Rev. # 01]

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EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1205/NL

Issue date: 06-Mar-23

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	Daska
<b>Nature of Monitoring:</b>	Noise Level
<b>Monitoring By:</b>	Pak Green Laboratories
<b>Monitoring Location:</b>	Near Fawara Chowk
<b>Coordinates:</b>	N 32.532547 E 74.354962
<b>Name of Sampling Person:</b>	Mr. Arsalan
<b>Monitoring Instrument:</b>	Noise Level Meter Land Tek SL-5868-P
<b>Monitoring Duration:</b>	24 hours
<b>Monitoring Date:</b>	21-Feb-23 to 22-Feb-23

**Results:**

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	1:00 PM	86.1
2.	2:00 PM	79.4
3.	3:00 PM	88.0
4.	4:00 PM	84.6
5.	5:00 PM	80.5
6.	6:00 PM	89.5
7.	7:00 PM	86.8
8.	8:00 PM	85.3
9.	9:00 PM	84.9
10.	10:00 PM	82.1
11.	11:00 PM	81.5
12.	12:00 AM	79.3
13.	1:00 AM	77.6
14.	2:00 AM	75.9
15.	3:00 AM	75.6
16.	4:00 AM	73.0
17.	5:00 AM	72.3
18.	6:00 AM	72.4
19.	7:00 AM	73.4
20.	8:00 AM	77.1
21.	9:00 AM	79.3
22.	10:00 AM	80.3
23.	11:00 AM	81.8
24.	12:00 PM	82.6
<b>Average</b>		<b>80.64</b>

End of Report







# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc #: PGG/MS/FF/003 | Rev: Date: 27-Jan-22 | Rev: 01

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Ref. #: PGG/LAB/2023-1204/NL


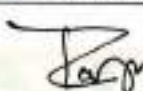
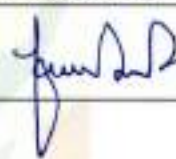
Issue date: 06-Mar-23

**PEQS: Punjab Environmental Quality Standards**

Sr. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	65

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Field Analyst	Chief Analyst	Laboratory Incharge
		



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/FF/063 | Rev. Date: 27-Jan-22 | Rev. # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1204/NL

Issue date: 06-Mar-23

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	Daska
<b>Nature of Monitoring:</b>	Noise Level
<b>Monitoring By:</b>	Pak Green Laboratories
<b>Monitoring Location:</b>	S-Number Chungi
<b>Coordinates:</b>	N 32.343682 E 74.353982
<b>Name of Sampling Person:</b>	Mr. Arsalan
<b>Monitoring Instrument:</b>	Noise Level Meter Land Tek SL-5868-P
<b>Monitoring Duration:</b>	24 hours
<b>Monitoring Date:</b>	20-Feb-23 to 21-Feb-23
<b>Results:</b>	

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	1:00 PM	80.8
2.	2:00 PM	74.1
3.	3:00 PM	82.7
4.	4:00 PM	79.3
5.	5:00 PM	81.2
6.	6:00 PM	84.2
7.	7:00 PM	81.5
8.	8:00 PM	80.0
9.	9:00 PM	79.6
10.	10:00 PM	76.8
11.	11:00 PM	76.2
12.	12:00 AM	74.0
13.	1:00 AM	72.3
14.	2:00 AM	70.6
15.	3:00 AM	70.3
16.	4:00 AM	67.7
17.	5:00 AM	67.0
18.	6:00 AM	67.1
19.	7:00 AM	68.1
20.	8:00 AM	71.8
21.	9:00 AM	74.0
22.	10:00 AM	75.0
23.	11:00 AM	76.5
24.	12:00 PM	77.3
<b>Average</b>		<b>75.3</b>

End of Report



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab. ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc. #: PGG/MS/FF/003 | Rev. Date: 27-Jan-22 | Rev. 9/01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

Ref. #: PGG/LAB/2023-1203/NL

Issue date: 06-Mar-23

**PDQS: Punjab Environmental Quality Standards**

Sr. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	65

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Field Analyst	Chief Analyst	Laboratory Incharge
		



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc # PGG/MS/FF/003 Rev. Date 27-Jan-22 Rev # 11

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EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1205/NL

Issue date: 06-Mar-23

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	Larri Adla, Daska
<b>Nature of Monitoring:</b>	Noise Level
<b>Monitoring By:</b>	Pak Green Laboratories
<b>Monitoring Location:</b>	Near Clock Tower
<b>Coordinates:</b>	N 32.327256 E 74.344016
<b>Name of Sampling Person:</b>	Mr. Arsalan
<b>Monitoring Instrument:</b>	Noise Level Meter Land Tek SL-5868-P
<b>Monitoring Duration:</b>	24 hours
<b>Monitoring Date:</b>	19-Feb-23 to 20-Feb-23
<b>Results:</b>	

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	1:30 PM	66.4
2.	2:30 PM	70.2
3.	3:30 PM	61.5
4.	4:30 PM	65.2
5.	5:30 PM	69.2
6.	6:30 PM	70.7
7.	7:30 PM	69.0
8.	8:30 PM	65.5
9.	9:30 PM	62.1
10.	10:30 PM	60.1
11.	11:30 PM	59.0
12.	12:30 AM	59.6
13.	1:30 AM	58.8
14.	2:30 AM	58.4
15.	3:30 AM	57.1
16.	4:30 AM	57.2
17.	5:30 AM	54.9
18.	6:30 AM	57.5
19.	7:30 AM	54.2
20.	8:30 AM	57.1
21.	9:30 AM	61.0
22.	10:30 AM	64.1
23.	11:30 AM	62.8
24.	12:30 PM	69.1
<b>Average</b>		62.11

End of Report



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc# PGG/MS-EP/063 Rev. Date: 27-Jan-22 Rev # 01

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Ref #: PGG/LAB/2023-1202/NL

Issue date: 06-Mar-23

### PEQS: Punjab Environmental Quality Standards

Sl. No.	Category of area/Zone	Units	Day Time	Night Time
1.	Industrial Area (C)	dB (A) Leq	75	65

### Terms & Conditions:

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- Daily calibrated instruments were used during monitoring.

Field Analyst	Chief Analyst	Laboratory Incharge
		



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# PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Doc.#: PGG/MS/F/R/03 | Rev. Date: 27-Jan-22 | Rev. # 01

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

EPA Certified

## TEST REPORT

Ref. #: PGG/LAB/2023-1202/NL

Issue date: 06-Mar-23

<b>Name of Project:</b>	PMDFC
<b>Site Location:</b>	College Road, Daska
<b>Nature of Monitoring:</b>	Noise Level
<b>Monitoring By:</b>	Pak Green Laboratories
<b>Monitoring Location:</b>	Near MC water Tanki-02
<b>Sample Coordinates:</b>	N 32.333323 E 74.344719
<b>Name of Sampling Person:</b>	Mr. Asadun
<b>Monitoring Instrument:</b>	Noise Level Meter Land Tek SL-5868-P
<b>Monitoring Duration:</b>	24 hours
<b>Monitoring Date:</b>	18-Feb-23 to 19-Feb-23
<b>Results:</b>	

Sr. No.	Time	Equivalent Noise
		dB (A)
1.	2:00 PM	67.3
2.	3:00 PM	71.1
3.	4:00 PM	62.4
4.	5:00 PM	66.1
5.	6:00 PM	70.1
6.	7:00 PM	71.6
7.	8:00 PM	69.9
8.	9:00 PM	66.4
9.	10:00 PM	63.0
10.	11:00 PM	61.0
11.	12:00 AM	59.9
12.	1:00 AM	60.5
13.	2:00 AM	59.7
14.	3:00 AM	59.3
15.	4:00 AM	58.0
16.	5:00 AM	58.1
17.	6:00 AM	55.8
18.	7:00 AM	58.4
19.	8:00 AM	55.1
20.	9:00 AM	58.0
21.	10:00 AM	61.9
22.	11:00 AM	65.0
23.	12:00 PM	63.7
24.	1:00 PM	70.0
<b>Average</b>		<b>63.01</b>

End of Report







**Annexure G: Personal Protective Equipment according to Hazard**

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.
	Oxygen deficiency	Portable or supplied air (fixed lines). On-site rescue equipment.
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits, aprons etc. of appropriate materials.

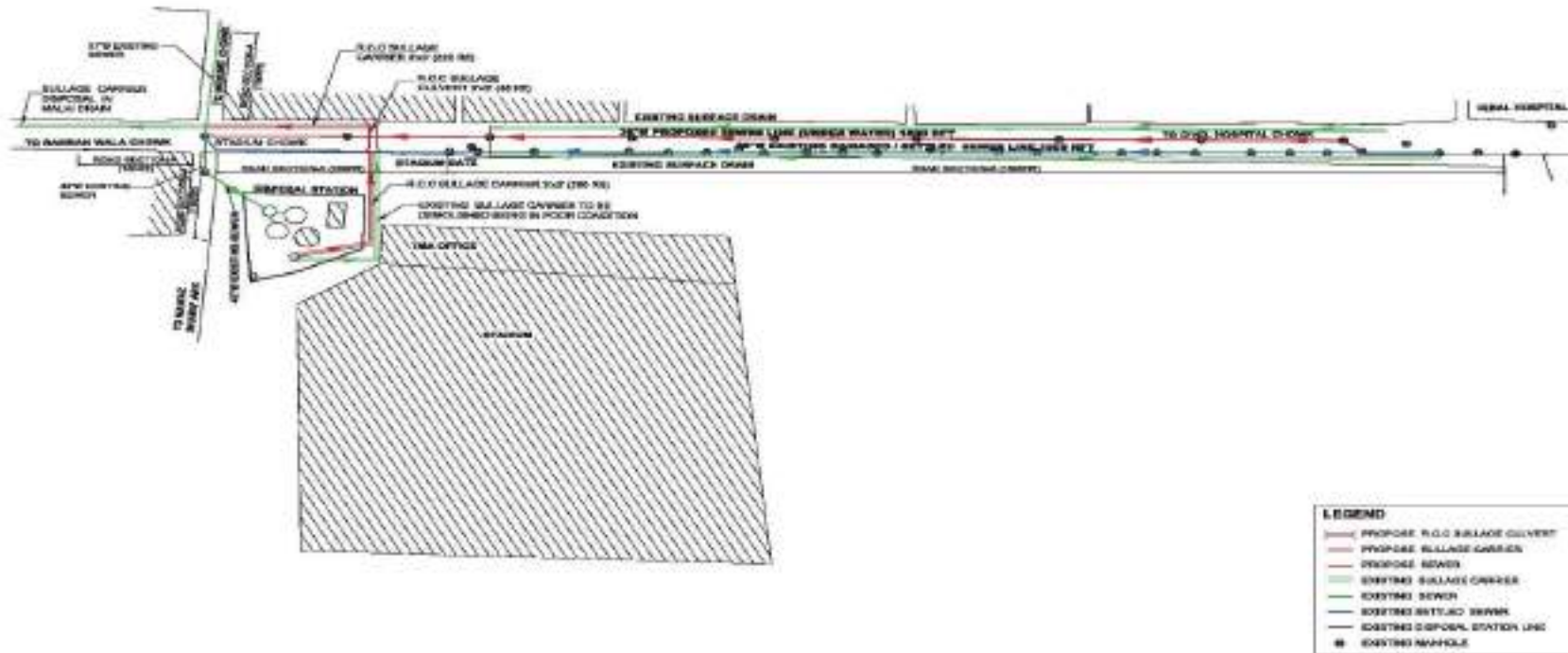


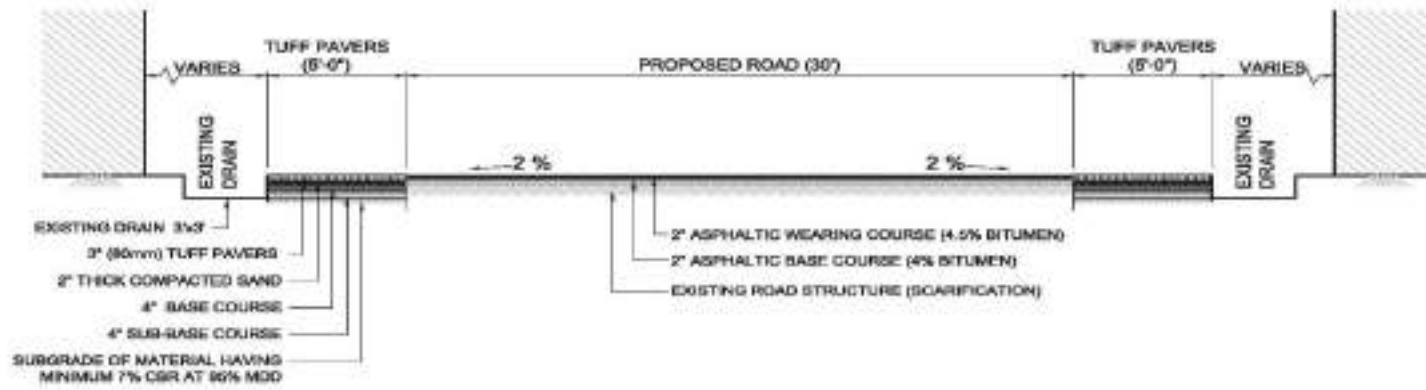
**Annexure H:List of participants in Consultation**

Sr. No.	Name	Cell No.
1	Haji Adil	0303-2500162
2	Asim Ali	0300-6196221
3	Mirza Iqbal	03473438894
4	Khadim Rasool	03338616603
5	Muhammad Pervaiz	03015229967
6	Muzamil Mushtaq	03218614411
7	Muhammad. Itifaq	03456831541
8	Tasneem Bhatti	03034226821
9	Saleem Bhatti	03034226821
10	Qamar Javed	03006460251
11	Rafaqat Ali	03476257228

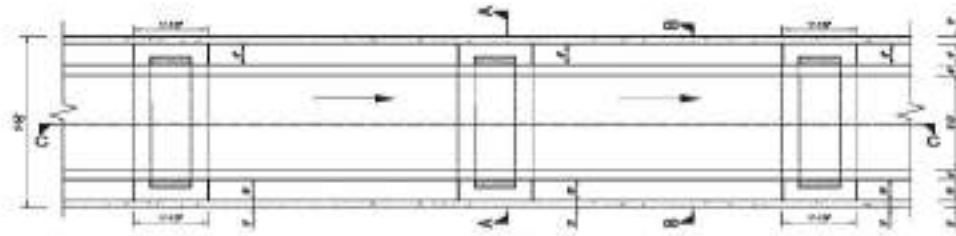
Sr.No	Name	Designation	Department	Cell No
1	Muhammad. Usman	SDO	Irrigation Department	03366464584
2	Mr. Sajjad Hussain	Sub-Engineer	Irrigation Department	03007164534
3	Mr. Umer Shehzad	EMT	Rescue 1122	03471139178
4	Syed Waqar Faryad	FDR	Rescue 1122	03034454650
5	Mr. Waseem Haider	EMT	Rescue 1122	03034339579
6	Mr. Uzair	MO(I)	MC Daska	03223322164

Annexure I: Drawings

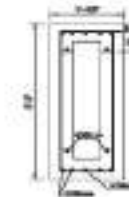




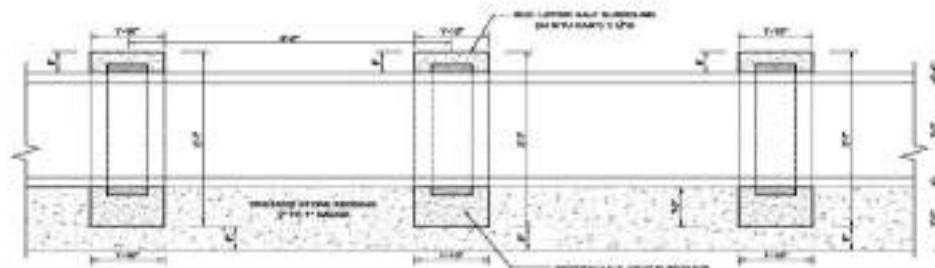
**STADIUM ROAD**  
**SECTION-B (1500 Rft)**



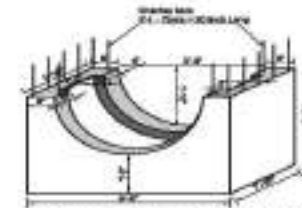
**PLAN OF 36" ID RCC SEWER UNDER SSWL**



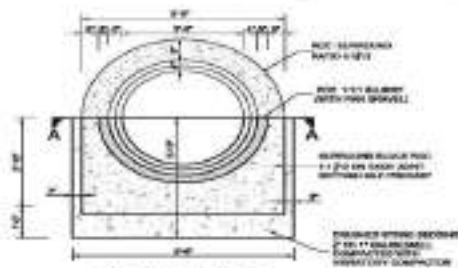
**PLAN OF REINFORCEMENT OF R.C.C. PRECAST BLOCK**



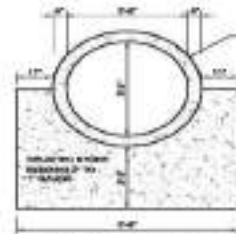
**X-SECTION AT G.G.**



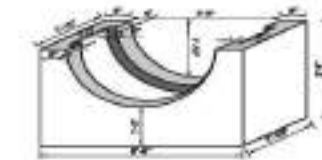
**RCC (1:1:3) PRECAST BLOCK FOR 36" ID RCC SEWER UNDER WATER**



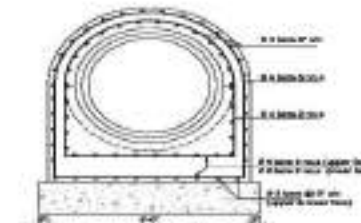
**X-SECTION AT A.A**



**X-SECTION AT B.B**

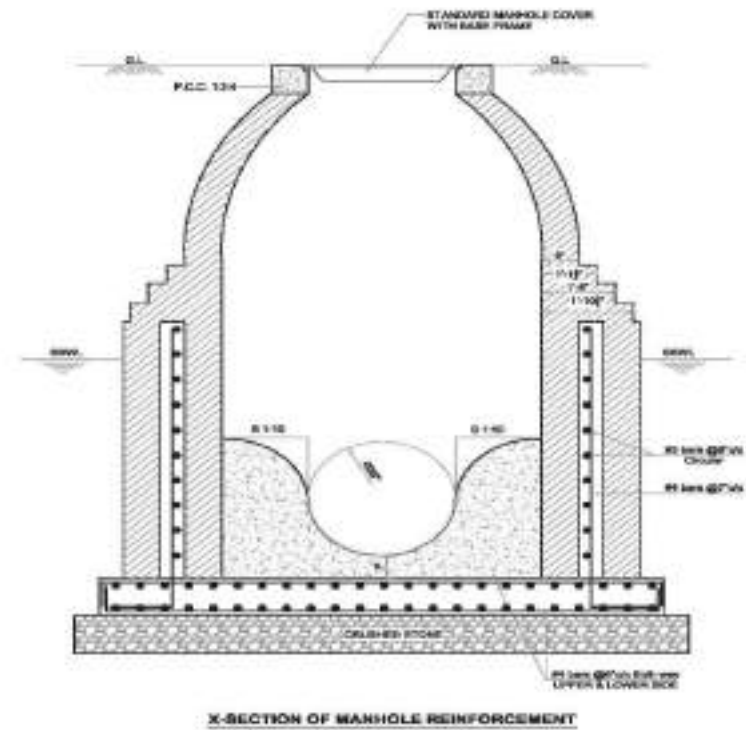
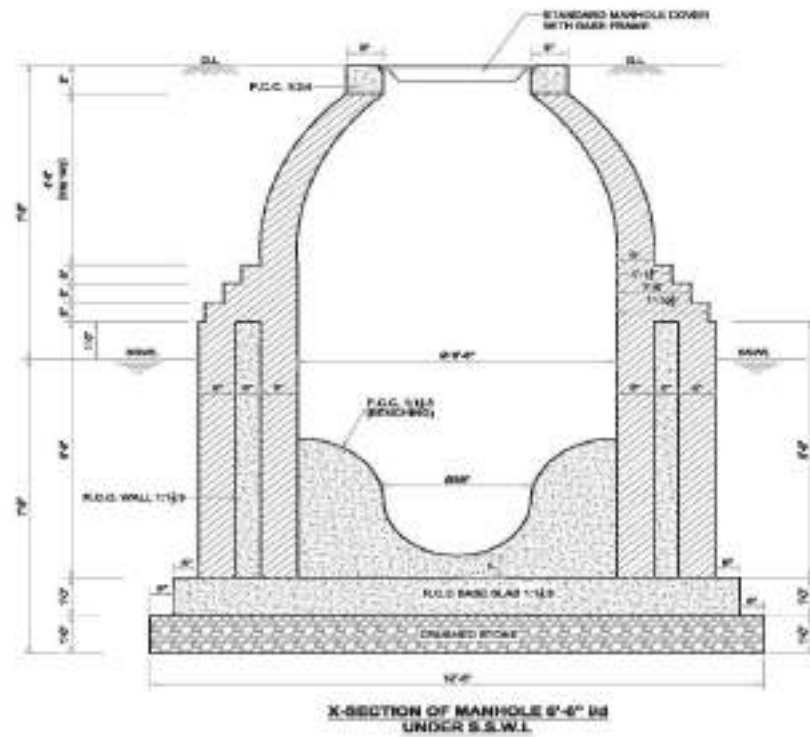


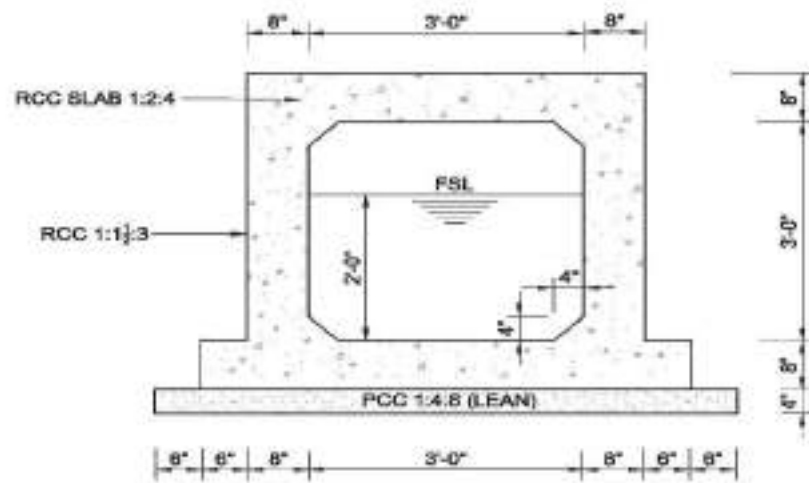
**RCC (1:1:3) PRECAST BLOCK FOR 36" ID RCC SEWER UNDER WATER**



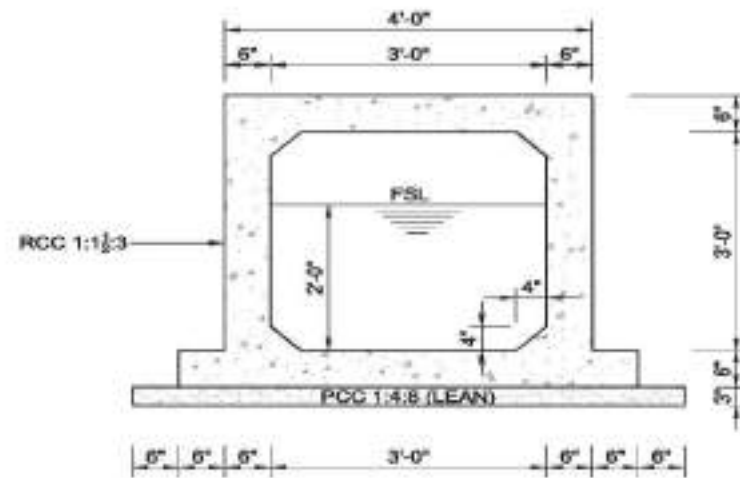
**X-SECTION AT A.A Reinforcement Detail A-A**







**X-SECTION OF RCC ON SULLAGE CARRIER CULVERT**



**X-SECTION OF RCC SULLAGE CARRIER**