



REQUEST FOR PROPOSAL (RFP)
FOR
FRONT END COLLECTION AND DISPOSAL OF
MUNICIPAL SOLID WASTE FOR ZONE KORANGI (DMC
KORANGI AREA) KARACHI, SINDH, PAKISTAN.



241

25250

Host

7/2/15

WP

Executive Director (Operation-I)
Sindh Solid Waste Management Board
(SSWMB)
Govt. of Sindh



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Preamble

Disclaimer

Though adequate care has been taken while preparing this document and information provided therein, but it is advised that the bidder must satisfy himself for the corrections and sufficiency of the Data. Information on any discrepancy should be intimated to this office immediately. If no information is received from any of the bidders within the time of submission date, it shall be presumed that this document is correct and complete in all respects. If considered necessary in the interest of work, Solid Waste Management Board Sindh (SSWMB) reserves the rights to modify, amend or supplement this document.

Section-I

Preamble

Section-I**1.1. Purpose of Request for Proposal (RFP)**

The purpose of this RFP is to invite all eligible, reputed and experienced waste management firms or individuals whether National, International or in consortiums/ joint ventures in accordance with relevant provisions of PEC by-laws and SPPRA Rules and Regulations to submit their technical/operational and financial proposals for sweeping, collection/Transportation and disposal of MSW of Zone Korangi (District Municipal Corporation Korangi Karachi Area under Single Stage Two Envelope procedure, open International competitive bidding method of Sindh Public Procurement Rules 2010 (amended 2013).

1.2. Scope of Work / Assignments.

1. Door to door collection of garbage & revamping of entire bin system.
2. Mechanical or manual Sweeping of roads, streets, lanes, footpaths, medians, green belts and open spaces.
3. Washing of specified important major roads and special areas as and when required on special occasions.
4. Lifting and transportation MSW from community dustbins sites & collection points to nearby designated Garbage Transfer Station (GTS).

1.3. Brief Description of DMC Korangi

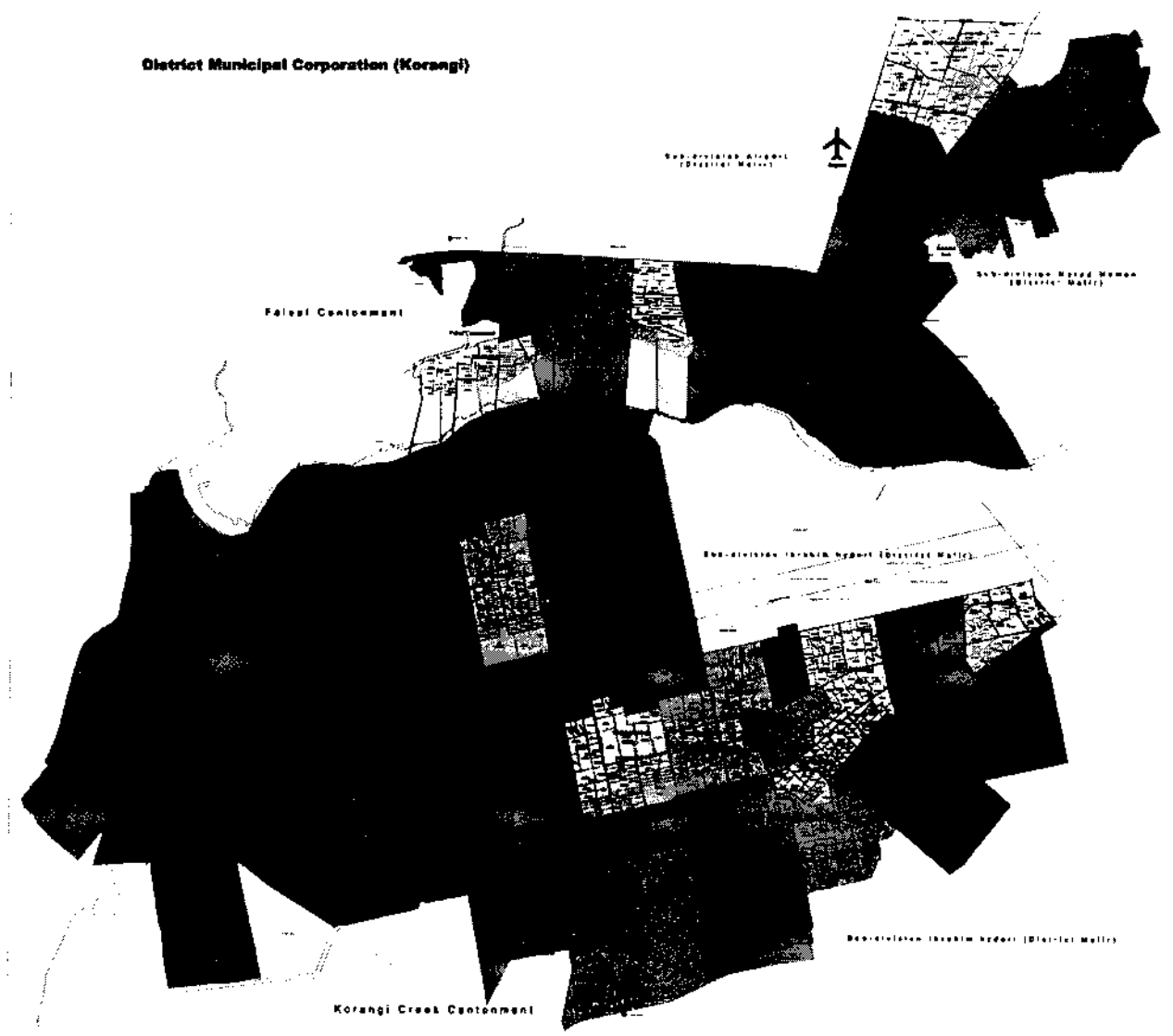
District Municipal Corporation (Korangi) is one of the Six DMCs of Karachi City. DMC Korangi comprises of the following zones:

- a) Korangi Zone.
- b) Shah Faisal Zone
- c) Landhi Zone.

DMC Korangi statistics at a glance:

Total No of UC	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW Generation Per Day (Ton)	MSW Generation Per Year (Ton)	Existing Solid Waste Collection and Transportation Vehicles	Available Human Resources (Staff)		Details at Annexure
						Office	Field	
28	3528140	69.40	1555.34	567699	95	64	1695	1-15

1.4. Map of DMC Korangi



1.5. Definition & Interpretation

- a. "Agreement" means agreement signed between the parties (SSWMB and Successful Bidder).
- b. "Client" means Sindh Solid Waste Management Board. The Procuring Agency.
- c. "Contractor" mean the bidder any entity or person, firms, company, joint venture / consortium that may provide or provides the work and services under the agreement.
- d. "Days" mean calendar days
- e. "Years" mean calendar year
- f. "RFP" means Request for Proposal prepared by the client.
- g. "Proposal" means the technical / operational proposal and financial proposal.
- h. "W&S" the mean the work and services to be performed by the contractor pursuant to the agreement.
- i. "Terms of Reference (TOR)" means the document in RFP which explains the objective, scope of work, activities, task to be performed, respective responsibilities of client and contractor and expected results and deliverables of assignments.
- j. "Bidder & Tenderer" mean any person or persons, contractor, firms, consortium of firms, joint venture submitting the bid or tender.
- k. the word "Tender" is synonymous with "bid" and the work tender document with bidding document and proposal document
- l. "contract price" means the sum stated in the letter of Acceptance/Award as payable to contractor for execution, performance and completion of works and services according to the scope of work
- m. "Client representative" means any representative of client appointed from time to time.
- n. "works" means all services to be provided and work to be done by the contractor under the contract.

1.6. Abbreviations

- a) DMC = District Municipal Corporation
- b) EOBI = Employees Old Age Benefits Institution
- c) EPA = Environmental Protection Agency
- d) MSW = Municipal Solid Waste
- e) PA = Procuring Agency i.e. Sindh Solid Waste Management Board
- f) SPPRA = Sindh Public Procurement Regulatory Authority
- g) SSWMB = Sindh Solid Waste Management Board
- h) SWM = Solid Waste Management
- i) UCs = Union Councils
- j) \$ = US-Dollars – Currency of United State of America.

1.7. Sections of RFP/Bidding Documents

All Section of RFP, Forms and Annexure are integral part of RFP and shall be considered as tender / bidding documents.

1.8. Procuring Agency Rights to cancel any or all proposal / tender.

The SSWMB is not bound to accept any proposal and reserved the rights to annual the selection process at any time prior to agreement or award of the contract without thereby incurring any liability to the bidder. The applicant will not be entitled to make any claim from Procuring Agency due to cancellation of the tender.

Section II

Instructions to Contractor/Bidder

Instructions to Contractor/Bidder

2.1. Information Related to Procuring Agency

Name : Sindh Solid Waste Management Board.
Address : Bungalow No.D-47, Block-2, Clifton, Karachi, Pakistan.
Phone No. : +92 21 3537 2982-4 and +92 21 35
Fax No. : +92 21 35863029
e-mail : info@sswmb.gos.pk
Website : www.sswmb.gos.pk

2.2. Language of Proposal and Correspondence

All documents/ proposal and respective correspondence shall be made / prepared in English Language.

2.3. Method of Procurement.

Single Stage Two Envelope method - International competitive bidding under Sindh Public Procurement Rules 2010 (Amended 2013).

2.4. Period of Contract.

Seven (07) Years after issuance of Work Order, extendable for further Three (03) Year based on mutual written consent of contractor and client which shall be on the basis of satisfactory performance of the contractor and on same terms and conditions.

2.5. Pre-Proposal Meeting/Pre-Bid Meeting

Pre-proposal meeting will be held on 1st October 2015 at 1500 hours at the office of the SSWMB.

2.6. Clarification, Modification of Bidding Document

Contractor/bidder may request a clarification of RFP Documents not later than 07 days before the proposal submission date. Any request for clarification must be sent in writing to the Procuring Agency address. The procuring agency will respond in writing including explanation to the queries to all bidders/contractors. Should the procuring agency deem it necessary to amend the RFP as a result of a clarification, it shall be done according to the concerned clause mentioned in this section.

2.7. Visit of the Area of Service/site visit.

- a. The bidder are advised to visit the area of service/site of works and its surroundings and obtained all information that may necessary for preparing their proposal/bid, and to acquaint themselves with the area, the existing system, the vehicles, offices, workshops and workforce of the existing system of Solid Waste Management of District (Korangi), however, the contractors / bidders can do so at their own risk and cost.
- b. The bidders and any of their personnel or agents will be granted permission by the procuring agency to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the bidders, their personnel and agents, will release and indemnify the procuring agency, 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.
- c. All the interested firms/bidders are advised to carried out a comprehensive survey of the Zone of the project area and come up with a very practicable strategy and project proposal in order to minimize complications during implementation.

2.8. Utilization/Transfer of Existing Workforce of SWM DMC Korangi (mandatory)

- a) It is mandatory upon the contractor/bidder to utilize the transferred staff out of the existing SWM workforce of DMC Korangi under this contract. The proposal must include the utilization plan for existing workforce.
- b) Zone wise detailed of staff, their grade wise salaries and cadre of service are given in Annexure 1-18. However, it should be clear that around 1000 employees (plus minus 10%) would be transferred on detailment basis to the contractor. The approximate salary paid to them by the DMC (Korangi) would be around Pak Rs. 300 million. The bidder must keep this in mind and give a proportionate discount in the Tipping Fee proposed.
- c) The Contractor/bidder however may be allowed to select the workforce (Field & Office Staff) on the basis of fitness and willingness basis.
- d) The workforce will be provided to the contractor/bidder on detailment basis by the procuring agency for the period of contract.
- e) The contractor/bidder will pay 25% (Twenty Five Percent) detailment allowance on their running basic pay directly to the workforce provided to the contractor on the basis of their performance.

- f) The detailment allowance must be paid to each individual through his or her bank account only and not through open cheque, cross cheque or in the form of cash amount. The details of such allowance so paid must be provided to the procuring agency mentioning the Name, Father's/Husband's Name, Employee Number, Amount of allowance and his/her performance at the work.
- g) The Detailment allowance shall be calculated on the basis of Running Basic Salary of the individual worker provided to contractor.
- h) The contractor will provide 48 Nos. of soaps and 24 Nos. of dusters per year to the individual workforce of grade 01 to 07 against an acknowledgement receipt, copy of which to be provided to the procuring agency.
- i) Casual Leave as admissible under the Sindh Local Council Leave Rules will be granted to the individuals on the request in writing by any individual workforce. Details of the same shall be provided to the procuring agency in writing.
- j) The contractor/bidder shall pay one honorarium of Rs.1,500/- to the individual of workforce of grade 01 & 02 of service cadre of Sanitary Workers, Muqaddam and Motor Coolie and one honorarium of Rs.2,000/- to the individual workforce of grade 05 to 07 of service cadre i.e. Drivers and Heavy Drivers. The honorarium is to be paid on the occasion of Eid-ul-Azha.
- k) A committee will be constituted by SSWMB comprising of the officers of SSWMB and nominated persons of successful bidder for the purpose of redressal of any dispute that arises between contractor/bidder and the workforce.
- l) The cases of Earned Leave or Medical Leave requested by any individual of workforce must be sent immediately to the committee or authorized officer for necessary action. The committee or authorized officer will decide that either detailment of such individual is cancelled or the leave is granted as per the Sindh Local Council Leave Rules. The decision of the committee shall be final and conclusive.
- m) The Contractor may reject any or some individual workforce if contractor considers that they are unwilling to work with the contractor or if not satisfied with their performance. In case that workforce made available to contractor carries out strikes contrary to law, the contractor shall immediately inform the procuring agency of this act of misconduct by the workforce. The committee formulated by the SSWMB for the purpose to resolve issues of workforce will take appropriate action in this regard and the decision of the committee shall be conclusive and binding on the workforce and the contractor.

- n) The lien of workforce so provided to the contractor on detailment shall however, remain with the Parent Department or Procuring agency.
- o) The contractor must account for the costs incurred on the benefits and allowances of the workforce provided to the contractor in their financial proposal/bid cost in the manner described under the contract document or as decided by the Procuring agency before the final agreement.
- p) The contractor shall recruit and provide staff and workers in addition to the workforce of DMC Korangi, to fulfill the requirements to take up the scope of work satisfactory as mentioned in the contract/RFP Document.
- q) For further detail regarding utilization of existing workforce of DMC Korangi reference be made to technical specification of RFP document

2.9. Utilization of Existing Solid Waste Collection and Transportation Vehicles of DMC Korangi (Optional)

- i. The Contractor may inspect the existing fleet that DMC Korangi could spare and decide to take over vehicles out of it.
- ii. A Joint Committee will assess the value of the vehicles and that amount will then be recovered in equal installments during first three years of the contract and adjusted from the monthly bill of the tipping fees.
- iii. In addition to these 20% vehicles from DMC (Korangi), the contractor may acquire 10% of the total vehicles on lease but all vehicles must be revamped and improved in an environment friendly manner by the contractor at his own expense.
- iv. The contractor / bidder shall however, ensure balance 70% of the fleet of vehicles for new standard solid waste machinery purchased and owned by the contractor in view of the requirement as suggested in this document.

2.10. Utilization of Existing Facilities i.e. Workshop, Offices of DMC Korangi

The contractor may utilize existing offices in the area of respective UCs of the Zone and the central workshop of DMC Korangi, however this facility shall be provided to the contractor on the basis and such terms and conditions as defined and set out in the contract agreement

The contractor shall be responsible to keep these offices, workshop handed over to them in neat, clean and well-maintained conditions throughout the contract period.

No major addition, alteration in existing structure shall be allowed. The contractor shall be responsible for the payments of all utility bills in

respect of these offices and workshop on due dates and a copy of the same shall be submitted to procuring agency.

Area, Location of workshop and offices is mentioned in the annexures.

2.11. Amendments through Addendums

At any time before submission of proposal the procuring agency (SSWMB) may amend the RFP by issuing an addendum(s) in writing and also hoisting it on SSWMB as well as SPPRA website. The addendum(s) shall also be sent to all contractor / bidders who purchased the RFP from the office of SSWMB or attended the pre-bid meeting on the subject tender. The contractors shall acknowledge receipt of all addendums issued by the procuring agency. This addendum(s) shall be binding on all bidders. To give reasonable time to contractor to take in to account these amendments in their proposal, the SSWMB may, if the amendment is substantial, extend the deadline for submission of proposal. Amendment(s) so made shall be binding on the bidders and will be part of this document.

2.12. Cancellation of Tender before Tender Time

Cancellation of tender/proposal before submission date & time if the matter are found in the tender document which are not possible to be corrected or in case where procuring agency find if necessary, the tender may be cancelled before last hours of submission of tender. If tender is cancelled all submitted tender documents shall be deemed to be rejected and returned to the contractors without being opened. The bidder/contractor will not be entitled to make any claim from procuring agency due to cancellation of tender.

2.13. Proposal Preparation /Cost of Bidding.

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

2.14. Bid submitted by a Joint Venture/Consortium.

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

- (a) one of the joint venture/consortium partners, lead firm 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/consortium partners/firms;
- (b) the bid, and in case of a successful bid, the Form of Contract Agreement shall be signed by the authorized partner so as to be legally binding on all partners/firms;

- (c) the firm/partner-in-charge shall always be duly authorized to deal with the procuring agency regarding all matters related with and/or incidental to the execution of works as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture/consortium;
- (d) all partners of the joint venture/consortium 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 (a) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid);
- (e) a copy of the agreement entered into by the joint venture/consortium partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the contract and can give valid receipts on behalf of the joint venture/consortium, the proportionate participation of the several firms forming the joint venture/consortium, and any other information necessary to permit a full appraisal of its functioning. No amendments / modifications whatsoever in the joint venture/consortium agreement shall be agreed to between the joint venture/consortium partners without prior written consent of the procuring agency;
- (f) submission of an alternative Letter of Intent to execute a Joint Venture/consortium Agreement shall be mandatory.
- (g) Bidders shall also submit proposals of work methods and schedule, in sufficient detail to demonstrate the adequacy of the bidders' proposals to meet the technical specifications and the timely completion as per schedule each day, each month and every year of the contract till completion of the contract successfully

2.15. Place, Date, Time and Manner of Submission of Tender/Bid Document/RFP

The bidder/contractors are required to submit their proposal/bid at the office of Sindh Solid Waste Management Board not later than 30th October 2015 at 1500 hours PST.

- i) The Contractors/bidders must submit their proposal/bid under **Single Stage Two Envelope Procedure** of SPP Rules 2010 (amended 2013). Proposal Bid shall comprise a single package containing two separate sealed Envelopes. Each Envelope shall contain SEPARATELY the Technical proposal and the Financial proposal.

- ii) The inner envelopes shall be marked as **Technical proposal** and **Financial Proposal** (as the case may be) in bold and legible letters.
- iii) The package (Outer Envelope) containing both the envelopes shall be marked as proposal for **Front End Collection and Disposal of Municipal Solid Waste for DMC Korangi, Karachi** in Bold and legible letters.
- iv) The package (outer Envelope) shall also be marked the submission address of the Proposal/Bid and Name, Address of Contractor/Bidder.
- v) The Package (Outer Envelope) shall be sealed, signed and stamped by the contractor or his authorized representative.
- vi) Once submitted, the tender shall not be retrieved or changed for any reason whatsoever.
- vii) Proposal/Bid shall be submitted by hand or may be sent by registered airmail post / courier service. Proposals/ bids that are not submitted / received until due date and time of submission of proposals/bid will not be considered.
- viii) In no case the Procurement Agency shall be responsible for non-receipt or late receipt of the bid submitted through registered mail or courier or any other means.
- ix) Where delivery of the bid is made by registered mail or courier, and the contractor/bidder desires to receive an acknowledgement of receipt of such bid, he shall make a request for such acknowledgement in a separate letter attached to the package (outer Envelope) but will not be a part of sealed Envelope.
- x) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by representative.
- xi) Bid submitted through telegraph, telex, fax or e-mail will not be considered.
- xii) Each page of the proposal/bid document must be signed by the contractor/bidder. In case the proposal/bid document is signed by the authorized representative of the contractor then, the authorization shall be in the form of written power of a attorney accompanying the proposal or in any other form demonstrating that the representative has been duly authorized to sign.
- xiii) The procuring agency at its discretion, extend the deadline for submission of bids/proposals by issuing an addendum notified in newspaper or website of SSWMB and SPPRA. All rights and

obligations of procuring agency and the contractor will thereafter be subject to the deadline as extended.

- xiv) The Technical/operational proposal shall not include any financial information. A Technical proposal containing financial information may be declared non responsive.

The technical proposal shall provide the information as indicated in the following Para.

- a) A brief introduction of contractor's organization and an outline of recent experience of contractor (each partner in case of joint venture) on assignments of similar nature.
- b) A description of the approach and methodology for performing the assignment covering the following subject, technical approach, methodology, organization and staffing.
- c) The list of the proposed professional, staff team by area of expertise, the position that would be assigned to each staff members and their tasks.
- d) While preparing the technical proposal, contractor must give particular attention to the following:
If the contractor considers that it may enhance its expertise for technical operational management and monitoring parts for the assignment to accomplish in a best-suited way and in accordance to the requirement of RFP Document he may associate with other contractors/firms. Any such association must clearly indicate in the technical proposal. In case of joint venture, all partners shall be jointly and severally liable, and shall indicate the lead firm of joint venture.
- e) Alternative professional staff shall not be proposed and only one Curriculum Vitae (CV) may be submitted for each position.
- f) Comments and suggestions may be given on the terms of reference including workable suggestions that could improve the quality, effectiveness of assignments and on requirement of the DMC (Korangi) workforce, machinery and facilities including administrative support, office, workshop and rehabilitation scavengers and any other. However, client is not bound to consider the suggestions as a whole or partially or otherwise as indicated in RFP Document.

- xv) The financial proposal shall include all cost

- a) Associated with scope and performance of work, management and operational cost, remuneration for staff monitoring system

and other incidental charges business taxes, income tax, local & provincial taxes, professional taxes, duties, fees, that may levied according to the laws and regulation in being prior to the closing date of submission of proposal (or levied afterwards) and taxes and fees on the equipment, and machinery required and on services performed under this contract. Nothing in the contract shall relieve the contractor/bidder from his responsibilities to pay taxes that may be levied on the profit made to him in respect to contract.

- b) The financial proposal shall contain NO OVERWRITING, CORRECTION and CUTTINGS, the contractor or his authorized representative who signed the proposal must initial such corrections, overwriting and cuttings.
- c) The contractor/bidder is required to quote the cost of every work item and total cost of works correctly in figure and words. The price and cost of works and services under this contract must be expressed in US Dollars (\$).
- d) Bid Security equal to 1% (one percent) of total bid amount in the shape described in clause 2.24 will be attached with financial proposal No Cheque or Insurance Guarantee shall be accepted as bid security.
- e) All the cost towards allowances of the workforce transferred by procuring agency to the contractor shall be incorporated in the financial proposal.

2.16. Currency Unit of Offers and Payments

The bidder shall quote the bid price for each work, item (Services) and the total bid amount in US Dollar (\$) and the interim/running monthly bill payment will be made to contractor in Pakistani Currency at the conversion/exchange rate declared by the State Bank of Pakistan on the date of submission of interim/running monthly bills.

For the conversion of total bid amount and the amount of the each item of work & services given in BOQ, the rate of exchange shall be the exchange rate declared/notified by State Bank of Pakistan prevailing 28 (Twenty Eight) days before the date of opening of the bid specified in bidding document.

2.17. Conditional and Partial Offers

Contractor / bidder are hereby cautioned that proposal with conditional offers or deviation from the conditions and instructions contained in RFP Document or other requirement stipulated therein shall result in rejection of proposal /bid as non responsive and shall not be considered. Partial offers

are not acceptable under this contract. Acceptance shall only be granted for complete job.

**2.18. Alternative Proposal not Acceptable.
One Bid per Bidder**

Alternative proposal is not acceptable only one proposal fulfilling all conditions, instructions and requirement contained in RFP should be submitted by each bidder. Alternative proposal shall not be entertained. Each bidder shall submit only one bid either by himself, or as a partner in a joint venture/consortium. A bidder who submits or participates in more than one bid will be disqualified.

2.19. Eligible Bidder.

This Invitation for Bids is open to all interested bidders who are eligible under provisions of Sindh Public Procurement Rules 2010 (amended 2013) as mentioned below (but not limited to) and the criteria given in the Notice Inviting Tender (NIT)/ Bidding Document.

Firms, national or international, are allowed to bid for the work. Any conditions for participation shall be limited to those that are essential to ensure the bidder's capability to fulfill the contract in question.

- (a) Bidders may be excluded if;
- (i) as a matter of law or official regulations, commercial relations are prohibited with the bidder's country by the federal government, or
 - (ii) a firm is blacklisted/ debarred by the procuring agency and the matter has been reported to the Authority, subject to Rule 30 of Sindh Public Procurement Rules 2010.
- (b) Government-owned enterprises or institutions may participate only if they can establish that they are;
- (i) legally and financially autonomous, and
 - (ii) operate under commercial law.

Provided that where government-owned universities or research centers in the country are of a unique and exceptional nature, and their participation is critical to project implementation, they may be allowed to participate; and Bidders shall include all those contractors who are registered or incorporated in Pakistan, irrespective of the nationality of their owners and professional staff, and

- (c) Bidders are:-
- (i) registered with Pakistan Engineering Council in CB or CA (No Limit) category and discipline, CE10 or CE01 and ME06 or ME05 (A

foreign bidder is entitle to bid only in a joint venture/consortium with Pakistani firm in accordance with relevant provision of PEC by laws. In case of International Firms relevant provisions of PEC law / rules shall be applicable.

- (ii) registered with relevant tax authorities (income/sales tax, wherever applicable).

2.20. Disqualification for Participating in Tender

Contractor or sub contractor cannot participate in tender in any manner directly or indirectly, in their name or in the name of any other person or firm.

- a. Those who are prohibited to participate in tender by any Govt. institution, authority and those who prohibited by law due to having any criminal record or convection.
- b. Those who have been declared bankrupt by the authorities or have filed bankruptcy.
- c. Those who have been declared or announced as an insolvent by court of law or tribunal or any other authorities or institution.
- d. Those who are under liquidation.
- e. Those whose affairs are run by any tribunals.
- f. Those who are under settlement with any financial institution or creditors.
- g. Those who have suspended their affairs or those who are in similar position as per the law of their country.
- h. Those who have been declared defaulter of social security contribution or premium payments under the law of Pakistan or as per law of their country.
- i. Those who have been declared defaulter of taxation or revenue department for nonpayment of income tax, sales tax, customs duties, or any other tax levied from time to time in Pakistan or as per law of their country.
- j. Those who have been condemned by decision of any court or law or tribunal because of their non-professional or unethical activities or professional malpractices.
- k. Those who have been determined by any institution or organization or authority or agency for adopting or performing non professional attitude or unethical or immoral activities or professional malpractices and such determination resulted from administering them during their jobs.

- I. Those who do not provide the required information or provided misleading or false representation or deliberately suppressed the information to be provided as required in RFP Document.
- m. Those who have been prohibited from professional activity by the Chamber of Commerce in Pakistan or any other equivalent body established for same purpose in the country where they are registered before the date of submission of the bid.
- n. The contractors/bidders who are blacklisted by Federal Govt., Provincial Govt., Autonomous Bodies and State Bank of Pakistan.

2.21. Exclusion Prohibition and Acts forbidden

The contractor/bidder shall be excluded from participating in tender under following circumstances.

- a. Those who are authorized by procuring agency in any way for preparation of RFP and the committees set out by the procuring agency in this regard.
- b. Those who are authorized by the procuring agency to finalize and to approve the tender process.
- c. The institutions established, with whatsoever reason, in relation with the procuring agency or existing structure of the procuring agency and institution such as foundation, association, union and the companies associated with the procuring agency.
- d. Those firms and companies who are rendering the advisory or consultancy services in preparation of RFP Document.
- e. The following acts and attitude are forbidden in the tender:
 - i. To rendered the activities of other participants doubtful, to obscure them from participation in the tender or to offer an agreement to the participant or to influence them to act in a manner, which will effect the other participant or tender process
 - ii. The act and attitude towards fraud, threat, influence, bribery or by any other way to win the tender.
 - iii. To issue and use false documents regarding Bid Security or Performance Security etc.
 - iv. More than one offers in the tender directly or indirectly in the name of themselves or in the name of others, as in person on in mandate.

The Contractor who participates in spite of these disqualification, prohibitions and exclusions shall stand excluded and their bid security shall be forfeited.

2.22. Subcontracting and Responsibilities.

Bidders/contractors may execute subcontracts for services up to 30% (Thirty Percent) of the total services for each job of solid waste management collection/transportation, door to door collection, manual and mechanical sweeping and mechanical washing and other services which are covered under this RFP Document, subject to approval of SSWMB. The contractor/bidder is responsible for performance of subcontractors to the procuring agency.

2.23. Bid Validity.

Validity period of proposal / bid is 120 (One Hundred and twenty) calendar days following the last date of submission of RFP/Bid Document. Bidder/Contractor may be requested to extend the validity period in writing, and consent of the bidders shall be obtained. If any bidder does not agree in such extension, his bid security of the applicant shall be returned.

2.24. Bid Security.

The bidders are required to furnish a bid security equal to 1% (One percent) of total bid amount in the currency in which the bid is priced/quoted, which shall remain valid for a period of 28 (twenty eight) days beyond the validity period of the bid.

The proposal must accompanied with a bid security equal to 1% (one percent) of the contract price in the currency in which the bids is priced/quoted in the form of bank draft / pay order or in the shape of bank guarantee from any scheduled bank of Pakistan in favour of SSWMB.

2.25. Responsiveness of Bid to Bidding Document/RFP.

In preparing their proposals contractors are expected to examine in detail the document comprising the RFP. Material deficiencies in providing the information requested in the RFP document may result in rejection of a proposal as non-responsive.

Prior to detailed evaluation of Bid the procuring agency will determine the substantial responsiveness of the bid to bidding document. A substantially responsive bid is one which conforms to all the conditions of bidding document without material deviation.

A material deviation is one

- i) Which affects in any substantial way the scope, quality or performance of works and services.

- ii) Which is inconsistent with bidding document/RFP and limits in any substantial way, procuring agency's rights or the obligation of the contractor/bidder under the scope of work or restriction/adoption of such conditions that would effect unfairly the competitive position of the bidder presenting substantially responsive bid.

2.26. Examination of Bids and Determination of Responsiveness.

- a. Prior to the detailed evaluation of bids, the procuring agency shall determine whether the bidder fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC, turnover statement, experience statement, and any other condition mentioned in the NIT and bidding document. If the bidder does not fulfill any of these conditions, his bid shall not be evaluated further.
- b. Once found to be fulfilling the eligibility criteria, as mentioned in sub-clause a. and in clause 2.19, the bids of eligible bidders will be evaluated for technical responsiveness as per specification and criteria given in the bidding documents. Technical and financial evaluations may be carried out in accordance with, Single Stage -Two Envelope, bidding procedure of SPP Rules 2010 (amended 2013).
- c. A bid will be considered technically responsive if it (i) has been properly signed; (ii) is accompanied by the required bid security in the manner described in the bid document; and (iii) 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 affects 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 procuring agency's rights or the bidder's obligations under the contract; or (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- d. If a bid, has major deviations to the commercial requirements and technical specifications, will be considered technically non responsive. As a general rule, major deviations are those that if accepted, would not fulfill the purpose for which the bid is requested, or would prevent a fair comparison or affect the ranking of the bids that are compliant with the bidding documents.

(A). Major (material) Deviations shall also include:-

- (i) has not been properly signed;
- (ii) is not accompanied by the bid security of required amount and manner;
- (iii) failing to respond to specifications;
- (iv) failing to comply with Mile-stones/Critical dates provided in Bidding Documents;
- (v) sub-contracting contrary to the Conditions of Contract specified in Bidding Documents;

- (vi) refusing to bear important responsibilities and liabilities allocated in the Bidding Documents, such as performance guarantees and insurance coverage;
- (vii) taking exception to critical provisions such as applicable law, taxes and duties and dispute resolution procedures;
- (viii) a material deviation or reservation is one :
 - (a) which affects in any substantial way the scope, quality or performance of the works;
 - (b) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

(B) Minor Deviations

- a. Bids that offer deviations acceptable to the Procuring Agency and which can be assigned a monetary value may be considered substantially responsive at least as to the issue of fairness. This value would however be added as an adjustment for evaluation purposes only during the detailed evaluation process.
- b. If a bid is not substantially responsive, it will be rejected by the procuring agency, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

2.27. Return of Bid Security.

- a. The bid security of the contractor / bidder who is awarded the work shall be retained and the bid security of other bidders shall be returned (in the shape it is deposited) after award of the contract to the successful bidder.
- b. Bid security of the successful bidder (to whom the contract is awarded) will be returned upon submission of performance security. (in the shape it is deposited)

2.28. Forfeiture of Bid Security.

The bid security may be forfeited:

- a. If the contractor/bidder withdraws his bid during the period of bid validity.
- b. If the contractor/bidders does not accept the correction of his bid price.
- c. If the successful bidders fails
 - a. To furnish required performance security
 - b. To sign the agreement

2.29. Proposal/Offer to be non responsive without bid security.

Proposal/offers, which are not accompanied with, required amount of bid security in the shape noted above shall be rejected as non-responsive.

2.30. Evaluation Criteria

Criteria, sub-criteria and point system for evaluation of technical proposal are as under:

1.	Company Profile	Marks
1.1	Number of Similar assignment /work completed by contractor during last five years	5
1.2	Value of Similar Assignment/works	10
1.3	Value and Numbers of appropriate Solid Waste Machinery owned by the company	10
1.4	Organization Structure/Relevant Experience of the firm	5
1.5	Net worth (Financial) of the contractor including bank financing not less than one billion rupees.	10
	Sub Total	40
2	Technical/Operational approach & Methodology.	Marks
2.1	Approach & Methodology for the works & services	10
2.2	Responsiveness to RFP	10
2.3	Goal Oriented Work Plan	15
	Sub Total	35
3	Technical/Operational & Operational Team	Marks
3.1	Education & Qualification	10
3.2	Relevant background	10
3.3	Time expend with the contractor	5
	Sub Total	25
	Grand Total	100
The Minimum Technical Score to qualify is 75 Marks		

2.31. Manner Place, Date and Time of Opening of Bid

- a. The proposal/bid will be opened on 30th October 2015 at 1500 hours by the Tender Opening Committee at the office of Sindh Solid Waste Management Board.
- b. Initially, only the Envelope marked "Technical/Operational Proposal" shall be opened.
- c. The Enveloped marked "Financial Proposal" shall be retained in the custody of client without being opened
- d. The evaluation committee of the procuring agency shall evaluate the technical/operational proposals on the basis of their responsiveness to RFP, applying the evaluation criteria, sub-criteria and point system specified in RFP Document without reference to the price. Any proposal which is found non responsive shall be rejected at this stage and particularly if the proposal fails to achieve the minimum technical score indicated in RFP document. No amendment in technical proposal shall be permitted during technical evaluation.

- e. After the technical evaluation is completed, the procuring agency shall inform the contractor/bidders, the technical scores obtained by their technical proposals and shall notify those contractors/bidders whose proposal did not meet the minimum qualifying marks or whose bid were considered non-responsive to the RFP and their Financial Proposal shall be returned unopened after completing the selection process.
- f. The procuring agency shall simultaneously notify in writing to the contractor that have secured the minimum qualifying marks and that the date and time and location for opening of financial proposals.
- g. The financial proposals shall be opened publically in the presence of contractor or their representative who chose to attend.
- h. Rectification of arithmetical errors will be made on the basis that if there is discrepancy found between the unit price and total price, that is obtained by multiplying the unit price and the quantity, the unit price shall prevail and the total price shall be corrected accordingly.
- i. If there is the discrepancy found between words and figure, the amount in words shall prevail.

2.32. Preliminary Examinations and Determination of Responsiveness of Bid prior to detailed evaluation of Bid.

1. The procuring agency will examine the bid whether:
 - a. The bid is complete and does not deviate from the scope of work for any computational error.
 - b. That required securities are furnished.
 - c. The documents have been properly signed.
 - d. That the bid is valid till the required period.
 - e. That bid does not deviate from basic technical requirement.
 - f. That the bids are generally in order.
2. The Tender Proposal shall be rejected and not considered:
 - a. If each page of the proposal/bid is not signed by bidder.
 - b. If its validity is less than specified period.
 - c. If it is submitted for incomplete scope of work.
 - d. If it is conditional and contained alternative proposals.

- e. If it indicates that bid price not inclusive the amount of all taxes, incidental charges.
- f. If not accompanied with bid security
- g. If bidder participated in more than one bid.
- h. If received after the deadline for submission of bid.
- i. If submitted through Fax, Telex, Telegram or e-mail.

2.33. Clarification of Bid.

In examination, evaluation and comparison of bids the procuring agency may at his discretion ask the contractor/bidder for clarification of his bid. The request for clarification and response shall be in writing and no change in price or substance of bid shall be sought, offered or permitted. No bidder shall be allowed to alter or modify his bid after the expiry of deadline for the receipt of the bid.

2.34. Correction of Errors before Financial Evaluation.

- I) Bids determined to be substantially responsive will be checked by the procuring agency for any arithmetic errors. Errors will be corrected by the procuring agency 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 procuring agency 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.
- II) The amount stated in the Form of Bid will be adjusted by the procuring agency in accordance with the above procedure for the correction of errors and with the concurrence of the bidders. The amount thus corrected 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 clause 2.28 hereof

2.35. Financial Evaluation and comparison of Bids

- i. The procuring agency will evaluate and compare only the Bids determined to be substantially responsive in accordance with clause 2.26.
- ii. In evaluating the Bids, the procuring agency 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 2.34;
 - (b) making an appropriate adjustment for any other acceptable variation or deviation.
- iii. 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.
 - iv. If the bid of the successful bidder is seriously unbalanced in relation to the procuring agency's estimate of the cost of work to be performed under the contract, the procuring agency 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 methods of performing the work and schedule proposed. After evaluation of the price analyses, the procuring agency may require that the amount of the Performance Security set forth in clause 2.36 be increased at the expense of the successful bidder to a level sufficient to protect the procuring agency against financial loss in the event of default of the successful bidder under the contract

2.36. Performance Security

- a. The successful bidder shall furnish to the procuring agency a Performance Security in the form of pay order or bank guarantee from any scheduled bank of Pakistan, and the amount stipulated in the bidding data and the Conditions of Contract within a period of 28 days after the receipt of Letter of Acceptance, but 07 days prior to expiry date of bid security.
- b. Failure of the successful bidder to comply with the requirements of Sub-clause a. or clauses 2.37 or 2.40 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- c. Validity of performance security shall extend at least seven months beyond the date of completion of contract, or as mentioned in the bidding data to cover defects liability period or maintenance period subject to final acceptance by the procuring agency.

2.37. Signing of Contract Agreement.

- 1) Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the procuring agency will send the successful bidder the Contract Agreement.
- 2) The formal Agreement between the procuring agency and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the procuring agency.

A procurement contract shall come into force when the procuring

agency requires signs contract, the date on which the signatures of both the procuring agency and the successful bidder are affixed to the written contract.

2.38. Stamp Duty

The formal Agreement between the client (Procuring Agency) and the successful bidder shall be duly stamped at rate of 0.3% of sanctioned price and as stated in Letter of Acceptance. The successful bidder will pay stamp duty.

2.39. General Performance of the bidders

Procuring agency may in case of consistent poor performance of the contractor and his failure to remedy the underperforming contract may take such action as may be deemed appropriate under the circumstances of the case including the rescinding the contract and/or black listing of such contractor and debarring him from participation in future bidding process.

2.40. Integrity Pact

The bidder shall sign and stamp the Integrity Pact provided at Annexure-10 to the bidding documents. Failure to provide such Integrity Pact shall make the bidder non-responsive.

2.41. Defect Liability Period

Defect liability period shall be 06 (six) months after the date of completion and expiry of the contract agreement.

2.42. Return of Performance Security

The performance security of the contractor shall be returned after 06 (six) months (defect liability period) of completion and expiry of the contract period, upon determination that the obligation under the contract have been duly fulfilled in accordance with the provisions of contract document and agreement and the contractor has no liability to the procuring agency due to this contract. In case the liabilities of the contractor to the procuring agency and other tax amount due to the contract, then such amount shall be recovered from the amount of performance security and balance amount of the performance security shall be return to the contractor.

2.43. Retention Money.

Retention money shall be deducted from contractor's running performance bill at the rate of 10% (Ten Percent) of monthly bill amount. The retention money shall be released in the currency in which it is deducted (Pak Rupees) after every fifteenth running bill payments of the contractor for the works successfully executed for last twelve month. The amount due to the

contractor in respect of retention money shall be released after deduction of such amount as are required to be recovered on account of default of contractor in performing his functions under this contract.

2.44. Format Contract Agreement

Format of Contract Agreement at annexure 18.

2.45. Form of Bank Guarantee for Performance Security

Format of bank guarantee for performance security is attached at annexure 16.

2.46. Inspection of Work & Services performed by the contractor

Representative of procuring agency shall inspect the work and services performed by the contractor under the contract and any deficiencies of work and services shall be notified in writing giving warning letter to the contractor. If the contractor does not recover/remove the deficiencies indicated a penalty as per penalty clauses shall be imposed.

2.47. Letter of Acceptance.

After announcement of tender decision, letter of acceptance will be sent to successful bidder/contractor, inviting for signing of agreement the contract agreement shall be signed within 14 (fourteen) days following the date of letter of acceptance.

2.48. Arbitration

Any dispute that is not amicably resolved shall be finally settled, unless otherwise specified in the Contract, under the Arbitration Act 1940 updated from time to time and would be held anywhere in the Province of Sindh at the discretion of procuring agency.

2.49. Information Related to Contractor / Bidder

- a. Contractor/Bidder Full Name _____
- b. Address _____
- c. Telephone No. _____
- d. Fax No. _____
- e. E-mail Address. _____

2.50. Bidding Data**Bidding Data**

Sri#	Data	
1	Name of Work	Front End Collection and Disposal of Municipal Solid Waste for Zone Korangi (DMC Korangi Area) Karachi, Sindh, Pakistan.
2	The Name of Procuring Agency's Official	Executive Director-I SSWMB
	Address	Bungalow No. D-47 Block-2, Clifton, Karachi, Pakistan.
	Telephone#	+92 21 35372982-4
	E-mail	info@sswmb.gos.pk
	Facsimile	+92 21 35863029
	Website	www.sswmb.gos.pk
3	Procedure of open competitive bidding (International Competitive Bidding – ICB)	<p>Single Stage – Two Envelope Procedure</p> <p>a. Proposal shall comprise a single package containing two separate sealed Envelopes. Each Envelope shall contain, separately the Technical/Operational Proposal & Financial Proposal.</p> <p>b. The package (Outer Envelope) shall be clearly marked the name of the Proposal, date and time of submission and the address and place of the submission and name and address of the contractor/bidder</p> <p>c. The package (Outer Envelope) containing the two Envelopes must be sealed, signed and stamped by the contractor or its authorized representative.</p>
4	Proposal shall be submitted by hand or may be sent by registered airmail. Proposal submitted through telegraph, telex, fax or e-mail will not be considered.	
5	Financial Proposal to be submitted with Technical Proposals.	
6	Pre-proposal/Pre bid meeting will be held at the office of SSWMB-Bungalow No, D-47, Block-2 Clifton, Karachi, Pakistan on 1 st October 2015 at 1500 hours.	
7	The proposal/bid submission address is at the office of SSWMB Bungalow No.D-47 Block-2 Clifton, Karachi, Pakistan.	
	Proposal must be submitted no later than the following date & time: 30 th October 2015 at 1500 hours	
8	Proposal must remain valid for 120 (One Hundred and Twenty) days after the proposal/bid submission deadline	
9	<p>Bid Security</p> <p>Bid security equal to 1% of total Bid amount will be attached with financial proposal in the form of Pay order, Demand Draft or Bank Guarantee in favour of SSWMB. The bid security shall remain valid for a period of 28 days beyond validity period of the bid. Bid security shall be submitted in the same currency as that in which the bid is priced/quoted.</p>	

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10	<p>Clarification may be requested not later than 7 (Seven) days before the submission date.</p> <p>The address for requesting clarification is Executive Director-I Sindh Solid Waste Management Board Karachi Division, Bungalow No. D-47 Block-2 Clifton, Karachi Pakistan e-mail info@sswmb.gps.pk, Facsimile +92 21 35863029</p>
11	<p>The proposal as well as all related correspondence exchange by the Contractor/Bidder and procuring agency shall be written in English however it is desirable that the firm's personnel have a working knowledge of the national and regional languages of Islamic Republic of Pakistan.</p>
12	<p>Alternative proposals are not acceptable; each bidder should submit only one proposal fulfilling all conditions, instructions and requirement contained in RFP. Alternative proposal shall not be entertained.</p>
13	<p>Valid Registration Certificate of the following Authorities must be attached with the proposal. In case of International bidders relevant clauses of PEC Rules shall be applicable.</p> <ol style="list-style-type: none"> a. Pakistan Engineering Council in category CB or CA (No Limit) and Discipline CE10 or CE01 & ME06 or ME05 b. Tax Authorities & NTN No.
14	<p>The Contractor/Bidder should quote the cost for each item of works under this contract and total bid price in US Dollars and interim payment/running bill payments shall be made in Pak Rupees (conversion/exchange rate declared by the State Bank of Pakistan shall be applicable of the date of submission of interim bill/monthly running bill for payment.</p>
15	<p>The Contractor/Bidder should quote the cost for each item of works inclusive of all National, Provincial, Local taxes, duties, expenses, contingencies and incidental charges.</p>
16	<p>Contractor/ Bidder must submit the original Technical/Operational Proposal, and the original of the Financial Proposal.</p>
17	<p>Successful Contractor/Bidder is required to submit performance security at 1% (one percent) of the contract amount in form of pay order or bank guarantee in favour of Sindh Solid Waste Management Board, in the currency in which the bid is priced/quoted.</p>
18	<p>Contractor/bidder shall undertake to sign Integrity Pact as per Format provided by SSWMB under this contract.</p>

Section III

Description of Zone Korangi (DMC Korangi Area)

Description of Zone Korangi (DMC Korangi Area)**3.1. Korangi Zone- Brief Description**

Korangi Zone is adjacent to the Southwest part of Landhi Zone. The Zone comprises of 09 (Nine) Union Councils, Bilal Colony UC-1 is area wise large UC of the Zone having low MSW Density of 6.15 Tons/KM² Per Day where UC-2 Zaman Town is area wise small but its MSW Density is high as compare to other UC of the Zone.

The area of the Zone is about 20KM², the population estimates as per population statistics of 1998 is 546504 persons and view of growth rate of approximately 5% per annum, the population of this Zone in the year 2015 is estimated to 1244705 persons.

The population density of UC No.6, 7, 8 is high i.e. about 179825 person per KM² whereas population density of UC-3, 4 and 5 is the middle i.e. about 180594 person per KM² and in UC-1 is on lower side i.e. about 14309 person per KM².

The zone is situated at long distance from existing landfill sites, the one which is nearest to it is Ashrafi Goth landfill. Therefore MSW of Korangi Zone should be transported to landfill sites through GTS located within the zone.

This zone is known by its Industrial area i.e. Korangi Industrial Area, and tannery industries.

The details of Municipal Solid Waste generation in each UC of the Zone. Its population and other details are given in Annexures 1-12

3.2. Demographics.

Korangi Zone is a well-demarcated area commonly known by its industrial activities. This zone is flanked by Landhi Zone on the Korangi, Bin Qasim on the South and Malir River on the west and north. Various industries registered under Korangi Association of Trade and Industries (KATI) is about 450 Nos. The nature of business under these industries are mostly of plastics, leather and leather products, textile and fabrics, chemicals, food packaging, pharmaceutical, dyeing, cigarettes manufacturing, wood and wood products, lubricants, light engineering, electronics, poultry feeds, cooking oil and Banaspati Ghee manufacturing.

Sector 7 & 7A of Korangi Industrial Area is mostly belongs to leather and tannery business, and these industries are registered with Pakistan Tannery Association (PTA) due to these industrial areas, katchi abadies and residential areas of low income people has been developed around the industrial area therefore beside industrial waste (which is not a subject of

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this document) a considerable amount of MSW is also generated in the industrial area.

The zone comprises of following UCs:

UC No.	UC Name	UC No.	UC Name
1	Hazrat Bilal Colony	6	Gulzar Colony / Korangi No.1
2	Nasir Colony / Qayumabad	7	Korangi Sector 33-C
3	Chakra Goth	8	Zaman Town
4	Mustafa Taj Colony	9	Hasrat Mohani Colony
5	100 Quarters		

UC-1 Hazrat Bilal Colony

UC-1 Hazrat Bilal Colony consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Bilal 8-A,	Undeveloped	Low	80-120 Sq Yard	
2	8-B	Undeveloped	Low	80-120 Sq Yard	
3	8-C	Undeveloped	Low	80-120 Sq Yard	
4	8-D	Undeveloped	Low	80-120 Sq Yard	
5	8-E	Undeveloped	Low	80-120 Sq Yard	
6	8-F	Undeveloped	Low	80-120 Sq Yard	
7	Mehran Town 6-A	Undeveloped	Low	80 Sq Yard	
8	6-B	Undeveloped	Low	80 Sq Yard	
9	6-C	Undeveloped	Low	80 Sq Yard	
10	6-D	Undeveloped	Low	80 Sq Yard	
11	6-E	Undeveloped	Low	80 Sq Yard	
12	6-F	Undeveloped	Low	500 Sq Yard	Res/Industrial Area
13	6-G	Undeveloped	Low	500 Sq Yard	Res/Industrial Area
14	6-H	Undeveloped	Low	80 Sq Yard	
15	6-I	Undeveloped	Low	80 Sq Yard	
16	K. I. A. 7-A	Developed	Industrial Area	500-1000 Sq Yard	

UC-2 Nasir Colony/Qayumabad

UC-2 Nasir Colony / Qayumabad consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	32-D	Developed	Low	60 Yard	
2	32-E	Developed	Low	60 Yard	
3	PNT Society	Developed	Middle	120-512 Sq Yard	
4	Lucknow Society	Developed	High	120-512 Sq Yard	
5	Dar-us-Salam Society	Developed	High	120-512 Sq Yard	
6	KDA Employees	Developed	Low	120 Sq Yard	
7	Al-Wasay Town	Developed	Middle	120 Sq Yard	

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8	Altaf Town	Developed	Low	80 Sq Yard	
9	Allah wala Town	Developed	Middle	100 Sq Yard	
10	A-Area	Developed	Middle	120 Sq Yard	
11	B-Area	Developed	Middle	120 Sq Yard	
12	C-Area	Developed	Middle	120 Sq Yard	
13	D-Area	Developed	Middle	120 Sq Yard	

UC-3 Chakra Goth

UC-3 Chakra Goth consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Sri.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector Y Area	Developed	Middle	120 Sq Yard	
2	Sector 48-A Silver Town	Developed	Middle	60 Sq Yard	
3	Sector 48-A Silver Town	Developed	Middle	80 Sq Yard	
4	Sectpr 48-H	Developed	Middle	60 Sq Yard	
5	Sector 39-C	Undeveloped	Middle	60 Sq Yard	
6	Sector 48-E	Developed	Middle	80 Sq Yard	
7	Sector 48-F	Developed	Low	Katchi Abadi	
8	Sector 48-D Abdullah Shah Noorani Colony	Undeveloped	Low	Katchi Abadi	
9	Gulzar Colony	Undeveloped	Low	Katchi Abadi	
10	Sector 40-C Norani Basti	Undeveloped	Low	Katchi Abadi	
11	Bhamba Goth	Undeveloped	Low	Katchi Abadi	
12	Chakra Goth	Undeveloped	Low	Katchi Abadi	

UC-4 Mustafa Taj Colony

UC-4 Mustafa Colony consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Sri.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	T Area	Developed	Middle	120 Sq Yard	
2	41-B	Developed	Middle	120 Sq Yard	
3	41-A	Developed	Middle	120 Sq Yard	
4	48-B	Developed	Middle	120 Sq Yard	
5	48-B N Area	Developed	Middle	120 Sq Yard	
6	48-C	Developed	Middle	120 Sq Yard	
7	48-D	Developed	Middle	120 Sq Yard	
8	43-A Rehmabad	Developed	Middle	120 Sq Yard	
9	43-A Mustafa Taj	Developed	Middle	120 Sq Yard	

UC-5 100 Quarters

UC-5 100 Quarters consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

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Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	D Area	Developed	Middle	120 Sq Yard	
2	E Area	Developed	Middle	120 Sq Yard	
3	G-I	Developed	Middle	120 Sq Yard	
4	G-II	Developed	Middle	120 Sq Yard	
5	H	Developed	Middle	120 Sq Yard	
6	50-B	Developed	Middle	120 Sq Yard	
7	50-B-I	Developed	Middle	160 Sq Yard	
8	50-A	Developed	Middle	240-80 Sq Yard	
9	Madina Colony 50-A	Developed	Middle	80 Sq Yard	
10	49	Developed	Middle	80 Sq Yard	
11	50-C	Developed	Low	60/80 Sq Yard	
12	50-D	Developed	Low	80 Sq Yard	

UC-6 Korangi No.1

UC-6 Korangi No.1 consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	S-Area Korangi 1	Developed	Middle	120 Sq Yard	
2	S-Area Meer Alam	Developed	Middle	120 Sq Yard	
3	R-Area	Developed	Middle	120 Sq Yard	
4	R-Area Red	Developed	Middle	120 Sq Yard	
5	32-B Ghodra Ground	Developed	Middle	120 Sq Yard	
6	32-B Altaf School	Developed	Middle	120 Sq Yard	
7	KTS/1132-B	Developed	Middle	120 Sq Yard	
8	32-B School R	Developed	Middle	120 Sq Yard	
9	32-A Labour Square	Developed	Middle	120 Sq Yard	
10	32-A Zia Colony	Undeveloped	Middle	80 Sq Yard	
11	32-A Alnoor Society	Undeveloped	Middle	80 Sq Yard	
12	32-A Abbas Nagar	Undeveloped	Middle	80 Sq Yard	
13	32-C	Undeveloped	Middle	120 Sq Yard	

UC-7 Sector 33-C

UC-7 Sector 33-C consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	33-A, Q Area	Developed	Middle	80 Sq Yard	
2	33-A, P Area	Developed	Middle	80 Sq Yard	
3	33-A, Q Area	Developed	Middle	80 Sq Yard	
4	33-B	Developed	Middle	80 Sq Yard	
5	33-C	Developed	Middle	80 Sq Yard	
6	33-D	Developed	Middle	80 Sq Yard	
7	33-E	Developed	Middle	80 Sq Yard	
8	33-F	Undeveloped	Middle	80+60 Sq Yard	
9	34-I	Undeveloped	Middle	80+60 Sq Yard	

UC-8 Zaman Town

UC-8 Zaman Town consists of following localities/areas, the infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Sri.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	35-B, K Area	Developed	Middle	120 Sq Yard	
2	35-B, J Area	Developed	Middle	120 Sq Yard	
3	35-B, K Area	Developed	Middle		
4	35-A	Developed	Middle	240+400 Sq Yard	
5	35-C	Developed	Middle	80 Sq Yard	
6	34-I	Developed	Middle	120 Sq Yard	
7	34-II	Developed	Middle	120 Sq Yard	
8	34-III	Developed	Middle	120 Sq Yard	
9	34-III	Developed	Middle	120 Sq Yard	
10	Kachi Abadi	Undeveloped	Low	80 Sq Yard	

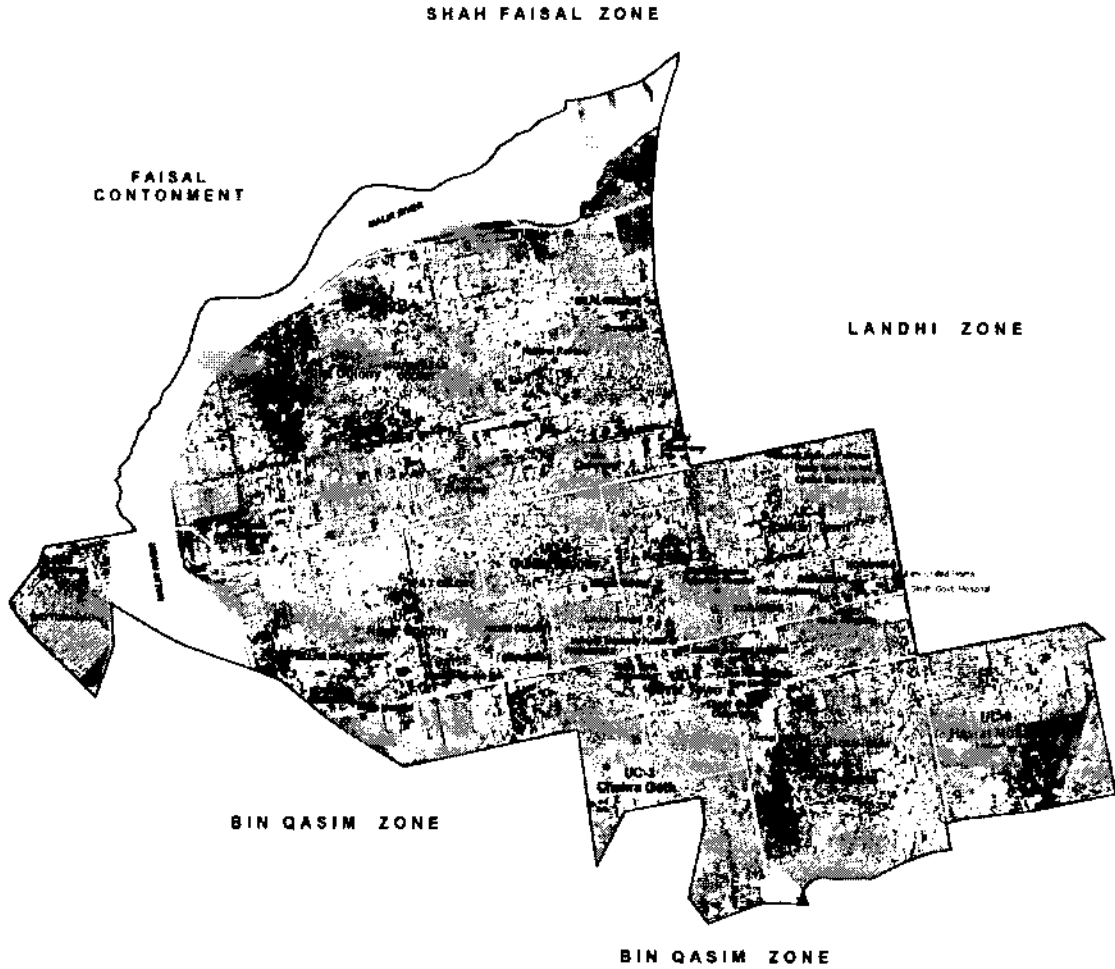
UC-9 Hasrat Mohani Colony

UC-9 Hasrat Mohani Colony consists of following localities/areas: Infrastructural condition, housing Units type, income group and name of localities in the area are detailed below:-

Sri.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	50-L	Developed	Middle	80 Sq Yard	
2	D Area	Developed	Middle	120 Sq Yard	
3	E Area	Developed	Middle	120 Sq Yard	
4	B Area	Developed	Middle	120 Sq Yard	
5	A Area	Developed	Middle	120 Sq Yard	
6	51-A	Developed	Middle	120 Sq Yard	
7	51-B	Developed	Middle	120 Sq Yard	
8	51-C	Developed	Middle	80 Sq Yard	
9	51-D	Developed	Middle	80 Sq Yard	
10	51-K	Developed	Middle	80 Sq Yard	

3.3. Maps of Korangi Zone.

KORANGI ZONE



3.4. Shah Faisal Zone Brief Description

The Shah Faisal Zone is on the North of Landhi Town. The area of the zone is about 11.69 KM², the population estimated as per population statistics of 1998 is 335823 and in view of growth rate of 5% per Annum the population of this zone is expected in this year 2015 is about 164864 persons. The average population density is 65430persons/ KM² the MSW output is 31.40 t/KM² per day, which is relatively even.

Shah Faisal Zone is far away from the two landfill sites i.e. Gondpass and Jamchakro, the nearest landfill site is Ashrafi Goth but not within the zone. In view of linear distances from the Geometrical centers of the UC's of the Zone, it is suggested that the MSW of Shah Faisal Zone should be transported to landfill site through GTS. Which located at Azeem Para Graveyard UC-7 and at present this practice is being adopted.

The details of Municipal Solid Waste Generation, in each UC of the Zone, its population and other details are given in Annexure 1-12.

3.5. Demographics of Shah Faisal Zone

Shah Faisal Zone is a well-demarcated residential area with small quantum of commercial, shops and commercial activities. This zone is defined by physical features, on the west & north, it is flanked by Faisal Cantonment and further by Shahrah-e-Faisal road on the north and northKorangi and on the south it is bordered by the Malir River. All union councils have been demarked keeping in view the existing colonies/goth in perspective and attempting to include the whole of a colony/goth in one union council. The relatively smaller size of the town is necessitated by physical contours defining its shape.

The Zone comprises of the following UCs.

UC No.	UC Name	UC No.	UC Name
1	Natha Khan Goth	5	Morio Khan Goth
2	Pak Sadat Colony	6	Rifah e Aam
3	Drigh Colony	7	Al-Falah Society
4	Reta Plot		

UC-1 Natha Khan Goth

UC-1 Natha Khan Goth consists of following localities/areas: The infrastructural condition, Housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Natha Khan	Unplanned, very congested, small lanes	Low	60-80 Sq Yard	Natha Khan Goth, Kachi Abadi, Hindu Para Katchi Abadi.

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2	Shah Faisal Block-4	Well planned, wide road, street with back lanes	Middle	80-120 Sq Yard	
3	Al-Hayder Society	Partially planned wide roads, streets	Low to Middle	80-100 Sq Yard	
4	Iqbal Abad & New Iqbal Abad	Unplanned but developed infrastructure	Low	60-80-100 Sq Yard	
5	Hindu Para	Katchi Abadi	Low	Katchi Abadi	Katchi Abadi

UC-2 Pak Sadat Colony

UC-2 Pak Sadat Colony consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Saddat Colony	Planned, Developed area, wide roads, streets and back lanes	Middle	120-400 Sq. Yard	
2	Shah Faisal Colony No.5	Planned, Developed area, wide roads, streets and back lanes	Middle	80-100 Sq. Yard	
3	Baraili Area	Planned, Developed area, wide roads, streets and back lanes	Middle to Low	80-120 Sq. Yard	
4	Mulla Shore Area	Planned & Developed	Middle to Low	80-120 Sq. Yard	
5	Roshan Abad	Unplanned, partially developed	Low		Katchi Abadi
6	Mohajir Basti	Unplanned, partially developed	Low		Katchi Abadi

UC-3 Drigh Colony

UC-3 Drigh Colony consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Shah Faisal Colony No.1	Planned, Developed area, wide roads, streets and back lanes	Middle to High	80% 80 to 120 Sq Yard 20% 400 to 500 Sq. Yard	
2	Shah Faisal Colony No.2	Planned, Developed area, wide roads, streets and back lanes	Middle to High	80% 80 to 120 Sq Yard 20% 400 to 500 Sq. Yard	
3	Al Falah Society	Planned, Developed area, wide roads, streets and back lanes	Middle to High	80 to 100 Sq. Yard	

UC-4 Reta Plot

UC-4 Reta Plot consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area are detailed below:-

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Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Raita Plot No. 1	Planned Area, Wide Road & Streets	Middle to Low	60-80 Sq Yard	Small Industries Setup
2	Raita Plot No.2	Planned Area, Wide Road & Streets	Middle to Low	80-120 Sq Yard	
3	Raita Plot No.3	Planned Area, Wide Road & Streets	Middle to Low	100 -160 Sq Yard	Small Industries Setup
4	Raita Plot No.9 and Green Town Part-I	Unplanned	Low to Middle	120 Sq Yard	Katchi Abadi

UC-5 Morio Khan Goth

UC-5 Morio Khan Goth consists of following localities/areas, the infrastructural condition, Having Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Shah Faisal Colony No.3	Well Planned, Wide Road & Street	Middle to high	30% 400 - 500 Sq Yard	
2	Main Green Town Part II	Planned Area, Wide Road & Street	Middle	70% 80 - 120 Sq Yard	
3	Moria Khan Goth	Planned Area, Developed Road & Street	Middle	100 - 120 Sq Yard	
4	Guishan Asghar	Planned Area, Developed Road & Street	Middle	80-120 Sq Yard	

UC-6 Rifah e Aam

UC-6 Rifah e Aam consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Rafah -e- Aam Society	Well Planned & Developed	Middle to High	40% 400 to 600 Sq Yard 60% 200 to 240 Sq Yard	
2	Samsi Society	Well Planned & Developed	Middle to High	400 Sq Yard and above	
3	Punjab Town	Planned & Developed	Middle	120 to 180 Sq Yard	
4	Golden Town	Planned & Developed	Middle	120 to 180 Sq Yard	
5	Al Badar Society	Planned & Developed	Middle	120 to 180 Sq Yard	
6	Hesam Mujtaba Town	Planned & Developed	Middle	120 to 200 Sq Yard	
7	Billal Town	Planned & Developed	Middle	120 to 200 Sq Yard	
8	Raiz uz Zohra	Planned & Developed	Middle	120 to 200 Sq Yard	
9	Bagh-e-Malir	Planned & Partially Developed	Middle	100 to 200 Sq Yard	

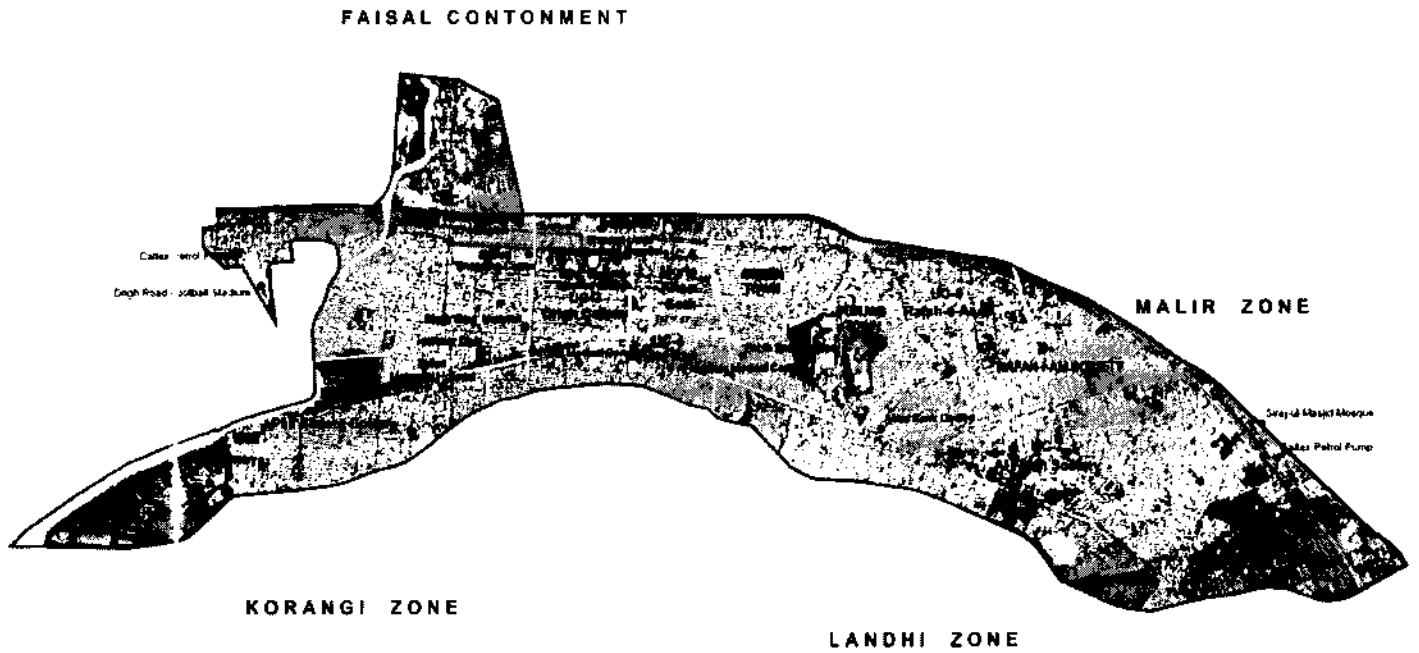
UC-7 Al-Falah Society

UC-7 Al-Falah Society consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area are detailed below:-

Sri.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Muhammad Ali Shaheed	Developed	Middle	80-120 Sq Yard	
2	Rafi Garden	Developed	Middle	80-120 Sq Yard	
3	Gulshan-e-Millat	Developed	Middle	80-120 Sq Yard	
4	Moaz Town	Developed	Middle	80-120 Sq Yard	
5	Rafi Bungalow	Developed	Middle	80-120 Sq Yard	
6	Mustafaabad	Developed	Middle	80-120 Sq Yard	
7	Bagh-e-Ibrahim	Developed	Middle	80-120 Sq Yard	
8	Bagh-e-Malir Block-B	Developed	Middle	80-120 Sq Yard	
9	Anwar-e-Ibrahim	Developed	Middle	80-120 Sq Yard	
10	Aswan Town	Developed	Middle	80-120 Sq Yard	
11	Bostan Rafi	Developed	Middle	80-120 Sq Yard	
12	Gulshan Rafi	Developed	Middle	80-120 Sq Yard	
13	Rafi Pride	Developed	Middle	80-120 Sq Yard	
14	Al-Noor Housing Society	Developed	Middle	80-120 Sq Yard	
15	Hansa abad	Developed	Middle	80-120 Sq Yard	
16	Anum Homes	Developed	Middle	80-120 Sq Yard	
17	Ibrahim Villas Phase-I	Developed	Middle	80-120 Sq Yard	
18	Gulshan Qadri	Developed	Middle	80-120 Sq Yard	
19	Gulzar Ibrahim	Developed	Middle	80-120 Sq Yard	
20	Al-Falah Block A, B, C & D	Developed	Middle	80-120 Sq Yard	
21	Phatan Goth	Developed	Middle	80-120 Sq Yard	
22	Millat Town	Developed	Middle	80-120 Sq Yard	
23	Azeempura	Developed	Middle	80-120 Sq Yard	
24	Dehli Saudagaran	Developed	Middle	80-120 Sq Yard	
25	Ahsanabad	Developed	Middle	80-120 Sq Yard	
26	Jumma Goth	Undeveloped	Low to Middle		Katchi Abadi
27	Ghulam Muhammad Goth	Developed	Middle	80-120 Sq Yard	
28	Siddiqui Goth	Undeveloped	Low to Middle		Katchi Abadi
29	Gulistan Malir	Developed	Middle	80-120 Sq Yard	
30	Shaheed Millat Town	Developed	Middle	80-120 Sq Yard	
31	Babar Town	Developed	Middle	80-120 Sq Yard	
32	Yousuf Goth	Developed	Middle	80-120 Sq Yard	
33	Al-Noor Garden	Developed	Middle	80-120 Sq Yard	
34	Gulshan rohi	Developed	Middle	80-120 Sq Yard	
35	Jamia Millia Campus	Developed	Middle	80-120 Sq Yard	
36	Al ameen City	Developed	Middle	80-120 Sq Yard	
37	Gulshan Akbar	Developed	Middle	80-120 Sq Yard	
38	Gulshan Ghazali	Developed	Middle	80-120 Sq Yard	
39	Gulistan Malir	Developed	Middle	80-120 Sq Yard	
40	Shaad Bagh Society	Developed	Middle	80-120 Sq Yard	

3.6. Maps of Shah Faisal Zone

SHAH FAISAL ZONE



3.7. Landhi Zone Brief Description

Landhi Zone is partially known by its industrial activities. Zone comprises of 12 union councils. Its UC No.01, 02, 03, 04 and 05 are congested undeveloped katchi abadies and small parts of UC-06, 08, 09, 10, 11, and 12 also undeveloped katchi abadies having lower income group of dwellings.

The MSW out put of Landhi Zone is 652.99 t/d and the MSW density Distribution is between 19.77 to 23.78 t/KM² Per Day UC 05 and UC 09 are of low MSW density and large area whereas the other UC are of higher MSW Density and lower area. The informal dumping site (Sharafi Goth) is within the Landhi Zone, which is now being planned, as another landfill site for Karachi and a proper GTS will be setup. There the MSW of Landhi Zone will be collected and transported to GTS at Sharafi Goth, which is already in practice by solid waste management department of Landhi Zone.

The area of Landhi Zone is about 37.61 KM², Its population estimates as per population statistics of 1998 is 645453 person and in view of growth rate of 5% per Annum, the population of this zone in the year 2015 is estimated to 1518570 persons. The population density of UC-01, 02, 03, 04, 05 is about 26075 persons/KM² whereas population density of UC-06, 07, 08, 09, 10, 11 and 12 is 62267 person per KM².

The details of MSW generation in each UC of the Zone, its population and other details are given in Annexure 1-12

3.8. Demographics of Landhi Zone

The Landhi Zone is a well-demarcated area, partially known by its industrial activities. The industries that are registered under Landhi Association of Trade and Industries (LATI) are about 150. However unregistered factories may be approximately double the number than those which are registered. This zone is flanked by Landhi Zone on the Korangi, Bin Qasim Zone on the South, Korangi Cant on the south west and Malir River on the west and north.

The Zone comprises of the following UCs.

UC No.	UC Name	UC No.	UC Name
1	Muzaffarabad Colony	7	Khuwaja Ajmer Colony
2	Muslimabad Colony	8	Landhi
3	Dawood Chowrangi	9	Awami Colony
4	Moinabad	10	Barmi Colony
5	Sharafi Goth	11	Korangi
6	Bhutto Nagar	12	Sherabad

UC-1 Muzaffarabad Colony

UC-1 Muzaffarabad Colony consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Old Muzaffarabad	Undeveloped	Low	60-80 Sq Yard	
2	New Muzaffarabad	Undeveloped	Low	60-80 Sq Yard	
3	Bilal Town	Undeveloped	Low	60-80 Sq Yard	
4	Jacob Line	Undeveloped	Low	60-80 Sq Yard	
5	Kala Pani	Undeveloped	Low	60-80 Sq Yard	
6	Majeed Colony	Undeveloped	Low	60-80 Sq Yard	

UC-2 Muslimabad

UC-2 Muslimabad consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Majeed Colony	Undeveloped	Low	60-80 Sq Yard	
2	Muslimabad Colony	Undeveloped	Low	60-80 Sq Yard	
3	Bilal Colony	Undeveloped	Low	60-80 Sq Yard	

UC-3 Dawood Chowrangi

UC-3 Dawood Chowrangi consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sherpao Colony	Undeveloped	Low	60-80 Sq Yard	
2	Mansehra Colony	Undeveloped	Low	60-80 Sq Yard	
3	F1, F2 Area	Undeveloped	Low	60-80 Sq Yard	
4	Muhammad Nagar	Undeveloped	Low	60-80 Sq Yard	
5	Tauheedabad	Undeveloped	Low	60-80 Sq Yard	
6	Bismillah Colony	Undeveloped	Low	60-80 Sq Yard	
7	Dawood Chali	Undeveloped	Low	60-80 Sq Yard	
8	Firdos Chali	Undeveloped	Low	60-80 Sq Yard	

UC-4 Moinabad

UC-4 Moinabad consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Moinabad I, II	Undeveloped	Low	60-80 Sq Yard	
2	Mohammad Nagar	Undeveloped	Low	60-80 Sq Yard	
3	Future Colony	Undeveloped	Low	60-80 Sq Yard	
4	Mansehra Shimla Pahari	Undeveloped	Low	60-80 Sq Yard	

UC-5 Sharafi Goth

UC-5 Sharafi Goth consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sharafi Goth	Undeveloped	Low	60-80 Sq Yard	
2	Haji Shali Goth	Undeveloped	Low	60-80 Sq Yard	
3	Peer Buksh Goth	Undeveloped	Low	60-80 Sq Yard	
4	Mansehra F1, F2 Area	Undeveloped	Low	60-80 Sq Yard	
5	Pakistan Tenary	Undeveloped	Low	60-80 Sq Yard	
6	Hashim Goth	Undeveloped	Low	60-80 Sq Yard	
7	Allah Dad Goth	Undeveloped	Low	60-80 Sq Yard	
8	Jamal Goth	Undeveloped	Low	60-80 Sq Yard	
9	Ismail Goth	Undeveloped	Low	60-80 Sq Yard	
10	Bangali Para	Undeveloped	Low	60-80 Sq Yard	
11	Dar ul Uloom	Undeveloped	Low	60-80 Sq Yard	
12	Raees Gul Muhammad Goth	Undeveloped	Low	60-80 Sq Yard	
13	Peer Buksh Goth A+B	Undeveloped	Low	60-80 Sq Yard	

UC-6 Bhutto Nagar

UC-6 Bhutto Nagar consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	37/D Area	Developed	Middle	120 Sq Yard	
2	37/F Area	Developed	Middle	120 Sq Yard	
3	1C-C1	Developed	Middle	80 Sq Yard	
4	Bhutto Nagar	Undeveloped	Low		Katchi Abadi
5	Rao Basti	Undeveloped	Low		Katchi Abadi

UC-7 Khuwaja Ajmer Colony

UC-7 Khuwaja Ajmer Colony consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	2B Area	Developed	Middle	80 Sq Yard	
2	2C Area	Developed	Middle	80 Sq Yard	
3	35/A	Developed	Middle	80 Sq Yard	
4	35/A Area	Developed	Middle	120 Sq Yard	
5	3/B Area	Developed	Middle	120 Sq Yard	
6	3/BE Area	Developed	Middle	120 Sq Yard	
7	F/1 Area	Developed	Middle	80 Sq Yard	
8	F/2 Area	Developed	Middle	80 Sq Yard	
9	84 Area	Developed	Middle	80 Sq Yard	
10	Farooq Villas	Developed	Middle	120 Sq Yard	
11	37/A Area	Developed	Middle	80 Sq Yard	
12	2/A Area	Developed	Middle	80 Sq Yard	

UC-8 Landhi

UC-8 Landhi consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	5/A Area	Developed	Middle	80-120 Sq Yard	
2	5/B Area	Developed	Middle	80-120 Sq Yard	
3	5/C Area	Developed	Middle	80-120 Sq Yard	
4	36/E 55 Quarters	Developed	Middle	80-120 Sq Yard	
5	44/C Area	Developed	Middle	80-120 Sq Yard	
6	4/C Area	Developed	Middle	80-120 Sq Yard	
7	4/B Area	Developed	Middle	80-120 Sq Yard	
8	36-C Area	Developed	Middle	80-120 Sq Yard	
9	36/E Area 19 Quarter	Developed	Middle	80-120 Sq Yard	
10	36/F Area	Developed	Middle	80-120 Sq Yard	
11	3-B Area	Developed	Middle	80-120 Sq Yard	
12	5-C/H Bilalabad	Undeveloped	Low		Katchi Abadi
13	5-D H Area	Undeveloped	Low		Katchi Abadi
14	5-D Area	Undeveloped	Low		Katchi Abadi

UC-9 Awami Colony

UC-9 Awami Colony consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	4/A Block 103 Area	Developed	Middle	120 Sq Yard	
2	30/D Area	Developed	Middle	120 Sq Yard	
3	Awami Colony I - II	Undeveloped	Low		Katchi Abadi
4	Gulshan Latif	Developed	Middle	120 Sq Yard	
5	Gulshan Billal	Developed	Middle	120 Sq Yard	
6	Sector 26, 27	Developed	Middle	120 Sq Yard	
7	Cattle Colony	Developed	Middle	120 Sq Yard	
8	Awami Colony	Developed	Middle	120 Sq Yard	
9	Haji Jalal Murad Goth	Undeveloped	Low		Katchi Abadi
10	Haji Shambe Goth	Undeveloped	Low		Katchi Abadi
11	Haji Ahmed Goth	Undeveloped	Low		Katchi Abadi
12	Neik Muhammad Goth	Undeveloped	Low		Katchi Abadi
13	Sharafi B Goth	Undeveloped	Low		Katchi Abadi
14	Gabol Goth	Undeveloped	Low		Katchi Abadi
15	Area 4-A	Undeveloped	Low		Katchi Abadi

UC-10 Barmi Colony

UC-10 Barmi Colony consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	36/C Area	Developed	Middle	80 Sq Yard	
2	4-C Area	Developed	Middle	80 Sq Yard	
3	5-C Area	Developed	Middle	80 Sq Yard	
4	Sharif Colony	Undeveloped	Low		Katchi Abadi
5	Burmi Colony	Undeveloped	Low		Katchi Abadi

UC-11 Korangi

UC-11 Korangi consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Red-N Area	Developed	Middle	80-120 Sq Yard	
2	White N Area	Developed	Middle	80-120 Sq Yard	
3	Gulshan-e-Muhammadi Area	Developed	Middle	80-120 Sq Yard	
4	M-Area	Developed	Middle	80-120 Sq Yard	
5	35/B, C, D Area	Developed	Middle	80-120 Sq Yard	
6	I Area	Developed	Middle	80-120 Sq Yard	
7	F Area (Korangi)	Developed	Middle	80-120 Sq Yard	
8	F Area (West)	Developed	Middle	80-120 Sq Yard	
9	C Area (Korangi)	Developed	Middle	80-120 Sq Yard	
10	C Area (West)	Developed	Middle	80-120 Sq Yard	
11	A Area (Korangi)	Developed	Middle	80-120 Sq Yard	
12	A Area (West)	Developed	Middle	80-120 Sq Yard	

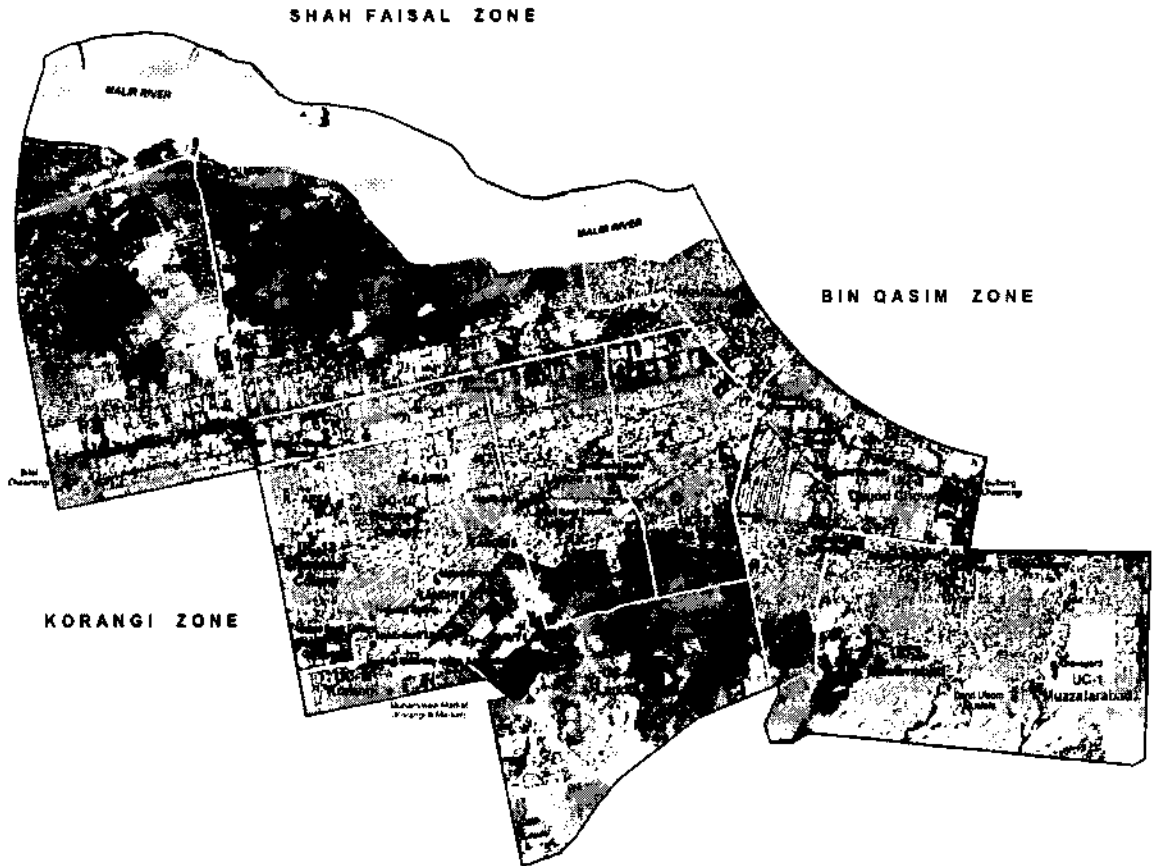
UC-12 Sherabad

UC-12 Sherabad consists of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	36/C Area (Upper)	Developed	Middle	120 Sq Yard	
2	36/C Area (Lower)	Undeveloped	Low		Katchi Abadi
3	I Area	Developed	Middle	120 Sq Yard	
4	Sherabad	Undeveloped	Low		Katchi Abadi
5	4-C Area	Developed	Middle	120 Sq Yard	
6	J-1 North	Developed	Middle	120 Sq Yard	
7	J-1 South	Developed	Middle	120 Sq Yard	
8	Double Room	Developed	Middle	120 Sq Yard	
9	Single Room	Developed	Middle	120 Sq Yard	
10	J Area	Developed	Middle	80-120 Sq Yard	

3.9. Maps of Landhi Zone

LANDHI ZONE



3.10. Existing Solid Waste Management System in DMC Korangi

i. Door-to-Door Collection.

At present system for collection of municipal solid waste at doorstep does not exist in DMC Korangi.

Residents of DMC Korangi throw their household waste to nearby katchra kundi (dustbin) during any time of the day. The shopkeepers of commercial areas and attendants of shopping malls, and residents of DMC Korangi usually throw garbage at the corner of each streets, and in front of shops etc. No strategy or collection plan for doorstep collection exists in DMC Korangi in general. No any MSW collection system in the industrial is in place, though a considerable quantum of MSW is generated in the industrial area as well.

ii. Street Sweeping.

Main roads and lanes in DMC Korangi are cleaned manually using brooms and brushes and the sweeping stuff is kept in the form of numbers of small heaps, besides kerbs and on road sides, which are then lifted with help of Belcha and transported to nearest dustbin site/collection point using wheelbarrow/handcarts. Sweeping stuff is normally thrown into the dustbin. Sweeping is done normally in two shifts i.e. 6:00 AM to 10 AM and then 2:00 PM to 5:00 PM. Mechanical sweeping is not done in DMC Korangi except on some occasion on the main road when such machines are provided by KMC.

iii. Washing of Main and Important Roads.

Currently no such practice is being carried out.

iv. Transportation of MSW from Dustbin/Collection points to GTS or nearest Landfill Sites.

Garbage vehicles i.e. Arm Roll, Compactor, Dump Trucks, Tractor Trolley designated to each UC of the Zone collect and transport waste from collection points/dustbins to GTS of the Zone. In some cases MSW is transported to nearest land fill sites. Each vehicle is supposed to make 3 to 4 trip a day to clear garbage from dustbins/collection points. Though complete lifting of garbage form the zones could not be made due to non-availability of required numbers of vehicles. Usually containers of 4 to 7 Ton capacity are placed at collection points/dustbins. However, in some areas of DMC Korangi garbage dumped at open places, such garbage is either lifted using loaders and bobcat (type of machinery) or through labour using baskets to pick and to load into refuse vans or compactors which is then transported to GTS of respective Zone. The machinery for lifting and transportation of MSW available with DMC Korangi is very old and not

compatible with the machines usually required for MSW lifting and transportation.

v. Location of GTS of the Zones of DMC Korangi.

GTS for the Korangi Zone is located at the boundary of UC-9 Hasrat Mohani Colony on the seashore. Whereas in Shah Faisal Zone GTS exist near Azeem Pura Graveyard UC-7. The GTS for Landhi Zone is at Sharafi Goth. The service area of the GTS is the whole area of the each zone. MSW handling capacity of each zone is mentioned in respective annexures.

3.11. Existing System of Offal Collection & Disposal in DMC (Korangi)

On the eve of Holy festival of Eid Ul Azha every year, thousands of animals, i.e. goat, lamb, sheep, cow, bulls and camels are slaughtered as a sacrifice. This sacrificial act is done (as a custom) on the door step of each household or within the premises jointly or individually on the roads sides open ground. After slaughtering the animal, as a general public practice, the offals and other residuals like bones, skin parts and other intestinal organs etc. are left at the door step or thrown at the road side in bushes, open ground, collection points and dustbins sites etc. creating an unclean environment with a pungent odor of blood almost everywhere on the event.

This situation is dealt with MSW Management of each zone efficiently and effectively, initiating a specific campaign under an offal collection plan. A day before the event, clearing the garbage from dustbins sites is done. The special offal collection campaign usually started just after Eid Ul Azha prayer. The offals and other residual animal waste are then collected through machinery within the zones including hired rental vehicles and disposed off in the pits already excavated at designated places where the offal are buried in a manner that create no hazard to the surrounding. Sprinkling the chalk powder and other insecticidal / perfume spray is also done to create pleasant atmosphere.

The campaign is managed in such a manner that area is made clean and clear by the evening of each day event which continuous for three continuous day. An estimated numbers of offals collected and buried in DMC Korangi are about 169,759 numbers.

Days of Eid-ul-Azha	Korangi	Shah Faisal	Landhi	Total
1 st Day	23290	27300	26485	77075
2 nd Day	21640	12700	24870	59210
3 rd Day	12444	5400	15630	33474
Total	57374	45400	66985	169759

3.12. Problems & Short Comings in Existing System

- Waste has never been assigned priority by the Government.
- Non-existence of Door-to-Door Collection System.
- Poor attendance of Sanitary Workers / Officials engaged street sweeping and waste disposal.
- Ineffective system of monitoring / reporting causing indiscriminate dumping of waste on open spaces and road sides, also causing delay in complaint redressal system.
- Deficient number of concrete dustbins (katchra kundi) / containers in the most of the areas, resulting in open and scattered dumping of garbage.
- Irregular collection of garbage from community bins/collection points due to:
 - Poor Supervision.
 - Too many waste bin / dust bin sites.
 - Defective, inappropriate and old garbage vehicles.
 - POL (Petrol, Oil and Lubricant) issues.
 - Political / labour Union intervention.
 - No fixed timings for garbage vehicles to collect garbage from dustbin sites and further transportation to landfill site.
 - Open transportation of garbage causing environmental pollution.
 - Encroachments especially in market / commercial area causing difficulties in sweeping, collection and transportation to GTS /Land Fill Site. Hence the required number of trips is not achieved.
 - No proper GTS facility is available.
 - Scavengers, especially on open spaces and roadside dustbins, cause scattering of garbage.
 - Existing rules with regards to SWM need to be reviewed, strengthened and enforced.
 - Lack of public awareness/ civic sense regarding SWM collection and disposal.
 - Lack of scientific approach towards integrated SWM.

Section IV

Proposed Plan for DMC (Korangi)

Proposed Plan for Zone Korangi (DMC Korangi Area)

4.1 Front End Collection Plan (Proposed Plan)

Front End Action Plan. It Includes followings scope of Work and services

1. Door to door collection and revamping of bin system.
2. Sweeping of roads, streets, lane, footpath, medians and open spaces and sweeping waste collection and disposal.
3. Washing of important roads as and when required including on special occasions.
4. Lifting and transportation MSW from dustbins sites & collection points to designated GTS.
5. Scientific monitoring and tracking system for entire management and operation plan.
6. Community awareness program and its implementation.

4.2 Door to door collection mechanism

Door to door collection for Front End Collection Plan/mechanism is categorized as:

(a) Block Collection.

Wherein waste collecting vehicles with one or two waste collecting workers move around the residential blocks on a specified time each day and sounds horn or ring bell and wait at intermediate location for residents to bring waste in polythene bags to the collection vehicles or where the workers with the collecting vehicles collect garbage in a basket at the door step of the residents and throw the same in the collecting vehicles, which is then disposed off to nearest dustbin site.

(b) Door Step Collection.

Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at specific time each day or collected at door step by the sweepers every day, equipped with wheel barrow, handcart and disposed off to nearest dustbins sites.

(c) Shared containers type collection.

Wherein a container of suitable capacity is placed at an appropriate place within a residential block, apartment building market and shopping area and residents and other generators, put their waste stuff inside the container, these containers may be of

hook and lifting type or may be bucket type with proper tipping arrangements, which are then emptied at by compaction container type compactor vehicles and then again placed at the location. However this operation is done as many time as required to keep the container free of garbage. The locations where the such containers are placed are kept cleaned and spilled out garbage is swept from the surrounding.

Anyone or all defined categories will be adopted under the front end collection plan for door to door collection keeping in view the demographics of the area, however for the purpose of guidance, sweeping methodology in various UCs of the Zones of DMC Korangi is mentioned hereunder.

Plastic bag will be provided free of cost by contractor/operator to all residential units for the first two weeks only. The size and grade of polythene bag is given in the technical specification.

Note.

Where block collection and door step collection is adopted, and where possible in case of shared container type collection, organic and inorganic Municipal Solid Waste are to be collected separately and transported to GTS in a manner that these two types of MSW be disposed of at GTS separately as directed by SSWMB officials and this practice is to be adopted in each zone. Organic and inorganic MSW is to be collected in different colored bags and litterbin and containers as the case may be.

Strategy for door-to-door collecting in various zones of DMC Korangi

Korangi Zone

Name of UC	Door to door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.
<p>UC#1 Bilal Colony</p> <p>UC#2 Nasir Colony / Qayumabad</p> <p>UC#3 Chakra Goth</p> <p>UC#4 Mustafa Taj Coloy</p> <p>UC# 5 100 Quarters</p> <p>UC# 9 Hasrat Mohani Colony</p> <ul style="list-style-type: none"> • Low to Middle Income Group • Congested areas 	<p>Shared Containers Type Collection</p> <ul style="list-style-type: none"> • Steel Containers of appropriate size & capacity must be placed at appropriate distance. When filled up must be lifted and disposed off into a compactor vehicle and empty container must be placed again on the location. The operation of clearing the container be done at least twice a day or as many time as required to keep the container free of garbage • Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	<p>Details of bucket and bin, bin sizes, frequency of placement, tool to be utilize, polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism is given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki pickup type vehicles may be used.</p>
<p>UC#6 Gulzar Colony / Korangi No.1</p> <p>UC#7 Korangi Sector 33-C</p> <p>UC#8 Zaman Town</p>	<ul style="list-style-type: none"> • <u>Block Collection Strategy:</u> Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. • <u>Door Step Collection.</u> Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in 	<p>Details of bucket and bin, bin sizes, frequency of placement, tool to be utilized; polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism is given in</p>

<ul style="list-style-type: none"> • Middle to high Income Group • Sparsely areas 	<p>and around the residential area at specific time on each day or collected by the sweepers every day equipped with wheel barrow, handcart and disposed off to nearest containers and bucket with tipping arrangements.</p>	<p>technical specification.</p> <p>Small Compactor vehicles type or small Suzuki pickup type vehicles may be used.</p>
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Shah Faisal Zone

Name of UC	Door to door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.
<p>UC#1 Natha Khan Goth</p> <p>UC#2 Pa\leftarrow Sadat Colony</p> <p>UC#4 Reta Plot</p> <p>UC#5 Morio Khan Goth</p> <ul style="list-style-type: none"> • Low Income Group • Thickly Populated 	<p>Shared Containers Type Collection</p> <ul style="list-style-type: none"> • Steel Containers of appropriate size & capacity must be placed at appropriate distance. When filled up must be lifted and disposed off into a compactor vehicle and empty container must be placed again on the location. The operation of clearing the container be done at least twice a day or as many time as required to keep the container free of garbage • Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	<p>Details of bucket and bin, bin sizes, frequency of placement, tool to be utilize, polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism is given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki pickup type vehicles may be used.</p>
<p>UC#3 Drigh Colony</p> <p>UC#6 Rifah e Aam</p> <p>UC#7 Al-Falah Society</p> <ul style="list-style-type: none"> • Middle to high Income Group 	<ul style="list-style-type: none"> • <u>Block Collection Strategy:</u> Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. • <u>Door Step Collection.</u> Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in 	<p>Details of bucket and bin, bin sizes, frequency of placement, tool to be utilized, polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism is given in</p>

<ul style="list-style-type: none"> • Sparsely areas 	<p>and around the residential area at specific time on each day or collected by the sweepers every day equipped with wheel barrow, handcart and disposed off to nearest containers and bucket with tipping arrangements.</p>	<p>technical specification.</p> <p>Small Compactor vehicles type or small Suzuki pickup type vehicles may be used.</p>
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Landhi Zone

Name of UC	Door to door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.
<p>UC#1 Muzaffarabad Colony</p> <p>UC#2 Muslimabad Colony</p> <p>UC#3 Dawood Chowrangi</p> <p>UC#4 Moinabad</p> <p>UC# 5 Sharafi Goth</p> <p>UC# 6 Bhutto Nagar</p> <p>UC# 7 Khawaja Ajmer Nagri</p> <p>UC#9 Awami Colony</p> <p>UC#10 Barmi Colony</p> <ul style="list-style-type: none"> • Low to Middle Income Group • Congested areas 	<p>Shared Containers Type Collection</p> <ul style="list-style-type: none"> • Steel Containers of appropriate size & capacity must be placed at appropriate distance. When filled up must be lifted and disposed off into a compactor vehicle and empty container must be placed again on the location. The operation of clearing the container be done at least twice a day or as many time as required to keep the container free of garbage • Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	<p>Details of bucket and bin, bin sizes, frequency of placement, tool to be utilize, polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism is given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki pickup type vehicles may be used.</p>
<p>UC#8 Landhi</p> <p>UC#11 Korangi</p> <p>UC#12 Sherabad</p>	<ul style="list-style-type: none"> • Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	<p>Details of bucket and bin, bin sizes, frequency of placement, tool to be utilized, polythene bags are given in technical specification.</p>

<ul style="list-style-type: none"> • Middle to high Income Group • Sparsely areas 	<ul style="list-style-type: none"> • <u>Door Step Collection.</u> Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at specific times each day or collected by the sweepers every day equipped with wheel barrow, handcart and disposed off to nearest containers and bucket with tipping arrangements. 	<p>Details of Type of garbage collecting and transporting vehicles, bin mechanism is given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki pickup type vehicles may be used.</p>
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Street Sweeping and Sweeping of Main Roads

i) Classification / Type of Roads.

a. **Primary Main Roads.**

There are the main roads connecting zone in a district (dual carriageway), planned and constructed on established Engineering practices with proper road geometry 3 or 4 lane carriageways.

b. **Secondary Main Roads.**

May be classified as main roads but secondary type, connecting various UCs in any Zone mostly single carriageways. However, in some parts, double carriageway facility. Planned and constructed on normal Engineering practices with without outside walks, median or edge stones and without proper road geometry, three lane single carriageways.

c. **Streets.**

These are internal roads, connecting various residential blocks, around market and commercial areas mostly 2 lane dual carriageways type with or without sidewalks. Constructed on conventional practice.

d. **Narrow lanes and streets.**

Paved or unpaved narrow internal streets in old resident areas, markets and around old commercial areas, single lane to double lane i.e. 10 to 20ft wide with or without sidewalks or edge stone.

ii) **Sweeping Methodology.**

1. **Conventional Type (i.e. manual).**

With the help of sweepers, using broom/brushes and sweeping waste is collected through wheelbarrow, transported and disposed off to nearby buckets containers with tipping arrangements.

2. **Mechanical Type (i.e. using machine sweepers).**

Appropriate, vacuum type mechanical sweeping vehicles including built-in sweeping waste containing facility, shall be used. The sweeping waste shall be disposed off to nearest bucket or container having tipping arrangements.

iii) **Proposed Sweeping System under Front End Collection Plan.**

a) **Secondary Main Road, Streets and Narrow Lanes. (Manual Sweeping).**

It is suggested that on secondary main roads, streets and on narrow lanes and streets manual sweeping be adopted along wheelbarrow and Suzuki Pickup type of vehicles to transport with the help of sweeping waste from the beat (area) to bucket or containers. Sweeping on internal streets of residential area may be done as per schedule, guideline given at technical specification. Whereas in markets/commercial areas and in bazaar type of market areas, sweeping is required two times in a day as mentioned schedule of sweeping at technical specification. Contractor must make its own schedule, for the purpose, however, the area must be cleaned and cleared from garbage.

b) **Primary Main Roads and Secondary Road. (Mechanical Sweeping)**

Using mechanical sweepers of appropriate size and capacity for sweeping of these roads as enlisted is to be done. Sweeping stuff may be disposed off to nearest dustbin site or to GTS. Mechanical sweepers of self contained and vacuum type is best suited for the purpose.

List of Primary and Secondary main Roads Mechanical Sweeping

Primary Main Roads (Dual Carriageway)

S No.	Name of Road	Length (KM)
Korangi Zone		
1	7000 Road	3.71
2	5000 Road	4.26
3	11000 Road	5.85
4	13000 Road	5.67
5	16000 Road	6.34

Sindh Solid Waste Management Board

6	9000 Road	6.30
7	3000 Road	4.14
8	351 Road	1.46
9	362 Road	1.95
10	14000 Road	2.19
Shah Faisal Zone		
11	Shoukat Umar Road	2.0
12	Shama Shopping Centre	0.8
13	Shah Faisal Colony 3 No. Main Bazar Road	0.8
14	Shah Faisal Colony 1 No. Main Bazar Road	0.8
15	Malir Band 5 No to Nasran Imam Bargah	0.8
16	Nasreen Imam Bargah to Millat Mor	4.5
17	Wireless Gate to Rifah-e-Aam Chowk	1.2
18	Jamia Milla College Road	2.0
19	Shahrah-e-Altah Malir Court to Malir River	1.5
Landhi Zone		
20	361 Road	4.37
21	362 Road	4.75
22	363 Road	1.48
23	365 Road	1.37
24	351 Road	1.75
25	352 Road	5.85
Total		75.84

Secondary main roads (Single Carriageway)

S No.	Name of Road	Length (KM)
Korangi Zone		
1	12000 Road	9.26
2	10000 Road	9.39
3	8000 Road	10.24
4	6000 Road	10.48
5	321 Road	0.85
Shah Faisal Zone		
6	Road Wireless Gate to Shamsi Hospital	1.30
7	Shamsi Hospital to Azeem Pura Road	1.50
Landhi Zone		
8	12000 Road	8.75
9	1000 Road	5.23
10	8000 Road	10.10
11	13000 Road	5.50
12	15000 Road	5.50
13	Mehran Highway	6.20
14	Shahrah-e-Landhi	3.27
Total		87.57

Proposed Machinery for Mechanical Sweeping and contained sweeping waste capacities under Front-end collection plan.

Mechanical Sweeper -B1

- Type- Vacuum type wet brushing mechanism
- Maximum sweeping width 3.5 Meter
- Operating speed 5 to 10 KM Per Hour
- Contained sweeping waste capacity 8 to 10 cubic meter
- Water tank capacity 250 to 350 liters
- Total number of machines **Required= 06 Number**



- Type- Vacuum type wet brushing mechanism
- Maximum sweeping width 2 Meter
- Operating speed 5 to 8 KM Per Hour
- Contained sweeping waste capacity 2 to 3.5 cubic meter
- Water tank capacity 80 to 100 liters



Proposed Machinery for Washing of Main Roads under Front end collection plan.

Mechanical Washers -C1

- Type- Automatic sprinkling washing mechanism
- Maximum Washing width 3.5 Meter
- Operating speed 5 to 10 KM Per Hour
- Contained water tank capacity 1000 to 1500 Gallons
- Total number of machines **Required= 03 Number**



**c) Footpath, Medians, Roundabouts and Open Spaces.
(Manual Sweeping)**

It is suggested that on footpath Medians, Roundabouts and open spaces, manual sweeping be adopted along wheelbarrow and Suzuki Pickup type of vehicles to transport the sweeping waste from the beat (area) to bucket or containers placed nearby the area. Sweeping be carried out as per schedule of sweeping provided in technical specification. The purpose is that the area must be cleaned and cleared from garbage.

iv) **Proposed Lifting & Disposal of MSW from Collection Point/Dustbin Sites to GTS.**

Under the proposed plan efficient and effective collection & transportation system for MSW is to be adopted using appropriate MSW collection, transportation, machineries and collection system. The suggested numbers of such machines of different MSW contained capacity to handle 1555 Tons Per day MSW generation of DMC Korangi satisfactorily is 57 numbers. A system schedule must be developed that helps keeping the area free of garbage. To coop up the target numbers of collection point / dustbin sites are to be significantly reduced that can be done using:

1. Containers, bucket, bins having tipping arrangements is to be provided at appropriate location that can be emptied into a compaction type container mounted on vehicles.

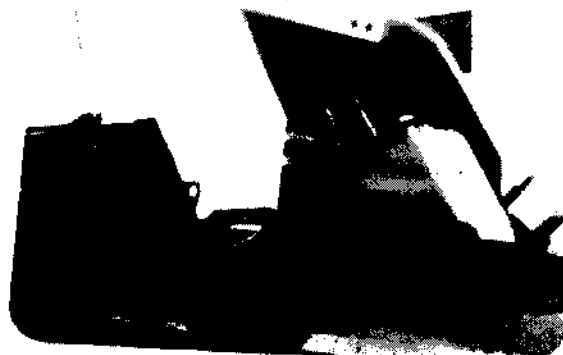
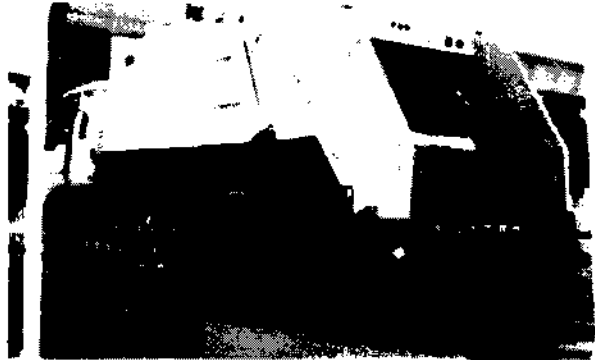
Using compaction type containers mounted vehicles saves labour cost and frequent cleaning of bins, buckets and containers help discourage scavengers, reduces insects/rodents problem, prevent windblown trash, control odor, save inside storage space and outside parking spaces, reduces the hazards of open dumping. For various such reasons emphasis is to use appropriate machinery for solid waste management and transportation.

The bins, buckets and containers mechanism the vehicle types that are recommended for collection, transportation are mentioned hereunder along with pictorial view of desired vehicles and their tipping mechanism. Operation schedule of machines, number required and proposed plan for operation is given in technical specifications.

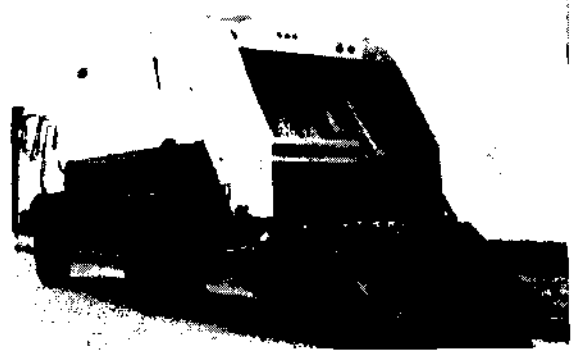
Proposed Machinery for lifting and Transportation including bin Tipping Mechanism under Front-end collection plan

Bin tipping Mechanism -A1

- Appliance- standard metal or plastic rubbish bin.
- Bin cubage 0.24 to 0.3 cubic meter



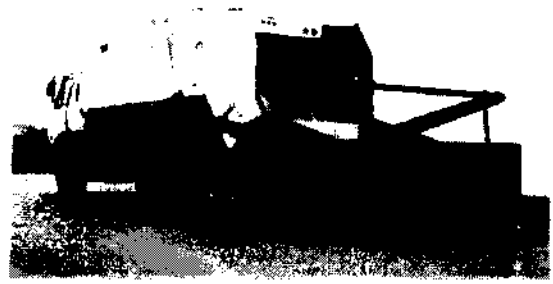
Bin tipping Mechanism A2
Appliances- metal bucket
Bucket cubage= 0.8 meter cube



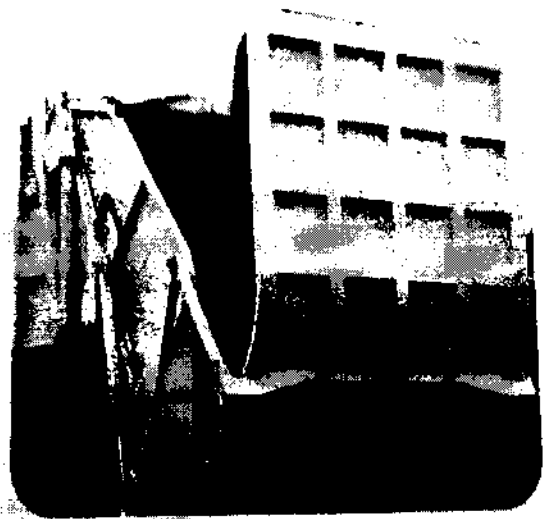
Bucket raising Mechanism A3

Appliance- big metal rubbish bucket

Bucket cubage =3.35 meter cube



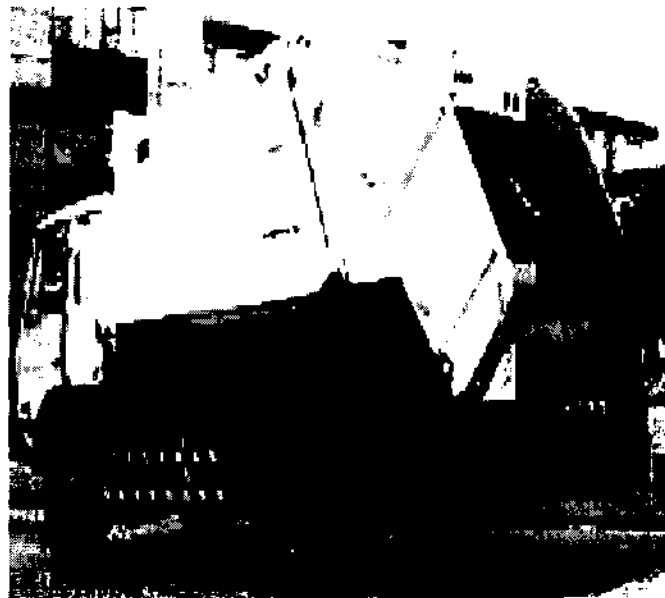
Bucket tipping mechanism-A4
Appliances- special metal covering
bucket.
Bucket cubage =1.4 to 2meter cube



Type of Vehicle –Tipping Mechanism –Bin category and type of vehicles

Vehicle Type - compactor semi Automatic or fully Automatic compaction type. Container in-built vehicle with

- BIN tipping Mechanism –A1
- BIN tipping Mechanism-A2
- Bucket raising Mechanism-A3
- Bucket tipping Mechanism-A4
- Container volume
 - 6.6 M³
 - 10 M³
 - 12 M³
 - 16 M³
- Number required
 - A suggested number of machines having different container capacity that are required to handle MSW generation of DMC Korangi on Daily Basis are mentioned as under:
 - **Vehicle with Container Capacity of 6.6 M³ = 10 No.**
 - **Vehicle with Container Capacity of 10 M³ = 07 No.**
 - **Vehicle with Container Capacity of 12 M³ = 07 No.**
 - **Vehicle with Container Capacity of 16 M³ = 08 No.**
 - Total = 32 No.**



Small vehicle tipping mechanism

Appliances- auto tipping bucket
Small vehicle bucket cubage = 1.4 meter cube
Capacity of in-built container = 1.5 to 2.5 meter cube

Number Required

As many number as required in view of the physical conditions.



Container Hook Lifting type Mechanism



Hook Lifting type Mechanism-B

Appliances- metal container

Container Cubage

1. 10 m³
2. 07 m³
3. 05 m³

Number required

- Suggested number of machines required of different container Volume capacity is
- | | |
|---------------------------|---------------|
| 05 M ³ Volume= | 09 No. |
| 10M ³ Volume= | 07 No. |
| 07M ³ Volume= | <u>09 No.</u> |
| Total = | 25 No. |

4.3 Schedule of Works

Proposed schedule of work and services is given at term of reference and technical specification.

4.4 GTS of Zones and Locations.

- a. Korangi Zone, near boundary of UC-9 or as designated by Procuring Agency.
- b. Shah Faisal Zone, near Azeem Pura Graveyard Or as designated by procuring agency.
- c. Landhi Zone at Sharafi Goth Or as designated by procuring agency.

Section V

Terms of Reference & Technical Specification

Terms of Reference & Technical Specification

5.1 MSW by Definition

Municipal Solid Waste, commonly known as trash or garbage is a waste type consisting of everyday items that are discarded by public includes food waste, market waste, yard waste, landscape waste (tree cutting, bushes, grass cuttings etc), domestic waste, Slaughter and Sacrificial animal waste (like offals, bones, skin etc.) and other miscellaneous solid waste from residential commercial, institutional areas but do not include demolition waste (inert waste) Industrial waste, agriculture waste, Medical Waste or sewage sludge.

The total estimate MSW generation in DMC Korangi is 1555 Ton Per Day, the composition of MSW and its quantum varies depending upon, type of dwelling population density, commercial activity and density of different type of bazaar and markets in the area, the quantum of MSW also reflects its variation on various occasion, like Eid Festival in the month of Ramdan and Eid ul Azha. The quantum also depends on seasonal variation.

Municipal Solid Waste can be classified in several ways, but the following list represents a typical classification:

- Biodegradable Waste i.e.
Food and kitchen waste, green waste, waste from houses, gardens, papers.
- Recyclable Material i.e.
Like paper, glass, bottles, cans, metals, plastic, fabrics, clothes, batteries, old types etc.
- Electrical and Electronics Waste
Like discarded, electrical appliances etc.
- Composite Waste.
Waste clothing, Tetra Pack, Plastic like toys etc.
- Hazardous Household Waste
Like paints, chemical in daily residential usage, light bulbs, tube, spray cans, garden fertilizer, different type of plastic bottles and cans, garden pesticide, herbicides etc.

Municipal Solid Waste as defined here above includes all type of waste that is collected at dustbins/collection points except, demolition waste (inert waste) industrial and medical waste, agriculture waste, sewage sludge but includes sweeping waste with a minor component of dirt.

5.2 Transition Period

The transition period for the purpose of implementation of this contract is 03 (three) months starting from the date of signing of agreement and work order. The contractor shall be liable to perform the function as per contract and his activities at the work and services even in the transition period.

5.3 Terms of Reference

a. Scope of work

1. Door to door collection of garbage & revamping of bin system.
2. Sweeping of roads, streets, lane, footpath, medians and open spaces and sweeping waste collection and disposal.
3. Washing of important roads as and when required on special occasions.
4. Lifting and transportation MSW from dustbins sites & collection points to designated GTS.
5. Establishment of Scientific Monitoring and Tracking of Entire System i.e. vehicle sanitary staff, assets etc.
6. Establishment of complaint management system.
7. Community awareness program and its implementation.

b. Objective of work and services

The objective of work and services is to provide efficient, cost effective, environment friendly solid waste collection transportation and its efficient, effective management and operation systems for the public to live in waste free and healthy environment. Effective management and monitoring shall help in obtaining desired results on time.

c. Task to be performed.

1. Door to door collection.

Door to door collection for Front End Collection
Plan/mechanism is categorized as under:

- (a) Block Collection.

Wherein waste collecting vehicles with one or two waste collecting workers move around the residential blocks on a specified time each day and sounds horn or rings bell and

wait at intermediate location for residents to bring waste in polythene bags to the collection vehicles or where the workers with the collecting vehicles collect garbage in a basket at the door step of the residents and throw in the collecting vehicles, which is then disposed off to nearest dustbin site.

(b) Door Step Collection.

Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at a specific time on each day or collected at door step by the sweepers every day, equipped with wheel-barrow, handcart and disposed of to nearest dustbins sites.

(c) Shared containers type collection.

Wherein a container of suitable capacity is placed at an appropriate place within a residential block, apartment building market and shopping area and residents and other generators, put their waste stuff inside the container, these containers may be of hook and lifting type or may be bucket type with proper tipping arrangements, which are then emptied by compaction container type compactor vehicles and then again placed at the location. However this operation is done as many time as required to keep the container free from garbage. The locations where such containers are placed are kept cleaned and spilled out garbage is swept away from the surroundings.

Anyone or all defined categories will be adopted under the front end collection plan for door to door collection keeping in view the demographics of the area, however for the purpose of guidance, sweeping methodology in various UCs of the Zones of DMC Korangi is mentioned hereunder.

Plastic bag will be provided free of cost by contractor/operator to all residential units for the first two weeks of the contract only.

d. Street Sweeping and sweeping of main roads

1. Conventional Type (i.e. manual).

With the help of sweepers, using broom/brushes and sweeping waste is collected through wheelbarrow, transported and disposed off to nearby buckets containers with tipping arrangements.

2. Mechanical Type (i.e. using machine sweepers).

Appropriate, vacuum type mechanical sweeping vehicles including built-in sweeping waste containing facility, shall be used. The sweeping waste shall be disposed off to nearest bucket or container having tipping arrangements.

e. Collection and transportation of MSW

Under the proposed plan efficient and effective collection & transportation system for MSW is to be adopted. A system that helps keeping the area free of garbage. To coup up the target numbers of collection point / dustbin sites are to be significantly reduced that can be done using:

1. Containers, bucket, bins having tipping arrangements are to be provided at appropriate locations that can be emptied into a compaction type container mounted on vehicles.

Using compaction type containers mounted vehicles saves labour cost and frequent cleaning of bin, buckets and containers help discourage scavengers, reduce insects/rodents problems, prevent windblown trash, control odor, saves inside storage space and outside parking spaces, reduce the hazards of open dumping. For various such reasons emphasis is laid to use appropriate machinery for solid waste management and transportation.

f. Responsibilities of procuring agency

1. In case the procuring agency does not fulfill its obligation regarding signing of agreement the contractor may relinquish its commitments 45 (forty five) days after receiving the acceptance letter by procuring agency.
2. The procuring agency shall assist and facilitate the contractor in performing the work and services as per the contract in respectful and honorable manner throughout the period of contract.
3. The procuring agency shall make all due payments to the contractor against verified monthly bills on time and will be careful and justify the imposing penalties, if any.

g. Responsibilities of contractor

1. The contractor shall perform the work and services under this contract in respectful, honorable manner with an objective and resolve to serve the people of the area.
2. The contractor shall submit his monthly performance bill in time and in accordance work performed correctly and in justifiable manner.
3. Contractor shall follow the instructions and guidelines issued by client or by representative of client and shall comply with all such instructions timely.

4. Contractor is responsible for ensuring good behavior to public and shall follow the code of conduct mentioned in contract document.

5.4 Technical specification.

A. Revamping of Bin System.

The contractor shall provide bins, buckets, and containers having tipping mechanism compatible with compactor vehicles in the color scheme noted below:

Korangi Zone – Olive Green

Shah Faisal Zone – Golden Yellow

Landh Zone – Grey

Marking of Logo and Letters

Sindh Solid Waste Management Board and the Zone Name shall be written in Capital Bold Letter and its logo shall be placed on the bins, buckets and containers with the approval of the Procuring Agency.

Bin Type and Sizes

1. Plastic Litterbins of bin cubage 0.24 to 0.3 Meter cube.
2. Standard metal bucket with the following cubage:
 - a. Bucket cubage of 0.8 to 1.4 m³.
 - b. Bucket cubage of 1.4 to 2 m³.
 - c. Big bucket cubage 3.35 to 4 m³.
3. Standard Metal Container with container cubage 5 to 10 m³.

All bins, buckets and containers shall be of tipping type.

Bin Requirements

Zones	Plastic Litterbins of different sizes and colors	Standard metal bucket of different sizes and colors	Standard Metal container of different sizes and colors
Korangi	1500 Nos.	1000 Nos.	200 Nos.
Shah Faisal	1000 Nos.	500 Nos.	100 Nos.
Landhi	1500 Nos.	1000 Nos.	250 Nos.
Total	4000 Nos.	2500 Nos.	550 Nos.
Area of placement	in markets & shops	in markets shopping malls & commercial centres & residential Unit	At appropriate places in residential areas, apartment blocks, residential blocks and public places

REMARKS:

Contractor shall provide bins, buckets, and container on prior approval (for numbers to be provided at first stage second stage and third stage) as desired by procuring agency.

B. Plan for Placement of bins, buckets and containers

The contractor will prepare a comprehensive plan for placement of bins, buckets and containers in various union councils of each zone as per the guidelines for revamping of bins system.

Client shall review the plan submitted by successful bidder after award of the contract. A revised plan shall be prepared with mutual consent of client and contractor dully approved by the client. The approved plan shall be implemented for provision of work and services under this contract.

C. Polythene bag

Polythene bag of size 0.5X1 sq. meter in black color of 30 micron thickness with letter and logo of SSWMB printed on it shall be provided by the contractor for door to door collection in the areas where door step strategy is adopted. Contractor will provide such bags free of cost for the first two weeks of the contract and thereafter bag will be provided to residents on payment. Prior approval of the client shall be required for the cost of the bag provided to residents. Samples of polythene bag shall be sent for approval of client with required printing. Approved bags only shall be supplied to the residents. Polythene bags shall be provided for everyday collection of solid waste from the residents.

D. Cost of Polythene bags provided free of cost

All costs towards providing/supplying of polythene bags free of cost (for the first two weeks of the contract) shall be included in unit cost of work and services mentioned in price list.

E. Door to door collection plan

Domestic waste shall be collected via strategy for door to door collection defined under front end collection plan contractor shall submit plans for implementation of this system for door to door collection along with the tender. Such plan shall be reviewed and reworked with the consent of client and successful bidder and shall be subject to approval of competent authority. The approved plan shall be implemented. The strategy for door-to-door collection defined herein the documents using UC wise parameter are basic once and the bidder is supposed to give his own appropriate plan and strategy. Innovation and out of box ideas shall be encouraged.

F. Handcarts and other tools for door to door collection

1. Contractor shall collect waste from narrow streets, that can not accessed by garbage vehicles, rather through manual workers using wheeled handcart and empty them to nearby container or to the compactor vehicle standing nearby locality.
Wheel handcart bin cubage = 120 Liters
2. Contractor may also collect waste from congested residential colonies through workers using wheelbarrow and basket

G. Manual sweeping

Manual sweeping of roads shall be done by man/woman sweepers using broom/brushes and sweeping waste is collected through wheelbarrows and sweeping waste disposed off at nearby container or bucket or compactor vehicles standing nearby the locality.

Tools for manual sweeping

1. Broom and brushes
2. Shovel and spades
3. Racks
4. Basket
5. Hoe.

H. Length and area for manual sweeping

a) Korangi Zone	595.50KM
b) Shah Faisal Zone	235.90KM
c) Landhi Zone	326.70KM
Total	1158.10KM

- d) Length and area for manual sweeping under following subhead is noted below.

a) Medians	92000 Sq Meter
b) Footpath	70000 Sq Meter
c) Roundabouts	23250 Sq Meter
d) Open spaces	33000 Sq Meter
Total	218250 Sq Meter

I. Workforce required for manual sweeping

Minimum suggested workforce required for sweeping of roads, medians, footpaths, roundabouts and open spaces under manual sweeping 2000 persons.

J. Schedule for manual sweeping

Type of roads	Manual sweeping length meter	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Secondary Main Road	188280	Yes	No	Yes	No	Yes	No	Yes
Streets	502080	No	Yes	No	Yes	No	Yes	No
Narrow lanes	467820	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Type of Area	Manual sweeping Square meter	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Medians	92000	Yes	No	No	Yes	No	No	Yes
Footpath	70000	No	No	Yes	No	No	Yes	No
Open spaces	23250	No	No	No	No	No	Yes	No
Roundabouts	33000	Yes	No	No	No	No	Yes	No

Manual sweeping shall be done in 02 (two) shift according to the schedule of sweeping.

06:00AM –to- 10:00 AM Shift-1

02:00PM –to- 06:00 PM Shift-2

All cost towards workers, bins, bucket, container, tools must be included in the unit cost of works and services items mentioned in the price list.

K. Schedule for mechanical sweeping on primary and secondary main roads

DMC	Mechanical sweeping length meter	Number of Sweeping Machine	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Korangi	239250	6	Yes	No	Yes	No	Yes	No	No

Standard mechanical sweeping machine of vacuum type with self contained in-built waste collection container shall be applied at the work.

L. Plan for mechanical sweeping.

The contractor shall prepare, a comprehensive plan for mechanical sweeping work, for each zone as per the guidelines given herein above and shall attach the same with the contract document. The client shall review the plan submitted by the successful bidder after award of the contract. The approved plan shall be implemented for operation of work and services under this contract.

M. Plan for collection and transportation of MSW and schedule of operation.

Name of DMC	MSW Generation Ton Per day	Number of collection and transportation vehicles of different Capacity	Mon	Tue	Wed	Thu	Fri	Sat	Sun
DMC Korangi	1555	57	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Door to door collection	Inclusive as above	Tool as per requirement	Yes	Yes	Yes	Yes	Yes	Yes	Yes

N. Plan for mechanical washing of the road

Name of DMC	Length of washing of main roads Per Year	Number of Washing vehicle	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
DMC Korangi	800	03	Occasionally when asked for.						On written orders	

Note:-

The schedule and work plan given herein above are based on basic parameters and of tentative basis and the bidder are suppose to give their own appropriate plan, strategies and schedules. Innovation and out of box ideas shall be encouraged.

O. Proposed Managerial and operational staff requirement

Srl No.	Designation	Numbers	Qualification	Remarks
01.	Manager Operation	01	Well experienced high qualified professional engineer	Please attached the C.V. of the personal
02	Manager Monitoring & Tracking System	01	Personal may be an I.T. Specialist at least B.S in computer science with specialization in networking and system management sciences	Please attached the C.V. of the personal
03	Zone Field Incharge	03	Graduate having sufficient experience in SWM.	Please attached the C.V. of the personal
04	Supervisor	28	Graduate having sufficient experience in SWM.	Please attached the C.V. of the personal
05	Asst. Supervisor	56	Intermediate sufficient experience in SWM.	Please attached the C.V. of the personal
06	Muquddam	84	Metric having sufficient experience in SWM.	Please attached the C.V. of the personal

5.5 Basis of current date prices

i. Source of price (Diesel/Petrol)

The source of prices of diesel/petrol shall be either obtained from Government of Pakistan (GOP) Federal Bureau of Statistic (FBS) monthly statistical bulletin or Pakistan State Oil (PSO). However, for a particular adjustable element the same source shall be used throughout the currency of the contract.

ii. Source price – Labour (Unskilled)

The source price for labour shall be either Govt. of Pakistan (GOP) Federal Bureau of Statistic (FBS) statistical bulletin or statutory notifications. However for a particular adjustable element the same source shall be used throughout the currency of the contract.

iii. Element for price adjustment

Following specified elements is subjected to price adjustment

- a) Fuel (Diesel/Petrol) for vehicles collecting/Transporting MSW only
- b) Labour (unskilled)

iv. Standard Procedure and Formula for Price Adjustment Calculations.

A) Applicability.

- a. The provision for price adjustment shall be applicable to this contract and price adjustment shall be applicable and as payable in full for original scheduled completion period.
- b. In the event the completion of contract exceeds the original scheduled period then:
 - i. In case of default on the part of contractor causing delay in original scheduled completion, the rate of price adjustment will be frozen at the original scheduled date of completion, however price adjustment will be applicable till actual completion. While computing price adjustment beyond the scheduled completion period, in the event the rate is reduced then that reduced rate will be applicable.
 - ii. The price adjustment will be payable in full for the extended period, if the contractor has been granted an extension of time for no fault on part of the contractor duly approved by Sindh Solid Waste Management Board (the procuring agency).

- c. The Basis for compensation (Price Adjustment) will be only those element as specifically listed in clause No.5.5(iii) of this document.
- d. There shall be no price adjustment for the elements, which the employer has either supplied free, of cost or at fixed prices as well as for those elements for which an umbrella exgratia or escalation cover is provided by the Government through an executive order or Statutory Regulatory Order (SRO).
- e. The price adjustment provided herein is only for price adjustment in Local Currency (Pak Rupees).
- f. No method other then given in this document is applicable to compute the price adjustment.

B) Base Date Price and Current Date Price

a. Base Date Price.

The base date price (or Base date index) of the element specified in clause 5.5 (iii) shall be the price of the element which was prevalent twenty eight (28) days prior to the date of submission of tender and such price is to be indicated in writing in the document, as required to be provided by the bidder under appendix-A along with the documentary evidence of specified source. The base date price of the specified element shall be obtained from the sources specified under clause No.5.5

b. Current Date Price.

The current date price (or current date index) of the element specified under clause 5.5(iii) shall be price of the element, which was prevalent twenty eight (28) days prior to the start of the execution month (calendar month) to which a particular monthly statement (monthly running bill) is related. The current date price of the specified element shall be obtained from the source specified in the contract and its documentary evidence is to be provided by the contractor along with monthly bill statement.

c. Procedure.

The monthly bill statement (monthly running bill) as submitted by the contractor, will be

- i. Subjected to verification by procuring agency or its authorized representatives. In case the billed amount is for more than one month, the amount of bill shall be segregated for actual work done for each month.

- ii. Considering the base date price and current date price, the price adjustment in the billed amount then be calculated for the month under consideration in accordance with the formula for price adjustment

C) Formula for Price Adjustment (generalized form)

$$P_n = A + b \frac{L_n}{L_o} + c \frac{M_n}{M_o} + d \frac{E_n}{E_o} + \dots$$

P_n = is Price Adjustment factor for the work carried out in the period n.

A = is a constant or non adjustable portion of the price adjustment factor as specified here under representing the non adjustable portion of contract price.

b, c, d=are the coefficient or weightage order 0.xx (i.e. fraction having two significant digits) for each specified element of adjustment in the contract. The sum of A, b, c, d, etc shall be one.

L_o, M_o, E_o, \dots = are the base date indices for the specified (adjustable) element.

L_n, M_n, E_n, \dots = are the current date indices of the specified (adjustable) element.

If P is the amount payable (prior to adjustment) at the rate entered in the price schedule of work carried out in period n then adjusted payable bill amount to the contractor for the work carried out in period n shall be equal to $P_n X P$.

5.6 Rate analysis

The contractor shall provide rate analysis for each item of BOQ mentioned in the price sheet. The rate analysis should indicate breakup of Unit Cost by activities involved in an item. The consumption of fuel at current rates, factored cost of machines, cost of Litterbins, buckets, containers, polythene bags (that are provided free of cost for two months only), tools, labour cost, managing and monitoring and other cost breakup while evaluating unit price for the items of works and services and shall also provide breakup of cost of other items that are inbuilt in items of works, and the way of evaluation the unit prices. The details are required to assist the reasonability of rates quoted by the contractor.

5.7 Chargeable works

The contractor shall provide polythene bag to the resident free of cost for the first two month of the contract period, after words

contractor shall charge the cost of polythene bag from the area residents to whom the bags are provided, however the cost of bag shall be approved by the client. In any case no cost towards supplying polythene bags to the residents shall be included or inbuilt in the unit price of the item mentioned in the price list except that provided free of cost for first two month of the contract.

5.8 Procuring agency representative, duties and authorities

The procuring agency will appoint a supervising consulting firm or supervising personnel to examine whether work is being performed in accordance with the standards, quality and specification. The supervising consulting firm shall verify the monthly performance bill checked monthly performance and shall report to the client. The contractor shall confirm to the instructions of the supervising authority.

5.9 Uniform

All field staff of the contractor shall wear a proper uniform as approved by the client. A logo of SSWMB shall be placed on the front pocket and on the back of the uniform, the cost of uniform shall be included in the unit price of work item mentioned in the price list.

5.10 Weightment of MSW.

Payment of MSW collection and Transportation shall be based on weight (Metric Ton=1000Kg), subjected to weight quantified/measured through a designated weighbridge (weighbridge designated and approved by SSWMB). The weighing charges shall be born by the contractor and deem to be included in the Unit Cost of the item.

5.11 Tentative Weight Assessment.

The weight of Municipal Solid Waste shall be assessed on the basis of its density as (Weight / Volume) Tons Per Cubic feet. (SSWMB and the contractor, prior to the execution of work shall subject this density to verification). The jointly verified density shall be used for assessment of weight of MSW throughout the contract). The Assessment of weight by density shall not be the basis of Payment. This tentative assessment of weight is a check to ensure that any construction debris or inert waste is not mixed with MSW. The contractor, for the purpose of assessment, shall provide cubage of each and every vehicle container transporting MSW to GTS or Landfill.

Debris and inert waste shall not be mixed with MSW. Any weight of debris or inert waste shall not be subject to payments. If mixed with

MSW strict action shall be taken including imposition of penalties and all such weight shall not be allowed / calculated for payment.

5.12 Rating System and Payment Criteria for sweeping work (Manual and Mechanical).

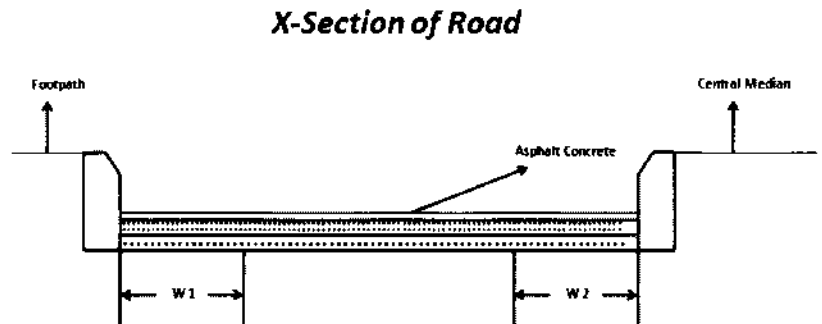
A) Street Cleaning Rating System in Term of Litter and Dust.

Numeric Value	Service Standard sweeping works	Payment in terms of percentage of cost of work done
1	a) A clean street no litter b) A clean street no dust and particles	100%
2	a) A clean street, except for a few one piece of litter b) A clean street, except for a few dust particles micron>40	90%
3	a) No concentration of litter. There are no piles of litter, and there are large gaps between piece of litter. b) No concentration of dust. There are no piles of dust, and there are a large gaps between minor heap of dust particle or small gaps between dust particles.	80%
4	a) Litter is concentrated in spots. There may either be large gaps between piles of liter, or small gaps between pieces of litter. b) Dust and particle micron <600 is concentrated in spots, there may either gaps between minor heap of dust particle or small gaps between dust particle	70%
5	a) Litter is concentrated and there are only small gaps between pieces of litter. b) Dust and particle micron <1000 is concentrated in spots, there may either gaps between minor heap of dust particle or small gaps between dust particle	50%
6	a) Litter is highly concentrated with no gaps in the piles of liter, the litter is straight line along the kerb. b) Dust is highly concentrated with no gaps in the heaps of dust and particles. The dust is straight line along the kerb.	30%
7	a) Litter is very highly concentrated and there are no gaps between the piles of litter. The litter is a straight line along and over the kerrb. b) Dust is very highly concentrated and	0%

	<p>there are no gaps between the dusts. The dust is a straight line along and over the kerb.</p>	
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B) Bases for Payment for Sweeping Work.

- i. Manual sweeping of Road/Streets with Kerbs at both edge with or without footpath but not including sweeping of footpath.



W1= 2 Meters Minimum from the edge stone of road

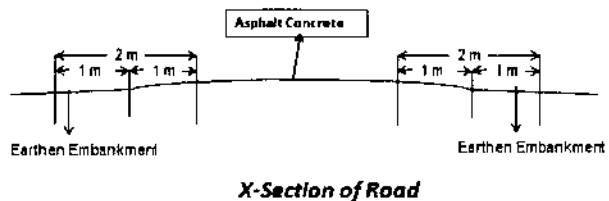
W2= 2 Meters Minimum from the edge stone of road

L = Length of sweeping

Sweeping work measured in KM in one direction of road= W1 and W2 both for the length of sweeping (L).

Note: Single length L of sweeping in one direction (inclusive of both W1 and W2) shall be considered for payment.

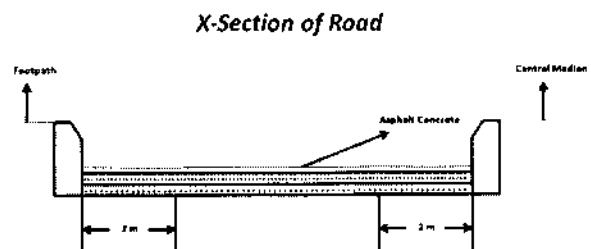
- ii. Manual sweeping of Road/Streets with earthen embankments or sides without kerbs.



Note: Single length L of sweeping in one direction inclusive of both W1 and W2 shall be considered for payment.

- iii. Mechanical sweeping of roads single or double carriageways.

- a) Mechanical sweeping of roads (single or double carriageways) with kerb at both edge with or without footpath, but not including sweeping of footpath



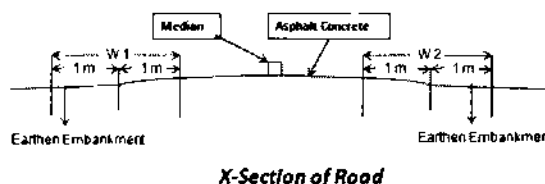
W1= 2 Meters Minimum from the edge stone of road

W2= 2 Meters Minimum from the edge stone of road

Sweeping work measured in KM in one direction of road= W1 and W2 both for the length of sweeping (L).

Note: Single length 'L' of sweeping in one direction (inclusive of both W1 and W2) shall be considered for payment.

- b) Mechanical sweeping of roads single or double carriageways with earthen embankment sides without kerbs having central median or without central median.



Sweeping work measured in KM in one direction of road= W1 and W2 both for length of sweeping L

Note: Single length L of sweeping in one direction (inclusive of both W1 and W2) shall be considered for payment.

5.13 Submission of Monthly Bill

A. The contractor shall submit the bill for the work and service performed by 7th day of every month. Monthly bill shall be supported by zone wise MSW weight slips along with detail of lifting of MSW along with date, time and location. An inventory of roads on which sweeping work is done with length and reference date, time and location shall be provided by the contractor in support of his bill. Contractor may use GIS System and other latest technology to provide information in support of his monthly bill submission.

B. Minimum amount of monthly bill (interim / running payment certificate), the amount of interim running payment shall be equal to the amount of certified monthly works executed. The monthly bill shall be paid within 15 days of its submission.

5.14 Demolition, Construction/Building Material and Debris Management Service.

The contractor shall be required to provide demolition construction/building material and debris management service on phone call or on complaint for removal/lifting and disposal of debris of demolition, construction/ building material from the area of service (the area of service of DMC Korangi) at his own risk and cost. For purpose of this, management of the contractor shall be required to:

- Provide as much number of vehicles as required to lift and transport of demolition material and debris.
- Provide as much staff as required to manage this service.

- c) Construct, manage and operate a construction demolition/building material and debris yard at appropriate place within the same area where demolition material and debris shall be dumped.

The contractor shall however, be allowed to charge a fee from the public requesting for lifting/removal of such demolition material and debris. The fee/charges for this service shall be fixed at the rates approved by the SSWMB.

The contractor shall also be allowed to sell out demolition construction/building material dumped at the yard at the rates approved by the SSWMB.

The contractor is hereby warned that:

- Dumping of demolition, construction/building material in the community dustbins, on road, streets, lanes, footpath, central median, roundabout & open places is strictly prohibited any violation in this regard will be dealt strictly and penalized as per law / rules.

5.15 Notices.

Prior to impose penalty, the contractor shall be informed by procuring agency officials of his deficiencies through two consecutive notices at a week's interval, after that, penalty will be imposed.

Appendix-A**Price Adjustment Under Clause 5.5 of Section-V of Contract Document**

The source of indices and the weightages or coefficient for adjustment formula under Clause 5.5 shall be as follows:

Cost Element	Description	Weightages	Applicable index
1	2	3	4
Non Adjustable Portion			
(i)	Fixed Portion	0.49	Official price from public sector organization or statistical bulletin published by Federal Bureau of Statistic (FBS), Statistical Division Govt. of Pakistan Statutory Notification.
Adjustable portion			
(i)	Fuel Diesel and Petroleum	0.08	Govt. of Pakistan by Federal Bureau of Statistic (FBS), Monthly statistical bulletin or Pakistan State Oil
(ii)	Labour (unskilled)	0.43	Govt. of Pakistan (GoP) Federal Bureau of Statistic (FBS), Statistical Bulletin and Statutory Notification.
	Total	1.00	

1. For Base Date and Current date indices, please refer clause no.5.5. The base cost indices or prices shall be those applying 28 days prior to the latest day for submission of bids. Current indices or prices shall be those applying 28 days prior to the last day of the billing period.
2. Any fluctuation in the indices or prices of elements other than those given above shall not be subjected to adjustment of the Contract Price.

Appendix-B**Price Adjustment Under Clause 5.5 of Section-V of Contract Document*****(To be filled in by bidder/contractor)***

Srl No.	Description	Base Date Price	Source
1	2	3	4
(i)	Fuel (Diesel and Petrol)		As given under Clause No.5.5-i
(ii)	Labour (unskilled		As given under Clause No.5.5-ii

Srl No.	Description	Current Date Price	Source
1	2	3	4
(i)	Fuel (Diesel and Petrol)		As given under Clause No.5.5-i
(ii)	Labour (unskilled		As given under Clause No.5.5-ii

Note: *The bidder/contractor is hereby cautioned to read clause 5.5 and price adjustment procedure given therein carefully while filling the above appendix.*

List of Subcontractors

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

Enclosed are documentation outlining experience of sub contractors, the curriculum vitae and experience of their key personnel and type of contracts carried out in the past.

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

Note: *While filling the above reference may kindly be drawn to Clause No.2.22 of this document.*

Appendix-D**List of Solid Waste Machinery / Vehicles & Equipments**

Owned Purchased or Leased	Description of Unit (Make, Model, Year	Capacity HP Rating	Condition	Present Location or Source	Dated of Delivery at Site	Fuel consumption Per Kilometer
1	2	3	4	5	6	7
a. Compactor along with tipping arrangemen ts						
b. Suzuki Pickup Type Vehicles with tipping arrangements						
c. Arm Rolls Type Vehicles with tipping arrangements						
d. Mechanical Sweepers vacuum type with wet sweeping mechanism and contained dirt provisions						
e. Mechanical Sweepers vacuum type with dry sweeping mechanism and contained dirt provisions						
f. Mechanical Washer						

Note: *While filling the above reference may kindly be drawn to Clause No.4.3 carefully of this document.*

Appendix-E

List of Solid Waste Machinery / Vehicles that the contractor intends to purchase from the DMC (Korangi)

Make Model of the Machinery	Type of Machinery	Registration No.
1	2	3

Note: *While filling the above contractor /bidder is requested to survey the existing machinery of the DMC Korangi with due care and diligence*

Appendix-F**Breakdown of Unit Cost of the item in BOQ by the Activities and Works in that item.**

Group of Activities in an item of BOQ: _____						
No.	Description of the Activities in the Item	Unit	Unit Cost	Quantity	Cost in Pak Rupees	Cost in US\$
1						
2						
3						
4						
5						

Cost = Unit Cost x Quantity

Note: *While filling the above contractor /bidder is requested to study the document and description of Items in BOQ carefully*

Appendix-G**Estimated Progress Payments .**

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

Quarter/Year/Period	Amounts (Million of Rupees.)
1	2
1 st Quarter	
2 nd Quarter	
3 rd Quarter	
4 th Quarter	
5 th Quarter	
6 th Quarter	
7 th Quarter	
8 th Quarter	
9 th Quarter	
Bid Price	

Section VI

**Performance Evaluation & Monitoring
System**

Performance Evaluation & Monitoring System**6.1 Scientific Monitoring and tracking system for entire management and operation Plan**

The monitoring of processes included in front-end services should be aimed to ensure that the objectives of solid waste management plan are realized and achieved. The proposed mechanism for different processes include:

COMMAND AND CONTROL CENTRE

- Command and Control Centre / Monitoring system to be established by the service provider.
- Members from District Municipal Corporation and Sindh Solid Waste Management Board to also be part of central control room.
- Radio monitoring system be established at control room.
- Android-based monitoring system be established at control room.
- GPS tracking system for garbage transportation vehicles.

COMPLAINT CELL

- Complaint cell to be established by the service provider
- All complaints to be reported to command and control centre for resolution.
- Command and Control Centre to notify the complaint cell, as the complaint is resolved.
- Complaint cell to duly confirm it with the complainant.
- Linkage between Complaint Cell, Union Council, District Municipal Corporation and Sindh Solid Waste Management Board to be established.
- Concerned Union Council to verify 75% of complaints.
- District Municipal Corporation and Sindh Solid Waste Management Board to verify at IKorangi 33% of the complaints.
- Response time to attend complaints should be less than 8 hours.

FOR STREET SWEEPING

- Monitoring and evaluation committees to be established at level of Union Council, District Municipal Corporation, Sindh Solid Waste Management Board and Service Provider.
- All committees to act independently
- Monthly third party validation
- Bio-metric and android based attendance system for sweeping staff.

FOR GARBAGE COLLECTION

- Monitoring and evaluation committees to be established at level of Union Council, District Municipal Corporation, Sindh Solid Waste Management Board and Service Provider.
- All committees to act independently.
- Monthly third party validation.
- Electronic chips should be installed in garbage bins.
- Daily collection report of GTS to be analyzed.

PUBLIC PERCEPTION STUDIES

- Quarterly public perception studies will be conducted by a third party firm
- The quantum of complaints will be analyzed to assess the performance of service provider.

Section VII

Conditions of Contract and Price Sheet

Conditions of Contract and Price Sheet**7.1 Compliance of Laws & Rules Regulation**

The contractor shall be bound under this contract to comply with all substantive and procedural laws of Islamic Republic of Pakistan, which may include but are not limited to the followings:

- i) Labour Laws
- ii) Land Laws
- iii) Environmental Laws
- iv) Local Govt. Act.
- v) All National and Provincial Rules and Regulation applicable to the nature of services and works under this contract.

Inability of successful bidder to comply with all laws, rules, regulation and procedures will result in penalization, as per penalty clauses provided in this contract.

This document is governed by all substantive and procedural laws of Islamic Republic of Pakistan including Sindh Public Procurement Rules 2010 (amended 2013).

7.2 RFP Document

All section of RFP documents i.e.

- | | | |
|-------|--------------|---|
| i) | Section-I | Preambles |
| ii) | Section-II | Instruction to Contractor |
| iii) | Section-III | Description of the Zones of DMC Korangi |
| iv) | Section IV | Proposed plan for DMC Korangi |
| v) | Section-V | Terms and reference and Technical Specifications. |
| vi) | Section-VI | Performance Evaluation and Monitoring System |
| vii) | Section-VII | Conditions of Contract & Price Sheet |
| viii) | Section-VIII | Annexure |

All Sections noted above and the clauses contain therein are part and parcel of RFP Document and are integral parts of the agreement and shall be binding upon client and contractor.

7.3 Correspondences-Communications-Notices

All correspondence, communication and notices required or permitted under this contract shall be in writing and in English language and shall be given (to and from contractors & client) at official address provided in this contract document. The relevant parties shall duly notify change of address.

7.4 Language of Agreement

Agreement will be prepared in English language.

7.5 Type of Agreement and Contract Price

The agreement is a unit price contract, the sum of amounts is calculated by multiplying quantity of each work item as indicated in the price list and unit price quoted by the contractor for that work / services items. The payments of each work/services performed by the contractor shall be based on the unit price quoted by the contractor.

7.6 Duties and Taxes

All of the taxes, duties, fees, and other contractual costs regarding the signing of the contract shall be born by the contractor.

7.7 Expenses included in the Contract Price

All costs associated with the operational management, monitoring and performance of works and services according to the contract, expanses related with fuel, spare parts, maintenance and repair, depreciation of vehicles (solid waste collection and transportation vehicles) etc. and cost of other incidental items, cost of transportation, cost of trollies, polythene bags, containers, dustbins, litterbins and others mentioned in various sections of the contract. Cost of any or all insurances related to and for the purpose of works and cost of all taxes required to be paid by the contractor pursuant to laws of Pakistan. All the above mentioned costs and those mentioned in the sections of the contract document, must be taken into account and included in bid price.

7.8 Intermediate payment / Running Bill

The contractor shall submit running bill in the first week of every month for the work and services performed by him. The monthly

performance shall be checked and determined by the client subject to verification through client representatives and on the basis of such verified determinations by the client payment shall be made within 15 days after submission of monthly performance bill/running bill by the contractor.

7.9 Insurance of work & work places

The contractor shall be responsible for safeguarding of work and work places the contractor shall take all insurances required by pertinent legislations and submit the policies thereof to the client. The contractor shall be responsible for any damages cost by its personals and his subcontractor in respect of work performed under this contract.

7.10 Indemnification by Bidder/Contractor

Contractor shall indemnify, defend and hold harmless the client (SSWMB), its member, officers, directors, employee and representatives from and against any and all claims arising out of or in anyway connected with gross negligence, fraud, or willful misconduct of the contractor or any one acting in contractor's behalf or under its instructions in connection, with this contract and contractor's obligations there under. Any cost or expense incurred by the contractor pursuant to its indemnity obligation under this clause shall be the sole responsibility of the contractor.

AND

The contractor/bidder shall indemnify the SSWMB, its employees against all losses and claims in respect of:

- a) Death or injury to any person, due to accident.
- b) Loss or damage to any vehicle, plant, property which may arrived out of accident or public riot or in consequences of execution of work and against all claims, proceedings, damages, cost, charges and expanses, whatsoever in respect of or in relation thereto the contractor shall indemnify the client, its officers, employee for any loss claims, demands or lawsuits resulting from defects in contractor's performance during execution of work and services.

7.11 Contractor Liability for Indemnification

The contractor shall be directly responsible for the choice or use of defective or noncompliant tools or machineries deficiencies of performance in works and services, mistakes in sufficient supervision or any failure to fulfill his obligation in accordance with the provisions of this contract and specification and any other losses and damages that may occur due to similar reasons. The contractor shall indemnify such losses and damages in accordance with pertinent legislation.

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7.12 Penalties & Cancellation of Contract.

Penalties as noted below shall be imposed if negligence, discrepancies and deficiencies on the part of the contractor to fulfill his obligations on the performance of works and services and the requirements to perform such works and services are found during the period of this contract.

a.	If door to door services is not rendered up to the mark or door to door services is rendered partially and non compliance of the requirement for door to door services mentioned in the technical specifications	Rs.15000/- Per Day Per Zone
b.	If number of manpower provided is found insufficient to perform works and services satisfactorily and not in accordance with the minimum requirement of manpower mentioned in the contract	Rs.400/- Per Day Per Person
c.	If the vehicle used for collection, transportation of solid waste is found inappropriate to the standards of solid waste management system. (Except where SWM vehicles of the procuring agency are utilized).	Rs.50000/- Per Day Per Vehicle
d.	If numbers of Solid Waste collection and transportation vehicle is deficient to the minimum requirement for successful collection and disposal of MSW as proposed by the bidder in their proposal.	Rs.100000/- Per Day
e.	If the SWM vehicles are not cleaned and washed and found on road in dirty, out of order and unsafe conditions.	Rs.2000/- Per Vehicle Per Day
f.	If leachate is dropped from the vehicle on roads and working routes.	Rs.5000/- Per Vehicle Per Day
g.	Failure to operate machinery and manpower and vehicles during emergency conditions	Rs.500000/- Per Day
h.	Improper collection of Solid Waste from dustbins and collection point including roadsides collection.	Rs.1000/- Per Day Per collection point
i.	If debris are found mixed with MSW while taking weights of MSW at designated weighbridge.	Rs.5000 Per Trip
j.	Number of Garbage Containers, litterbins, tipper bins are found less than the requirement as proposed by bidder in their proposal.	Rs.50000/- Per Day
k.	Failure to clean public areas and removal of waste there from.	Rs.10000/- Per Day
l.	Sweepers personals not wearing uniform (Identifiable to procuring agency)	Rs.500/- Per Person Per Day
m.	Failure to collect domestic waste on road sides footpath and streets in 24hours.	Rs.1000/- Per Day

n.	If garbage containers are not cleared properly and timely as required under the contract	Rs.10000/- Per Day
o.	Repeat violation of cleaning and street sweeping services	Rs.20000/- Per Day
p.	On open transportation of garbage	Rs.5000/- Per Vehicle Per Day
q.	If polythene bags for door to door collection to the residents of the area are not provided as mentioned in the contract.	Rs.5000/- Per Day Per Zone
r.	If the works and services to be delivered are not started within the stipulate time i.e. 15 days after signing of agreement.	Rs.50000/- Per Day
s.	If dumping of garbage and other solid waste to any other place other than the approved disposal site.	Rs.10000/- Per Day
t.	Segregation of MSW is prohibited under front end collection plan. If segregation takes place by scavenger or other persons at collection point, dustbins sites, at containers and stage of door to door collection.	Rs.25000/- Per Dustbin Per Month

If the procuring agency finds any non conformity/contrary to the job description defined in this document. The contractor shall be bound giving a chance to bring his work standards to the satisfaction level of the procuring agency and if the non conformity is not corrected within the time limit granted by the procuring agency, the penalties will be imposed on the contractor.

If non conformity continuous, despite the penalties the procuring agency may terminate the agreement and damages to the procuring agency due to these non conformities of the contractor shall be recovered from his performance securities.

7.13 Resolution of Dispute

a) **Amicable Settlement:** If any dispute and differences arises between procuring agency and contractor in connection or arises out of this contract, the procuring agency and contractor shall attempt to settle such disputes (within the provisions of the contract) through discussion in the first instance. The designated representatives of procuring agency and contractor shall promptly use their best efforts in good faith to reach a reasonable and equitable resolution of such dispute.

b) **Settlement through Arbitration:** After coming into force of the procurement contract dispute between the parties to the contract shall be settled by complaint redressal committee defined in SPPR 2010 amended 2013 or through arbitration in accordance with arbitration Act. 1940 and Laws for the time being in forced in Islamic Republic of Pakistan.

7.14 Code of Conduct

The contractor that attempts to get secret information to conclude illegal agreements with the competitors or to effect the procuring agency during the phase of tender inspection, evaluation and comparison shall result in their offers cancellation and this situation shall be penalized administratively.

The contractor shall act objectively and trust worthy in accordance with rule of business ethic. It should avoid making public announcement regarding the works and services without prior permission and authorization of the procuring agency.

The contractor and its staff shall not act inconsistent way their obligation against the procuring agency and they shall not accept any type of the contributions that may effect their decisions at execution, performance, reporting at the works and services.

Assets of the procuring agency shall not be utilized without appropriate documentations and valid permissions in accordance with the contract. Procuring agency assets shall not be used for personal interest.

Contractor is responsible to ensure that its employees keep good behavior with public during execution of services in the area. Contractor shall be constructive with the public and shall not behave in a disgusting manner to the public. The services that are to be performed are to serve the public. Briberies, tip or commission offered as incentive or reward to any person shall be considered as fraud, which is strictly forbidden under this contract. If the contractor found guilty under forbidden clauses of the contract, action shall be taken accordingly.

7.15 Time extension in conditions, situations of force majeure

Time extension shall be granted to the contractor in condition and situation of force majeure, but procuring agency and competent authorities shall certify such condition and situation.

The contractor shall not be liable for any failure or delay in performance of his obligation under the contract which is caused by circumstances beyond his control under force majeure.

Time extension shall be granted to the contractor in case where the procuring agency fails to fulfill its obligation regarding performance of the contract due to any reason not related with the contractor.

7.16 Access to the service area

Procuring agency and their authorized representative shall have access at all time to service area, offices of the contractor and any document, materials and record and accounts relating to the works and services performed under the contract for the purpose of inspections and reviews.

7.17 Termination upon notice by procuring agency

Procuring agency may terminate the contract upon 30 (thirty) days prior written notice to contractor in the event

- i) That contractor violets and consent to a violation of any law applicable to the services, where the violation may have a material adverse effect on the management and operation of services under the contract.
- ii) procuring agency may terminate the contract immediately upon the bankruptcy of the contractor or in other conditions as specified in the various clauses of the contract.

7.18 Termination by contractor

The contractor may also terminate this contract upon 30 (thirty) days prior written notice to procuring agency in the event

- i) That procuring agency failure to perform its material obligations under this contract in timely manner. If the failure do not addressed properly by the contractor for redressal in 30 (thirty) days, but in no case such redressal is made beyond 90 (ninety) days accept if procuring agency continuous to pursue for redressal of such failure.

7.19 Work in emergency

The contractor in case of emergency may be called upon to provides works and services as per scope of work under this contract and the contractor shall comply with such emergency orders of procuring agency without excuses. Non compliance of the contractor shall lead to disqualification and will be dealt accordingly

7.20 Payment of Income Tax

The contractor, sub contractor and their employees shall be responsible for payment of all taxes and all type of income taxes, other taxes and taxes on income arising out of the contract and rate and prices coated by the contractor shall be deemed to cover all such taxes.

7.21 Local Taxation

The price coated by the contractor shall include all customs duties, import duties, business taxes income and other taxes that may levied in accordance with law and regulation in force in Pakistan as of the date, 28 days prior to the closing date for the submission of bid and taxes on vehicle machinery tools acquired for the purpose of the contract and on services performed under the contract, nothing in the contract shall relived the contractor from his responsibilities to pay taxes that may levied in respect of the contract.

7.22 Liability of the contractor

The contractor and their sub contractor or assigns shall follow strictly all relevant labour laws including workman's compensation act, and the procuring agency fully indemnified for all claims arising out of any damage by the contractor, his sub contractors or assigns and labour employed by them.

7.23 Price List and B.O.Q.

Item No	Description of Item	Unit	Quantity	Offer Unit Price (US \$) In Figure & in Words	Total Price (in US \$) In Figure & in Words
1.	Providing for and collection of MSW waste, sweeping waste including cost of door to door collection, management, operational, monitoring cost and cost of machineries, labours, sweepers, coolies, drivers, transportation, etc, cost of all taxes and other incidental cost as per the contract document.	Tons	567699 Per Year		
2.	Providing for and manual sweepings of roads and streets including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and other incidental cost and cost of all taxes as per contract document.	Kilo Meter	254877 Kilo Meter Per Year		
3.	Providing for and manual sweeping of footpath, Greenbelts, medians, Roundabouts, open spaces including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and other incidental cost and cost of all taxes as per contract document.	Sq Kilo Meter	24.252 Square Kilo Meter Per Year		

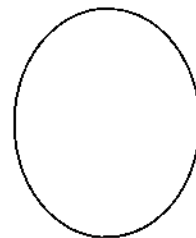
4.	Providing for and mechanical sweeping of roads including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and other incidental cost and cost of all taxes as per contract document.	Per Kilo Meter	68904 KM Per Year		
5.	Providing for and mechanical washing of main roads including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and other incidental cost and cost of all taxes as per contract document.	Per Kilo Meter	800 KM Per Year		
6.	Providing and supplying at site of works litterbins, metal buckets, metal container (tipping type) compatible with Solid Waste Machinery including painting of bucket, bin and container in desired color including cost lettering as directed, cost of transportation, manufacturing etc. complete				
	a) Plastic Litterbin as per required standard having bin cubage of 0.24 to 0.3 Meter Cube	Each	4000 Nos		
	b) Standard Metal Bucket of bin cubage 1. 0.8 to 1.4 Meter Cube 2. 1.4 to 2 Meter Cube 3. 3.4 to 4 Meter Cube	Each Each Each	500 Nos 1000 Nos 1000 Nos		
	c) Metal Container of container cubage 1. 6.6 Meter Cube 2. 10 Meter Cube 3. 12 Meter Cube 4. 16 Meter Cube	Each Each Each Each	40 Nos 60 Nos 60 Nos 120 Nos		
7.	Providing for and collection and transportation of offals and other sacrificial animal waste (on eve of Eid ul Azha) from door steps, roads, streets, lanes open ground i.e. from the whole area under contract	Ton	1400 Ton Per Year		

Sindh Solid Waste Management Board

including cost of collection, transportation and disposal to landfill site (Jam Chakro Landfill site) including cost of management, monitoring, labours, machinery, incidental cost and cost of all taxes etc. complete				
---	--	--	--	--

Per Year of cost of work and services for item listed in price list / B.O.Q. in Figures _____

Per Year of cost of work and services for item listed in price list / B.O.Q. in wards _____



Seal & Signature

Name of Contractor/Bidder _____

Address: _____

Landline & Cell # : _____

Fax # : _____

e-mail address : _____

7.24 Form of BID

FORM OF BID

Bid Reference No. _____
(Name of Contract/Work)

To:

1. Having examined the bidding documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications and Bill of Quantities and Addenda Nos. _____ for the execution of the above-named work, we/I, the undersigned, offer to execute and complete the work and remedy any defects therein in conformity with the Conditions of Contract, Specifications, Bill of Quantities and Addenda for the sum of US Dollar _____ (\$) _____) or such other sum as may be ascertained in accordance with the said conditions.
2. We/I understand that all the Annexure attached hereto form part of this bid.
3. As security for due performance of the undertakings and obligations of this bid, we/I submit herewith a bid security in the amount of US Dollar _____ (\$ _____) drawn in your favour or made payable to procuring agency and valid for a period of _____ days beginning from the date, bid is opened.
4. We/I undertake, if our bid is accepted, to commence the works and to complete the whole of the works comprised in the contract within the time stated in the contract document.
5. We/I agree to abide by this bid for the period of _____ days from the date fixed for opening the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Unless and until a formal Agreement is prepared and executed, this bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We do hereby declare that the bid is made without any collusion, comparison of figures or arrangement with any other bidder for the works.

We understand that you are not bound to accept the lowest or any bid you may receive.

9. We undertake, if our/my bid is accepted, to execute the Performance Security referred to in Conditions of Contract for the due performance of the Contract.

10. We confirm, if our bid is accepted, that all partners of the joint venture/consortium shall be liable jointly and severally for the execution of the Contract and the composition or the

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Executive Director (Operation-I)
Karachi

Korangi

Contractor

Sindh Solid Waste Management Board

constitution of the joint venture/consortium shall not be altered without the prior consent of the procuring agency.

(Please delete this in case of Bid form a single bidder)

in the capacity of _____ duly authorized to sign Bids for and on behalf of

Dated this _____ day of _____ 20_____

Signature: _____

(Name of Bidder in Block Capitals) (Seal)

Address: _____

Witness:

Signature: _____

Name: _____

Address: _____

Occupation: _____

Section VIII

Annexure

Annexure

<u>Korangi Zone</u>	
Annexure-1	MSW Details in Each Union Council
Annexure-2	Statics of House Hold Unit
Annexure-3	Road, Footpath, Median & Open Spaces
<u>Shah Faisal Zone</u>	
Annexure-4	MSW Details in Each Union Council
Annexure-5	Statics of House Hold Unit
Annexure-6	Road, Footpath, Median & Open Spaces
<u>Landhi Zone</u>	
Annexure-7	MSW Details in Each Union Council
Annexure-8	Statics of House Hold Unit
Annexure-9	Road, Footpath, Median & Open Spaces
Annexure-10	Salaries Korangi Zone
Annexure-11	Salaries Shah Faisal Zone
Annexure-12	Salaries of Landhi Zone
Annexure-13	Existing SW Machinery in Korangi Zone
Annexure-14	Existing SW Machinery in Shah Faisal Zone
Annexure-15	Existing SW Machinery in Landhi Zone
<u>Forms</u>	
Annexure-16	Performance Guarantee format
Annexure-17	Integrity Pact.
Annexure-18	Format for Contract Agreement

MSW Details in Each Union Council of Korangi Zone (including Sweeping waste and land scrape waste)

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW out put of each UC (t/d)	The Straight Distance b/w UC Center & GTS in KM	No. of Collection Point in UC		Masonry Dustbin / Collection points
	UC #	Name							Container Collection	Open Collection	
1	1	Bilal Colony	62449	94822	142233	9.94	61.16	1.92	0	19	1
2	2	Nasir Colony / Qayumabad	61798	93833	140749	2.58	60.52	3.91	0	42	2
3	3	Chakra Goth	61905	92901	139351	1.25	59.92	3.74	0	35	3
4	4	Mustafa Taj Colony	58858	90464	135696	1.18	58.35	4.61	0	39	2
5	5	100 Quarters	57867	87865	131797	1.72	56.67	5.00	0	30	4
6	6	Gulzar Colony / Korangi No.1	63474	96378	144567	0.81	62.16	2.62	0	19	1
7	7	Korangi Sector 33-C	61661	93625	140437	0.97	60.39	2.62	0	38	2
8	8	Zaman Town	60408	91723	137584	0.57	59.16	3.05	0	35	4
9	9	Hasrat Mohani Colony	58084	88194	132291	1.08	56.89	5.62	0	28	2
Total		09 UC	546504	829805	1244705	20.10	535.22		0	285	21

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for collection and disposal of MSW, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

Statistic of Household Unit in Korangi Zone.

S. No.	Union Council		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per annum	Statistic of Housing Unit in 1998	Housing Units projections for 2015	Income Group	Housing Unit Wise Area Density	MSW out put of each UC /ward (t/d)
	UC #	Name								
1	1	Bilal Colony	9.94	62449	94822	8514	12928	Low Income	Congested	61.16
2	2	Nasir Colony / Qayumabad	2.58	61798	93833	6781	10296	Low, Middle to High High	Congested thickly	60.52
3	3	Chakra Goth	1.25	61905	92901	9430	14152	Middle to Low Income	Congested thickly	59.92
4	4	Mustafa Taj Colony	1.18	58858	90464	8303	12762	Middle Income	Widely spread	58.35
5	5	100 Quarters	1.72	57867	87865	7266	11033	Middle to Low Income	Congested	56.67
6	6	Gulzar Colony / Korangi No.1	0.81	63474	96378	8322	12636	Middle Income	Congested	62.16
7	7	Korangi Sector 33-C	0.97	61661	93625	8447	12826	Middle to Low Income	Congested thickly	60.39
8	8	Zaman Town	0.57	60408	91723	7843	11909	Middle Income	Widely spread	59.16
9	9	Hasrat Mohani Colony	1.08	58084	88194	7930	12041	Middle Income	Widely spread	56.89
Total		09 UC	20.10	546504	829805	72836	110593			535.22

Note:

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi Korangi, Population Census Organization Statistic Division Govt. of Pakistan Islamabad. Projection for 2015 is tabulated on Prorata basis on statistic report 1998.
2. Housing Unit wise area density noted above is excluding to the katchi abadies in the UCs wherein Area Density is thickly congested.

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Road, Footpath, Medians & Open spaces in Korangi Zone.

Annexure-3							
S. No.	Road Category	Area of the Zone (Sq KM)	Methodology of Sweeping	Length of Road (Meter)	Width of Road (Meter)	Area (Sq Meter)	Remarks
A	Primary Main Roads		Mechanical Sweeping	42000	a) 30 to 36 Dual Carriageway	1386000	
				40000	b) 18 to 30 Single Carriageway	960000	
B	Secondary Main Roads	20.10	Manual Sweeping	94500	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	1417500	
				252000	b) 12 to 15 Single Carriage (internal roads)	3402000	
				249000	c) less than 9 Meters (Back Lane/ Narrow Lane)	2241000	
C	Medians		Manual Sweeping		a) 01 Meter	45000	
					b) 01 to 02 Meter	30000	
D	Chowrangi		Manual Sweeping			7000	
E	Open Spaces		Manual Sweeping			12000	
					Total	9500500	

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for Sweeping work, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

MSW Details in Each Union Council of Shah Faisal Zone (including Sweeping waste and land scrape waste)

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW output of each UC (t/d)	The Straight Distance b/w UC Center & GTS in KM	No. of Collection Point in UC		Masonry Dustbin / Collection points
	UC #	Name							Container Collection	Open Collection	
1	1	Natha Khan Goth	56681	86064	129096	2.16	61.97	4.98	0	9	0
2	2	Pak Sadat Colony	47314	71841	107761	1.25	51.73	4.77	1	10	0
3	3	Drigh Colony	44575	67682	101523	1.25	48.73	4.00	1	12	0
4	4	Reta Plot	42968	65242	97863	0.66	46.97	2.94	0	9	0
5	5	Morio Khan Goth	47150	71592	107388	1.07	51.55	3.58	0	8	1
6	6	Rifah e Aam	44663	64708	97062	2.48	46.59	2.82	1	9	0
7	7	Al-Falah Society	52472	82781	124171	2.82	59.60	2.67	1	11	0
Total		07 UC	335823	509910	764864	11.69	367.13		4	68	1

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for collection and disposal of MSW, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

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Statistic of Household Unit in Shah Faisal Zone.

S. No.	Union Council		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per annum	Statistic of Housing Unit in 1998	Housing Units projections for 2015	Income Group	Housing Unit Wise Area Density	MSW out put of each UC /ward (t/d)
	UC #	Name								
1	1	Natha Khan Goth	2.16	56681	129096	8328	18968	Low Income	Thickly Congested	61.97
2	2	Pak Sadat Colony	1.25	47314	107761	6697	15253	Middle to Low Income	Wide & Spread	51.73
3	3	Drigh Colony	1.25	44575	101523	6437	14661	Middle Income	Wide & Spread	48.73
4	4	Reta Plot	0.66	42968	97863	5837	13294	Middle to Low Income	Wide & Spread	46.97
5	5	Morio Khan Goth	1.07	47150	107388	7165	16319	Middle to High Income	Wide & Spread	51.55
6	6	Rifah e Aam	2.48	44663	97062	6963	15132	Middle Income	Wide & Spread	46.59
7	7	Al-Falah Society	2.82	52472	124171	7799	18456	Middle to High Income	Wide & Spread	59.60
Total		09 UC	11.69	335823	764864	49226	112116			367.13

- Note:**
1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi Korangi, Population Census Organization Statistic Division Govt. of Pakistan Islamabad. Projection for 2015 is tabulated on Prorata basis on statistic report 1998.
 2. Housing Unit wise area density noted above is excluding to the katchi abadies in the UCs wherein Area Density is thickly congested.

Road, Footpath, Medians & Open spaces in Shah Faisal Zone.

Annexure-6							
S. No.	Road Category	Area of the Zone (Sq KM)	Methodology of Sweeping	Length of Road (Meter)	Width of Road (Meter)	Area (Sq Meter)	Remarks
A	Primary Main Roads		Mechanical Sweeping	17000	a) 30 to 36 Dual Carriageway	561000	
				5800	b) 18 to 30 Single Carriageway	139200	
B	Secondary Main Roads	69.11	Manual Sweeping	39330	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	589950	
				104880	b) 12 to 15 Single Carriage (internal roads)	1415880	
				91770	c) less then 9 Meters (Back Lane/ Narrow Lane)	825930	
C	Medians		Manual Sweeping		a) 01 Meter	25000	
					b) 01 to 02 Meter	16000	
D	Chowrangi		Manual Sweeping			7500	
E	Open Spaces		Manual Sweeping			10500	
					Total	3590960	

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for Sweeping work , the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

MSW Details in Each Union Council of Landhi Zone (including Sweeping waste and land scrape waste)

Annexure-7

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW output of each UC (t/d)	The Straight Distance b/w UC Center & GTS in KM	No. of Collection Point in UC		Masonry Dustbin / Collection points
	UC #	Name							Container Collection	Open Collection	
1	1	Muzaffarabad Colony	62797	95350	143025	3.11	61.50	6.30	0	29	0
2	2	Muslimabad Colony	42307	64238	96357	3.43	41.43	4.80	0	22	0
3	3	Dawood Chowrangi	61787	93817	140725	3.88	60.51	3.50	0	28	0
4	4	Moinabad	44996	68321	102481	0.73	44.07	2.57	0	21	0
5	5	Sharafi Goth	49146	74623	111934	11.65	48.13	0.50	0	34	0
6	6	Bhutto Nagar	54110	82160	123240	1.82	52.99	3.09	0	27	0
7	7	Khuwaja Ajmer Colony	61326	93117	139675	1.98	60.06	2.60	0	32	0
8	8	Landhi	53196	80772	121158	2.19	52.10	2.75	0	31	0
9	9	Awami Colony	60660	92105	138157	5.58	59.41	1.46	0	42	0
10	10	Barmi Colony	53083	80540	120810	0.41	51.95	2.68	0	18	0
11	11	Korangi	61309	93091	139636	1.43	60.04	1.65	0	40	0
12	12	Sherabad	40736	94248	141372	1.40	60.79	2.82	0	19	0
Total		12 UC	645453	1012382	1518570	37.61	652.99		0	343	0

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for collection and disposal of MSW, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

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Executive Director (Operation-I)
Karachi

Korangi

Contractor

Statistic of Household Unit in Landhi Zone.

S. No.	Union Council /Ward		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per annum	Statistic of Housing Unit in 1998	Housing Units projections for 2015	Income Group	Housing Unit Wise Area Density	MSW out put of each UC /ward (t/d)
	UC #	Name								
1	1	Muzaffarabad Colony	3.11	62797	143025	5878	13388	Low Income	Thickly Congested	61.50
2	2	Muslimabad Colony	3.43	42307	96357	7635	17389	Low Income	Thickly Congested	41.43
3	3	Dawood Chowranghi	3.88	61787	140725	6787	15458	Low Income	Thickly Congested	60.51
4	4	Moinabad	0.73	44996	102481	5434	12376	Low Income	Congested	44.07
5	5	Sharafi Goth	11.65	49146	111934	5015	11422	Low Income	Congested & spread	48.13
6	6	Bhutto Nagar	1.82	54110	123240	5886	13406	Middle to Low Income	Congested	52.99
7	7	Khuwaja Ajmer Colony	1.98	61326	139675	7935	18073	Middle Income	Widely spread	60.06
8	8	Landhi	2.19	53196	121158	6665	15180	Middle to Low Income	Widely spread	52.10
9	9	Awami Colony	5.58	60660	138157	7994	18207	Middle to Low Income	Congested	59.41
10	10	Barmi Colony	0.41	53083	120810	6370	14497	Middle to Low Income	Congested	51.95
11	11	Korangi	1.43	61309	139636	7453	16975	Middle Income	Widely spread	60.04
12	12	Sherabad	1.40	40736	141372	5482	19025	Middle to Low Income	Widely spread	60.79
Total		12 UC	37.61	645453	1518570	78534	184768			652.99

Note:

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi Korangi, Population Census Organization Statistic Division Govt. of Pakistan Islamabad. Projection for 2015 is tabulated on Prorata basis on statistic report 1998.
2. Housing Unit wise area density noted above is excluding to the katchi abadies in the UCs wherein Area Density is thickly congested.

Road, Footpath, Medians & Open spaces in Landhi Zone.

Annexure-9							
S. No.	Road Category	Area of the Zone (Sq KM)	Methodology of Sweeping	Length of Road (Meter)	Width of Road (Meter)	Area (Sq Meter)	Remarks
A	Primary Main Roads		Mechanical Sweeping	44550	a) 30 to 36 Dual Carriageway	1470150	
				19570	b) 18 to 30 Single Carriageway	469680	
B	Secondary Main Roads	37.61	Manual Sweeping	54450	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	816750	
				145200	b) 12 to 15 Single Carriage (internal roads)	1960200	
				127050	c) less than 9 Meters (Back Lane/ Narrow Lane)	1143450	
C	Medians		Manual Sweeping		a) 01 Meter	22000	
					b) 01 to 02 Meter	24000	
D	Footpaths		Manual Sweeping			8750	
E	Open Spaces		Manual Sweeping			10500	
					Total	5925480	

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for Sweeping work , the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

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Existing Budget (2015-2016) on Solid Waste Management of Korangi Zone

(Salaries)

Annexure -10									
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum
	Office Staff								
1	Addl. Director	18	1	20000-1500-50000	419200	630816	188004		1238020
2	Deputy Director	17	1	16000-1200-40000	407200	397692	188004		992896
	Asst. Director San	16	3	10000-800-34000	673200	2293635	564012		3530847
3	Office Superintendent	17	2	16000-1200-40000	635200	1325438	376008		2336646
4	Head Clerk	14	1	8000-610-26300	232270	231240	57624	712	521846
5	Senior Clerk	9	3	6200-380-17600	457980	753120	122400	1247	1334747
6	Junior Clerk	7	5	5800-320-15400	611200	899760	156000	2078	1669038
7	Qasid	4	5	5200-230-12100	500050	894060	150000	2078	1546188
	Overtime/Benefits								
Total			21		3936300	7425761	1802052	6115	13170228

Existing Budget (2015-2016) on Solid Waste Management of Korangi Zone

(Salaries)

Annexure -10										
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
	Field Staff									
1	Health Inspector	14	3	8000-610-26300	582920	693720	172872	2137	1451649	
2	Motor Vehicle Inspector	14	1	8000-610-26300	232270	231240	57624	712	521846	
3	Sanitary Sub. Inspector	11	16	6600-460--20400	2547520	1144320	864000	11399	4567239	
4	Heavy Mechanical Driver	9	9	6200-380-17600	1373940	2259360	367200	3740	4004240	
5	Driver	5	34	5400-260-13200	4060280	5618368	1060800	14129	10753577	
6	Mushi	5	13	5400-260-13200	1552460	2339376	405600	5402	4302838	
7	Pump Operator	4	5	5200-230-12100	500050	894060	150000	2078	1546188	
8	Muqaddam	4	10	5200-230-12100	1000100	1788120	300000	4156	3092376	
9	Chowkidar	2	6	4900-170-10000	583140	1065672	158400	2493	1809705	
10	Security Guard	2	13	4900-170-10000	1167470	2184156	343200	5402	3700228	
11	Motor Cooly	2	32	4900-170-10000	2726080	4876384	844800	13298	8460562	
12	Sanitary Worker	2	170	4900-170-10000	10402300	17372409	4488000	70645	32333354	
13	Motor Cooly	1	17	4800-150-9300	999430	2356204	448800	7065	3811499	
14	Chowkidar	1	6	4800-150-9300	352740	1008072	158400	2493	1521705	
15	Sanitary Worker	1	144	4800-150-9300	7603810	6742778	3628800	59841	18035229	
	Total				35684510	50574239	13448496	204990	99912235	
	Overtime/Honorium								1000000	
	Additional Pay	10%				3962081			3962081	
Total			479		35684510	54536320	13448496	204990	104874316	

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**Existing Budget (2015-2016) on Solid Waste Management
of Shah Faisal Zone
(Salaries)**

Annexure -11									
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum
	Office Staff								
1	Director Solid Waste	18	1	20000-1500-50000	322500	425820			748320
2	Deputy Director	18	1	20000-1500-50000	574500	694500	117600		1386600
3	Office Superintendent	17	1	10000-800-34000	200400	278928	94080		573408
4	Assistant Director	16	1	10000-800-34000	144800	226704	73920		445424
5	Accountant	11	1	6000-460-20400	214900	278520	45360	456	539236
6	Senior Clerk	9	1	6200-380-17600	195620	252420	39984	264	488288
7	Junior Clerk	7	2	5800-320-15400	198400	209426	71232	528	479586
8	Naib Qasid	2	8	4900-170-10000	543020	798996	190848	1824	1534688
	Overtime/Benefits								
Total			16		2394140	3165314	633024	3072	6195550

Existing Budget (2015-2016) on Solid Waste Management of Shah Faisal Zone

(Salaries)

										Annexure -11
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
	Field Staff									
1	Chief Sanitary Inspector	17	1	16000-1200-40000	229200	291384	94080		614664	
2	Sanitary Inspector	14	5	8000-610-26300	677030	998652	288120	2280	1966082	
3	Motor Vehicle Inspector	14	1	8000-610-26300	136870	200208	57624	456	395158	
4	Sub. Inspector	11	7	6000-460--20400	913660	1311024	317520	3192	2545396	
5	Motor Mechanic	7	3	5800-320-15400	334560	470496	106848	792	912696	
6	Driver	5	19	5400-260-13200	1983380	2867244	593712	5016	5449352	
7	Munshi	5	14	5400-260-13200	1153990	1685248	418320	3696	3261254	
8	Mugaddam	4	9	5200-230-12100	1144650	1621808	261576	2052	3030086	
9	Chowkidar	2	7	4900-170-10000	495410	787932	167160	1596	1452098	
10	Security Guard	2	9	4900-170-10000	783210	1215196	221256	2052	2221714	
11	Sanitary Worker	2	435	4900-170-10000	35760070	58213312	10501848	99180	104574410	
12	Cooly	2	22	4900-170-10000	1409100	2050752	521136	5016	3986004	
	Total				45021130	71713256	13549200	125328	130408914	
	Overtime/Honorium					1500000			1500000	
	Additional Pay	10%				4741527			4741527	
Total			532		45021130	77954783	13549200	125328	136650441	

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Existing Budget (2015-2016) on Solid Waste Management of Landhi Zone

(Salaries)

Annexure -12									
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum
	Office Staff								
1	Deputy Director (Sanitation)	18	1	20000-1500-50000	370440	427858	171143		969441
2	Deputy Director (Sanitation)	17	1	16000-1200-40000	305280	352598	141039		798917
3	Deputy Director S/W	17	1	16000-1200-40000	305280	352598	141039		798917
4	Assistant Director	16	1	10000-800-34000	228480	263894	105558		597932
5	Assistant Director S/W	16	3	10000-800-34000	558720	645322	258129		1462171
6	Head Clerk	14	1	8000-610-26300	144480	166874	66785	500	378639
7	Data Entry Operator	12	1	7000-500-22000	124800	144144	57658	500	327102
8	Senior Clerk	9	1	6200-380-17600	145824	168427	67371	300	381922
9	Junior Clerk	7	17	5800-320-15400	1360340	1571193	628477	3300	3563310
	Overtime/Benefits								
Total			27		3543644	4092908	1637199	4600	9278351

Existing Budget (2015-2016) on Solid Waste Management of Landhi Zone**(Salaries)****Annexure -12**

S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum
Field Staff									
1	Assistant Director SW (M.V)	16	1	10000-800-34000	228480	263894	105558		597932
2	Inspector	14	6	8000-610-26300	242568	280166	112066	2400	637200
3	Inspector Sanitation	14	1	8000-610-26300	144480	166874	66750	500	378604
4	Sub. Inspector	11	16	6000-460--20400	2249040	2597641	1039056	5000	5890737
5	Driver	9	42	6200-380-17600	4666860	5390223	2156089	20000	12233172
6	Assistant MVI	7	1	5800-320-15400	117312	135495	54198	400	307405
7	Driver	5	7	5400-260-13200	841344	971752	388701	2000	2203797
8	Munshi	5	3	5400-260-13200	468900	541580	216632	1100	1228212
9	Muqaddam / Qasid	4	3	5200-230-12100	284490	328586	131434	1100	745610
10	Muqaddam	4	22	5200-230-12100	3240816	3743142	1497257	2500	8483715
11	Cleaner	4	2	4900-170-10000	299352	345752	138301	800	784205
12	Naib Qasid	2	4	4900-170-10000	450240	520027	208011	800	1179078
13	Khidmatyar	2	1	4900-170-10000	108096	124851	49940	200	283087
14	Chowkidar	2	2	4900-170-10000	110136	127207	50883	400	288626
15	Notice Surveyor	2	2	4900-170-10000	110136	127207	50883	400	288626
16	Sanitary Worker	2	16	4900-170-10000	1576680	1821065	728426	1500	4127671
17	Sanitary Worker	2	315	4900-170-10000	31674562	36584119	14633648	200000	83092329
18	Motor Cooly	2	22	4900-170-10000	2667120	3080524	1232209	60000	7039853
19	Sanitary Worker	1	140	4800-150-9300	12589560	14540942	5816377	150000	33096879
20	SW (Vacant Post)	1	78	4800-150-9300	6261300	7231802	2892271	70000	16455373
Total					68331472	78922849	31568690	519100	179342111
Overtime/Honorium						1500000			1500000
Additional Pay						7187511			7187511
Total					68331472	87610360	31568690	519100	188029622

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Existing Solid Waste Machinery / Vehicles in Korangi Zone

					Annexure- 13
S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	00391	Hitachi/LX-100	Loader		
2	69475726		China Loader		
Total			02 Loader		
1	00579	Kukatsu	Bobcat		
2	175662	Case / 1838	Bobcat		
3	711210	Case	Bobcat		
Total			03 Bobcat		
1	10795	Hino FB	Dumper		
2	16100	Hino FB	Dumper		
3	3583957	Isuzu FTR	Dumper		
4	21279	Hino FF	Dumper		
5	3243	Nissan / CP-37	Dumper		
6	3601398	Isuzu FTR	Dumper		
7	100977	Volvo FL-6	Dumper		
8	100981	Volvo FL-6	Dumper		
9	3601396	Isuzu FTR	Dumper		
10	3600529	Isuzu FTR	Dumper		
Total			10 Dumper		
1	15426	Ballarus-510	Tractor Trolley		
2	TT - 02	Ballarus-510	Tractor Trolley		
3	TT - 03	Ballarus-510	Tractor Trolley		
4	TT - 04	Ballarus-510	Tractor Trolley		
5	TT - 05	Ballarus-510	Tractor Trolley		
6	TT - 06	Ballarus-510	Tractor Trolley		
7	TT - 07	Ballarus-510	Tractor Trolley		
8	TT - 08	Ballarus-510	Tractor Trolley		
9	TT - 09	Ballarus-510	Tractor Trolley		
Total			09 Tractor Trolley		
1	8062	Ballarus-510	Blade Tractor		
Total			01 Blade Tractor		
1	16044	Hino FB	Refuse Van		
Total			01 Refuse Van		
1	158405	Volvo FL-6	Compactor		
2	158499	Volvo FL-6	Compactor		
Total			02 Compactor		

Existing Solid Waste Machinery / Vehicles in Shah Faisal Zone

					Annexure- 14
S.NC.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	5292	Hitachi	Loader		
2	CLG-835	III V Gong	Loader		
Total			02 Loader		
1	CH-00929	Kumatsu	Bobcat		
2	CH-00590	Kumatsu	Bobcat		
2	CH-1576	Case	Bobcat		
4	17-250	Case	Bobcat		
Total			04 Bobcat		
1	CH-16103	Hino FF	Dumper		
2	CH-1864	Hino	Dumper		
3	CH-3576901	Volvo	Dumper		
4	CH-3601409	Volvo	Dumper		
5	CH-10048	Hino FF	Dumper		
3	CH-21278	Hino FF	Dumper		
7	CH-21278	Hino FF	Dumper		
3	CH-12298		Dumper		
9	CH-1687-886		Dumper		
Total			09 Dumper		
1	CH-0047-06		Shawal Tractor		
2	CH-0048		Shawal Tractor		
3	089		Shawal Tractor		
Total			03 Shawal Tractor		
1	CH-8061	MESSY	Tractor Trolley		
Total			01 Tractor Trolley		
1	CH-11477	Volvo	Compactor		
Total			01 Compactor		
1	CH-03247	Hino	Arm Roll		
2	CH-3600528	ISUZU	Arm Roll		
3	CH-16057	HINO	Arm Roll		
4	CH-1687-141	ISUZU	Arm Roll		
5	CH-158406	Volvo	Arm Roll		
			ARM ROLL (5 Nos.)		

Existing Solid Waste Machinery / Vehicles in Landhi Zone**Annexure- 15**

S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	69225	C/Loader	Loader		
2	1041	Farkawa	Loader		
3	175278	Skid	Loader		
4	175660	Skid	Loader		
5	4317	Skid	Loader		
6	00450	Skid	Loader		
7	02412	Skid	Loader		
8	00487	Skid	Loader		
Total			08 Loader		
1	000306	T-Shawal	T-Shawal MF385		
2	6328	T-Shawal	T-Shawal MF385		
3	1693545	T-Shawal	T-Shawal MF385		
4	1693546	T-Shawal	T-Shawal MF385		
Total			04 Shawal		
1	3581275	Isuzu FTR	Dumper		
2	3583958	Isuzu FTR	Dumper		
3	10047	Volvo	Dumper		
4	21309	Hino FF	Dumper		
5	21306	Hino FF	Dumper		
6	16101	Hino FF	Dumper		
7	10047	Hino FF	Dumper		
8	21295	Hino FF	Dumper		
9	21298	Hino FF	Dumper		
10	14251	Hino FF	Dumper		
11	7102741	Isuzu FTR	Dumper		
12	7102742	Isuzu FTR	Dumper		
13	3057	Bedford	Dumper		
14	3005	Hino FB	Dumper		
15	16059	Hino FB	Dumper		
16	3183	Bedford	Dumper		
17	10790	Hino FB	Dumper		
18	1687228	Isuzu FTR	Dumper		
Total			18 Dumper		
1	158500	Volvo	Refuse Van		
2	159839	Volvo	Refuse Van		
Total			02 Refuse Van		
1	510810	Tractor Trolley	Tractor Trolley		
2	510815	Tractor Trolley	Tractor Trolley		
3	510744	Tractor Trolley	Tractor Trolley		
4	510854	Tractor Trolley	Tractor Trolley		
5	6326	Tractor Trolley	Tractor Trolley		
6	8096	Tractor Trolley	Tractor Trolley		

Sindh Solid Waste Management Board

7	6324	Tractor Trolley	Tractor Trolley		
8	510700	Tractor Trolley	Tractor Trolley		
9	5094	Tractor Trolley	Tractor Trolley		
10	51822	Tractor Trolley	Tractor Trolley		
Total			10 Tractor Trolley		

Format for Performance Guarantee

To be provided to the successful bidder/contractor
after acceptance of the bid.

Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC; PAYABLE BY CONTRACTORS.

(FOR CONTRACTS WORTH RS. 10.00 MILLION OR MORE)

Contract No. _____ Dated _____
 Contract Value: _____
 Contract Title: _____

..... [name of Contractor] 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 Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, [name of Contractor] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from, from Procuring Agency (PA) except that which has been expressly declared pursuant hereto.

[name of Contractor] accepts full responsibility and strict liability 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 PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Contractor] 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 PA under any law, contract or other instrument, be voidable at the option of PA.

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

[Procuring Agency]

[Contractor]

**Format for Contract Agreement
To be provided at the time of Agreement**

REQUEST FOR PROPOSAL (RFP)
FOR
FRONT END COLLECTION AND DISPOSAL OF
MUNICIPAL SOLID WASTE FOR ZONE CENTRAL (DMC
CENTRAL AREA) KARACHI
SINDH - PAKISTAN.

241

25250



Executive Director (Operation-I)
Sindh Solid Waste Management Board
(SSWMB)
Govt. of Sindh



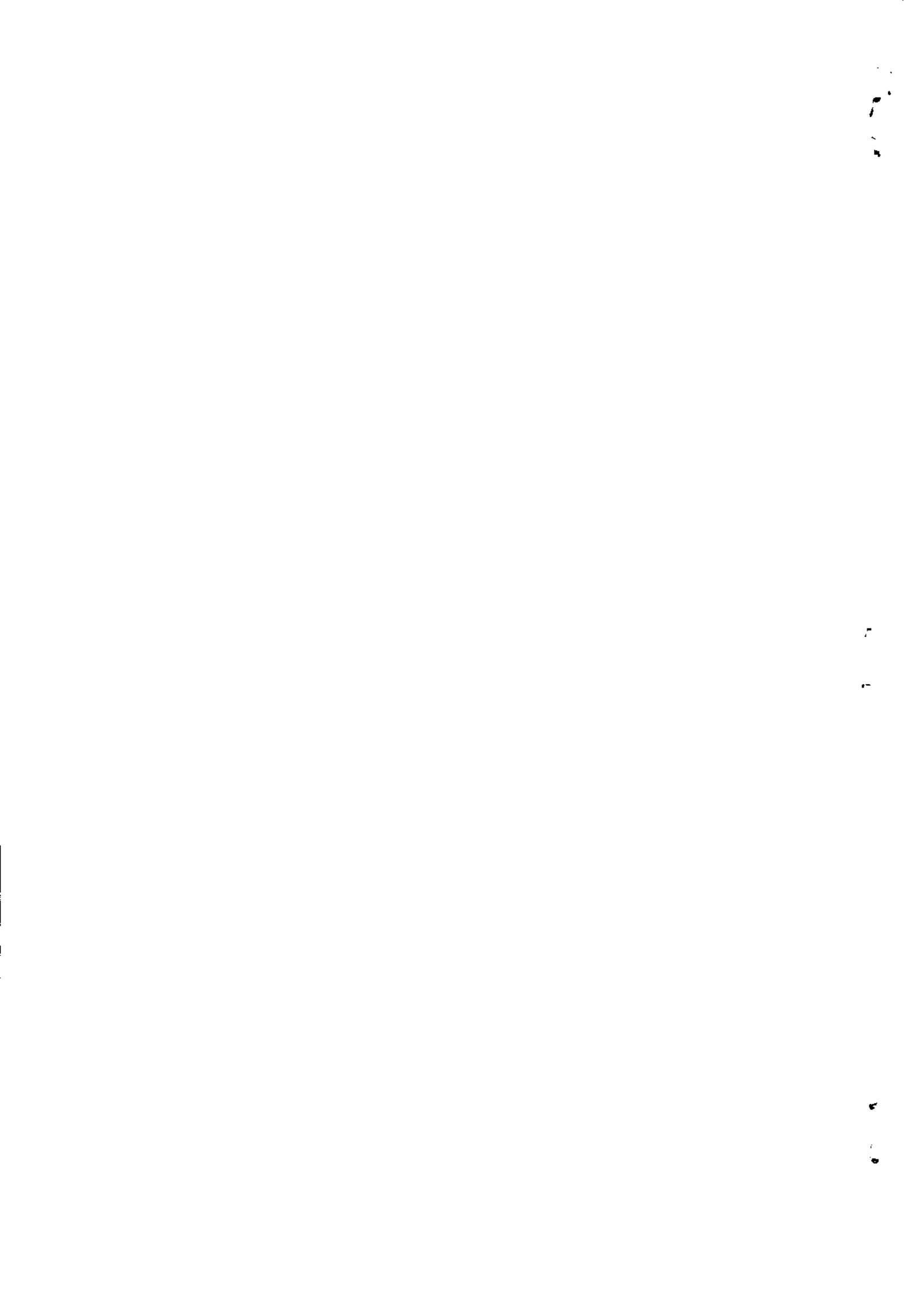


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Executive Director (Operation-I)
Karach

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Contractor

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Disclaimer

Though adequate care has been taken for preparation of this document and information provided therein, however it is advised that the bidder must satisfy himself for the accuracy, correctness and sufficiency of the Data. Information on any discrepancy should be intimated to this office immediately. If no information is received from any of the bidders within 07 (seven) days before the time of submission date, it shall be presumed that this document is correct and complete in all respects. Solid Waste Management Board Sindh (SSWMB) reserves the right to modify, amend or supplement this document through addendum, if considered necessary in the interest of work / objectives.

Section-I

Preamble

Section-I**1.1. Purpose of Request for Proposal (RFP)**

The purpose of this RFP is to invite all eligible, reputed and experienced waste management firms or individuals whether National, International or in consortiums/ joint ventures in accordance with relevant provisions of PEC by-laws and SPPRA Rules and Regulations to submit their technical/operational and financial proposals for sweeping, collection/Transportation and disposal of MSW of Zone Central (District Municipal Corporation Central Karachi Area under Single Stage Two Envelope procedure, open International competitive bidding method of Sindh Public Procurement Rules 2010 (amended 2013).

1.2. Scope of Work / Assignments.

1. Door to door collection of garbage & revamping of entire bin system.
2. Mechanical or manual Sweeping of roads, streets, lanes, footpaths, medians, green belts and open spaces.
3. Washing of specified important major roads and special areas as and when required on special occasions.
4. Lifting and transportation MSW from community dustbins sites & collection points to nearby designated Garbage Transfer Station (GTS).

1.3. Brief Description of DMC Central

District Municipal Corporation (Central) is one of the Six DMCs of Karachi City. DMC Central comprises of the following zones:

- a) Liaquatabad Zone.
- b) North Nazimabad Zone
- c) Gulberg Zone.
- d) New Karachi Zone.

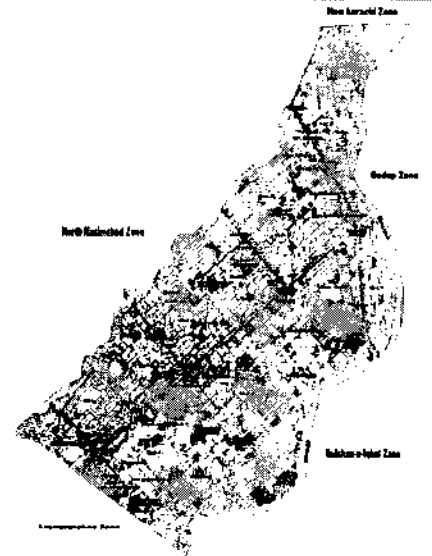
Total No of UC	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW Generation Per Day (Ton)	MSW Generation Per Year (Ton)	Existing Solid Waste Collection and Transportation Vehicles	Available Human Resources (Staff)		Details at Annexure
						Office	Field	
38	5199613	61.64	1992.69	727332	203	115	3755	1-20

1.4. Map of DMC Central

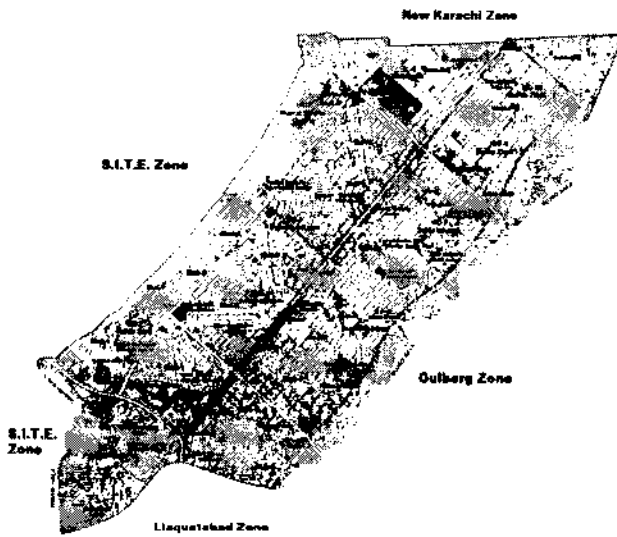
Liaquatabad Zone



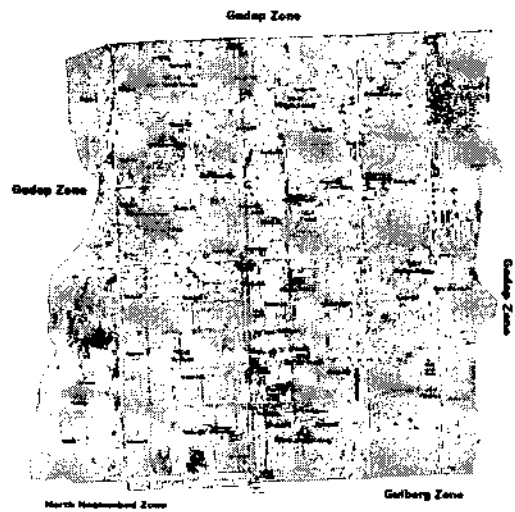
Gulberg Zone



North Nazimabad Zone



New Karachi Zone



1.5. Definition & Interpretation

- a. "Agreement" means agreement signed between the parties (SSWMB and Successful Bidder).
- b. "Client" means Sindh Solid Waste Management Board. The Procuring Agency.
- c. "Contractor" means the bidder, any entity or person, firm, company, joint venture / consortium that may provide or provides the work and services under the agreement.
- d. "Days" mean calendar days
- e. "Years" mean calendar year
- f. "RFP" means Request for Proposal prepared by client.
- g. "Proposal" means the technical / operational proposal and financial proposal.
- h. "W&S" the mean the work and services to be performed by the contractor pursuant to the agreement.
- i. "Terms of Reference (TOR)" means the document in RFP, which explains the objectives, scope of work, activities, task to be performed, respective responsibilities of the client and the contractor and expected results and deliverables of assignments.
- j. "Bidder & Tenderer" means any person or persons, contractor, firms, consortium of firms, joint venture submitting the bid or tender.
- k. the word "Tender" is synonymous with "bid" and the word 'tender document' with 'bidding document' and 'proposal document'.
- l. "contract price" means the sum stated in the letter of Acceptance/Award as payable to the contractor for execution, performance and completion of works and services according to the scope of work
- m. "Client representative" means any representative of the client appointed from time to time.
- n. "works" mean all services to be provided and work to be done by the contractor under the contract.

1.6. Abbreviations

- a) DMC = District Municipal Corporation
- b) EOBI = Employees Old Age Benefits Institution
- c) EPA = Environmental Protection Agency
- d) MSW = Municipal Solid Waste
- e) PA = Procuring Agency i.e. Sindh Solid Waste Management Board
- f) SPPRA = Sindh Public Procurement Regulatory Authority
- g) SSWMB = Sindh Solid Waste Management Board
- h) SWM = Solid Waste Management
- i) UCs = Union Councils
- j) \$ = US-Dollars – Currency of United State of America.

1.7. Sections of RFP/Bidding Documents

All Section of RFP, Forms and Annexure are integral part of RFP and shall be considered as tender / bidding documents.

1.8. Procuring Agency Rights to cancel any or all proposal / tender.

The SSWMB is not bound to accept any proposal and reserved the rights to annual the selection process at any time prior to agreement or award of the contract without thereby incurring any liability to the bidder. The applicant will not be entitled to make any claim from Procuring Agency due to cancellation of the tender.

Section II

Instructions to Contractor/Bidder

Instructions to Contractor/Bidder

2.1. Information Related to Procuring Agency

Name : Sindh Solid Waste Management Board.
Address : Bungalow No.D-47, Block-2, Clifton, Karachi, Pakistan.
Phone No. : +92 21 3537 2982-4 and +92 21 3586 3026-8
Fax No. : +92 21 35863029
e-mail : info@sswmb.gos.pk
Website : www.sswmb.gos.pk

2.2. Language of Proposal and Correspondence

All documents/ proposal and respective correspondence shall be made / prepared in English Language.

2.3. Method of Procurement.

Single Stage Two Envelope method - International competitive bidding under Sindh Public Procurement Rules 2010 (Amended 2013).

2.4. Period of Contract.

Seven (07) Years after issuance of Work Order, extendable for further Three (03) Year based on mutual written consent of contractor and client which shall be on the basis of satisfactory performance of the contractor and on same terms and conditions.

2.5. Pre-Proposal Meeting/Pre-Bid Meeting

Pre-proposal meeting will be held on 15th October 2015 at 1500 hours at the office of the SSWMB.

2.6. Clarification, Modification of Bidding Document

Contractor/bidder may request a clarification of RFP Documents not later than 07 days before the proposal submission date. Any request for clarification must be sent in writing to the Procuring Agency address. The procuring agency will respond in writing including explanation to the queries to all bidders/contractors. Should the procuring agency deem it

necessary to amend the RFP as a result of a clarification, it shall be done according to the concerned clause mentioned in this section.

2.7. Visit of the Area of Service/site visit.

- a. The bidder are advised to visit the area of service/site of works and its surroundings and obtained all information that may necessary for preparing their proposal/bid, and to acquaint themselves with the area, the existing system, the vehicles, offices, workshops and workforce of the existing system of Solid Waste Management of District (Central), however, the contractors / bidders can do so at their own risk and cost.
- b. The bidders and any of their personnel or agents will be granted permission by the procuring agency to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the bidders, their personnel and agents, will release and indemnify the procuring agency, 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.
- c. All the interested firms/bidders are advised to carried out a comprehensive survey of the Zone of the project area and come up with a very practicable strategy and project proposal in order to minimize complications during implementation.

2.8. Utilization/Transfer of Existing Workforce of SWM DMC Central (mandatory)

- a) It is mandatory upon the contractor/bidder to utilize the transferred staff out of the existing SWM workforce of DMC Central under this contract. The proposal must include the utilization plan for existing workforce.
- b) Zone wise detailed of staff, their grade wise salaries and cadre of service are given in Annexure 1-18. However, it should be clear that around 1,000 employees (plus minus 10%) will be transferred on detailment basis to the contractor. The approximate salary paid to them by the DMC (Central) would be around Pak Rs. 300 million. The bidder must keep this in mind and give a proportionate discount in the Tipping Fee proposed. However, the bidder should obtain detailed information about existing work force and their salary details from DMC (Central).
- c) The Contractor/bidder however may be allowed to select the workforce (Field & Office Staff) on the basis of fitness and willingness basis.
- d) The workforce will be provided to the contractor/bidder on detailment basis by the procuring agency for the period of contract.

- e) The contractor/bidder will pay 25% (Twenty Five Percent) detailment allowance on their running basic pay directly to the workforce provided to the contractor subject to satisfactory performance of their duty. This allowance shall not be payable during leave beyond 15 days but shall be payable during casual leave, medical leave or gazetted holiday.
- f) The detailment allowance must be paid to each individual through his or her bank account only and not through open cheque, cross cheque or in the form of cash amount. The details of such allowance so paid must be provided to the procuring agency mentioning the Name, Father's/Husband's Name, Employee Number, Amount of allowance and his/her performance at the work.
- g) The Detailment allowance shall be calculated on the basis of Running Basic Salary of the individual worker provided to contractor.
- h) The contractor will provide 48 Nos. of soaps and 24 Nos. of dusters per year to the individual workforce of grade 01 to 07 against an acknowledgement receipt, copy of which to be provided to the procuring agency.
- i) Casual Leave as admissible under the Sindh Local Council Leave Rules will be granted to the individuals on the request in writing by any individual workforce. Details of the same shall be provided to the procuring agency in writing.
- j) The contractor/bidder shall pay one honorarium of Rs.1,500/- to the individual of workforce of grade 01 & 02 of service cadre of Sanitary Workers, Muqaddam and Motor Coolies and one honorarium of Rs.2,000/- to the individual workforce of grade 05 to 07 of service cadre i.e. Drivers and Heavy Drivers. The honorarium is to be paid on the occasion of Eid ul Azha.
- k) A committee will be constituted by SSWMB comprising of the officers of SSWMB and nominated persons of successful bidder for the purpose of redressal of any dispute that arises between contractor/bidder and the workforce.
- l) The cases of Earned Leave or Medical Leave requested by any individual of workforce must be sent immediately to the committee or authorized officer for necessary action. The committee or authorized officer will decide that either detailment of such individual is cancelled or the leave is granted as per the Sindh Local Council Leave Rules. The decision of the committee shall be final and conclusive.
- m) The Contractor may reject any or some individual workforce if he considers that they are unwilling to work with the contractor or if not satisfied with their performance. In case that workforce made available to contractor carries out strikes contrary to law, the contractor shall immediately inform the procuring agency of this act of misconduct by

the workforce. The committee formulated by the SSWMB for the purpose to resolve issues of workforce will take appropriate action in this regard and the decision of the committee shall be conclusive and binding on the workforce and the contractor.

- n) The lien of workforce so provided to the contractor on detailment shall however, remain with the Parent Department or Procuring agency.
- o) The contractor must account for the costs incurred on the benefits and allowances of the workforce provided to the contractor in their financial proposal/bid cost in the manner described under the contract document or as decided by the Procuring agency before the final agreement.
- p) The contractor shall recruit and provide staff and workers in addition to the workforce of DMC Central, to fulfill the requirements to take up the scope of work satisfactory as mentioned in the contract/RFP Document.
- q) For further detail regarding utilization of existing workforce of DMC Central reference be made to technical specification of RFP document

2.9. Utilization of Existing Solid Waste Collection and Transportation Vehicles of DMC Central (Optional)

- i. The Contractor may inspect the existing fleet that DMC Central can spare and decide to take over.
- ii. A Joint Committee will assess the value of the vehicles and that amount will be then recovered in equal installments during first three years of the contract and adjusted from the monthly bill of the tipping fees.
- iii. In addition to these 20% vehicles from DMC (Central), the contractor may acquire 10% of the total vehicles on lease but all vehicles must be revamped and improved in an environment friendly manner by the contractor at his own expense.
- iv. The contractor / bidder shall however ensure balance 70% of the fleet of vehicles for new standard solid waste machinery purchased and owned by the contractor in view of the requirement as suggested in this document.

2.10. Utilization of Existing Facilities i.e. Workshop, Offices of DMC Central

The contractor may utilize existing offices in the area of respective UCs of the Zone and the central workshop of DMC Central, however, this facility shall be provided to the contractor on the basis / such terms and conditions as defined and set out in the contract agreement

The contractor shall be responsible to keep these offices and workshop handed over to him in neat, clean and well-maintained condition throughout the contract period.

No major addition, alteration in existing structure shall be allowed. The contractor shall be responsible for the payment of all utility bills in respect of these offices and workshop on due dates and a copy of the same shall be submitted to procuring agency.

Details of the area, location of workshops and offices is mentioned in the annexures / can be obtained by contacting DMC (Central) / SSWMB.

2.11. Amendments through Addendums

At any time, before submission of proposal the procuring agency may amend the RFP by issuing an addendum in writing. The addendum shall be sent to all contractors / bidders who attended pre-bid meeting or conveyed their interest in participation in the tender and shall be binding on them. The addendum shall also be uploaded on the SSWMB and SPPRA websites. The contractors shall acknowledge receipt of all addendums issued by the procuring agency. To give reasonable time to contractors to take into account these amendments in their proposal, the SSWMB may, if the amendment is substantial, extend the deadline for submission of proposal. Amendments so made shall be binding on the bidders and shall be part of this document.

2.12. Cancellation of Tender before Tender Time

If any matter is found in the tender document, which is not possible to be corrected, or in case where procuring agency considers it necessary, the tender may be cancelled before last hours of submission of the tender. If tender is cancelled all submitted tender documents shall be deemed to be rejected and returned to the contractors without being opened. The bidder/contractor will not be entitled to make any claim from procuring agency due to cancellation of tender.

2.13. Proposal Preparation /Cost of Bidding.

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

2.14. Bid submitted by a Joint Venture/Consortium.

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

- (a) one of the joint venture/consortium partners, lead firm 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/consortium partners/firms;

- (b) the bid, and in case of a successful bid, the Form of Contract Agreement shall be signed by the authorized partner so as to be legally binding on all partners/firms;
- (c) the firm/partner-in-charge shall always be duly authorized to deal with the procuring agency regarding all matters related with and/or incidental to the execution of works as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture/consortium;
- (d) all partners of the joint venture/consortium 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 (a) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid);
- (e) a copy of the agreement entered into by the joint venture/consortium partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the contract and can give valid receipts on behalf of the joint venture/consortium, the proportionate participation of the several firms forming the joint venture/consortium, and any other information necessary to permit a full appraisal of its functioning. No amendments / modifications whatsoever in the joint venture/consortium agreement shall be agreed to between the joint venture/consortium partners without prior written consent of the procuring agency;
- (f) submission of an alternative Letter of Intent to execute a Joint Venture/consortium Agreement shall be mandatory.
- (g) Bidders shall also submit proposals of work methods and schedule, in sufficient detail to demonstrate the adequacy of the bidder's proposals to meet technical specifications and timely completion as per schedule each day, each month and every year of the contract till completion of the contract successfully

2.15. Place, Date, Time and Manner of Submission of Tender/Bid Document/RFP

- i) The bidder/contractors are required to submit their proposal/bid at the office of Sindh Solid Waste Management Board not later than 19th November 2015 at 1430 hours (Local Time).

- ii) The Contractors/bidders must submit their proposal/bid under **Single Stage Two Envelope Procedure** of SPP Rules 2010. Proposal Bid shall comprise a single package containing two separate sealed Envelopes. Each Envelope shall contain separately the Technical/operational proposal and the Financial proposal.
- iii) Envelopes shall be marked as Technical/Operation proposal and Financial Proposal in bold and legible letters.
- iv) The package (Outer Envelope) containing the envelopes shall be marked as proposal for 'Front End Collection and Disposal of Municipal Solid Waste for DMC Central Karachi' in Bold and legible letters.
- v) The package (Outer Envelope) shall also mention the submission address of the Proposal/Bid and Name, Address of Contractor/Bidder.
- vi) The Package (Outer Envelope) shall be sealed, signed and stamped by the contractor or his authorized representative.
- vii) The Bid/Tender, once submitted, shall not be retrieved or changed for any reason whatsoever.
- viii) Proposal/Bid shall be submitted by hand or may be sent by registered airmail post / courier service. Proposals/ bids that are not submitted until due date and time of submission of proposals/bid will not be considered on any ground.
- ix) Where delivery of bid is made by registered mail and the contractor/bidder desired to receive an acknowledgement of receipt of such bid, he shall make a request for such acknowledgement in a separate letter attached to the package (outer envelope) but will not be a part of sealed envelope.
- x) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by representative.
- xi) Bid submitted through telegraph, telex, fax or e-mail will not be considered.
- xii) Each page of the proposal/bid document must be signed by the contractor/bidder, in case the proposal/bid document is signed by the authorized representative of the contractor then, the authorization shall be in the form of written power of a attorney accompanying the proposal or in any other form demonstrating that the representative has been duly authorized to sign.
- xiii) The procuring agency at his discretion, extend the deadline for submission of bids/proposals by issuing an addendum notified in

newspaper. All rights and obligations of procuring agency and the contractor will thereafter be subject to the deadline as extended.

- xiv) The Technical/operational proposal shall not include any financial information. A Technical proposal containing financial information may be declared non responsive.

The technical proposal shall provide the information as indicated in the following Para.

- a) A brief introduction of contractor's organization and an outline of recent experience of contractor (each partner in case of joint venture) on assignments of similar nature.
- b) A description of the approach and methodology for performing the assignment covering the following subject, technical approach, methodology, organization and staffing.
- c) The list of the proposed professional, staff team by area of expertise, the position that would be assigned to each staff members and their tasks.
- d) While preparing the technical proposal, contractor must give particular attention to the following:
 - If the contractor considers that it may enhance its expertise for technical operational management and monitoring parts for the assignment to accomplish in a best-suited way and in accordance to the requirement of RFP Document he may associate with other contractors/firms (not more than 30% of the job). Any such association must be clearly indicated in the technical proposal. In case of joint venture, all partners shall be jointly and severally liable, and shall indicate the lead firm of joint venture.
- e) Alternative professional staff shall not be proposed and only one curriculum vitae (CV) may be submitted for each position.
- f) Comments and suggestions may be given on the terms of reference including workable suggestions that could improve the quality, effectiveness of assignments and on requirement of the DMC (Central) workforce, machinery and facilities including administrative support, office, workshop and rehabilitation of scavengers and any other allied matter. However, client is not bound to consider the suggestions as a whole or part or otherwise as indicated in the RFP Document.

- xv) The financial proposal shall include all cost:
- a) Associated with scope and performance of work, management and operational cost, remuneration for staff monitoring system and other incidental charges, business taxes, income tax, local & provincial taxes, professional taxes, duties, fees, that may be levied according to the laws and regulations in being prior to the closing date of submission of proposal and taxes and fees on the equipment, and machinery required and on services performed under this contract. Nothing in the contract shall relieve the contractor/bidder from his responsibilities to pay taxes that may be levied on the profit made to him in respect to contract.
 - b) The financial proposal shall contain NO OVERWRITING, CORRECTIONS and CUTTINGS. The contractor or his authorized representative who signed the proposal must initial such corrections, overwriting and cuttings, if any.
 - c) The contractor/bidder is required to quote the cost of every work item and total cost of works correctly in figure and words. The price and cost of works and services under this contract must be expressed in US Dollars (\$).
 - d) Bid Security equal to 1% (one percent) of total bid amount in the shape described in clause 2.24 will be attached with financial proposal. No Cheque or Insurance Guarantee shall be accepted as bid security.
 - e) All the costs towards allowances of the workforce transferred by procuring agency to the contractor shall be incorporated in the financial proposal.

2.16. Currency Unit of Offers and Payments

The bidder shall quote the bid price for each work, item (Services) and the total bid amount in US Dollar (\$) and the interim/running monthly bill payment will be made to contractor in Pakistani Currency at the conversion/exchange rate declared by the State Bank of Pakistan on the date of submission of interim/running monthly bills.

For the conversion of total bid amount and the amount of the each item of work & services given in BOQ, the rate of exchange shall be the exchange rate declared/notified by State Bank of Pakistan prevailing 28 (Twenty Eight) days before the date of opening of the bid specified in bidding document.

2.17. Conditional and Partial Offers

Contractors / bidders are hereby cautioned that proposal with conditional offers or deviation from the conditions and instructions contained in RFP Document or other requirement stipulated therein shall result in rejection of proposal /bid as non-responsive and shall not be considered. Partial offers are not acceptable under this contract. Acceptance shall only be granted for complete job.

2.18. Alternative Proposal not Acceptable. One Bid per Bidder

Only one proposal fulfilling all conditions, instructions and requirement contained in RFP should be submitted by each bidder. Alternative proposal shall not be entertained.

Each bidder shall submit only one bid either by himself, or as a partner in a joint venture/consortium. A bidder who submits or participates in more than one bid will be disqualified.

2.19. Eligible Bidder.

This Invitation for Bids is open to all interested bidders who are eligible under provisions of Sindh Public Procurement Rules as mentioned (but not restricted) below and the criteria given in the Notice Inviting Tender (NIT) / Bidding Document.

Firms and individuals, national or international, may be allowed to bid for the work. Any conditions for participation shall be limited to those that are essential to ensure the bidder's capability to fulfill the contract in question.

- (a) Bidders may be excluded if;
 - (i) as a matter of law or official regulations, commercial relations are prohibited with the bidder's country by the federal government, or
 - (ii) a firm is blacklisted/ debarred by the procuring agency and the matter has been reported to the Authority, subject to Rule 30 of Sindh Public Procurement Rules 2010.

- (b) Government-owned enterprises or institutions may participate only if they can establish that they are;
 - (i) legally and financially autonomous, and
 - (ii) operate under commercial law.

Provided that where government-owned universities or research centers in the country are of a unique and exceptional nature, and their participation is critical to project implementation, they may be allowed to participate; and Bidders shall include all those contractors who are registered or

incorporated in Pakistan, irrespective of the nationality of their owners and professional staff, and

- (c) Bidders are required to submit evidence of:-
- (i) Registration with relevant tax authorities (income/sales tax/SBR, wherever applicable). However international firms can be allowed to participate in the tender prior to registration with the tax authorities subject to the condition that they shall have to register themselves and submit proof before award of the contract.

2.20. Disqualification for Participating in Tender

Contractor or sub contractor cannot participate in the tender in any manner directly or indirectly, in their name or in the name of any other person or firm.

- a. Those who are prohibited to participate in tender by any Govt. institution, authority and those who are prohibited by the law due to having any criminal record or conviction.
- b. Those who have been declared bankrupt by the authorities or have filed bankruptcy.
- c. Those who have been declared or announced as an insolvent by court of law or tribunal or any other authorities or institutions.
- d. Those who are under liquidation.
- e. Those whose affairs are run by any tribunals.
- f. Those who are under settlement with any financial institution or creditors.
- g. Those who have suspended their affairs or those who are in similar position as per the law of their country.
- h. Those who have been declared defaulter of social security contribution or premium payments under the law of Pakistan or as per law of their country.
- i. Those who have been declared defaulter of taxation or revenue department for non-payment of income tax, sales tax, customs duties, or any other tax levied from time to time in Pakistan or as per law of their country.
- j. Those who have been condemned by decision of any court or law or tribunal because of their non-professional or unethical activities or professional malpractices.
- k. Those who have been determined by any institution or organization or authority or agency for adopting or performing non-professional

attitude or unethical or immoral activities or professional malpractices and such determination resulted from administering them during their jobs.

- l. Those who do not provide the required information or provided misleading or false representation or deliberately suppressed the information to be provided as required in RFP Document.
- m. Those who have been prohibited from professional activity by the Chamber of Commerce in Pakistan or any other equivalent body established for same purpose in the country where they are registered before the date of submission of the bid.
- n. The contractors/bidders who are the blacklisted by Federal Govt., Provincial Govt., Autonomous Bodies and State Bank of Pakistan.

2.21. Exclusion Prohibition and Acts forbidden

The contractor/bidder shall be excluded from participating in tender under following circumstances.

- a. Those who are authorized by procuring agency in any way for preparation of RFP and the committees set out by the procuring agency in this regard.
- b. Those who are authorized by the procuring agency to finalize and to approve the tender process.
- c. The institutions established, with whatsoever reason, in relation with the procuring agency or existing structure of the procuring agency and institution such as foundation, association, union and the companies associated with the procuring agency.
- d. Those firms and companies who are rendering the advisory or consultancy services in preparation of RFP Document.
- e. The following acts and attitude are forbidden in the tender:
 - i. To render the activities of other participants doubtful, to obscure them from participation in the tender or to offer an agreement to the participant or to influence them to act in a manner, which will affect other participant or tender process
 - ii. The act and attitude towards fraud, threat, influence, bribery or by any other way to win the tender.
 - iii. To issue and use false documents regarding Bid Security or Performance Security etc.

- iv. More than one offer in the tender directly or indirectly in the name of themselves or in the name of others, as in person or in mandate.

The Contractor who participates in spite of these disqualification, prohibitions and exclusions shall stand excluded and his bid security shall be forfeited.

2.22. Subcontracting and Responsibilities.

Bidders/contractors may execute subcontracts for services up to 30% (Thirty Percent) of the total services for each job of solid waste management collection/transportation, door to door collection, manual and mechanical sweeping and mechanical washing and other services which are covered under this RFP Document, subject to approval of SSWMB. The contractor/bidder is responsible for performance of subcontractors to the procuring agency.

2.23. Bid Validity.

Validity period of proposal / bid is 120 (One Hundred and twenty) calendar days following the last date of submission of RFP/Bid Document. Bidder/Contractor may be requested to extend the validity period in writing, and consent of the bidder shall be obtained. If any bidder does not agree in such extension then the bid security of that bidder shall be returned with no liability.

2.24. Bid Security.

The bidders are required to furnish a bid security equal to 1% (One percent) of total bid amount (calculated for one year) in the currency (or equivalent PKR) in which the bid is priced/quoted, which shall remain valid for a period of 28 (twenty eight) days beyond the validity period of the bid.

The proposal must be accompanied with a bid security equal to 1% (one percent) of the contract price in the currency (or equivalent PKR) in which priced/quoted in the form of bank draft / pay order or in the shape of bank guarantee from any scheduled bank of Pakistan in favor of SSWMB.

2.25. Responsiveness of Bid to Bidding Document/RFP.

In preparing their proposals contractors are expected to examine in detail the document comprising the RFP. Material deficiencies in providing the information requested in the RFP document may result in rejection of a proposal as non-responsive.

Prior to detailed evaluation of Bid the procuring agency will determine the substantial responsiveness of the bid to bidding document. A substantially responsive bid is one, which conforms to all the conditions of bidding document without material deviation.

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A material deviation is one:

- i) Which affects in any substantial way the scope, quality or performance of works and services.
- ii) Which is inconsistent with bidding document/RFP and limits in any substantial way, procuring agency's rights or the obligation of the contractor/bidder under the scope of work or restriction/adoption of such conditions that would effect unfairly the competitive position of the bidder presenting substantially responsive bid.

2.26. Examination of Bids and Determination of Responsiveness.

- a. Prior to the detailed evaluation of bids, the procuring agency will determine whether the bidder fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC, turnover statement, experience statement, and any other conditions mentioned in the NIT and bidding document. If the bidder does not fulfill any of these conditions, his bid shall not be evaluated further.
- b. Once found to be fulfilling the eligibility criteria, as mentioned in sub-clause a. and in clause 2.19, the bids of eligible bidders will be evaluated for technical responsiveness as per specification and criteria given in the bidding documents. Technical and financial evaluation shall be carried out in accordance with, single stage-two envelopes, bidding procedure of SPP Rules 2010.
- c. A bid will be considered technically responsive if it (i) has been properly signed; (ii) is accompanied by the required bid security in the manner described in the bid document; and (iii) conforms to all the terms, conditions and specifications of the bidding documents, without material deviation or reservation.
- d. If a bid has major deviations to the commercial requirements and technical specifications it will be considered technically non-responsive. As a general rule, major deviations are those that if accepted, would not fulfill the purpose for which the bid is requested, or would prevent a fair comparison or affect the ranking of the bids that are compliant with the bidding documents.

(A). Major (material) Deviations shall also include:-

- (i) has been not properly signed;
- (ii) is not accompanied by the bid security of required amount and manner;
- (iii) failing to respond to specifications;
- (iv) failing to comply with Milestones/Critical dates provided in Bidding Documents;
- (v) sub-contracting contrary to the Conditions of Contract specified in Bidding Documents;
- (vi) refusing to bear important responsibilities and liabilities allocated in the Bidding Documents, such as performance guarantees and insurance coverage;

- (vii) taking exception to critical provisions such as applicable law, taxes and duties and dispute resolution procedures;
- (viii) which affects in any substantial way the scope, quality or performance of the works;
- (ix) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- (x) which affects in any substantial way the scope, quality or performance of the works;
- (xi) which limits in any substantial way, inconsistent with the bidding documents, the procuring agency's rights or the bidder's obligations under the contract;
- (xii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

(B) Minor Deviations

Bids that offer deviations acceptable to the Procuring Agency and which can be assigned a monetary value may be considered substantially responsive at least as to the issue of fairness. This value would, however, be added as an adjustment for evaluation purpose only during the detailed evaluation process.

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

2.27. Return of Bid Security.

- a. The bid security of the contractor / bidder who is awarded the work shall be retained and the bid security of other un-successful bidders shall be returned (in the shape it is deposited) after award of the contract to successful bidder.
- b. Bid security of the successful bidder (to whom the contract is awarded) will be returned upon submission of performance security (in the shape it is deposited).

2.28. Forfeiture of Bid Security.

The bid security may be forfeited

- a. If the contractor/bidder withdraws his bid during the period of bid validity.
- b. If the contractor/bidders does not accept the correction of his bid price.
- c. If the successful bidders fails
 - a. To furnish required performance security
 - b. To sign the agreement

2.29. Proposal/Offers to be non responsive without bid security.

Proposal/offers, which are not accompanied with required amount of bid security in the shape noted above shall be rejected as NON-RESPONSIVE.

2.30. Evaluation Criteria

Criteria, sub-criteria and point system for evaluation of technical proposal are as under:

1.	Company Profile	Marks
1.1	Number of Similar assignment /work completed by contractor during last five years	5
1.2	Value of Similar Assignment/works	10
1.3	Value and Numbers of appropriate Solid Waste Machinery owned by the company	10
1.4	Organization Structure/Relevant Experience of the firm	5
1.5	Net worth (Financial) of the contractor including bank financing not less than one billion rupees.	10
	Sub Total	40
2	Technical/Operational approach & Methodology.	Marks
2.1	Approach & Methodology for the works & services	10
2.2	Responsiveness to RFP	10
2.3	Goal Oriented Work Plan	15
	Sub Total	35
3	Technical/Operational & Operational Team	Marks
3.1	Education & Qualification	10
3.2	Relevant background	10
3.3	Time spent with the contractor	5
	Sub Total	25
	Grand Total	100
The Minimum Technical Score to qualify is 75 Marks		

2.31. Manner Place, Date and Time of Opening of Bid

- a. The proposal/bid shall be publically opened on 19th November 2015 at 1530 hours (PST), by the Tender Opening Committee at the office of Sindh Solid Waste Management Board, in presence of the contractors or their representatives who chose to attend.
- b. Initially, only the envelopes marked "Technical/Operational Proposal" shall be opened.
- c. The envelopes marked "Financial Proposal" shall be retained in the custody of client without being opened

- d. The evaluation committee of the procuring agency shall evaluate the technical/operational proposals on the basis of their responsiveness to RFP, applying the evaluation criteria, sub-criteria and point system specified in RFP Document without reference to the price. Any proposal which, is found non-responsive shall be rejected at this stage and particularly if the proposal fails to achieve the minimum technical score indicated in RFP document. No amendment in technical proposal shall be permitted during technical evaluation.
- e. After the technical evaluation is completed, the procuring agency shall inform the contractors/bidders, the technical scores obtained by their technical proposals and shall notify those contractors/bidders whose proposal did not meet the minimum qualifying marks or considered non-responsive to the RFP and their proposal will be returned unopened after completion of the selection process.
- f. The procuring agency shall simultaneously notify in writing to the contractor that have secured the minimum qualifying marks and that the date and time and location for opening of financial proposals.
- g. The financial proposals shall be opened publically in the presence of contractors or their representatives who chose to attend.
- h. Rectification of arithmetical errors will be made on the basis that if there is discrepancy found between the unit price and total price, that is obtained by multiplying the unit price and the quantity, the unit price shall prevail and the total price shall be corrected accordingly.
- i. If there is a discrepancy found between words and figure, the amount in words shall prevail.

2.32. Preliminary Examinations and Determination of Responsiveness of Bid prior to detailed evaluation of Bid.

1. The procuring agency will examine the bid whether:
 - a. The bid is complete and does not deviate from the scope of work for any computational error.
 - b. That required securities are furnished.
 - c. The documents have been properly signed.
 - d. That the bid is valid till the required period.
 - e. That bid does not deviate from basic technical requirement.
 - f. That the bids are generally in order.
2. The Tender Proposal shall be rejected and not considered:

- a. If each page of the proposal/bid is not signed by bidder.
- b. If its validity is less than specified period.
- c. If it is submitted for incomplete scope of work.
- d. If it is conditional and contain alternative proposals.
- e. If it indicates that bid price is not inclusive of the amount of all taxes, incidental charges.
- f. If not accompanied with bid security
- g. If bidder submitted more than one bid.
- h. If received after the deadline for submission of bid.
- i. If submitted through Fax, Telex, Telegram or e-mail.

2.33. Clarification of Bid.

In examination, evaluation and comparison of bids the procuring agency may at its discretion ask the contractor/bidder for clarification of his bid. The request for clarification and response shall be in writing and no change in price or substance of bid shall be sought, offered or permitted. No bidder shall be allowed to alter or modify his bid after the expiry of deadline for the receipt of the bid.

2.34. Correction of Errors before Financial Evaluation.

- I) Bids determined to be substantially responsive will be checked by the procuring agency for any arithmetic errors. Errors will be corrected by the procuring agency 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 procuring agency 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.
- II) The amount stated in the Form of Bid will be adjusted by the procuring agency in accordance with the above procedure for correction of the errors and with the concurrence of the bidders. The amount thus corrected 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 clause 2.28 hereof

2.35. Financial Evaluation and comparison of Bids

- i. The procuring agency will evaluate and compare only the Bids determined to be substantially responsive in accordance with clause 2.26.
- ii. In evaluating the Bids, the procuring agency 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 2.34;
 - (b) making an appropriate adjustment for any other acceptable variation or deviation.
- iii. 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.
- iv. If the bid of the successful bidder is seriously unbalanced in relation to the procuring agency's estimate of the cost of work to be performed under the contract, the procuring agency may require the bidder to produce detailed price analysis for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the methods of performing the work and schedule proposed. After evaluation of the price analyses, the procuring agency may require that the amount of the Performance Security set forth in clause 2.36 be increased at the expense of the successful bidder to a level sufficient to protect the procuring agency against financial loss in the event of default of the successful bidder under the contract

2.36. Performance Security

- a. The successful bidder shall furnish to the procuring agency a Performance Security in the form of pay order or bank guarantee from any scheduled bank of Pakistan, and the amount stipulated in the bidding data and the Conditions of Contract within a period of 28 days after the receipt of Letter of Acceptance, but 07 days prior to expiry date of bid security.
- b. Failure of the successful bidder to comply with the requirements of Sub-clause a. or clauses 2.37 or 2.40 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- c. Validity of performance security shall extend at least seven months beyond the date of completion of contract, or as mentioned in the bidding data to cover defects liability period or maintenance period subject to final acceptance by the procuring agency.

2.37. Signing of Contract Agreement.

- 1) Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the procuring agency will

send the successful bidder the Contract Agreement.

- 2) The formal Agreement between the procuring agency and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the procuring agency.
- 3) A procurement contract shall come into force when the procuring agency requires to sign the contract, the date on which the signatures of both the procuring agency and the successful bidder are affixed to the written contract.

2.38. Stamp Duty

The formal Agreement between the client (Procuring Agency) and the successful bidder shall be duly stamped at rate of 0.3% of sanctioned price and as stated in Letter of Acceptance. The successful bidder will pay the stamp duty.

2.39. General Performance of the bidders

Procuring agency may, in case of consistent poor performance of the contractor and his failure to make remedy / rectify the underperforming contract, take such action as may be deemed appropriate under the circumstances of the case including the rescinding the contract and/or black listing of such contractor and debarring him from participation in future bidding process.

2.40. Integrity Pact

The bidder shall sign and stamp the Integrity Pact provided at Annexure-10 to the bidding documents. Failure to provide such Integrity Pact shall make the bidder non-responsive.

2.41. Defect Liability Period

Defect liability period shall be 06 (six) months after the date of completion and expiry of the contract agreement.

2.42. Return of Performance Security

The performance security of the contractor shall be returned after 06 (six) months (defect liability period) of completion and expiry of the contract period, upon determination that the obligation under the contract have been duly fulfilled in accordance with the provisions of contract document and agreement and the contractor has no liability to the procuring agency due to this contract. In case the liabilities of the contractor to the procuring agency and other tax amount are due to the contract, then such amount shall be recovered from the amount of performance security and balance amount of the performance security shall be returned to the contractor.

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2.43. Retention Money.

Retention money shall be deducted from contractor's running performance bill at the rate of 5% (Five Percent) of monthly bill amount. The retention money shall be released in the currency in which it is deducted (Pak Rupees) after 12th (twelfth) running bill payments of the contractor for the works successfully executed for last twelve month. The amount due to the contractor in respect of retention money shall be released (within 60 days after end of 12 month contract period) after deduction of such amount as are required to be recovered on account of default of contractor in performing his functions, if any, under this contract.

2.44. Format Contract Agreement

Format of Contract Agreement at annexure 23.

2.45. Form of Bank Guarantee for Performance Security

Format of bank guarantee for performance security is attached at annexure 21.

2.46. Inspection of Work & Services performed by the contractor

Representative of procuring agency shall inspect the work and services performed by the contractor under the contract and any deficiencies of work and services shall be notified in writing giving warning letter to the contractor. If the contractor does not rectify/remove the deficiencies indicated, a penalty as per penalty clauses shall be imposed.

2.47. Letter of Acceptance.

After announcement of tender decision, letter of acceptance will be sent to the successful bidder/contractor, inviting him for signing contract agreement which shall be signed within 14 (fourteen) days following the date of letter of acceptance.

2.48. Arbitration

Any dispute that is not amicably resolved between the client and the contractor, shall be finally settled, unless otherwise specified in the Contract, under the Arbitration Act 1940 updated from time to time. The arbitration proceedings would be held anywhere in the Province of Sindh at the discretion of procuring agency.

2.49. Information Related to Contractor / Bidder

- a. Contractor/Bidder Full Name _____
- b. Address _____
- c. Telephone No. _____
- d. Fax No. _____
- e. E-mail Address. _____

2.50. Bidding Data**Bidding Data**

Srl#	Data	
1	Name of Work	Front End Collection and Disposal of Municipal Solid Waste for Zone Central (DMC Central Area) Karachi, Sindh, Pakistan.
2	The Name of Procuring Agency's Official	Executive Director (Operations-I), SSWMB
	Address	Bungalow No. D-47 Block-2, Clifton, Karachi, Pakistan.
	Telephone#	+92 21 35372982-4
	E-mail	info@sswmb.gos.pk
	Facsimile	+92 21 35863029
	Website	www.sswmb.gos.pk
3	Procedure of open competitive bidding (International Competitive Bidding – ICB)	<p>Single Stage – Two Envelope Procedure</p> <p>A. Proposal shall comprise a single package containing two separate sealed envelopes. Each envelope shall contain, separately the Technical/Operational Proposal & Financial Proposal.</p> <p>B. The package (Outer Envelope) shall be clearly marked the name of the Proposal, date and time of submission and the address and place of the submission and name and address of the contractor/bidder</p> <p>C. The package (Outer envelope) containing the two envelopes must be sealed, signed and stamped by the contractor or his authorized representative.</p>
4	Proposal shall be submitted by hand or may be sent by registered airmail. Proposal submitted through telegraph, telex, fax or e-mail will not be considered.	
5	Financial Proposal to be submitted with Technical Proposals.	
6	Pre-proposal/Pre bid meeting will be held at the office of SSWMB-Bungalow No, D-47, Block-2 Clifton, Karachi, Pakistan on 15 th October 2015 at 1500 hours.	

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7	<p>The proposal/bid submission address is at the office of SSWMB Bungalow No.D-47 Block-2 Clifton, Karachi, Pakistan.</p> <p>Proposal must be submitted no later than the following date & time. 19th November 2015 at 1430 hours PST. The bids shall be opened at 1530 hours on same day.</p>
8	<p>Proposal must remain valid for 120 (One Hundred and Twenty) days after the proposal/bid submission deadline</p>
9	<p>Bid Security Bid security equal to 1% of total Bid amount will be attached with financial proposal in the form of Pay order, Demand Draft or Bank Guarantee in favour of SSWMB. The bid security must remain valid for a period of 28 days beyond validity period of the bid. Bid security shall be submitted in the same currency as that in which the bid is priced/quoted.</p>
10	<p>Clarification may be requested not later than 7 (Seven) days before the submission date.</p> <p>The address for requesting clarification is Executive Director (Operations-I), Sindh Solid Waste Management Board, Karachi, Bungalow No. D-47 Block-2 Clifton, Karachi Pakistan e-mail info@sswmb.gos.pk, Facsimile +92 21 35863029</p>
11	<p>The proposal as well as all related correspondence exchange by the Contractor / Bidder and procuring agency shall be written in English. However it is desirable that the firm's personnel have a working knowledge of the national and regional languages of Islamic Republic of Pakistan.</p>
12	<p>Alternative proposals are not acceptable and shall not be entertained; each bidder should submit only one proposal fulfilling all conditions, instructions and requirement contained in RFP.</p>
13	<p>Valid Registration Certificate of the following Authorities must be attached with the proposal:</p> <ol style="list-style-type: none"> a. Sindh Borad of Revenue b. Federal Board of Revenue (NTN Number)
14	<p>The Contractor/Bidder should quote the cost for each item of works under this contract and total bid price in US Dollars. However, interim payment/ running bill payments shall be made in Pak Rupees (conversion/exchange rate declared by the State Bank of Pakistan shall be applicable of the date of submission of interim bill/monthly running bill for payment.</p>
15	<p>The Contractor/Bidder should quote the cost for each item of works inclusive of all National, Provincial, Local taxes, duties, expenses, contingencies and incidental charges.</p>
16	<p>Contractor/ Bidder must submit the original Technical/Operational Proposal and the original Financial Proposal along with copies of the both.</p>
17	<p>Successful Contractor/Bidder is required to submit performance security at 1% (one percent) of the contract amount in form of pay order or bank guarantee in favour of Sindh Solid Waste Management Board, in the currency in which the bid is priced/quoted.</p>
18	<p>Contractor/bidder shall undertake to sign Integrity Pact as per Format provided by SSWMB under this contract.</p>

Section III

Description of Zone Central (DMC Central Area)

Description of Zone Central (DMC Central Area)**3.1. Liaquatabad Zone- Brief Description**

Liaquatabad Zone is adjacent to the east part of North Nazimabad Zone and is typical for its high population density. The population of the zone as per statistics of 1998 is 644774 persons. In view of growth rate of 5% per annum, the population of this zone in the year 2015 is estimated to 1478353 persons. The area of the zone is 10.89 Sq KM and the population density is about 147835 persons per KM² and the MSW output of this zone is about 517 Ton/Day.

Liaquatabad zone is far away from the existing landfill site. The zone is very compacted as far as its population and the area is concerned, it is mostly congested comprising of small housing units, infrastructural facilities exist in the area but in most of the UCs of the Zone the housing units and lanes are small, giving look of a katchiabadi. In view of the congested area and the quantum of MSW generation it is advisable that MSW of Liaquatabad Zone may be transported to GTS located at the boundary of North Nazimabad Zone from where it may be transported to Jamchakro Landfill site through GTS.

The detail of MSW Generation in each UCs of the zone, its population and other details are given in annexures.

3.2. Demographics.

Liaquatabad Zone is a well demarcated area known by its small business activities and home industries. The zone belongs to low and middle-income groups, its boundary are flanked by District East and District West.

The zone comprises of following UCs:-

UC No.	UC Name	UC No.	UC Name
1	Rizvia Society	7	Sharifabad
2	Firdous Colony	8	Commercial Area
3	Super Market	9	Mujahid Colony
4	Dakkhana	10	Nazimabad No-01
5	Qasimabad	11	Abbassi Shaheed
6	Bandhani Colony		

UC-1 Rizvia Society

UC-1 Rizvia Society consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Rizvia Society	Developed	High Class	200-1000	Wide Area
2	Usmania Society	Developed	Middle-High	120-200	Wide Area
3	Jahangirabad	Undeveloped	Lower-Middle	60-80	Wide Area
4	Dooda Village	Undeveloped	Lower	60-80	Congested/Katchi abadi Type
5	400 Quarter	Developed	Middle	60-80	Congested/Katchi abadi Type
6	Muhammadabad	Developed	Middle	60-80	Congested/Katchi abadi Type
7	Qadaria	Developed	Middle	60-80	Congested/Katchi abadi Type
8	Eid gah	Developed	Middle	60-80	Congested/Katchi abadi Type
9	Waheedabad	Developed	Middle	80-120	Congested/Katchi abadi Type
10	Barsati Shaheed	Undeveloped	Lower	60-80	Congested/Katchi abadi Type

UC-2 Firdous Colony

UC-2 Firdous Colony consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Fidous Colony	Developed	Middle	120-200	Congested/Katchi abadi Type
2	Qureshi Colony	Developed	Middle	120-240	Congested/Katchi abadi Type
3	Pasban Mohalla	Developed	Middle	120	Congested/Katchi abadi Type
4	Jan Muhammad Village	Undeveloped	Lower	60-80	Congested/Katchi abadi Type
5	Firdous Colony	Undeveloped	Lower	60-100	Congested/Katchi abadi Type
6	Basran Mohalla	Undeveloped	Lower	60-80	Congested/Katchi abadi Type
7	Hasan Colony	Developed	Lower-Middle	120	Congested/Katchi abadi Type
8	Sultanabad Flat	Developed	Lower	Flat 80	Congested/Katchi abadi Type
9	Panjabi Para	Undeveloped	Lower	60-100	Congested/Katchi abadi Type
10	Haji Mureed Goth	Undeveloped	Lower	60-90	Congested/Katchi abadi Type

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11	Khalidabad	Undeveloped	Lower	60-90	Congested/Katchi abadi Type
12	Jan Muhammad village	Undeveloped	Lower	80	Congested/Katchi abadi Type
13	Khamosh Colony	Undeveloped	Lower	80	Congested/Katchi abadi Type
14	Ali Basti	Developed	Middle	60-100	Congested/Katchi abadi Type
15	100 Quarters	Developed	Middle	77	Congested/Katchi abadi Type
16	Jaffaria	Developed	Middle	70	Congested/Katchi abadi Type
17	Shahjahanabad	Undeveloped	Lower	40-80	Congested/Katchi abadi Type
18	Nishtar Colony	Developed	Middle	77	Congested/Katchi abadi Type
19	Lyari Naddi Area	Undeveloped	Lower	40-70	Congested/Katchi abadi Type

UC-3 Super Market

UC-3 Super Market consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Liaquatabad No-1&2	Developed	Lower	90	Congested
2	Talib Colony	Undeveloped	Lower	90	Congested

UC-4 Dak Khana

UC-4 Dak Khana consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Liaquatabad B-1 Area	Developed	Middle	80-120	Congested/Katchi abadi Type
2	Angara Goth	Undeveloped	Lower	40-80	Congested/Katchi abadi Type
3	Balouch Para	Undeveloped	Lower	40-60	Congested/Katchi abadi Type
4	Liaquatabad C-Area	Developed	Lower-Middle	60-120	Congested/Katchi abadi Type
5	C-Area Qabrستان	Undeveloped	Lower	40-60	Congested/Katchi abadi Type
6	Ilyas Goth	Undeveloped	Lower	40-60	Congested/Katchi abadi Type
7	Haji Mureed Goth	Undeveloped	Lower	40-60	Congested/Katchi abadi Type
8	Usman Goth	Undeveloped	Lower	40-60	Congested/Katchi abadi Type
9	Muhammadi Colony	Undeveloped	Lower	40-80	Congested/Katchi abadi Type

UC-5 Qasimabad

UC-5 Qasimabad consists of following localities/areas, . The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Liaquataba No-07	Developed	Middle	80-90	Congested
2	Liaquatabad No-06	Developed	Middle	60-80	Congested
3	Liaquatabad No-05	Developed	Middle	80-90	Congested
4	Qasimabad	Developed	Lower-Middle	80-120	Congested
5	Bantva Nagar	Developed	Middle	120	Congested
6	Azam Nagar	Undeveloped	Lower	40-60	Congested
7	Ikramabad	Undeveloped	Lower	40-60	Congested
8	Zahidabad	Undeveloped	Lower	40-100	Congested
9	Muhammadi Colony	Undeveloped	Lower	40-120	Congested
10	Timber Market	Undeveloped	Lower	40-80	Congested

UC-6 Bandhani Colony

UC-6 Bandhani Colony consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Liaquatabad No-10	Developed	Middle	80	Congested
2	Sikandarabad	Undeveloped	Lower	80	Congested
3	Gharibabad	Undeveloped	Lower	30	Congested
4	Ishaqabad	Undeveloped	Lower	80	Congested
5	Bandhani Colony	Developed	Middle	80	Congested
6	Rafeeqabad	Developed	Middle	80	Congested
7	Liaquatabad No-08	Developed	Middle	80	Congested
8	Liaquatabad No-09	Developed	Middle	80	Congested

UC-7 Sharifabad

UC-7 Sharifabad consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sharifabad	Developed	Middle	120	Wide Area
2	Gharibabad	Undeveloped	Lower	40	Wide Area
3	Ishaqabad	Developed	Middle-High	120-240	Wide Area
4	F.C.Area	Developed	Lower	Flats 80	Wide Area

UC-8 Commercial Area

UC-8 Commercial Area consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Liaquataba Block-3	Developed	Lower	90	Congested
2	Liaquatabad Block-4	Developed	Lower	90	Congested
3	F.C.Area	Undeveloped	Lower	40	Congested
4	Panjabi Para	Undeveloped	Lower	20-40	Katchi abadi

UC-9 Mujahid Colony

UC-9 Mujahid Colony consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Nazimabad No-04	Developed	High	440-1200	Wide Area
2	Nazimabad No-02	Developed	Middle-High	120-200	Wide Area
3	Pak Sarhad Colony	Undeveloped	Lower-Middle	60-100	Katchi abadi
4	Mujahid Colony	Undeveloped	Lower-Middle	60-100	Katchi abadi
5	Super Mkt. Police Station	Undeveloped	Lower	60-100	Congested
6	Panjabi Para	Undeveloped	Lower	60-100	Katchi abadi

UC-10 Nazimabad No.1

UC-10 Nazimabad No.1 consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Nazimabad No-01	Developed	Middle-High	133-216	Congested
2	Jahangirabad	Undeveloped	Lower	40-60	Congested
3	Siraj Colony	Undeveloped	Lower	40	Congested
4	Jalalabad	Undeveloped	Lower	60-80	Congested
5	Musarrat Colony	Undeveloped	Lower	60	Congested
6	Panjabi Para	Undeveloped	Lower	40	Congested
7	Kabuli Bazar	Undeveloped	Lower	40	Congested

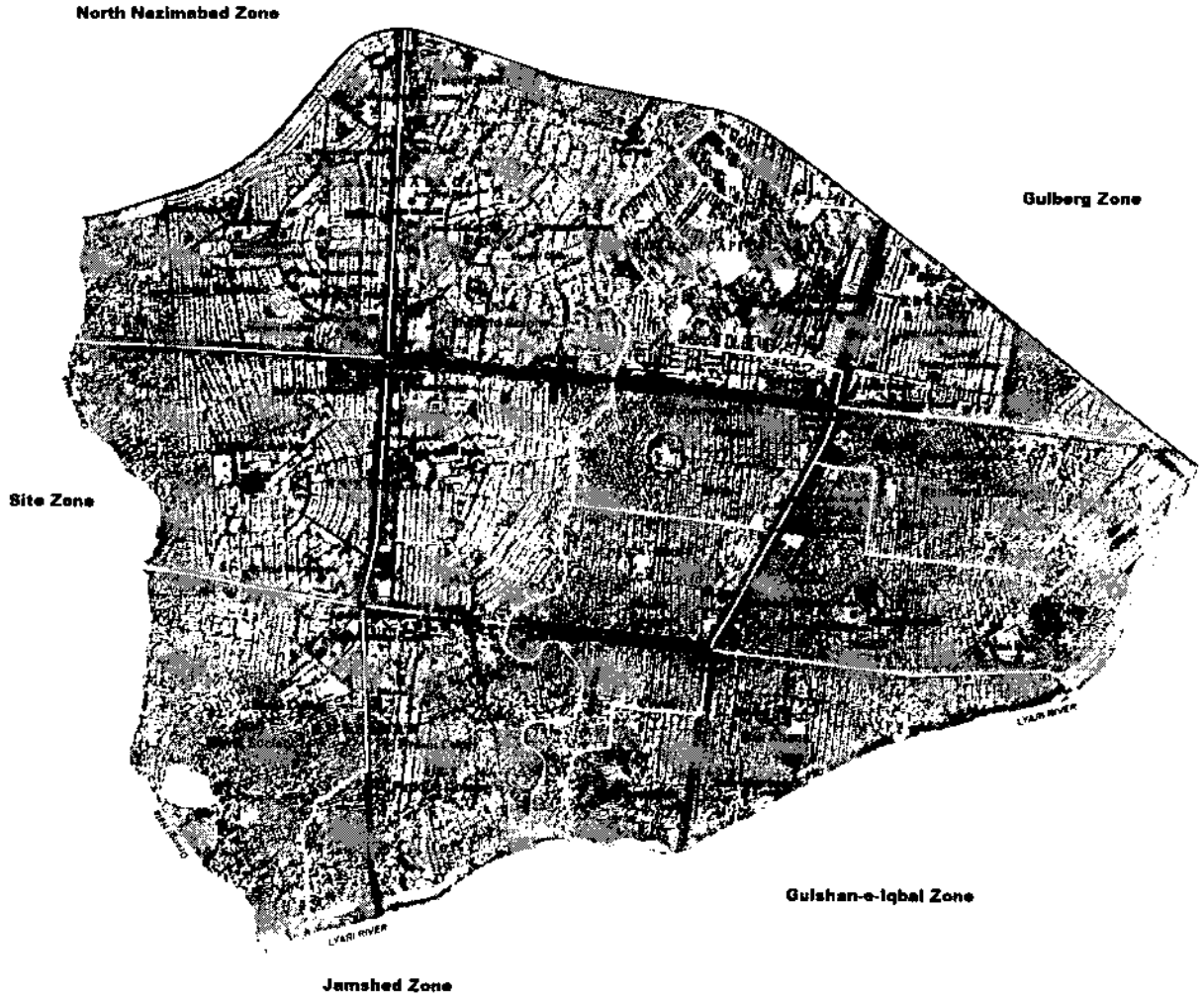
UC-11 Abbasi Shaheed

UC-11 Abbasi Shaheed consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Nazimabad No-03	Developed	Middle-High	133-216	Wide Area
2	Abbasi Shaheed Hosp.	Developed	High	427	Wide Area
3	Chota Maidan	Developed	Lower-Middle	40-80	Wide Area
4	Orangabad	Undeveloped	Lower	40-80	Congested
5	Neetal Colony	Undeveloped	Lower	40	Congested
6	Eid-gah	Developed	Middle-High	133-216	Congested

3.3. Map of Liaquatabad Zone.

Liaquatabad Zone



3.4. North Nazimabad Zone Brief Description

North Nazimabad Zone is also a thickly populated area. Its population as per statistics of 1998 is 496194 persons and in view of estimated population growth at the rate of 5% per annum is about 1130121 persons in the year 2015. The area of the zone is 16.69 SqKM and the average MSW output is 542 Ton/Day. The population density is 67713 person per KM². North Nazimabad Zone is far away from existing landfill site therefore its MSW should be transported to landfill site through GTS, which is located within the zone.

North Nazimabad is a developed area and mostly belongs to middle and high income group. The housing units in the zone ranges from 200 to 1000 Sq Yard whereas good infrastructural facilities exist in the zone.

The approximate details of MSW generation in each UC of the zone and its population and other details area are given at the annexures.

3.5. Demographics of North Nazimabad Zone

North Nazimabad Zone is a well-demarcated area commonly known for its educational institutions, markets, shopping centre, restaurants & marriage halls etc. The roads are wide, well carpeted with wide central Island. Parks & playground are the beauty of the area. There are some katchiabadi namely Royedad Nagar in UC-1, Gharib Nawaz Colony, Deer Colony, Umar Farooq Colony, Usman Ghani Colony, Christianabadi in UC-2, Wahid Colony in UC-3, Kosar Niazi Colony UC-4, Arfat Town, Bitha Town and Peoples Colony in UC-5, Mustafabad in UC-7, KBR 16-A and Buffer Zone and Miskeenabad in Buffer Zone-II in UC-10 are congested areas like katchiabadies where infrastructural facilities are relatively poor. These areas belong to low-income group.

The Zone comprises of the following UCs.

UC No.	UC Name	UC No.	UC Name
1	Paposh	6	Faroq-e-Azam
2	Phare Ganj	7	Mustafabad
3	Khando Goth	8	Shadman
4	Hydri	9	Buffer Zone II
5	Sakhi Hassan	10	Buffer Zone I

UC-1 Paposh

UC-1 Paposh consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Aurangabad	Undeveloped	Lower to Middle	60-120	Congested
2	Jamhorial Colony	Undeveloped	Lower to Middle	40-120	Congested
3	5A, 5B, 5C	Developed	Middle	100-160	Wide Area
4	5D, 5E	Developed	Middle	100-160	Wide Area
5	Royedad Nagar	Undeveloped	Lower to Middle	40-80	Katchi Abadi
6	Allama Iqbal Town	Developed	Lower to Middle	120-600	Wide Area

UC-2 Pahar Ganj

UC-2 Pahar Ganj consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Gharib Nawaz Colony	Undeveloped	Lower to Middle	40-100	Congested Katchi abadi Type
2	Deer Colony	Undeveloped	Lower to Middle	40-100	Congested Katchi abadi Type
3	Umer Farooq Colony-1	Undeveloped	Lower to Middle	40-100	Congested Katchi abadi Type
4	Umer Farooq Colony-2	Undeveloped	Lower to Middle	40-100	Congested Katchi abadi Type
5	Usman Ghani Colony	Undeveloped	Lower to Middle	40-100	Congested Katchi abadi Type
6	Christian Abadi	Undeveloped	Lower to Middle	40-100	Congested Katchi abadi Type
7	Deselva Town	Development	Middle to High	120-400	Wide area
8	Block-Q	Development	Middle	120-400	Wide area

UC-3 Khando Goth

UC-3 Khando Goth consist of following localities/areas. The infrastructural condition, Housing Units type, income group and name of localities in the area are detailed below:-

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Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-A	Developed	Middle to High	120-600	Wide Area
2	Block-B	Developed	Middle to High	240-100	Wide Area
3	Block-C	Developed	Middle to High	120-600	Wide Area
4	Block-E	Developed	Middle to High	Flat Area	Wide Area
5	Wahid Colony	Undeveloped	Low to Middle	40-100	Katchi Abadi

UC-4 Hyderi

UC-4 Hyderi consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-F	Developed	Middle to High	400-1000	Wide Area
2	Block-G	Developed	Middle	Flat Area	Wide Area
3	Block-H	Developed	Middle to High	120-600	Wide Area
4	Kosar Niazi	Undeveloped	Low to Middle	40-100	Katchi Abadi

UC-5 Sakhi Hasan

UC-5 Morio Khan Goth consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-L	Developed	Middle to High	120-600	Wide Area
2	Block-M	Developed	Middle to High	Flat Area	Wide Area
3	Block-N	Developed	Middle to High	120-600	Wide Area
4	Arfat Town	Undeveloped	Low to Middle	60-100	Congested Katchi abadi Type
5	Batha Town	Undeveloped	Low to Middle	60-100	Congested Katchi abadi Type
6	Peoples Colony	Undeveloped	Low to Middle	60-100	Congested Katchi abadi Type

UC-6 Farooq-e-Azam

UC-6 Farooq-e-Azam consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Sindh Solid Waste Management Board

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-D	Developed	Middle to High	120-600	Wide Area
2	Block-I	Developed	Middle to High	120-600	Wide Area
3	Block-J	Developed	Middle to High	120-600	Wide Area
4	Block-K	Developed	Middle to High	Flat Area	Wide Area

UC-7 Mustafabad

UC-7 Mustafabad consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-R	Developed	Middle to high	120-400	Wide Area
2	Block-S	Developed	Middle to high	120-400	Congested Katchiabadi Type
3	Block-T	Developed	Middle to high	120-400	Congested Katchiabadi Type
4	Khalilabad	Undeveloped	Low to Middle	60-100	Congested Katchiabadi Type
5	Bilalabad	Undeveloped	Low to Middle	60-100	Congested Katchiabadi Type
6	Nusrat Bhutto	Undeveloped	Low to Middle	60-100	Congested Katchiabadi Type
7	Mustafabad	Undeveloped	Low to Middle	60-100	Congested Katchiabadi Type

UC-8 Shadman

UC-8 Shadman consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 14-A	Developed	Middle	120-240	Wide Area
2	Sector 14-B	Developed	Middle to high	120-360	Wide Area

UC-9 Buffer Zone-II

UC-9 Buffer Zone-II consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Sindh Solid Waste Management Board

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 15-A-3	Developed	Low to Middle	120-240	Wide Area
2	Sector 15-A-4	Developed	Low to Middle	120-240	Wide Area
3	Sector 15-B	Developed	Low to Middle	120-240	Wide Area
4	Miskeenabad	Undeveloped	Low to Middle	60-100	Katchi Abadi

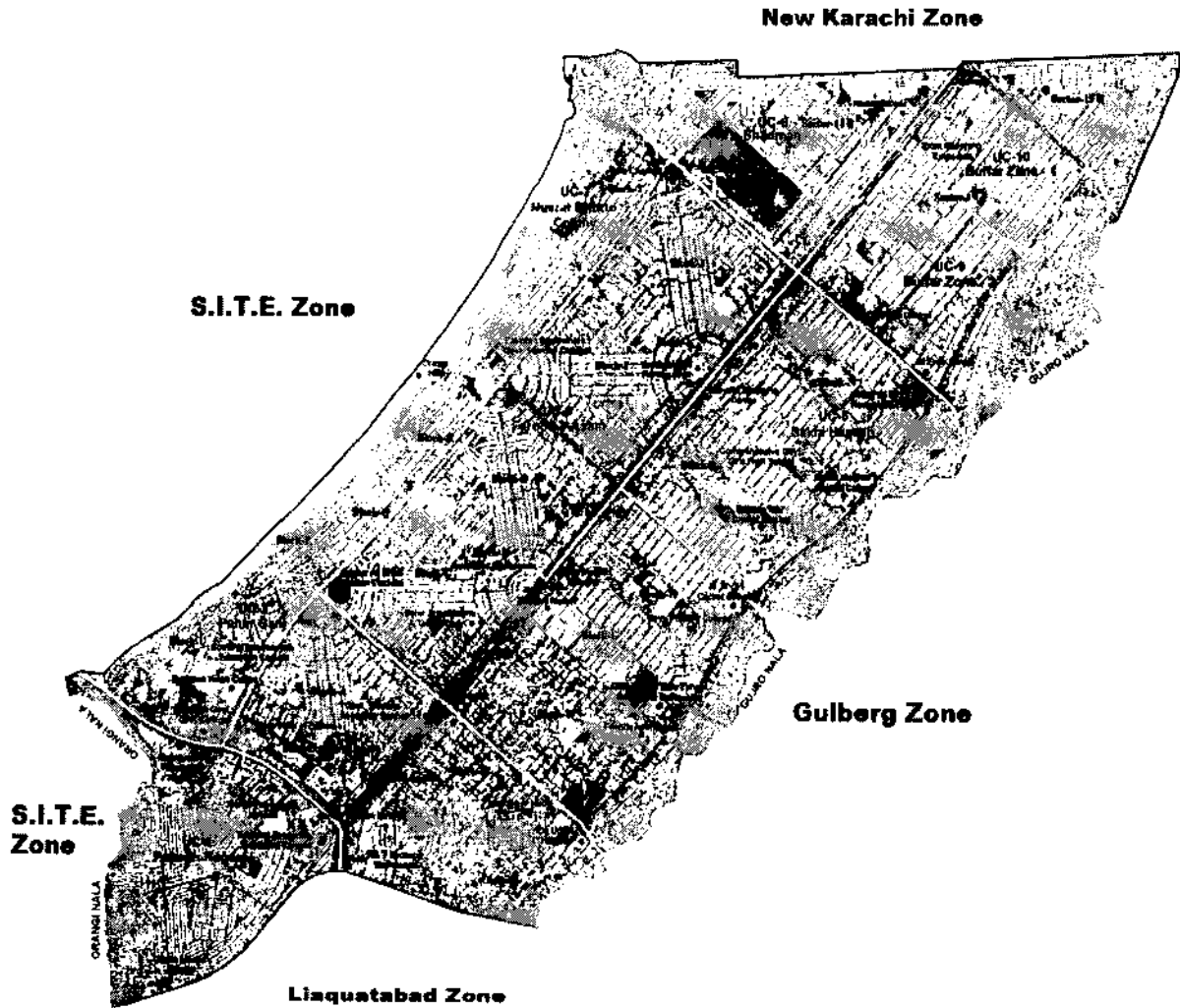
UC-10 Buffer Zone-I

UC-10 Buffer Zone-I consists of following localities/areas. The infrastructural conditions, housing unit types, income groups and names of localities in the area are detailed below:-

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 15-A-1	Developed	Middle	120-240	Congested
2	Sector 15-A-2	Developed	Middle	120-240	Congested
3	Sector 15-A-5	Developed	Middle	120-240	Congested
4	KBR-16-A	Undeveloped	Low to Middle	60-100	Congested Katchiabadi Type

3.6. Map of North Nazimabad Zone

North Nazimabad Zone



3.7. Gulberg Zone Brief Description

Gulberg Zone is a developed region but thickly populated. The population of the zone as per statistics of 1998 is 453490 persons, and in view of growth rate of 5% per annum its population is estimated to about 1032259 person in the year 2015. The area of zone is 13.8 Sq KM. the population density is relatively high i.e. 74801 person per KM². The MSW output is 372 Ton/Day. Gulberg Zone is adjacent to North West Part of Gulshan-e-Iqbal Zone of District East. Therefore in view of its population and the area its MSW may be transported to GTS near the boundaries of North Nazimabad Zone.

The zone is known by its industrial area located at F.B. Area Industrial Zone. However, industrial waste collection and transportation is not the subject of this document.

The detail of MSW Generation in each UC of the zone its population and other details are given at the annexures.

3.8. Demographics of Gulberg Zone

Gulberg Zone is a well demarcated and developed area commonly know by its small businesses and commercial activities. The industrial area of the zone exists at Block-21 and Block-22 of F.B. Area. The registered number of industries under Federal B Area Industrial Association is about 300 Nos. where the nature of the business varies from textile, garments, dying, packaging, printing to plastic pipe manufacturing, Flour mill, soap, towel, bleaching industries etc. Middle to high income group residence varies from 120 to 400 Sq Yard housing units, Moosa Colony and Bhangoria Goth are two katchi abadis in the zone.

The Zone comprises of the following UCs.

UC No.	UC Name	UC No.	UC Name
1	Azizabad	5	Naseerabad
2	Karimabad	6	Yaseenabad
3	Ayesha Manzil	7	Water Pump
4	Ancholi	8	Shafiq Mill Colony

UC-1 Azizabad

UC-1 Azizabad consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-02	Developed	Middle	120	Wide Area
2	Block-08	Developed	Middle	200 & 120	Wide Area
3	Bhangoria Goath	Both	Middle & Lower	40 to 80	Congested Katchi Abadi Type

UC-2 Karimabad

UC-2 Karimabad consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-01	Developed	Middle	120	Wide Area
2	Block-03	Developed	Middle	120	Wide Area

UC-3 Aisha Manzil

UC-3 Aisha Manzil consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-04,05,06	Developed	High	400 to 600	Wide Area
2	Block-10,11	Developed	High	400 to 600	Wide Area
3	Moosa Colony	Developed	Middle & Lower	40 to 60	Congested Katchiabadi Type

UC-4 Ancholi

UC-4 Ancholi consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-12,13	Developed	High	120 to 400	Wide Area
2	Block-17,18	Developed	Middle	120 to 200	Wide Area

UC-5 Naseerabad

UC-5 Naseerabad consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-07	Developed	Middle	Flats	Wide Area
2	Block-09	Developed	Middle	120	Wide Area
3	Block-14	Developed	Middle	120	Wide Area

UC-6 Yaseenabad

UC-6 Yaseenabad consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-09	Developed	Middle	120	Congested
2	Block-15	Developed	Middle	120	Congested

UC-7 Water Pump

UC-7 Water Pump consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-16	Developed	Middle	Flats & 120	Congested
2	Block-21	Developed	Middle	120,220, flats & industry	Congested

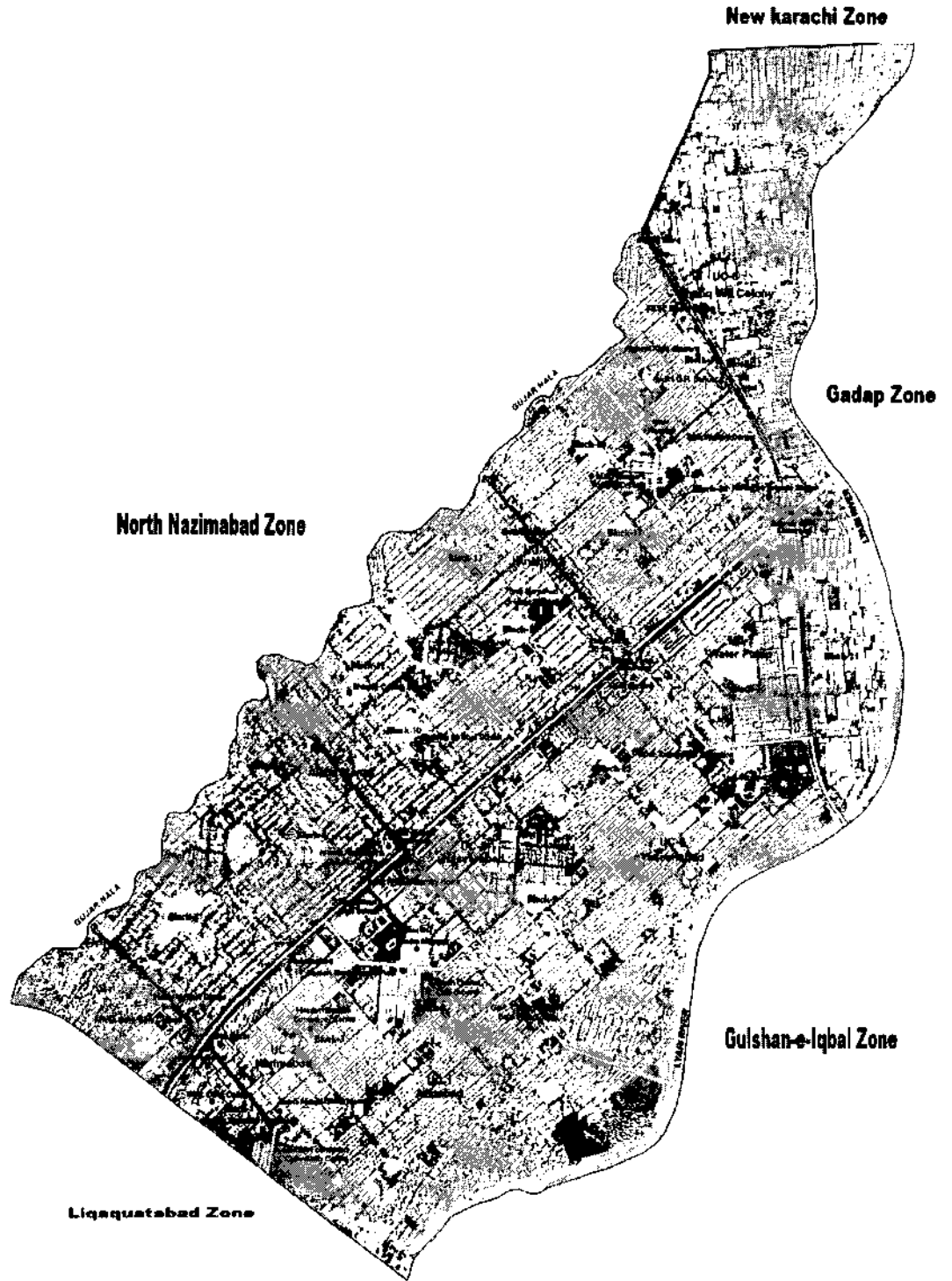
UC-8 Shafiq Mill Colony

UC-8 Shafiq Mill Colony consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Block-19	Developed	Middle	120	Wide Area
2	Block-20	Developed	Middle	120	Wide Area
3	Block-22	Developed	Middle	Flats & Industry	Wide Area

3.9. Map of Gulberg Zone

Gulberg Zone



3.10. New Karachi Zone Brief Description

New Karachi is the main residential area in the north of Karachi City having high-populated density. Its population as per statistics of 1998 was 684173 and its population in view of estimated / approximate growth rate of 5% is 1558280 persons in the year 2015. The infrastructural facilities of the zone are relatively developed and planned. The population density and MSW Density of the zone are nearly even. The area of the zone is 20.08 Sq KM and MSW output is 560.98 ton/day. The Jamchakro landfill site exists within the zone therefore MSW of the zone could be easily transported directly to landfill site. The MSW generation and population density of the zone are relatively on higher side.

The detail of MSW generation of Each UC of the zone, its population and other details are given at the annexures.

3.11. Demographics of New Karachi Zone

New Karachi Zone is a well-demarcated area commonly known by its industrial estate named as NIKATE. The registered industries under New Karachi Association of Trade and industries (NIKATE) is about 700 numbers, where nature of business ranges from towel factories, dyeing and bleaching, chemical, printing, housing factories, textile, resin making, shoe making and allied industries.

Low to middle income group and small housing units ranging from 80 to 200 Sq Yards exist in the zone. The sector 7-C, 7-A, 7-B in UC-1, Christian Colony in UC-3, Abbasi Nagar Bismillah Colony, Makka Colony in UC-4, Abu Zar Colony and Christian Colony in UC-5, Ashraf Colony, Madina Colony in UC-7, Pathan Colony in UC-8, Khamiso Goth in UC-9, Mustafabad and Khawaja Nagar in UC-10, Rasheedabad in UC-11, Sector 1 – A/1, Sector 1 – A/2, Arsalan Homes, Shahnawaz Bhutto Colony, Zareena Colony, Bangali Para in UC-13 are congested and undeveloped areas of the zone and belong to low income groups.

The Zone comprises of the following UCs:

UC No.	UC Name	UC No.	UC Name
1	Kalyana	8	Shahfaisal
2	Sir Syed	9	Khamiso Goth
3	Fatima Jinnah	10	Mustafa Colony
4	Godhra	11	Kh. Ajmair Nagri
5	Abu Zar Ghaffari	12	Gulshan-e-Saeed
6	Hakim Ahsan	13	Shah Nawaz Bhutto
7	Madina Colony		

UC-1 Kalyan

UC-1 Kalyan consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 11-C/3	Developed	Middle Class	120	Wide Area
2	Sector 8	Developed	Middle Class	120	Wide Area
3	Sector 9	Developed	Middle Class	120	Wide Area
4	Sector 10	Developed	Middle Class	120	Wide Area
5	Sector 7-C	Un-Developed	Lower Class	80 / 120 / 200	Congested Katchiabadi Type
6	Sector 7-A	Un-Developed	Lower Class	80 / 120	Congested Katchiabadi Type
7	Sector 7-B	Un-Developed	Lower Class	80	Congested Katchiabadi Type
8	Sector 7-D/1	Developed	Middle Class	120/200	Wide Area
9	Sector 7-D/2	Developed	Middle Class	80/120/200	Wide Area
10	Sector 7-D/3	Developed	Middle Class	120/200	Wide Area
11	Sector 7-D/4	Developed	Middle Class	80/120/200/400	Wide Area

UC-2 Sir Syed

UC-2 Sir Syed consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 11-C/1	Developed	Middle Class	80/120/400	Wide Area
2	Sector 11-C/2	Developed	Middle Class	80/120/400/ F.SITE	Wide Area
3	Sector 11-A	Developed	High Class	200/400	Wide Area
4	Sector 11-B	Developed	High Class	80/120/200/400/600	Wide Area

UC-3 Fatima Jinnah Colony

UC-3 Fatima Jinnah Colony consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
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Sindh Solid Waste Management Board

1	Sector 11-H	Developed	Lower & Middle	Flat Site	Wide Area
2	Sector 11-E	Average	Middle Class	80/200/400	Wide Area
3	Ali M. Goth	Un-Developed	Lowers Class	80/120	Congested Katchiabadi
4	Cristan Colony	Un-Developed	Lowers Class	64/80	Thickly Congested Katchiabadi Type

UC-4 Godhra

UC-4 Godhra consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 11-G	Developed	Middle Class	128	Wide Area
2	Sector 11-F	Developed	Middle Class	118	Wide Area
3	Abbasi Nagar	Developed	Lower Class	40/64/80	Congested Katchiabadi Type
4	Bismillah Colony	Developed	Lower Class	40/64/80	Congested Katchiabadi Type
5	Makkah Colony	Un-Developed	Lower Class	30/40/50/64	Congested Katchiabadi Type

UC-5 Abu Zar Ghaffari

UC-5 Abu Zar Ghaffari consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 11-D	Developed	Middle Class	128	Wide Area
2	Sector 11-J	Developed	Missle Class	80/128	Congested
3	Sector 11-I	Developed	Middle Class	120	Wide Area
4	Abu Zar Colony	Un-Developed	Lower Class	64/80	Congested Katchiabadi Type
5	Cristan Colony	Un-Developed	Lower Class	60/64/45	Congested Katchiabadi Type

UC-6 Hakim Ahsan

UC-6 Hakim Ahsan consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Sindh Solid Waste Management Board

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 11-D	Developed	Middle Class	120	Wide Area
2	Sector 11-L	Developed	Middle Class	80/120	Wide Area

UC-7 Madina Colony

UC-7 Madina Colony consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 11-F	Developed	Middle Class	120	Congested
2	Sector 5-G	Developed	Middle Class	120	Congested
3	Ashraf Colony	Un-Developed	Lower Class	64/80/75	Congested Katchiabadi Type
4	Madina Colony	Un-Developed	Lower Class	64/80	Congested Katchiabadi Type

UC-8 Shah Faisal

UC-8 Shah Faisal consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 5-E	Developed	Middle Class	120	Wide Area
2	Sector 5-L	Developed	Middle Class	80/120	Wide Area
3	Pathan Colony	Developed	Middle Class	120	Congested Katchiabadi Type

UC-9 Khamiso Goth

UC-9 Khamiso Goth consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 5-F	Developed	Middle Class	120	Wide Area
2	Lal Market	Developed	Middle Class	80/120	congested
3	Lal Shehbaz Colony	Developed	Middle Class	120	Wide Area
4	Khamiso Goth	Undeveloped	Low Income	40-60-120	Congested Katchiabadi Type

UC-10 Mustafa Colony

UC-10 Mustafa Colony consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 5-D	Developed	Middle Class	128	Wide Area
2	Sector 5-J	Developed	Middle Class	118/100/80/64	Congested
3	Sector 5-M	Developed	Middle Class	80/120	Wide Area
4	Mustafaabad	Un-Developed	Lower Class	64/80	Congested Katchiabadi Type
5	Khawaja Nagar	Un-Developed	Lower Class	64/80	Congested Katchiabadi Type

UC-11 Khawaja Ajmer Nagri

UC-10 Khawaja Ajmer Nagri consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 5-C/1	Developed	Middle Class	80/120	Wide Area
2	Sector 5-C/2	Developed	Middle Class	80/120	Wide Area
3	Sector 5-C/3	Developed	Middle Class	80/120	Wide Area
4	Sector 5-C/4	Un-Developed	Middle Class	80/120	Wide Area
5	Sector -4	Developed	Avrrage	80/120	Wide Area
6	Rasheed Abad	Un-Developed	Lower Class	64/80	Congested Katchiabadi Type

UC-12 Gulshan Saeed

UC-12 Gulshan Saeed consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 5-B/1	Developed	Middle Class	80/120	Wide Area
2	Sector 5-B/2	Developed	Middle Class	80/120	Wide Area
3	Sector 5-B/3	Developed	Middle Class	80/120	Wide Area

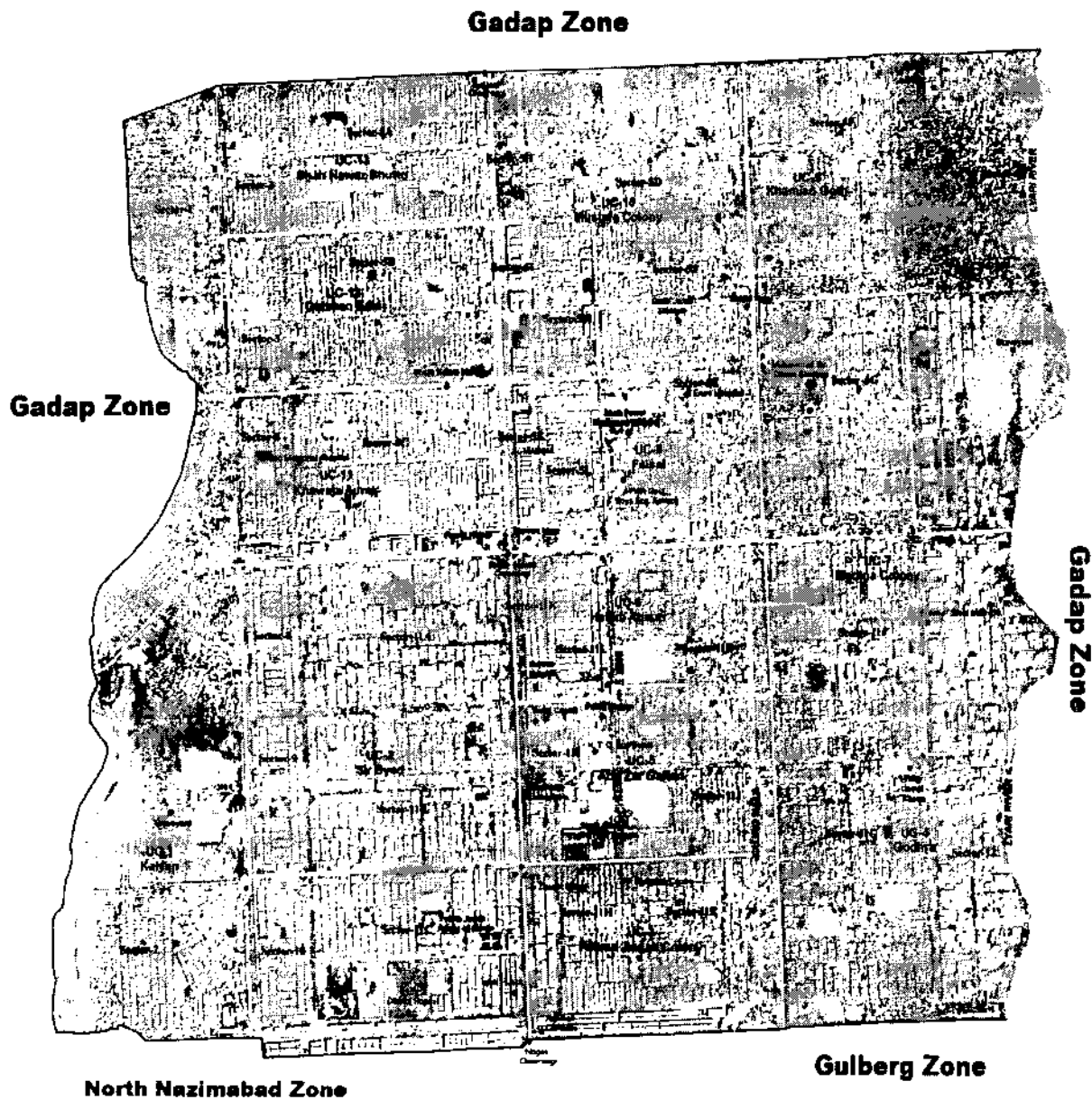
UC-13 Shah Nawaz Bhutto

UC-12 Shah Nawaz Bhutto consists of following localities/areas. The infrastructure, housing unit types, income groups and names of the localities in the area are detailed below:

Srl.#	Area/Locality	Infrastructural Condition	Income Group	House Units Sq. Yards	Remarks
1	Sector 5-A/1	Developed	Middle Class	80/120	Wide Area
2	Sector 5-A/2	Developed	Middle Class	80/120	Wide Area
3	Sector 5-A/3	Developed	Middle Class	80/120	Wide Area
4	Sector 5-A/4	Developed	Middle Class	80/120	Wide Area
5	Sector -2	Developed	Middle Class	80/120	Wide Area
6	Sector -3	Developed	Middle Class	80/120	Congested Katchiabadi Type
7	Sector 1-A/1	Un-Developed	Lower Class	60/80	Congested Katchiabadi Type
8	Sector 1-A/2	Un-Developed	Lower Class	60/80	Congested Katchiabadi Type
9	Arslan Homes	Un-Developed	Lower Class	60/80	Congested Katchiabadi Type
10	Shah Nawaz Bhutto	Un-Developed	Lower Class	64/80	Congested Katchiabadi Type
11	Zarina Colony	Un-Developed	Lower Class	64/80	Congested Katchiabadi Type
12	Bangali Para	Un-Developed	Lower Class	60/64	Congested Katchiabadi Type

3.12. Map of New Karachi Zone

New Karachi Zone



3.13. Existing Solid Waste Management System in DMC Central

i. Door-to-Door Collection.

At present, routine system for collection of municipal solid waste at doorstep does not exist in DMC Central.

Residents of DMC Central throw their household waste to nearby katchra kundi (dustbin) during any time of the day. The shopkeepers of commercial areas and attendants of shopping malls, and residents of DMC Central usually throw garbage at the corner of each street, and in front of shops etc. No any strategy or collection plan for doorstep collection does exists in DMC Central in general.

ii. Street Sweeping.

Main roads, and lanes in DMC Central are cleaned manually using brooms and brushes and the sweeping stuff is kept in the form of numbers of small heaps, besides kerbs and on road sides, which are then lifted with help of Belcha and transported to nearest dustbin site/collection point using wheelbarrow/handcarts. Sweeping stuff is normally thrown into the dustbin. Sweeping is done normally in two shifts i.e. 6:00 AM to 10 AM and then 2:00 PM to 5:00 PM. Mechanical sweeping is not done in DMC Central except on some occasion on the main road when such machines are provided by KMC.

iii. Washing of Main and Important Roads.

Currently no such practice is being carried out.

iv. Transportation of MSW from Dustbin/Collection points to GTS or nearest Landfill Sites.

Garbage vehicles i.e. Arm Roll, Compactor, Dump Trucks, Tractor Trolley designated to each UC of the Zone collects and transport waste from collection points/dustbins to GTS of the Zone. In some cases MSW is transported to nearest land fill sites. Each vehicle is supposed to make 3 to 4 trips a day to clear garbage from dustbins/collection points. Though complete lifting of garbage form the zones could not be made due to availability of required numbers of vehicles. Usually containers of 4 to 7 Ton capacity are placed at collection points/dustbins. However in some areas of DMC Central garbage is dumped, at open places, such garbage is lifted using loaders and bobcat type of machinery and labours using baskets to pick and to load into refuse vans or compactor which is then transported to GTS of Zones. The machinery for lifting and transportation of MSW available

with DMC Central is very old and not compatible with the machines normally required for MSW lifting and transportation.

v. Location of GTS of the Zones of DMC Central.

GTS of Every Zone is located temporarily within the Zone Area however GTS for New Karachi Zone is located behind New Karachi Industrial Area whereas the GTS of North Nazimabad Zone behind Asgher Ali Shah Stadium adjacent to Sharah-e-Noor Jahan.

3.14. Existing System of Offal Collection & Disposal in DMC (Central)

On the eve of Holy festival of Eid Ul Azha every year, thousands of animals, i.e. goats, lambs, sheep, cows, bulls and camels are offered as a sacrifice. These sacrifices is done (as custom) on the door step or within the premises jointly or individually on the roads sides open ground and the offal and other residuals like bones, skin parts, offals and other intestinal organs etc. are thrown at the door step, road side in the bushes, open grounds and collection points, dustbins sites etc. creating an unclean environment with a pungent odor of blood which is seen and witnessed almost in each area on this event.

This situation is dealt with MSW Management of each zone efficiently and affectively. Initiating a specific campaign under an offal collection plan. A day before the event clearing the garbage from dustbins sites is done. The special offal collection campaign usually started just after Eid Ul Azha prayer. The offals and other residual animal waste are then collected through machinery within the zones including hired rental vehicles and disposed of in the pits already excavated at designated places where the offal are buried in a manner that create no hazard to the surrounding. Sprinkling the lime powder and other insecticidal / perfume spray is also done to create pleasant atmosphere.

The campaign is managed in such a manner that area is made clean and clear by the evening of each day event which continuous for three continuous day. An estimated number of offals that are collected and buried in DMC Central is about 261413 numbers.

Days of Eid-ul-Azha	Liaquatabad Zone	North Nazimabad Zone	Gulberg Zone	New Karachi Zone	Total
1 st Day	15265	37000	35000	40000	127265
2 nd Day	14770	26000	20000	20000	80770
3 rd Day	10378	9000	12000	15000	46378
Total	40413	72000	67000	75000	254413
North Nazimabad zone for Bohri Communities offal collection 7000 Nos					
Total Collection of Offals in DMC Central is 261413 Nos					

3.15. Problem & Short Coming in Existing System

- Waste has never been assigned priority by the Government.
- Non existence of Door to Door Collection System.
- Poor attendance of Sanitary Workers / Officials affecting street sweeping and waste disposal.
- Ineffective system of monitoring / reporting causing indiscriminate dumping of waste on open spaces and road sides, also causing delay in complaint redressal system.
- Deficient number of concrete dustbins (katchra kundi) / containers in the most of the areas, resulting in open and scattered dumping of garbage.
- Irregular collection of garbage from community bins/collection points due to:
 - Poor Supervision.
 - Too many dustbins sites.
 - Defective, un-appropriate and old garbage vehicles.
 - POL problems.
 - Political/labour Union intervention.
 - No fix timing of garbage vehicles to collect garbage from dustbin sites and transportation to landfill site.
 - Open transportation of garbage causing environmental pollution.
 - Encroachments especially in market / commercial area causing difficulties in sweeping, collection and transportation to GTS /Land Fill Site. Hence the required number of trips is not achieved.
 - No proper GTS facility
 - Scavenging specially on open spaces and roadside dustbins causing scattering of garbage.
 - Existing rules with regards to SWM need to be reviewed, strengthened and enforced.
 - Lack of public awareness / civic sense regarding SWM collection and disposal.
 - Lack of scientific approach for integrated SWM.

Section IV

Proposed Plan for DMC (Central)

Proposed Plan for Zone Central (DMC Central Area)

4.1 Front End Collection Plan (Proposed Plan)

Front End Action Plan. It Includes followings scope of Work and services

1. Door to door collection and revamping of bin system.
2. Sweeping of roads, streets, lane, footpath, medians and open spaces and sweeping waste collection and disposal.
3. Washing of important roads as and when required including on special occasions.
4. Lifting and transportation MSW from dustbins sites & collection points to designated GTS.
5. Scientific monitoring and tracking system for entire management and operation plan.
6. Community awareness program and its implementation.

4.2 Door to door collection mechanism

Door to door collection for Front End Collection Plan/mechanism is categorized as:

(a) Block Collection.

Wherein waste collecting vehicles with one or two waste collecting workers move around the residential blocks on a specified time each day and sounds horns or ring bell and wait at intermediate location for residents to bring waste in polythene bags to the collection vehicles or where the workers with the collecting vehicles collect garbage in a basket at the door step of the residents and throw the same in the collecting vehicles, which is then disposed of to nearest dustbin site.

(b) Door Step Collection.

Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at specific time each day or collected at door step by the sweepers every day, equipped with wheel barrow, handcart and disposed of to nearest dustbins sites.

(c) Shared containers type collection.

Wherein a container of suitable capacity is placed at an appropriate place within a residential block, apartment building market and shopping area and residents and other generators, put their waste stuff inside the container. These containers may be of hook and lifting type or may be bucket type with proper tipping arrangements, which are then emptied at by compaction container

type compactor vehicles and then again placed at the location. However this operation is done as many times as required to keep the container free of garbage. The location where such containers are placed are kept cleaned and spilled out garbage is swept from the surrounding.

Anyone or all defined categories will be adopted under the front end collection plan for door to door collection keeping in view the demographics of the area, however, for the purpose of guidance, sweeping methodology in various UCs of the Zones of DMC Central is mentioned hereunder.

Plastic bag will be provided free of cost by contractor/operator to all residential units for the first two weeks only. The size and grade of polythene bag is given in the technical specification.

Note.

Where block collection and door step collection is adopted, and where possible in case of shared container type collection, organic and inorganic Municipal Solid Waste are to be collected separately and transported to GTS in a manner that these two types of MSW be disposed of at GTS separately as directed by SSWMB officials and this practice is to be adopted in each zone. Organic and inorganic MSW is to be collected in different colored bags and litterbins and containers as the case may be.

Strategy for door-to-door collection in various zones of DMC Central

Liaquatabad Zone

Name of UC	Door to door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.
UC#2 Firdous Colony UC#3 Super Market UC#4 Dak Khana UC# 5 Qasimabad UC# 6 Bandhani Colony UC# 8 Commercial Area UC# 10 Nazimabad No.1 <ul style="list-style-type: none"> • Low to Middle Income Group • Congested areas 	<p style="text-align: center;">Shared Containers Type Collection</p> <ul style="list-style-type: none"> • Steel Containers of appropriate size & capacity must be placed at appropriate distance. When filled up, these must be lifted and disposed of into a compactor vehicle and empty container must be placed again on the location. The operation of clearing the container be done at least twice a day or as many time as required to keep the container free of garbage • Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around in the area on fixed timings along with one or two waste collecting workers. 	<p>Details of buckets and bins, bin sizes, frequency of placement, tools to be utilized and polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.</p>
UC#1 Rizvia Society UC#9 Mujahid Colony UC#7 Sharifabad UC#11 Abbasi Shaheed	<ul style="list-style-type: none"> • <u>Block Collection Strategy:</u> Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	<p>Details of buckets and bins, bin sizes, frequency of placement, tools to be utilized and polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin</p>

<ul style="list-style-type: none"> • Middle to high Income Group • Sparsely areas 	<ul style="list-style-type: none"> • <u>Door Step Collection.</u> Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at specific time each day or collected by the sweepers every day equipped with wheel barrow, handcart and disposed off to nearest containers and bucket with tipping arrangements. 	<p>mechanism are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.</p>
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North Nazimabad Zone

Name of UC	Door-to-door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.
UC#1 Paposh UC#2 Pahare Ganj UC#7 Mustafabad UC#10 Buffer Zone-I <ul style="list-style-type: none"> • Low Income Group • Thickly Populated 	Shared Containers Type Collection <ul style="list-style-type: none"> • Steel Containers of appropriate size & capacity must be placed at appropriate distance. When filled up must be lifted and disposed of into a compactor vehicle and empty container must be placed again on the location. The operation of clearing the container be done at least twice a day or as many time as required to keep the container free of garbage • Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	<p>Details of buckets and bins, bin sizes, frequency of placement, tools to be utilized and polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.</p>
UC#3 Khando Goth UC#4 Hyderi UC#5 Sakhi Hasan UC#6 Farooq-e-Azam UC#8 Shadman UC#9 Buffer Zone-II <ul style="list-style-type: none"> • Middle to high Income Group • Sparsely areas 	<ul style="list-style-type: none"> • <u>Block Collection Strategy:</u> Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around in the area on fixed timings along with one or two waste collecting workers. • <u>Door Step Collection.</u> Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at specific time each day or collected by the sweepers every day equipped with wheel barrows, handcarts and disposed of to nearest containers and bucket with tipping arrangements. 	<p>Details of buckets and bins, bin sizes, frequency of placement, tools to be utilized and polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.</p>

Gulberg Zone

Name of UC	Door-to-door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.
UC#6 Yaseenabad UC#7 Water Pump <ul style="list-style-type: none"> • Low to Middle Income Group • Congested areas 	Shared Containers Type Collection <ul style="list-style-type: none"> • Steel Containers of appropriate size & capacity must be placed at appropriate distance. When filled up must be lifted and disposed of into a compactor vehicle and empty container must be placed again on the location. The operation of clearing the container be done at least twice a day or as many time as required to keep the container free of garbage • Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	<p>Details of buckets and bins, bin sizes, frequency of placement, tools to be utilized and polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.</p>
UC#1 Azizabad UC#2 Kar mabad UC#3 Aisha Manzil UC#4 Ancholi UC#5 Naseerabad UC#8 Shafiq Mill Colony <ul style="list-style-type: none"> • Middle to high Income Group • Sparsely areas 	<ul style="list-style-type: none"> • <u>Block Collection Strategy:</u> Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. • <u>Door Step Collection.</u> Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at specific time each day or collected by the sweepers every day equipped with wheel barrow, handcart and disposed of to nearest containers and bucket with tipping arrangements. 	<p>Details of buckets and bins, bin sizes, frequency of placement, tools to be utilized and polythene bags are given in technical specification.</p> <p>Details of Type of garbage collecting and transporting vehicles, bin mechanism are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.</p>

New Karachi Zone

Name of UC	Door to door collection Strategy	Suggested Tools and Machinery for door to door collection type.
UC#3 Fatima Jinnah UC#4 Godhra UC#5 Abu Zar Ghaffari UC#7 Madina Colony UC# 8 Shah Faisal UC# 10 Mustafa Colony UC# 13 Shah Nawaz Bhutto Colony • Low to Middle Income Group • Congested areas	Shared Containers Type Collection <ul style="list-style-type: none"> Steel Containers of appropriate size & capacity must be placed at appropriate distance. When filled up must be lifted and disposed of into a compactor vehicle and empty container must be placed again on the location. The operation of clearing the container be done at least twice a day or as many time as required to keep the container free of garbage Block Collection Strategy: Block collection may also be adopted in some areas, which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. 	Details of buckets and bins, bin sizes, frequency of placement, tools to be utilized and polythene bags are given in technical specification. Details of Type of garbage collecting and transporting vehicles, bin mechanism are given in technical specification. Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.
UC#1 Kalyana UC#2 Sir Syed UC#6 Hakim Ahsan UC#9 Khamiso Goth UC#11 Khawaja Ajmer	<ul style="list-style-type: none"> <u>Block Collection Strategy:</u> Block collection may also be adopted in some area which are congested and thickly populated using small vehicles moving around the area on fixed timings along with one or two waste collecting workers. <u>Door Step Collection.</u> Wherein waste is left outside the 	Details of bucket and bin, bin sizes, frequency of placement, tool to be utilize, polythene bags are given in technical specification. Details of Type of

<p>Nagri UC#12 Gulshan-e-Saeed</p> <ul style="list-style-type: none"> • Middle to high Income Group • Sparsely areas 	<p>property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at specific time each day or collected by the sweepers every day equipped with wheel barrow, handcart and disposed off to nearest containers and bucket with tipping arrangements.</p>	<p>garbage collecting and transporting vehicles, bin mechanism are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki typing type may be used.</p>
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4.3 Street Sweeping and Sweeping of Main Roads

i) Classification / Type of Roads.

a. **Primary Main Roads.**

These are the main roads connecting different zones in a district (dual carriageway), planned and constructed on established engineering practices with proper road geometry, 3 or 4 lane carriageways.

b. **Secondary Main Roads.**

May be classified as main roads but secondary type, connecting various UCs in a Zone, mostly single carriageways, however in some parts double carriageway facility is included. Planned and constructed on normal engineering practices with or without outside footpaths, green belts, and median or edge stones and without proper road geometry, two to three lane single carriageways.

c. **Streets.**

These are internal roads, connecting various residential blocks, around markets and commercial areas mostly 2 lane single or sometimes double carriageways type with or without sidewalks. Constructed on conventional practice.

d. **Narrow lanes and streets.**

Paved or unpaved narrow internal streets in old resident areas, markets and around old commercial areas, single lane to double lane i.e. 10 to 20ft wide with or without sidewalks or edge stone.

ii) Sweeping Methodology.

1. **Conventional Type (i.e. manual).**

With the help of sweepers, using broom/brushes. The sweeping waste is collected through wheelbarrows transported and disposed of to nearby buckets containers with tipping arrangements.

2. **Mechanical Type (i.e. using machine sweepers).**

Appropriate, vacuum type mechanical sweeping vehicles including built-in sweeping waste containing facility, shall be used. The

sweeping waste shall be disposed of to nearest bucket or container having tipping arrangements.

iii) **Proposed Sweeping System under Front End Collection Plan**

a) **Secondary Main Roads, Streets and Narrow Lanes.**
(Manual Sweeping)

It is suggested that on secondary main roads, streets and on narrow lanes and streets manual sweeping be adopted along with wheelbarrows and Suzuki / Pickup type of vehicles to transport the sweeping waste from the beat (area) to bucket or containers. Sweeping on internal streets of residential area may be done as per schedule, guideline given at technical specification. Whereas in markets / commercial areas and in bazaar type of market areas, sweeping is required two times in a day as mentioned in the schedule of sweeping at technical specification. Contractor must make its own schedule, for the purpose, however the area must be cleaned and cleared from garbage.

b) **Primary Main Roads and Secondary Road.**
(Mechanical Sweeping)

Using mechanical sweepers of appropriate size and capacity for sweeping of these roads as enlisted is to be done. Sweeping stuff may be disposed of to nearest dustbin site or to GTS. Mechanical sweepers of self contained and vacuum type are best suited for the purpose.

List of Primary and Secondary main Roads Mechanical Sweeping**Primary Main Roads (Dual Carriageway)**

S No.	Name of Road	Length (KM)
Liaquatabad Zone		
1	Nawab Siddiq Ali Khan Road (From Nazimabad No-07 Half Bridge to Lasbell Half Bridge both sides)	6.5
2	S.M.Toufiq Road (From Karimabad Half Bridge to Teen-Hatti Half Bridge both sides)	6.5
3	Sir Shah Suleman Road (From From Essa Nagri Half Bridge to Liaquatabad No-10 both sides)	5
4	Ibn-e-Sina Road (From Liaquatabad No-10 to S.I.T.E Half Bridge both sides)	5
5	Altaf Hussain Barailvi Road (From Jahangirabad Half Bridge to Dakkhana to Old Sabzi Mandi Half Bridge both sides)	9
6	Syed Ahmed Shaheed Road (From Gharibabad Cut to Sharifabad Railway Phatak)	0.89
	Total	32.89
North Nazimabad Zone		
1	Shara-e-Abuul Kalam Block-A UC-03	1.5
2	Shara-e- Faizi UC -03 Block-C	1.5
3	Aslam Market Road UC-06 Block-D	1
4	Khadija Market Road UC-06 Block-I	1.5
5	Taqi Centre Road BI-J UC-06	1
6	Shadman No. 1 UC-08	1
7	Shadman No. 2 UC-08	1
8	7.C Bus Stop Road UC-09 & 10	0.75
9	Buffer Zone Madni Biryani Road UC-09	0.5
10	2.K Wali Road Block-M, N UC-05	1
11	Madras Bakery Road Block-L, M UC-05	1
12	Hydri Market Road Block-G, I UC-04	1
13	Hydri Post office Road Block-F, G UC04	1
14	Asgher Hospital Road Block-B UC-03	1
15	Wahid Colony Road Block-B UC-03	0.75
	Total	15.5
Gulberg Zone		
01	Shahra-e-Pakistan	03
02	Shahra-e-Waliullah	03
03	Ziauddin Bridge to Ghareebabad Phatak	02
04	Landi Kotal to Yaseenabad Bridge	02
05	Café Payyala to UBL Sports Complex	02
	Total	12
New Karachi Zone		
1	2000 Road	3.04
2	2200 Raod	2.28
3	3000 Road	4.69

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4	3100 Road	4.69
5	4000 Road	3.04
6	5000 Road	4.69
7	9000 Road	4.69
Total		27.12

Secondary main roads (Single Carriageway)

S No.	Name of Road	Length (KM)
Liaquatabad Zone		
	Various Secondary Roads (Single Carriageway in Liaquatbad Zone) where machine sweeping can be done	19.15
North Nazimabad Zone		
1	Abdullah College Khilafat Chowk UC-01	0.75
2	Khilafat Chowk Abbasi Rilway Crossing	0.75
3	Khilafat Chowk to Chandi Chowk UC-01	0.75
4	Chandi Chowk to Bara Medan UC-01	0.75
Total		3
Gulberg Zone		
01	Gharibabad Phatak to Heart Diseases Hospital	03
02	Al Noor to Moosa Colony Suzuki Stand	04
Total		7
New Karachi Zone		
1	Haji Akhter to Naumania Masjid Raod Between Sector 11-C	0.94
2	Meeza Bank to Educator School Sector 11-C	0.45
3	Light Backery To Masjid-e-Bilal sector 11-C	0.21
4	Dawn School To Public School Scrtor 11-C	0.27
5	Siddiqui Market to 2100 ROAD	0.45
6	Rajput Milkshop to Iqbal Plaza Latfi Nagar	0.18
7	Saeeda Academy to 2100 Road	0.18
8	Bank Al-Habib to 2400 Road	0.91
9	Altaf Book Depot to 2300 Road	0.27
10	2400 Road to British Backery	0.21
11	2400 Road to Park Sector 11-A	0.21
12	4000 Cricket Stadum to Usman Public School	0.12
13	Anda More to Sector Mohammad Shah Gravyard Sector 7-C	0.67
14	Bara Market to 3100 Road	0.94
15	Between Dividing Road Of Sector 5-C/1 & 5-C/2	0.27
16	Dividing Road Sector 5-C/3 & 5-C/4	0.27
17	3100 Road to White House Grammer School Sector 5-C/1	0.18
18	Faizan-e-Madina ot 3100 Road	0.91
19	4300 Road to Pila chool Sector 5-B/3	0.33
20	Madeha Stop to 3100 Road Sector 5-A	0.91

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21	Kala School to Imam Bargah Sector 5-D	0.15
22	6000 Road to Eid gah Sector 5-D	0.3
23	4400 to 4300 Road Wali Asr Imam Bargah Sector 5-M	0.6
24	2200 Road to Eid Gah Sector 11-E	0.15
25	Eid Gah to Bab-e-Iqbal Sector 11-E	0.21
26	Lal Masjid to Double Story Sector 5-E	0.18
27	Fire Brg. To Uc Office Sector 5-E	0.21
28	Safaid School to Khamiso goth Road Sector 5-F	0.45
29	Imam Bargah to 6000 Road Sector 5-F	0.21
30	last Bus Stop No 60 to Filter Plant	0.6
31	Madina Colony to kali market Sector 5-G	0.3
32	7000 Road to Double Story sector 5-G	0.3
33	Kali Market to 4100 Road	0.15
34	Behind 7000 Road to 4000 Road (Service Road)	0.67
35	Ranjars Headquarter sector 11-F to Kaghzi Market	0.15
36	Kulsoom Hotel to Double Story Sector 11-G	0.24
37	Godhra to Gabol Town Behind 2000 Road Sector 11-G	0.6
38	Gabol Town To Noorani Ground Sector 11-G	0.73
	Total	15.08

Proposed Machinery for Mechanical Sweeping and contained sweeping waste capacities under Front-end collection plan.

Mechanical Sweeper -B1

- Type- Vacuum type wet brushing mechanism
- Maximum sweeping width 3.5 Meter
- Operating speed 5 to 10 KM Per Hour
- Contained sweeping waste capacity 8 to 10 cubic meter
- Water tank capacity 250 to 350 liters
- Total number of machine Required= 07 Number



- Type- Vacuum type wet brushing mechanism
- Maximum sweeping width 2 Meter
- Operating speed 5 to 8 KM Per Hour
- Contained sweeping waste capacity 2 to 3.5 cubic meter
- Water tank capacity 80 to 100 liters



Proposed Machinery for Washing of Main Roads under Front-end collection plan.

Mechanical Washers -C1

- Type- Automatic sprinkling washing mechanism
- Maximum Washing width 3.5 Meter
- Operating speed 5 to 10 KM Per Hour
- Contained water tank capacity 1000 to 1500 Gallons
- Total number of machine **Required= 03 Number**



c) Footpath, Medians, Roundabouts and Open Spaces. (Manual Sweeping)

It is suggested that on footpath Medians, Roundabouts and open spaces, manual sweeping be adopted along wheelbarrow and Suzuki Pickup type of vehicles to transport the sweeping waste from the beat (area) to bucket or containers placed nearby the area. Sweeping be carried out as per schedule of sweeping provided in technical specification. The purpose is that the area must be cleaned and cleared from garbage.

iv) **Proposed Lifting & Disposal of MSW from Collection Point/Dustbin Sites to GTS.**

Under the proposed plan efficient and effective collection & transportation system for MSW is to be adopted using appropriate MSW collection, transportation, machineries and collection system. The suggested numbers of such machines of different MSW contained capacity to handle 1992 Tons Per day MSW generation of DMC Central satisfactorily is 72 numbers. A system schedule must be developed that helps keeping the area free of garbage. To cope up the target numbers of collection point / dustbin sites are to be significantly reduced that can be done using:

1. Containers, bucket, bins having tipping arrangements is to be provided at appropriate location that can be emptied into a compaction type container mounted on vehicles.

Using compaction type containers mounted vehicles saves labour cost and frequent cleaning of bin, buckets and containers help discourage scavengers, reduces insects/rodents problems, prevent windblown trash, control odor, save inside storage space and outside parking spaces, reduce the hazards of open dumping. For various such reasons emphases is laid to use appropriate machinery for solid waste management and transportation.

The bins, buckets and containers mechanism the vehicle type that are recommended for collection, transportation are mentioned hereunder along with pictorial view of desired vehicles and their tipping mechanism. Operation schedule of machines, number required and proposed plan for operation is given in technical specifications.

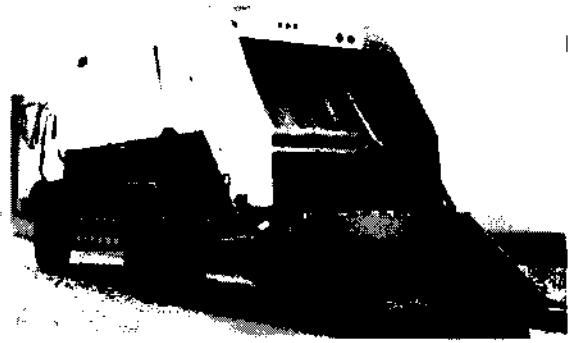
Proposed Machinery for lifting and Transportation including bin Tipping Mechanism under Front-end collection plan

Bin tipping Mechanism -A1

- Appliance- standard metal or plastic rubbish bin.
- Bin cubage 0.24 to 0.3 cubic meter



Bin tipping Mechanism A2
Appliances- metal bucket
Bucket cubage= 0.8 meter cube



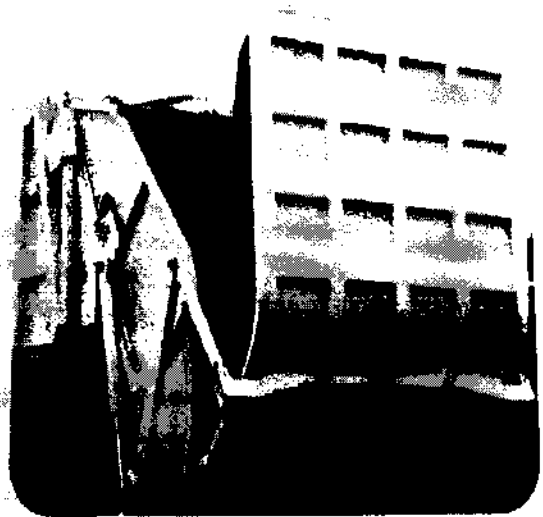
Bucket raising Mechanism A3

Appliance- big metal rubbish bucket

Bucket cubage =3.35 meter cube



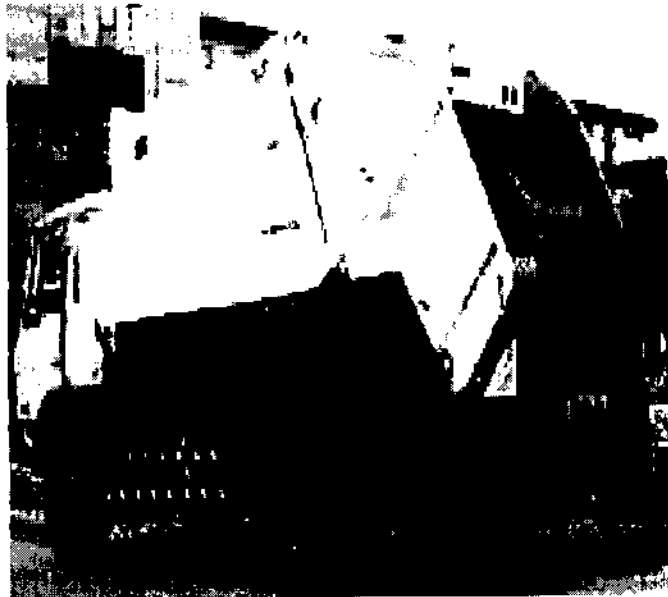
Bucket tipping mechanism-A4
Appliances- special metal covering
bucket.
Bucket cubage =1.4 to 2meter cube



Type of Vehicle –Tipping Mechanism –Bin category and type of vehicles

Vehicle Type - compactor semi Automatic or fully Automatic compaction type. Container in-built vehicle with

- BIN tipping Mechanism –A1
 - BIN tipping Mechanism-A2
 - Bucket raising Mechanism-A3
 - Bucket tipping Mechanism-A4
 - Container volume
 - 6.6 M³
 - 10 M³
 - 12 M³
 - 16 M³
 - Number required
 - A suggested number of machines having different container capacity that are required to handle MSW generation of DMC Central on Daily Basis are mentioned as under:
 - **Vehicle with Container Capacity of 6.6 M³ = 13 No.**
 - **Vehicle with Container Capacity of 10 M³ = 09 No.**
 - **Vehicle with Container Capacity of 12 M³ = 09 No.**
 - **Vehicle with Container Capacity of 16 M³ = 10 No.**
- Total = 41 No.**

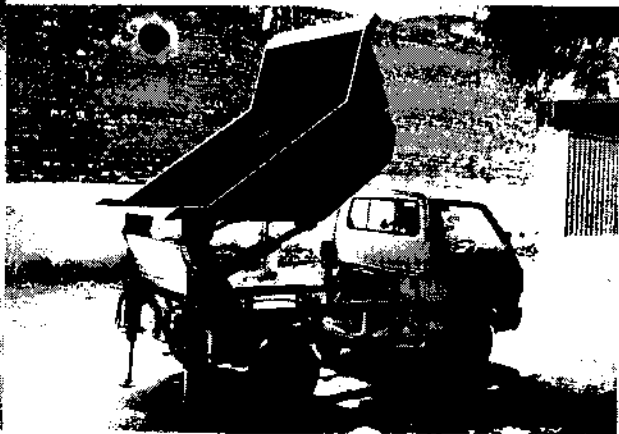


Small vehicle tipping mechanism

Appliances- auto tipping bucket
Small vehicle bucket cubage = 1.4 meter cube
Capacity of in-built container = 1.5 to 2.5 meter cube

No Required

As many numbers as required in view of the physical conditions.



Container Hook Lifting type Mechanism



Hook Lifting type Mechanism-B
Appliances- metal container
Container Cubage

1. 10 m³
2. 07 m³
3. 05 m³

Number required

- Suggested number of machines required of different container Volume capacity is

05 M³ Volume=	11 No.
10M³ Volume=	09 No.
07M³ Volume=	<u>11 No.</u>
Total =	31 No.

NOTE: THE CONTRACTOR IS SUPPOSED TO GIVE HIS OWN STRATEGY FOR THE FRONT END COLLECTION COMPRISING OF DIFFERENT TYPES OF VEHICLES (LARGE, MEDIUM AND SMALL AND EVEN UPTO HAND CARTS & WHEEL BARROWS). INNOVATIVE APPROACH LEADING TO IMPROVED EFFICIENCY AND SAVINGS IN COST WILL BE HIGHLY APPRECIATED.

4.4 Schedule of Works

Proposed schedule of work and services is given at term of reference and technical specification.

4.5 GTS of Zones and Locations.

- a. Liaquatabad Zone, GTS exists within the Zone.
- b. North Nazimabad Zone, behind Asgher Ali Shah Stadium at Shara-e-Noor Jahan
- c. Gulberg Zone, GTS exists within the Zone.
- d. New Karachi Zone at Jamchakro Landfill Site

Section V

Terms of Reference & Technical Specification

Terms of Reference & Technical Specification**5.1 MSW by Definition**

Municipal Solid Waste, commonly known as trash or garbage is a waste type consisting of everyday items that are discarded by public includes food waste, market waste, yard waste, landscape waste (tree cutting, bushes, grass cuttings etc), domestic waste, Slaughter and Sacrificial animal waste (like offals, bones, skin etc.) and other miscellaneous solid waste from residential commercial, institutional areas but do not include demolition waste (inert waste) Industrial waste, agriculture waste, Medical Waste or sewage sludge.

The total estimate MSW generation in DMC Central is approximately 1992 Ton Per Day, the composition of MSW and its quantum varies depending upon type of dwelling population density, commercial activity and density of different type of bazaars and markets in the area. The quantum of MSW also reflects its variation on various occasions like Eid Festival, in the month of Ramdan and Eidul Azha. The quantum also depends on seasonal variation.

Municipal Solid Waste can be classified in several ways, but the following list represents a typical classification:

- Biodegradable Waste i.e.
Food and kitchen waste, green waste, waste from houses, gardens, papers.
- Recyclable Material i.e.
Like paper, glass, bottles, cans, metals, plastic, fabrics, clothes, batteries, old types etc.
- Electrical and Electronics Waste
Like discarded, electrical appliances etc.
- Composite Waste.
Waste clothing, Tetra Pack, Plastic like toys etc.
- Hazardous Household Waste
Like paints, chemical in daily residential usage, light bulbs, tube, spray cans, garden fertilizer, different type of plastic bottles and cans garden pesticide, herbicides etc.

Municipal Solid Waste as defined here above includes all type of waste that is collected at dustbins/collection points except, demolition waste (inert waste) industrial and medical waste, agriculture waste, sewage sludge but includes sweeping waste with a minor component of dirt.

5.2 Transition Period

The transition period for the purpose of implementation of this contract is 03 (three) months starting from date of signing of agreement and issuance of work order. The contractor shall be liable to perform its activities at the work and services even in the transaction period.

5.3 Terms of Reference

a. Scope of work

1. Door to door collection of garbage & revamping of bin system.
2. Sweeping of roads, streets, lane, footpath, medians and open spaces and sweeping waste collection and disposal.
3. Washing of important roads as and when required on special occasions.
4. Lifting and transportation MSW from dustbins sites & collection points to designated GTS.
5. Establishment of Scientific Monitoring and Tracking of Entire System i.e. vehicle sanitary staff, assets etc.
6. Establishment of complaint management system.
7. Community awareness program and its implementation.

b. Objective of work and services

The objective of work and services is to provide efficient, cost effective, environment friendly solid waste collection transportation and its efficient, effective management and operation systems for the public to live in waste free and healthy environment. Effective management and monitoring shall help in obtaining desired results on time.

c. Task to be performed.

1. Door to door collection.

Door to door collection for Front End Collection
Plan/mechanism is categorized as under:

(a) Block Collection.

Wherein waste collecting vehicles with one or two waste collecting workers move around the residential blocks on a specified time each day and sounds horn or rings bell and wait at intermediate location for residents to bring waste in

polythene bags to the collection vehicles or where the workers with the collecting vehicles collect garbage in a basket at the door step of the residents and throw in the collecting vehicles, which is then disposed off to nearest dustbin site.

(b) Door Step Collection.

Wherein waste is left outside the property by the residents in plastic/polythene bags and picked up by waste collecting vehicles moving in and around the residential area at a specific time on each day or collected at door step by the sweepers every day, equipped with wheel-barrow, handcart and disposed of to nearest dustbins sites.

(c) Shared containers type collection.

Wherein a container of suitable capacity is placed at an appropriate place within a residential block, apartment building market and shopping area and residents and other generators, put their waste stuff inside the container, these containers may be of hook and lifting type or may be bucket type with proper tipping arrangements, which are then emptied by compaction container type compactor vehicles and then again placed at the location. However this operation is done as many times as required to keep the container free from garbage. The locations where such containers are placed are kept cleaned and spilled out garbage is swept away from the surroundings.

Anyone or all defined categories will be adopted under the front end collection plan for door to door collection keeping in view the demographics of the area, however for the purpose of guidance, sweeping methodology in various UCs of the Zones of DMC Korangi is mentioned hereunder.

Plastic bag will be provided free of cost by contractor/operator to all residential units for the first two weeks of the contract only.

d. Street Sweeping and sweeping of main roads

1. Conventional Type (i.e. manual).

With the help of sweepers, using broom/brushes and sweeping waste is collected through wheelbarrow, transported and disposed off to nearby buckets containers with tipping arrangements.

2. Mechanical Type (i.e. using machine sweepers).

Appropriate, vacuum type mechanical sweeping vehicles including built-in sweeping waste containing facility, shall be used. The sweeping waste shall be disposed off to nearest bucket or container having tipping arrangements.

e. Collection and transportation of MSW

Under the proposed plan efficient and effective collection & transportation system for MSW is to be adopted. A system that helps keeping the area free of garbage. To cope up the target numbers of collection point / dustbin sites are to be significantly reduced that can be done using:

1. Containers, bucket, bins having tipping arrangements are to be provided at appropriate locations that can be emptied into a compaction type container mounted on vehicles.

Using compaction type containers mounted vehicles saves labour cost and frequent cleaning of bin, buckets and containers help discourage scavengers, reduce insects/rodents problems, prevent windblown trash, control odor, saves inside storage space and outside parking spaces, reduce the hazards of open dumping. For various such reasons emphasis is laid to use appropriate machinery for solid waste management and transportation.

f. Responsibilities of procuring agency

1. In case the procuring agency does not fulfill its obligation regarding signing of agreement the contractor may relinquish its commitments 45 (forty five) days after receiving the acceptance letter by procuring agency.
2. The procuring agency shall assist and facilitate the contractor in performing the work and services as per the contract in respectful and honorable manner throughout the period of contract.
3. The procuring agency shall make all due payments to the contractor against verified monthly bills on time and will be careful and justify the imposing penalties, if any.

g. Responsibilities of contractor

1. The contractor shall perform the work and services under this contract in respectful, honorable manner with an objective and resolve to serve the people of the area.
2. The contractor shall submit his monthly performance bill in time and in accordance work performed correctly and in justifiable manner.
3. Contractor shall follow the instructions and guidelines issued by client or by representative of client and shall comply with all such instructions timely.

4. Contractor is responsible for ensuring good behavior to public and shall follow the code of conduct mentioned in contract document.

5.4 Technical specification.

A. Revamping of Bin System.

The contractor shall provide bins, buckets and containers having tipping mechanism compatible with compactor vehicles in the color scheme given below:

Liaquatabad Zone – Green
North Nazimabad Zone – Purple Yellow
Gulberg Zone – Clay
New Karachi Zone – Bluish

Marking of Logo and Letters:

Sindh Solid Waste Management Board and the Zone Name shall be written in Capital Bold Letter and its logo shall be placed on bin, buckets and containers with the approval of the Procuring Agency.

Bin Type and Sizes

1. Plastic Litter bins of bin cubage 0.24 to 0.3 Meter cube.
2. Standard metals bucket with the following cubage:
 - a. Bucket cubage of 0.8 to 1.4 m³.
 - b. Bucket cubage of 1.4 to 2 m³.
 - c. Big bucket cubage 3.35 to 4 m³.
3. Standard Metal Container with container cubage 5 to 10 m³.

All the bins, buckets and containers shall be of tipping type.

Bin Requirements

Zones	Plastic Litterbins of different sizes and colors	Standard metal bucket of different sizes and colors	Standard Metal container of different sizes and colors
Liaquatabad	1000 Nos.	800 Nos.	150 Nos.
North Nazimabad	1000 Nos.	800 Nos.	150 Nos.
Gulberg	800 Nos.	500 Nos.	100 Nos.
New Karachi	1500 Nos.	1000 Nos.	200 Nos.
Total	4300 Nos.	3100 Nos.	600 Nos.
Area of placement	in markets & shops	in markets shopping malls & commercial centres & residential units	At appropriate places in residential areas, apartment blocks, residential blocks and public places

REMARKS:

Contractor shall provide bins, buckets, and container on prior approval (for numbers to be provided at first stage), second stage and third stage as desired by procuring agency.

B. Plan for Placement of bins, buckets and containers

The contractor will prepare a comprehensive plan for placement of bins, buckets and containers in various union councils of each zone as per the guidelines for revamping of bins system.

Client shall review the plan submitted by successful bidder after award of the contract. A revised plan shall be prepared with mutual consent of client and contractor dully approved by the client. The approved plan shall be implemented for provision of work and services under this contract.

C. Polythene bag

Polythene bag of size 0.5X1 sq. meter in black color of 30 micron thickness with letter and logo of SSWMB printed on it shall be provided by the contractor for door to door collection in the areas where door step strategy is adopted. Contractor will provide such bags free of cost for the first two weeks of the contract and thereafter bag will be provided to residents on payment. Prior approval of the client shall be required for the cost of the bag provided to residents. Samples of polythene bag shall be sent for approval of client with required printing. Approved bags only shall be supplied to the residents. Polythene bags shall be provided for everyday collection of solid waste from the residents.

D. Cost of Polythene bags provided free of cost

All costs towards providing/supplying of polythene bags free of cost (for the first two weeks of the contract) shall be included in unit cost of work and services mentioned in price list.

E. Door to door collection plan

Domestic waste shall be collected via strategy for door to door collection defined under front end collection plan contractor shall submit plans for implementation of this system for door to door collection along with the tender. Such plan shall be reviewed and reworked with the consent of client and successful bidder and shall be subject to approval of competent authority. The approved plan shall be implemented. The strategy for door-to-door collection defined herein the documents using UC wise parameter are basic once and the bidder is supposed to give his own appropriate plan and strategy. Innovation and out of box ideas shall be encouraged.

F. Handcarts and other tools for door to door collection

1. Contractor shall collect waste from narrow streets, that can not accessed by garbage vehicles, rather through manual workers using wheel handcart and empty them to the nearby container or to the compactor vehicle standing at nearby locality.
Wheel handcart bin cubage = 120 Litters
2. Contractor may also collect waste from congested residential colonies through workers using wheelbarrow and basket

G. Manual sweeping

Manual sweeping of roads shall be done by man/woman sweepers using broom/brushes and sweeping waste is collected through wheelbarrows and sweeping waste disposed off at nearby container or bucket or compactor vehicles standing nearby the locality.

Tools for manual sweeping

1. Broom and brushes
2. Shovel and spades
3. Racks
4. Basket
5. Hoe.

H. Length and area for manual sweeping

a) Liaquatabad Zone	<u>256.96KM</u>
b) North Nazimabad Zone	<u>283.14KM</u>
c) Gulberg Zone	<u>264.02KM</u>
d) New Karachi Zone	<u>472.30KM</u>
Total	1276.42KM

- e) Length and area for manual sweeping under following subhead is noted below.

a) <u>Medians</u>	<u>127000 Sq Meter</u>
b) <u>Footpath</u>	<u>71000 Sq Meter</u>
c) <u>Roundabouts</u>	<u>27000 Sq Meter</u>
d) <u>Open spaces</u>	<u>17000 Sq Meter</u>
Total	242000 Sq Meter

I. Workforce required for manual sweeping

Minimum suggested workforce required for sweeping of roads, medians, footpaths, roundabouts and open spaces under manual sweeping is 2500 persons.

J. Schedule for manual sweeping

Type of roads	Manual sweeping length meter	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Secondary Main Road	233775	Yes	No	Yes	No	Yes	No	Yes
Streets	537105	No	Yes	No	Yes	No	Yes	No
Narrow lanes	505540	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Type of Area	Manual sweeping Square meter	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Medians	127000	Yes	No	No	Yes	No	No	Yes
Footpath	71000	No	No	Yes	No	No	Yes	No
Open spaces	17000	No	No	No	No	No	Yes	No
Roundabouts	27000	Yes	No	No	No	No	Yes	No

Manual sweeping shall be done in 02 (two) shift according to the schedule of sweeping.

06:00AM –to- 10:00 AM Shift-1

02:00PM –to- 06:00 PM Shift-2

All cost towards workers, bins, bucket, container, tools must be included in the unit cast of works and services items mentioned in the price list.

K. Schedule for mechanical sweeping on primary and secondary main roads

DMC	Mechanical sweeping length meter	Number of Sweeping Machine	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Central	138500	7	Yes	No	Yes	No	Yes	No	No

Standard mechanical sweeping machine of vacuum type with self-contained in-built waste collection container shall be applied at the work.

L. Plan for mechanical sweeping.

Contractor will prepare a comprehensive plan for mechanical sweeping work of each zone as per guidelines given herein above and will attach the same with the contract document. The client shall review the plan submitted by the successful bidder after award of the contract. The approved plan shall be implemented for operation of work and services under this contract.

M. Plan for collection and transportation of MSW and schedule of operation.

Name of DMC	MSW Generation Ton Per day	Number of collection and transportation vehicles of different Capacity	Mon	Tue	Wed	Thu	Fri	Sat	Sun
DMC Central	1992	72	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Door to door collection	Inclusive as above	Tool as per requirement	Yes	Yes	Yes	Yes	Yes	Yes	Yes

N. Plan for mechanical washing of the road

Name of DMC	Length of washing of main roads Per Year	Number of Washing vehicle	Mon	Tue	Wed	Thu	Fri	Sat	Sun
DMC Central	800 KM	03	Occasionally when asked for. On written orders						

Note:-

The schedule and work plan given herein above is based on basic parameters and of tentative basis and the bidder are suppose to give their own appropriate plan strategies and schedules. Innovation and out of box ideas shall be encourage.

O. Proposed Managerial and operational staff requirement

Srl No.	Designation	Numbers	Qualification	Remarks
01.	Manager Operation	01	Well experienced high qualified professional engineer	Please attached the C.V. of the personal
02	Manager Monitoring & Tracking System	01	Personal may be an I.T. Specialist at least B.S in computer science with specialization in networking and system management sciences	Please attached the C.V. of the personal
03	Zone Field Incharge	04	Graduate having sufficient experience in SWM.	Please attached the C.V. of the personal
04	Supervisor	38	Graduate having sufficient experience in SWM.	Please attached the C.V. of the personal
05	Asst. Supervisor	76	Intermediate sufficient experience in SWM.	Please attached the C.V. of the personal
06	Muquddam	152	Metric having sufficient experience in SWM.	Please attached the C.V. of the personal

5.5 Basis of current date prices

i. Source of price (Diesel/Petrol)

The source of prices of diesel/petrol shall be either obtained from Government of Pakistan (GOP) Federal Bureau of Statistics (FBS) monthly statistical bulletin or Pakistan State Oil (PSO). However, for a particular adjustable element the same source shall be used throughout the currency of the contract.

ii. Source price – Labour (Unskilled)

The source price for labour shall be either Govt. of Pakistan (GOP) Federal Bureau of Statistics (FBS) statistical bulletin or statutory notifications. However, for a particular adjustable element the same source shall be used throughout the currency of the contract.

iii. Element for price adjustment

Following specified elements is subjected to price adjustment

- a) Fuel (Diesel/Petrol) for vehicles
collecting/Transporting MSW only
- b) Labour (unskilled)

iv. Standard Procedure and Formula for Price Adjustment Calculations.

A) Applicability.

- a. The provision for price adjustment shall be applicable to this contract and price adjustment shall be applicable and as payable in full for original scheduled completion period.
- b. In the event the completion of contract exceeds the original scheduled period then:
 - i. In case of default on the part of contractor causing delay in original scheduled completion, the rate of price adjustment will be frozen at the original scheduled date of completion, however price adjustment will be applicable till actual completion. While computing price adjustment beyond the scheduled completion period, in the event the rate is reduced then that reduced rate will be applicable.
 - ii. The price adjustment will be payable in full for the extended period, if the contractor has been granted an extension of time for no fault on part of the contractor duly approved by Sindh Solid Waste Management Board (the procuring agency).

- c. The Basis for compensation (Price Adjustment) will be only those element as specifically listed in clause No.5.5(iii) of this document.
- d. There shall be no price adjustment for the elements, which the employer have either supplied free, of cost or at fixed prices as well as for those elements for which an umbrella exgratia or escalation cover is provided by the Government through an executive order or Statutory Regulatory Order (SRO).
- e. The price adjustment provided herein is only for price adjustment in Local Currency (Pak Rupees).
- f. No method other then given in this document is applicable to compute the price adjustment.

B) Base Date Price and Current Date Price

a. Base Date Price.

The base date price (or Base date index) of the element specified in clause 5.5 (iii) shall be the price of the element which was prevalent twenty eight (28) days prior to the date of submission of tender and such price is to be indicated in writing in the document, as required to be provided by the bidder under appendix-A along with the documentary evidence of specified source. The base date price of the specified element shall be obtained from the sources specified under clause No.5.5

b. Current Date Price.

The current date price (or current date index) of the element specified under clause 5.5(iii) shall be price of the element, which was prevalent twenty eight (28) days prior to the start of the execution month (calendar month) to which a particular monthly statement (monthly running bill) is related. The current date price of the specified element shall be obtained from the source specified in the contract and its documentary evidence is to be provided by the contractor along with monthly bill statement.

c. Procedure.

The monthly bill statement (monthly running bill) as submitted by the contractor, will be

- i. Subjected to verification by procuring agency or its authorized representatives. In case the billed amount is for more than one month, the amount of bill shall be segregated for actual work done for each month.

- ii. Considering the base date price and current date price, the price adjustment in the billed amount then be calculated for the month under consideration in accordance with the formula for price adjustment

C) Formula for Price Adjustment (generalized form)

$$P_n = A + b \frac{L_n}{L_o} + c \frac{M_n}{M_o} + d \frac{E_n}{E_o} + \dots$$

P_n = is Price Adjustment factor for the work carried out in the period n.

A = is a constant or non-adjustable portion of the price adjustment factor as specified here under representing the non-adjustable portion of contract price.

b, c, d=are the coefficient or weightage order 0.xx (i.e. fraction having two significant digits) for each specified element of adjustment in the contract. The sum of A, b, c, d, etc shall be one.

L_o, M_o, E_o, \dots = are the base date indices for the specified (adjustable) element.

L_n, M_n, E_n, \dots = are the current date indices of the specified (adjustable) element.

If P is the amount payable (prior to adjustment) at the rate entered in the price schedule of work carried out in period n then adjusted payable bill amount to the contractor for the work carried out in period n shall be equal to $P_n X P$.

5.6 Rate analysis

The contractor shall provide rate analysis for each item of BOQ mentioned in the price sheet. The rate analysis should indicate breakup of Unit Cost by activities involved in an item. The consumption of fuel at current rates, factored cost of machines, cost of Litterbins, buckets, containers, polythene bags (that are provided free of cost for two weeks only), tools, labour cost, managing and monitoring and other cost breakup while evaluating unit price for the items of works and services and shall also provide breakup of cost of other items that are inbuilt in items of works, and the way of evaluation the unit prices. The details are required to assist the reasonability of rates quoted by the contractor.

5.7 Chargeable works

The contractor shall provide polythene bag to the resident free of cost for the first two weeks of the contract period, after words

contractor shall charge the cost of polythene bag from the area residents to whom the bags are provided, however the cost of bag shall be approved by the client. In any case no cost towards supplying polythene bags to the residents shall be included or inbuilt in the unit price of the item mentioned in the price list except that provided free of cost for first two month of the contract.

5.8 Procuring agency representative, duties and authorities

The procuring agency will appoint a supervising consulting firm or supervising personnel to examine whether work is being performed in accordance with the standards, quality and specifications. The supervising consulting firm shall verify the monthly performance bill checked monthly performance and shall report to the client. The contractor shall conform to the instructions of the supervising authority.

5.9 Uniform

All field staff of the contractor shall wear a proper uniform as approved by the client. A logo of SSWMB shall be placed on the front pocket and on the back of the uniform, the cost of uniform shall be included in the unit price of work item mentioned in the price list.

5.10 Weightment of MSW.

Payment of MSW collection and Transportation shall be based on weight (Metric Ton=1000Kg), subjected to weight quantified/measured through a designated weighbridge (weighbridge designated and approved by SSWMB). The weighing charges shall be borne by the contractor and deemed to be included in the Unit Cost of the item.

5.11 Tentative Weight Assessment.

The weight of Municipal Solid Waste shall be assessed on the basis of its density as (Weight / Volume) Tons Per Cubic feet. (SSWMB and the contractor, prior to the execution of work shall subject this density to verification). The jointly verified density shall be used for assessment of weight of MSW throughout the contract). The Assessment of weight by density shall not be the basis of Payment. This tentative assessment of weight is a check to ensure that any construction debris or inert waste is not mixed with MSW. The contractor, for the purpose of assessment, shall provide cubage of each and every vehicle container transporting MSW to GTS or Landfill.

Debris and inert waste shall not be mixed with MSW. Any weight of debris or inert waste shall not be subject to payments. If mixed with

MSW strict action shall be taken including imposition of penalties and all such weight shall not be allowed / calculated for payment.

5.12 Rating System and Payment Criteria for sweeping work (Manual and Mechanical).

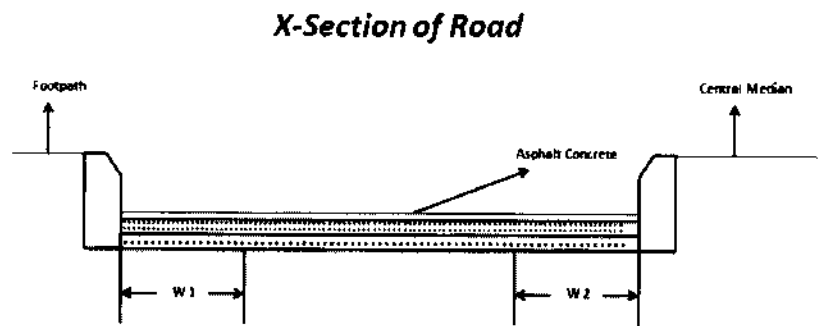
A) Street Cleaning Rating System in Term of Litter and Dust.

Numeric Value	Service Standard sweeping works	Payment in terms of percentage of cost of work done
1	a) A clean street no litter b) A clean street no dust and particles	100%
2	a) A clean street, except for a few one piece of litter b) A clean street, except for a few dust particles micron>40	90%
3	a) No concentration of litter. There are no piles of litter, and there are large gaps between pieces of litter. b) No concentration of dust. There are no piles of dust, and there are large gaps between minor heap of dust particle or small gaps between dust particles.	80%
4	a) Litter is concentrated in spots. There may either be large gaps between piles of litter, or small gaps between pieces of litter. b) Dust and particle micron <600 is concentrated in spots, there may either gaps between minor heap of dust particle or small gaps between dust particle	70%
5	a) Litter is concentrated and there are only small gaps between pieces of litter. b) Dust and particle micron <1000 is concentrated in spots, there may either gaps between minor heap of dust particle or small gaps between dust particle	50%
6	a) Litter is highly concentrated with no gaps in the piles of litter and the litter is straight line along the kerb. b) Dust is highly concentrated with no gaps in the heaps of dust and particles. The dust is straight line along the kerb.	30%
7	a) Litter is very highly concentrated and there are no gaps between the piles of litter. The litter is a straight line along and over the kerb. b) Dust is very highly concentrated and	0%

	there are no gaps between the dusts. The dust is a straight line along and over the kerb.	
Numeric Value	Service Standard sweeping works	Payment in terms of percentage of cost of work done
1	c) A clean street no litter d) A clean street no dust and particles	100%
2	c) A clean street, except for a few one piece of litter d) A clean street, except for a few dust particles micron>40	90%
3	c) No concentration of litter. There are no piles of litter, and there are large gaps between pieces of litter. d) No concentration of dust. There are no piles of dust, and there are large gaps between minor heap of dust particle or small gaps between dust particle.	80%
4	c) Litter is concentrated in spots. There may either be large gaps between pile of liter, or small gaps between pieces of litter. d) Dust and particle micron <600 is concentrated in spots, there may either gaps between minor heap of dust particle or small gaps between dust particle	70%
5	c) Litter is concentrated and there are only small gaps between pieces of litter. d) Dust and particle micron <1000 is concentrated in spots, there may either gaps between minor heap of dust particle or small gaps between dust particle	50%
6	c) Litter is highly concentrated with no gaps in the pile of litter and the litter is straight line along the curb. d) Dust is highly concentrated with no gaps in the heaps of dust and particle. The dust is straight line along the curb.	30%
7	c) Litter is very highly concentrated and there are no gaps between the piles of litter. The litter is a straight line along and over the curb. d) Dust is very highly concentrated and there are no gaps between the dusts. The dust is a straight line along and over the curb.	0%

B) Bases for Payment for Sweeping Work.

- i. Manual sweeping of Road/Streets with Kerb at both edge with or without footpath but not including sweeping of footpath.

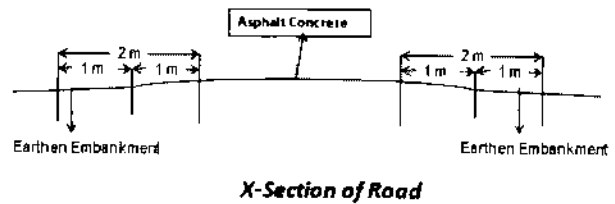


W1= 2 Meters Minimum from the edge stone of road
 W2= 2 Meters Minimum from the edge stone of road
 L = Length of sweeping

Sweeping work measured in KM in one direction of road= W1 and W2 both for the length of sweeping (L)

Note: Single length L of sweeping in one direction (inclusive of both W1 and W2) shall be considered for payment.

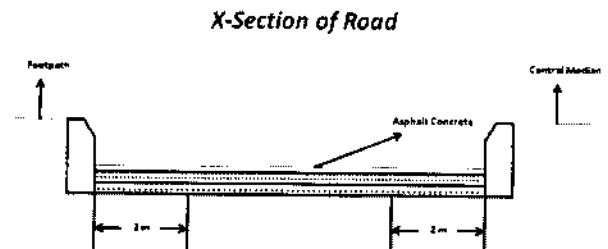
- ii. Manual sweeping of Road/Streets with earthen embankments or sides without kerbs.



Note: Single length L of sweeping in one direction inclusive of both W1 and W2 shall be considered for payment.

- iii. Mechanical sweeping of roads single or double carriageways.

- a) Mechanical sweeping of roads (single or double carriageways) with kerb at both edge with or without footpath, but not including sweeping of footpath

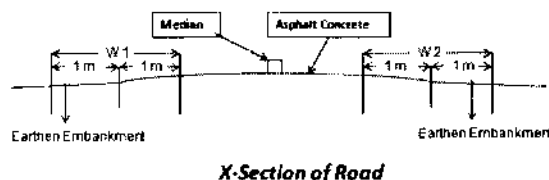


W1= 2 Meters Minimum from the edge stone of road
 W2= 2 Meters Minimum from the edge stone of road

Sweeping work measured in KM in one direction of road= W1 and W2 both for length of sweeping L

Note: Single length L of sweeping in one direction (inclusive of both W1 and W2) shall be considered for payment.

- b) Mechanical sweeping of roads single or double carriageways with earthen embankment sides without kerbs having central median or without central median.



Sweeping work measured in KM in one direction of road= W1 and W2 both for length of sweeping L

Note: Single length L of sweeping in one direction (inclusive of both W1 and W2) shall be considered for payment.

5.13 Submission of Monthly Bill

- A. The contractor shall submit the bill for the work and service performed by 7th day of every month. Monthly bill shall be supported by zone wise MSW weight slips along with detail of lifting of MSW including date, time and location. An inventory of roads on which sweeping work is done with length and reference date, time and location shall be provided by the contractor in support of his bill. Contractor may use GIS System and other latest technology to provide information in support of his monthly bill submission.
- B. Minimum amount of monthly bill (interim / running payment certificate): the amount of interim running payment shall be equal to the amount of certified monthly works executed. The monthly bill shall be paid within 15 days of its submission.

5.14 Demolition, Construction/Building Material and Debris Management Service.

The contractor shall be required to provide demolition construction/building material and debris management service on phone call or on complaint for removal/lifting and disposal of debris of demolition, construction/ building material from the area of service (the area of service of DMC Central at his own risk and cost. For the purpose of this management the contractor shall be required to:

- a) Provide as many number of vehicle as required to lift and transport of demolition material and debris.
- b) Provide as much staff as required to manage this service.
- c) Construct, manage and operate a construction demolition/building material and debris yard at appropriate place within the same area where demolition material and debris shall be dumped.

The contractor shall however be allowed to charge a fee from the public requesting for lifting/removal of such demolition material and debris. The fee/charges for this service shall be fixed at the rates approved by the SSWMB.

The contractor shall also be allowed to sell out demolition construction/building material dumped at the yard at the rates approved by SSWMB procuring agency.

The contractor is hereby warned that:

- Dumping of demolition, construction/building material in the community dustbins, on road, streets, lanes, footpath, central median, roundabout & open places is strictly prohibited and any violation in this regard will be dealt strictly and penalized as per law / rules.

5.15 Notices.

Prior to impose penalty, the contractor shall be informed by procuring agency officials of his deficiencies through two consecutive notices at a week's interval, after that, penalty will be imposed.

Price Adjustment Under Clause 5.5 of Section-V of Contract Document

The source of indices and the weightages or coefficient for procuring agency replace us in the adjustment formula under Clause 5.5 shall be as follows:

Cost Element	Description	Weightages	Applicable index
1	2	3	4
Non Adjustable Portion			
(i)	Fixed Portion	0.49	Official price from public sector organization or statistical bulletin published by Federal Bureau of Statistics (FBS), Statistical Division Govt. of Pakistan Statutory Notification.
Adjustable portion			
(i)	Fuel Diesel and Petroleum	0.08	Govt. of Pakistan by Federal Bureau of Statistics (FBS), Monthly statistical bulletin or Pakistan State Oil
(ii)	Labour (unskilled)	0.43	Govt. of Pakistan (GoP) Federal Bureau of Statistics (FBS), Statistical Bulletin and Statutory Notification.
	Total	1.00	

1. For Base Date and Current date indices refer clause no.5.5. The base cost indices or prices shall be those applying 28 days prior to the latest day for submission of bids. Current indices or prices shall be those applying 28 days prior to the last day of the billing period.
2. Any fluctuation in the indices or prices of elements other than those given above shall not be subject to adjustment of the Contract Price.

Price Adjustment Under Clause 5.5 of Section-V of Contract Document***(To be filled in by bidder/contractor)***

Srl No.	Description	Base Date Price	Source
1	2	3	4
(i)	Fuel (Diesel and Petrol)		As given under Clause No.5.5-i
(ii)	Labour (unskilled		As given under Clause No.5.5-ii

Srl No.	Description	Current Date Price	Source
1	2	3	4
(i)	Fuel (Diesel and Petrol)		As given under Clause No.5.5-i
(ii)	Labour (unskilled		As given under Clause No.5.5-ii

Note: *The bidder/contractor is hereby cautioned to read clause 5.5 and price adjustment procedure given therein carefully while filling the above appendix.*

Appendix-C**List of Subcontractors**

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

Enclosed are documentation outlining experience of sub contractors, the curriculum vitae and experience of their key personnel and type of contracts carried out in the past.

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

Note: *While filling the above reference may kindly be drawn to Clause No.2.22 of this document.*

List of Solid Waste Machinery / Vehicles & Equipment

Owned Purchased or Leased	Description of Unit (Make, Model, Year)	Capacity HP Rating	Condition	Present Location or Source	Dated of Delivery at Site	Fuel consumption Per Kilometer
1	2	3	4	5	6	7
a. Compactor along with tipping arrangements						
b. Suzuki Pickup Type Vehicles with tipping arrangements						
c. Arm Rolls Type Vehicles with tipping arrangements						
d. Mechanical Sweepers vacuum type with wet sweeping mechanism and contained dirt provisions						
e. Mechanical Sweepers vacuum type with dry sweeping mechanism and contained dirt provisions						
f. Mechanical Washer						

Note: *While filling the above reference may kindly be drawn to Clause No.4.3 carefully of this document.*

Appendix-E**List of Solid Waste Machinery / Vehicles that the contractor intend to purchase from the DMC (Central)**

Make Model of the Machinery	Type of Machinery	Registration No.
1	2	3

Note: *While filling the above contractor /bidder is requested to survey the existing machinery of the DMC Central with due care and diligence*

Appendix-F**Breakdown of Unit Cost of the item in BOQ by the Activities and Works in that item.**

Group of Activities in an item of BOQ: _____						
No.	Description of the Activities in the Item	Unit	Unit Cost	Quantity	Cost in Pak Rupees	Cost in US\$
1						
2						
3						
4						
5						

Cost = Unit Cost x Quantity

Note: *While filling the above contractor /bidder is requested to study the document and description of Items in BOQ carefully*

Estimated Progress Payments.

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

Quarter/Year/Period	Amounts (Million of Rupees.)
1	2
1 st Quarter	
2 nd Quarter	
3 rd Quarter	
4 th Quarter	
5 th Quarter	
6 th Quarter	
7 th Quarter	
8 th Quarter	
9 th Quarter	
Bid Price	

Section VI

Performance Evaluation & Monitoring System

Performance Evaluation & Monitoring System**6.1 Scientific Monitoring and tracking system for entire management and operation Plan**

The monitoring of processes included in front-end services should be aimed to ensure that the objectives of solid waste management plan are realized and achieved. The proposed mechanism for different processes include:

COMMAND AND CONTROL CENTRE

- Command and Control Centre / Monitoring system to be established by the service provider.
- Members from District Municipal Corporation and Sindh Solid Waste Management Board to also be part of central control room.
- Radio monitoring system be established at control room.
- Android-based monitoring system be established at control room.
- GPS tracking system for garbage transportation vehicles.

COMPLAINT CELL

- Complaint cell to be established by the service provider
- All complaints to be reported to command and control centre for resolution.
- Command and Control Centre shall notify the complaint cell, as and when the complaint is resolved.
- Complaint cell to duly confirm it with the complainant.
- Linkage between Complaint Cell, Union Council, District Municipal Corporation and Sindh Solid Waste Management Board to be established.
- Concerned Union Council to verify 75% of complaints.
- District Municipal Corporation and Sindh Solid Waste Management Board to verify at least 33% of the complaints.
- Response time to attend complaints should be less than 8 hours.

FOR STREET SWEEPING

- Monitoring and evaluation committees to be established at various levels of Union Council, District Municipal Corporation, Sindh Solid Waste Management Board and Service Provider.
- All committees to act independently
- Monthly third party validation
- Biometric and android based attendance system for sweeping staff.

FOR GARBAGE COLLECTION

- Monitoring and evaluation committees to be established at level of Union Council, District Municipal Corporation, Sindh Solid Waste Management Board and Service Provider.
- All committees to act independently.
- Monthly third party validation.
- Electronic chips should be installed in garbage bins.
- Daily collection report of GTS to be analyzed.

PUBLIC PERCEPTION STUDIES

- Quarterly public perception studies will be conducted by a third party firm
- The quantum of complaints will be analyzed to assess the performance of service provider.

Section VII

Conditions of Contract and Price Sheet

Conditions of Contract and Price Sheet**7.1 Compliance of Laws & Rules Regulation**

The contractor shall be bound under this contract to comply with all substantive and procedural laws of Islamic Republic of Pakistan, which may include but are not limited to the followings:

- i) Labour Laws
- ii) Land Laws
- iii) Environmental Laws
- iv) Local Govt. Act.
- v) All National and Provincial Rules and Regulation applicable to the nature of services and works under this contract.

Inability of successful bidder to comply with all laws, rules, regulation and procedures will result in penalization, as per penalty clauses provided in this contract.

This document is governed by all substantive and procedural laws of Islamic Republic of Pakistan including Sindh Public Procurement Rules 2010 (amended 2013).

7.2 RFP Document

All section of RFP documents i.e.

- | | | |
|-------|--------------|---|
| i) | Section-I | Preambles |
| ii) | Section-II | Instruction to Contractor |
| iii) | Section-III | Description of the Zones of DMC Central |
| iv) | Section IV | Proposed plan for DMC Central |
| v) | Section-V | Terms and reference and Technical Specifications. |
| vi) | Section-VI | Performance Evaluation and Monitoring System |
| vii) | Section-VII | Conditions of Contract & Price Sheet |
| viii) | Section-VIII | Annexure |

All Sections noted above and the clauses contain therein are part and parcel of RFP Document and are integral parts of the agreement and shall be binding upon client and contractor.

7.3 Correspondences-Communications-Notices

All correspondence, communication and notices required or permitted under this contract shall be in writing and in English language and shall be given (to and from contractors & client) at official address as provided in this contract document. Change of address shall be duly notified by the relevant parties.

7.4 Language of Agreement

Agreement will be prepared in English language.

7.5 Type of Agreement and Contract Price

The agreement is a unit price contract, the sum of amounts is calculated by multiplying quantity of each work item as indicated in the price list and unit price quoted by the contractor for that work / services items. The payments of each work/services performed by the contractor shall be based on the unit price quoted by the contractor.

7.6 Duties and Taxes

All of the taxes, duties, fees, and other contractual costs regarding the signing of the contract shall be borne by the contractor.

7.7 Expenses included in the Contract Price

All costs associated with the operational management, monitoring and performance of works and services according to the contract, expenses related with fuel, spare parts, maintenance and repair, depreciation of vehicles (solid waste collection and transportation vehicles) etc. and cost of other incidental items, cost of transportation, cost of trollies, polythene bags, containers, dustbins, litterbins and others mentioned in various sections of the contract. Cost of any or all insurances related to and for the purpose of works and cost of all taxes required to be paid by the contractor pursuant to laws of Pakistan. All the above-mentioned costs and those mentioned in the sections of the contract document, must be taken into account and included in bid price.

7.8 Intermediate payment / Running Bill

The contractor shall submit running bill in the first week of every month for the work and services performed by him. The monthly

performance shall be checked and determined by the client subject to verification through client representatives and on the basis of such verified determinations by the client payment shall be made within 15 days after submission of monthly performance bill/running bill by the contractor.

7.9 Insurance of work & work places

The contractor shall be responsible for safeguarding of work and work places. The contractor shall take all insurances required by pertinent legislations and submit the policies thereof to the client. The contractor shall also be responsible for any damages caused by its personals and his subcontractor in respect of work performed under this contract.

7.10 Indemnification by Bidder/Contractor

Contractor shall indemnify, defend and hold harmless the client (SSWMB), its member, officers, directors, employee and representatives from and against any and all claims arising out of or in anyway connected with gross negligence, fraud, or willful misconduct of the contractor or any one acting in contractor's behalf or under its instructions in connection, with this contract and contractor's obligations there under. Any cost or expanses incurred by the contractor pursuant to his indemnity obligation under this clause shall be the sole responsibility of the contractor.

AND

The contractor/bidder shall indemnify the SSWMB, its employees against all losses and claims in respect of:

- a) Death or injury to any person, due to accident.
- b) Loss or damage to any vehicle, plant, property which may arrived out of accident or public riot or in consequences of execution of work and against all claims, proceedings, damages, cost, charges and expanses whatsoever in respect of or in relation thereto the contractor shall indemnify the client, its officers, employee for any loss claims, demands or lawsuits resulting from defects in contractor's performance during execution of work and services.

7.11 Contractor's Liability for Indemnification

The contractor shall be directly responsible for the choice or use of defective or noncompliant tools or machineries, deficiencies of performance in works and services, mistakes in sufficient supervision or any failure to fulfill his obligation in accordance with the provisions of this contract and specification, and any other losses and damages that may occur due to similar reasons. The contractor shall indemnify such losses and damages in accordance with pertinent legislation.

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7.12 Penalties & Cancellation of Contract.

Penalties as noted below shall be imposed if negligence, discrepancies and deficiencies on part of the contractor to fulfill his obligations on the performance of works and services and the requirements to perform such works and services are found during the period of this contract.

a.	If door to door services is not rendered up to the mark or door to door services is rendered partially and non compliance of the requirement for door to door services mentioned in the technical specifications	Rs.15000/- Per Day Per Zone
b.	If number of manpower provided is found insufficient to perform works and services satisfactorily and not in accordance with the minimum requirement of manpower mentioned in the contract	Rs.400/- Per Day Per Person
c.	If the vehicle used for collection, transportation of solid waste is found inappropriate to the standards of solid waste management system. (Except where SWM vehicles of the procuring agency are utilized.)	Rs.50000/- Per Day Per Vehicle
d.	If numbers of Solid Waste collection and transportation vehicle is deficient to the minimum requirement for successful collection and disposal of MSW as proposed by the bidder in their proposal.	Rs.100000/- Per Day
e.	If the SWM vehicles are not cleaned and washed and found on road in dirty, out of order and unsafe conditions.	Rs.2000/- Per Vehicle Per Day
f.	If leachate is dropped from the vehicle on roads and working routes.	Rs.5000/- Per Vehicle Per Day
g.	Failure to operate machinery and manpower and vehicles during emergency conditions	Rs.500000/- Per Day
h.	Improper collection of Solid Waste from dustbins and collection points including roadside collection.	Rs.1000/- Per Day Per collection point
i.	If debris are found mixed with MSW while taking weights of MSW at designated weighbridge.	Rs.5000 Per Trip
j.	Number of Garbage Containers, litterbins, tipper bins are found less than the requirement as proposed by bidder in their proposal.	Rs.50000/- Per Day
k.	Failure to clean public areas and removal of waste there from.	Rs.10000/- Per Day
l.	Sweepers personals not wearing uniform (Identifiable to procuring agency)	Rs.500/- Per Person Per Day
m.	Failure to collect domestic waste on road sides, footpath	Rs.1000/-

	and streets in 24hours.	Per Day
n.	If garbage containers are not cleared properly and timely as required under the contract	Rs.10000/- Per Day
o.	Repeat violation of cleaning and street sweeping services	Rs.20000/- Per Day
p.	On open (un-covered) transportation of garbage	Rs.5000/- Per Vehicle Per Day
q.	If polythene bags for door-to-door collection to the residents of the area are not provided as mentioned in the contract.	Rs.5000/- Per Day Per Zone
r.	If the works and services to be delivered are not started within the stipulated time i.e. 15 days after signing of agreement.	Rs.50000/- Per Day
s.	Dumping of garbage and other solid waste to any other place other than the approved disposal site.	Rs.10000/- Per Day
t.	Segregation of MSW is prohibited under front-end collection plan. If segregation takes place by scavenger or other persons at collection point, dustbins sites, at containers and stage of door-to-door collection.	Rs.25000/- Per Dustbin Per Month

If the procuring agency finds any non-conformity/contrary to the job description defined in this document, the contractor shall be bound giving a chance to bring his work standards to the satisfaction level of the procuring agency and if the non-conformity is not corrected within the time limit granted by the procuring agency, the penalties will be imposed on the contractor.

If non-conformity continues despite penalties, the procuring agency may terminate the agreement and damages to the procuring agency due to these non-conformities of the contractor shall be recovered from his performance securities.

7.13 Resolution of Dispute

- a) **Amicable Settlement:** If any disputes and differences arise between procuring agency and contractor in connection of the contract or arise out of this contract, the procuring agency and contractor shall attempt to settle such disputes (within the provisions of the contract) through discussion in the first instance. The designated representatives of procuring agency and contractor shall promptly use their best efforts in good faith to reach a reasonable and equitable resolution of such dispute.
- b) **Settlement through Arbitration:** After coming into force of the procurement contract, disputes between the parties to the contract (if not settled amicably) shall be settled by complaint redressal committee defined in SPPR 2010 amended 2013 or through arbitration in accordance with arbitration Act. 1940 and Laws for the time being in forced in Islamic Republic of Pakistan.

7.14 Code of Conduct

The contractor that attempts to get secret information to conclude illegal agreements with the competitors or to influence the procuring agency during the phase of tender inspection, evaluation and comparison shall result in cancellation of his offer/bid and this situation shall be penalized administratively.

The contractor shall act objectively and trust worthy in accordance with rule of business / ethics. He should avoid making public announcement regarding the works and services without prior permission and authorization of the procuring agency.

The contractor and his staff shall not act in inconsistent way in his obligation against the procuring agency and he shall not accept any type of the contributions that may affect his decisions at execution, performance, reporting at the works and services.

Assets of the procuring agency shall not be utilized without appropriate documentations and valid permissions in accordance with the contract. Procuring agency's assets shall not be used for personal interest.

Contractor is responsible to ensure that his employees keep good behavior with public during execution of services in the area. Contractor shall behave in a constructive way with the public and shall not behave in a disgusting manner to the public. The services that are to be performed are to serve the public. Bribes, tip or commission offered as incentive or reward to any person shall be considered as fraud, which is strictly forbidden under this contract. If the contractor is found guilty under forbidden clauses of the contract, action shall be taken accordingly.

7.15 Time extension in conditions, situations of force majeure

Time extension shall be granted to the contractor in condition and situation of force majeure, but procuring agency and competent authorities shall certify such conditions and situation.

The contractor shall not be liable for any failure or delay in performance of his obligation under the contract, which is caused by circumstances beyond his control under force majeure.

Time extension shall be granted to the contractor in case where the procuring agency fails to fulfill his obligation regarding performance of the contract due to any reason not related with the contractor.

7.16 Access to the service area

Procuring agency and their authorized representatives shall have access at all time to one service area, offices of the contractor and any document, materials and record and accounts relating to the works and services performed under the contract for the purpose of inspections and reviews.

7.17 Termination upon notice by procuring agency

Procuring agency may terminate the contract upon 30 (thirty) days prior written notice to contractor in the event

- i) That contractor violets and consent to a violation of any law applicable to the services, where the violation may have a material adverse effect on the management and operation of services under the contract.
- ii) Procuring agency may terminate the contract immediately upon the bankruptcy of the contractor or in other conditions as specified in the various clauses of the contract.

7.18 Termination by contractor

The contractor may also terminate this contract upon 30 (thirty) days prior written notice to procuring agency in the event

- i) That procuring agency's failure to perform its material obligations under this contract in timely manner. If the failure is not addressed properly by the contractor for redressal in 30 (thirty) days, but in no case such redressal is made beyond 90 (ninety) days accept if procuring agency continuous to pursue for redressal of such failure.

7.19 Work in emergency

The contractor in case of emergency may be called upon to provide works and services as per scope of work under this contract and the contractor shall comply with such emergency orders of procuring agency without excuses. Non-compliance of the contractor shall lead to disqualification and will be dealt accordingly

7.20 Payment of Income Tax

The contractor, sub contractor and their employees shall be responsible for payment of all taxes and all type of income tax, other taxes and taxes on income arising out of the contract and rate and prices quoted by the contractor shall be deemed to cover all such taxes.

7.21 Local Taxation

The price quoted by the contractor shall include all custom duties, import duties, business taxes, income and other taxes that may be levied in accordance with law and regulation in force in Pakistan as of the date, 28 days prior to the closing date for the submission of bid and taxes on vehicle machinery tools acquired for the purpose of the contract and on services performed under the contract. Nothing in the contract shall relieve the contractor from his responsibilities to pay taxes that may be levied in respect of the contract from time to time.

7.22 Liability of the contractor

The contractor and their sub contractor or assignees shall follow strictly all relevant labour laws including workman's compensation act, and the procuring agency fully indemnified for all claims arising out of any damage by the contractor, his sub contractors or assignees and labour employed by them.

7.23 Price List and B.O.Q.

Item No	Description of Item	Unit	Quantity	Offer Unit Price (US \$) In Figure & in Words	Total Price (in US \$) In Figure & in Words
1.	Providing for and collection of MSW waste, sweeping waste including cost of door to door collection, management, operational, monitoring cost and cost of machineries, labours, sweepers, coolies, drivers, transportation, etc, cost of all taxes and other incidental cost as per the contract document.	Tons	727332 Per Year		
2.	Providing for and manual sweepings of roads and streets including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and other incidental cost and cost of all taxes as per contract document.	Kilo Meter	280462 Kilo Meter Per Year		
3.	Providing for and manual sweeping of footpath, Greenbelts, medians, Roundabouts, open spaces including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and	Sq Kilo Meter	28.512 Square Kilo Meter Per Year		

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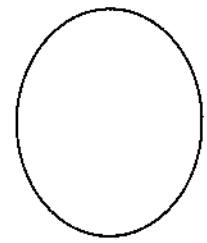
	other incidental cost and cost of all taxes as per contract document.				
4.	Providing for and mechanical sweeping of roads including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and other incidental cost and cost of all taxes as per contract document.	Per Kilo Meter	32399 KM Per Year		
5.	Providing for and mechanical washing of main roads including management operational, monitoring cost, labour, drivers, coolies cost and cost of tools and other incidental cost and cost of all taxes as per contract document.	Per Kilo Meter	800 KM Per Year		
6.	Providing and supplying at site of works litterbins, metal buckets, metal container (tipping type) compatible with Solid Waste Machinery including painting of bucket, bin and container in desired color including cost lettering as directed, cost of transportation, manufacturing etc. complete				
	a) Plastic Litterbin as per required standard having bin cubage of 0.24 to 0.3 Meter Cube	Each	4300 Nos		
	b) Standard Metal Bucket of bin cubage 1. 0.8 to 1.4 Meter Cube 2. 1.4 to 2 Meter Cube 3. 3.4 to 4 Meter Cube	Each Each Each	700 Nos 1200 Nos 1200 Nos		
	c) Metal Container of container cubage 1. 6.6 Meter Cube 2. 10 Meter Cube 3. 12 Meter Cube 4. 16 Meter Cube	Each Each Each Each	150 Nos 150 Nos 100 Nos 200 Nos		
7.	Providing for and collection and transportation of offals and other sacrificial animal waste (on eve of Eid	Ton	2000 Ton Per Year		

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ul Azha) from door steps, roads, streets, lanes open ground i.e. from the whole area under contract including cost of collection, transportation and disposal to landfill site (Jam Chakro Landfill site) including cost of management, monitoring, labours, machinery, incidental cost and cost of all taxes etc. complete				
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Per Year of cost of work and services for item listed in price list / B.O.Q. in Figures _____

Per Year of cost of work and services for item listed in price list / B.O.Q. in wards _____



Seal & Signature

Name of Contractor/Bidder _____

Address: _____

Landline & Cell # : _____

Fax # : _____

e-mail address : _____

7.24 Form of BID

FORM OF BID

Bid Reference No. _____
(Name of Contract/Work)

To:

1. Having examined the bidding documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications and Bill of Quantities and Addenda Nos. _____ for the execution of the above-named work, we/I, the undersigned, offer to execute and complete the work and remedy any defects therein in conformity with the Conditions of Contract, Specifications, Bill of Quantities and Addenda for the sum of US Dollar _____ (\$ _____) or such other sum as may be ascertained in accordance with the said conditions.
2. We/I understand that all the Annexure attached hereto form part of this bid.
3. As security for due performance of the undertakings and obligations of this bid, we/I submit herewith a bid security in the amount of US Dollar _____ (\$ _____) drawn in your favour or made payable to procuring agency and valid for a period of _____ days beginning from the date, bid is opened.
4. We/I undertake, if our bid is accepted, to commence the works and to complete the whole of the works comprised in the contract within the time stated in the contract document.
5. We/I agree to abide by this bid for the period of _____ days from the date fixed for opening the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Unless and until a formal Agreement is prepared and executed, this bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We do hereby declare that the bid is made without any collusion, comparison of figures or arrangement with any other bidder for the works.

We understand that you are not bound to accept the lowest or any bid you may receive.

9. We undertake, if our/my bid is accepted, to execute the Performance Security referred to in Conditions of Contract for the due performance of the Contract.

Sindh Solid Waste Management Board

10. We confirm, if our bid is accepted, that all partners of the joint venture/consortium shall be liable jointly and severally for the execution of the Contract and the composition or the constitution of the joint venture/consortium shall not be altered without the prior consent of the procuring agency.

(Please delete this in case of Bid form a single bidder)

in the capacity of _____ duly authorized to sign Bids for and on behalf of

Dated this _____ day of _____ 20 _____

Signature: _____

(Name of Bidder in Block Capitals) (Seal)

Address: _____

Witness:

Signature: _____

Name: _____

Address: _____

Occupation: _____

Section VIII

Annexure

Section VIII**Annexure**

<u>Liaquatabad Zone</u>	
Annexure-1	MSW Details in Each Union Council
Annexure-2	Statistics of Household Unit
Annexure-3	Road, Footpath, Median & Open Spaces
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MSW Details in Each Union Council of Liaquatnabad Zone (including Sweeping waste and landscape waste)

Annexure-1

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW out put of each UC (t/d)	The Straight Distance b/w UC Center & GTS in KM	No. of Collection Point in UC		Masonry Dustbin / Collection points
	UC #	Name							Container Collection	Open Collection	
1	1	Rizvia Society	62691	95189	142783	1.15	49.97	5.60	2	1	2
2	2	Firdous Colony	60997	92617	138925	0.63	48.62	5.38	3	1	4
3	3	Super Market	52772	79065	118597	0.75	41.51	5.07	1	1	1
4	4	Dakkhana	54581	82875	124312	0.71	43.51	5.55	1	1	2
5	5	Qasimabad	66815	101453	152179	0.81	53.26	5.14	3	2	4
6	6	Bandhani Colony	53675	81499	122248	0.73	42.79	4.77	2	1	2
7	7	Sharifabad	60576	92005	138007	0.77	48.30	4.17	4	3	6
8	8	Commercial Area	62469	94848	142272	1.11	49.80	3.93	2	1	2
9	9	Mujahid Colony	61995	101726	152589	2.15	53.41	3.71	5	2	5
10	10	Nazimabad No-01	52968	80426	120639	1.01	42.22	4.56	3	1	4
11	11	Abbassi Shaheed	55235	83868	125802	1.07	44.03	3.66	3	1	3
Total		11 UC	644774	985571	1478353	10.89	517.42		29	15	35

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for collection and disposal of MSW, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

Statistics of Household Unit in Liaquatabad Zone.

S. No.	Union Council		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per annum	Statistics of Housing Unit in 1998	Housing Units projections for 2015	Income Group	Housing Unit Wise Area Density	MSW out put of each UC /ward (t/d)
	UC #	Name								
1	1	Rizvia Society	1.15	62691	95189	8833	13412	Middle	Congested	49.97
2	2	Firdous Colony	0.63	60997	92617	8468	12858	Middle	Congested	48.62
3	3	Super Market	0.75	52772	79065	7375	11050	Low	Congested	41.51
4	4	Dakkhana	0.71	54581	82875	8046	12217	Low	Congested	43.51
5	5	Qasimabad	0.81	66815	101453	9386	14252	Low	Congested	53.26
6	6	Bandhani Colony	0.73	53675	81499	7512	11406	Low	Congested	42.79
7	7	Sharifabad	0.77	60576	92005	8785	13343	Middle	Wide	48.30
8	8	Commercial Area	1.11	62469	94848	8984	13641	Low	Congested	49.80
9	9	Mujahid Colony	2.15	61995	101726	9039	14832	High	Wide to Congested	53.41
10	10	Nazimabad No-01	1.01	52968	80426	7746	11761	High	Congested	42.22
11	11	Abbassi Shaheed	1.07	55235	83868	7956	12080	Middle	Wide to Congested	44.03
Total		11 UC	10.89	644774	985571	92130	140826			517.42

Note:

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi Central, Population Census Organization Statistics Division Govt. of Pakistan Islamabad. Projection for 2015 is tabulated on Prorata basis on statistics report 1998.
2. Housing Unit wise area density noted above is excluding to the katchi abadies in the UCs wherein Area Density is thickly congested.

Road, Footpath, Medians & Open spaces in Liaquatabad Zone.

Annexure-3							
S. No.	Road Category	Area of the Zone (Sq KM)	Methodology of Sweeping	Length of Road (Meter)	Width of Road (Meter)	Area (Sq Meter)	Remarks
A	Primary Main Roads		Mechanical Sweeping	32890	a) 30 to 36 Dual Carriageway	1085370	
				19150	b) 18 to 30 Single Carriageway	459600	
B	Secondary Main Roads	10.89	Manual Sweeping	40305	a) 12 to 18 Single / Dual Carriageway (inter connected roads)	604575	
				108505	b) 12 to 15 Single Carriage (internal roads)	1464818	
				108150	c) less than 9 Meters (Back Lane/ Narrow Lane)	973350	
C	Narrow Lane		Manual Sweeping		a) 01 Meter	28000	
D	Medians		Manual Sweeping		b) 01 to 02 Meter	24000	
E	Footpaths		Manual Sweeping			5000	
F	Chowrangi		Manual Sweeping			4000	
	Open Spaces		Manual Sweeping				
					Total	4648713	

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for Sweeping work, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

MSW Details in Each Union Council of North Nazimabad Zone (including Sweeping waste and landscape waste)

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW output of each UC (t/d)	The Straight Distance b/w UC Center & GTS in KM	No. of Collection Point in UC		Masonry Dustbin / Collection points
	UC #	Name							Container Collection	Open Collection	
1	1	Paposh	69307	105235	157852	0.72	75.77	2.76	3	5	3
2	2	Phare Ganj	42279	64196	96294	0.59	46.22	1.38	0	10	0
3	3	Khando Goth	52662	79961	119941	3.54	57.57	1.48	2	16	2
4	4	Hydri	58382	88647	132970	1.83	63.83	1.82	5	22	0
5	5	Sakhi Hassan	59320	90071	135106	1.73	64.85	2.54	7	16	0
6	6	Farog-e-Azam	39437	59881	89821	3.48	43.11	1.64	2	12	4
7	7	Mustafabad	38998	59214	88821	1.14	42.63	0.91	0	8	1
8	8	Shadman	37996	57693	86539	1.87	41.54	3.05	2	11	0
9	9	Buffer Zone II	57794	87754	131631	1.15	63.18	3.38	3	15	1
10	10	Buffer Zone I	40019	60764	91146	0.64	43.75	4.01		22	0
Total		10 UC	496194	753416	1130121	16.69	542.46		24	137	11

Annexure-4

Note:

The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for collection and disposal of MSW, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

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Statistics of Household Unit in North Nazimabad Zone.

Annexure- 5

S. No.	Union Council		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per annum	Statistics of Housing Unit in 1998	Housing Units projections for 2015	Income Group	Housing Unit Wise Area Density	MSW out put of each UC /ward (t/d)
	UC #	Name								
1	1	Paposh	0.72	69307	157852	10235	23311	Lower, Middle, High	Wide to Congested	75.77
2	2	Phare Ganj	0.59	42279	96294	5489	12502	Lower, Middle, High	Thickly Congested	46.22
3	3	Khando Goth	3.54	52662	119941	8692	19797	Lower, Middle, High	Wide	57.57
4	4	Hydri	1.83	58382	132970	8537	19444	Lower, Middle, High	Wide	63.83
5	5	Sakhi Hassan	1.73	59320	135106	9172	20890	Lower, Middle, High	Wide	64.85
6	6	Farooq-e-Azam	3.48	39437	89821	6041	13759	Middle to High	Wide	43.11
7	7	Mustafabad	1.14	38998	88821	5211	11868	Lower, Middle, High	Congested	42.63
8	8	Shadman	1.87	37996	86539	6633	15107	Middle to High	Wide	41.54
9	9	Buffer Zone II	1.15	57794	131631	8466	19282	Lower, Middle	Congested	63.18
10	10	Buffer Zone I	0.64	40019	91146	6128	13957	Lower, Middle	Congested	43.75
Total		10 UC	16.69	496194	1130121	74604	169916			542.46

Note:

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi Central, Population Census Organization Statistics Division Govt. of Pakistan Islamabad. Projection for 2015 is tabulated on Prorata basis on statistics report 1998.
2. Housing Unit wise area density noted above is excluding to the katchi abadies in the UCs wherein Area Density is thickly congested.

Road, Footpath, Medians & Open spaces in North Nazimabad Zone.

Annexure-6							
S. No.	Road Category	Area of the Zone (Sq KM)	Methodology of Sweeping	Length of Road (Meter)	Width of Road (Meter)	Area (Sq Meter)	Remarks
A	Primary Main Roads		Mechanical Sweeping	14480	a) 30 to 36 Dual Carriageway	477840	
				10780	b) 18 to 30 Single Carriageway	258720	
B	Secondary Main Roads	16.69	Manual Sweeping	57900	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	868500	
				108200	b) 12 to 15 Single Carriage (internal roads)	1460700	
				117040	c) less than 9 Meters (Back Lane/ Narrow Lane)	1053360	
C	Medians		Manual Sweeping		a) 01 Meter	4000	
D	Footpaths		Manual Sweeping		b) 01 to 02 Meter	32000	
E	Chowrangi		Manual Sweeping			9000	
F	Open Spaces		Manual Sweeping			4000	
Total						4204120	

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for Sweeping work , the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

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MSW Details in Each Union Council of Gulberg Zone (including Sweeping waste and landscape waste)

Annexure-7

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW out put of each UC (t/d)	The Straight Distance b/w UC Center & GTS in KM	No. of Collection Point in UC		Masonry Dustbin / Collection points
	UC #	Name							Container Collection	Open Collection	
1	1	Azizabad	67863	103042	154563	1.73	55.64	4.05	3	2	1
2	2	Karimabad	44545	67637	101455	0.79	36.52	5.21	2	6	2
3	3	Ayesha Manzil	62382	94720	142080	2.08	51.15	5.39	3	10	2
4	4	Ancholi	63589	96553	144829	2.15	52.14	4.70	2	6	1
5	5	Naseerabad	69563	105624	158436	1.25	57.04	4.28	4	10	6
6	6	Yaseenabad	47640	72336	108504	1.52	39.06	3.29	4	5	2
7	7	Water Pump	43070	65397	98095	1.35	35.31	3.26	4	5	2
8	8	Shafiq Mill Colony	54838	83265	124897	2.93	44.96	4.62	2	8	1
Total		8 UC	453490	688574	1032859	13.80	371.83		24	52	17

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for collection and disposal of MSW, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

Statistics of Household Units in Gulberg Zone.

S. No.	Union Council /Ward		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per annum	Statistics of Housing Unit in 1998	Housing Units projections for 2015	Income Group	Housing Unit Wise Area Density	MSW out put of each UC /ward (t/d)
	UC #	Name								
1	1	Azizabad	1.73	67863	154563	10480	23869	Middle	Wide to Congested	55.64
2	2	Karimabad	0.79	44545	101455	7865	17913	Middle	Congested	36.52
3	3	Ayesha Manzil	2.08	62382	142080	9883	22509	Upper	Wide to Congested	51.15
4	4	Ancholi	2.15	63589	144829	9742	22188	Upper	Wide to Congested	52.14
5	5	Naseerabad	1.25	69563	158436	12576	28643	Middle	Wide to Congested	57.04
6	6	Yaseenabad	1.52	47640	108504	6921	15763	Middle	Wide to Congested	39.06
7	7	Water Pump	1.35	43070	98095	6771	15421	Middle	Wide to Congested	35.31
8	8	Shafiq Mill Colony	2.93	54838	124897	7766	17688	Middle	Wide to Congested	44.96
Total		12 UC	13.80	453490	1032859	72004	163995			371.83

Annexure- 8**Note:**

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi Central, Population Census Organization Statistics Division Govt. of Pakistan Islamabad. Projection for 2015 is tabulated on Prorata basis on statistics report 1998.
2. Housing Unit wise area density noted above is excluding to the katchi abadies in the UCs wherein Area Density is thickly congested.

Road, Footpath, Medians & Open spaces in Gulberg Zone.**Annexure-9**

S. No.	Road Category	Area of the Zone (Sq KM)	Methodology of Sweeping	Length of Road (Meter)	Width of Road (Meter)	Area (Sq Meter)	Remarks
A	Primary Main Roads		Mechanical Sweeping	12000	a) 30 to 36 Dual Carriageway	396000	
				7000	b) 18 to 30 Single Carriageway	168000	
B	Secondary Main Roads	13.80	Manual Sweeping	51020	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	765300	
				113600	b) 12 to 15 Single Carriage (internal roads)	1533600	
				99400	c) less than 9 Meters (Back Lane/ Narrow Lane)	894600	
C	Medians		Manual Sweeping		a) 01 Meter	14000	
D	Footpaths		Manual Sweeping		b) 01 to 02 Meter	12000	
E	Chowrangi		Manual Sweeping			5000	
F	Open Spaces		Manual Sweeping			3000	
					Total	3791500	

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for Sweeping work , the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

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MSW Details in Each Union Council of New Karachi Zone (including Sweeping waste and landscape waste)

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per annum	Area in Sq KM	MSW out put of each UC (t/d)	The Straight Distance b/w UC Center & GTS in KM	No. of Collection Point in UC		Masonry Dustbin / Collection points
	UC #	Name							Container Collection	Open Collection	
1	1	Kalyana	47313	71839	107758	1.78	38.79	3.50	0	12	0
2	2	Sir Syed	44557	67655	101482	1.50	36.53	4.00	2	20	0
3	3	Fatima Jinnah	55324	84003	126004	0.85	45.36	2.20	2	35	0
4	4	Godhra	70437	106951	160426	1.68	57.75	1.80	2	55	0
5	5	Abu Zar Ghaffari	43791	66492	99738	0.63	35.91	2.20	2	18	0
6	6	Hakim Ahsan	40427	61384	92076	0.60	33.15	3.20	0	22	0
7	7	Madina Colony	62102	94295	141442	1.69	50.92	3.70	0	18	0
8	8	Shahfaisal	59033	89635	134452	1.34	48.40	4.20	2	16	0
9	9	Khamiso Goth	59855	90898	136347	2.93	49.08	5.90	0	18	0
10	10	Mustafa Colony	57790	87748	131622	2.27	47.38	5.70	2	15	0
11	11	Kh. Ajmair Nagri	53684	81513	122269	1.41	44.02	6.20	1	22	0
12	12	Gulshan-e-Saeed	41401	62863	94294	0.86	33.95	6.70	0	35	0
13	13	Shah Nawaz Bhuttoo	48459	73580	110370	2.54	39.73	7.20	1	28	0
Total		13 UC	684173	1038856	1558280	20.08	560.98		14	314	0

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for collection and disposal of MSW, the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

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Statistics of Household Units in New Karachi Zone.

Union Council		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per annum	Statistics of Housing Unit in 1998	Housing Units projections for 2015	Income Group	Housing Unit Wise Area Density	MSW out put of each UC /ward (t/d)	
S. No.	UC #									
1	1	Kalyana	1.78	47313	107758	6988	15916	Middle	Wide to Congested	38.79
2	2	Sir Syed	1.50	44557	101482	3712	8454	High/Middle	Wide	36.53
3	3	Fatima Jinnah	0.85	55324	126004	8097	18441	Middle	Congested	45.36
4	4	Godhra	1.68	70437	160426	9231	21024	High/Middle	Congested	57.75
5	5	Abu Zar Ghaffari	0.63	43791	99738	6328	14413	Middle	Congested	35.91
6	6	Hakim Ahsan	0.60	40427	92076	5383	12260	Middle	wide	33.15
7	7	Madina Colony	1.69	62102	141442	8164	18594	Middle / Lower	Congested	50.92
8	8	Shahfaisal	1.34	59033	134452	8168	18603	Middle	Congested	48.40
9	9	Khamiso Goth	2.93	59855	136347	9253	21078	Middle / Lower	Wide	49.08
10	10	Mustafa Colony	2.27	57790	131622	8148	18558	Middle / Lower	Wide to Congested	47.38
11	11	Kh. Ajmair Nagri	1.41	53684	122269	7602	17314	Middle	Wide to Congested	44.02
12	12	Gulshan-e-Saeed	0.86	41401	94294	5931	13508	Middle / Lower	Wide	33.95
13	13	Shah Nawaz Bhutto	2.54	48459	110370	7045	16046	Middle / Lower	Congested	39.73
Total		09 UC	20.08	684173	1558280	94050	214209			560.98

- Note:**
1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi Central, Population Census Organization Statistics Division Govt. of Pakistan Islamabad. Projection for 2015 is tabulated on Prorata basis on statistics report 1998.
 2. Housing Unit wise area density noted above is excluding to the katchi abadies in the UCs wherein Area Density is thickly congested.

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Road, Footpath, Medians & Open spaces in New Karachi Zone.

Annexure-12								
S. No.	Road Category	Area of the Zone (Sq KM)	Methodology of Sweeping	Length of Road (Meter)	Width of Road (Meter)	Area (Sq Meter)	Remarks	
A	Primary Main Roads	20.08	Mechanical Sweeping	27120	a) 30 to 36 Dual Carriageway	894960		
				15080	b) 18 to 30 Single Carriageway	361920		
B	Secondary Main Roads		84550	Manual Sweeping	206800	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	1268250	
	Streets		180950			b) 12 to 15 Single Carriage (internal roads)	2791800	
	Narrow Lane					c) less then 9 Meters (Back Lane/ Narrow Lane)	1628550	
C	Medians			Manual Sweeping		a) 01 Meter	45000	
D	Footpaths			Manual Sweeping		b) 01 to 02 Meter	3000	
E	Chowrangi			Manual Sweeping			8000	
F	Open Spaces			Manual Sweeping			6000	
					Total	7007480		

Note: The above Data is just an estimation subject to verification by the bidder / Contractor. The purpose of information is to assist the bidder / contractor in formulation of methodology for Sweeping work , the contractor /bidder should conduct its own investigation and analysis to the check the accuracy of the Data.

Existing Budget (2015-2016) on Solid Waste Management of Liaquatnabad Zone

Salaries

Annexure - 13										
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
Office Staff										
1	Chief Sanitary Inspector	17	1	16000-1200-40000	315600	274800	94100	0	684500	
2	Motor Vehicle Inspector	17	1	16000-1200-40000	272400	245200	94100	0	611700	
3	Head Clerk	14	1	8000-610-26300	115000	126600	57700	1400	300700	
4	Account Assistant	14	1	8000-610-26300	137700	164000	57600	1400	360700	
5	Sr. Clerk	9	5	6200-380-17600	960700	1054500	200000	4200	2219400	
6	Urdu Typist	9	1	6200-380-17600	99900	122500	40000	800	263200	
7	Time Keeper	5	1	5400-260-13200	113500	132500	31300	800	278100	
8	Clerk	7	5	5800-320-15400	765300	823300	178100	3750	1771700	
9	Sub-Registrar	5	9	5400-260-13200	1020800	1192000	281300	7500	2501600	
Overtime/Benefits										
Total			25		3800900	4135400	1034200	19850	8991600	

Existing Budget (2015-2016) on Solid Waste Management of Liaquatnabad Zone

(Salaries)

Annexure - 13										
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
	Field Staff									
1	Inspector	14	9	8000-610-26300	2316000	2462100	690700	17000	5485800	
2	Sub-Inspector	11	34	6600-460-20400	5759800	6784000	1904800	59800	14508400	
3	Motor Mechanic	7	1	5800-320-15400	121800	137600	35700	800	295900	
4	Driver	7	10	5800-320-15400	1382600	1370600	320600	7500	3081300	
5	Driver	6	12	5600-290-14300	1635000	1731600	367800	9100	3743500	
6	Driver	5	37	5400-260-13200	2720800	3110800	1156200	3800	7018600	
7	Munshi	5	34	5400-260-13200	4058800	4946000	1245200	33300	10283300	
8	Fitter	5	1	5400-260-13200	113500	132500	31300	800	278100	
9	Muqaddam	4	28	5200-230-12100	3526100	4057400	871900	21300	8476700	
10	Qasid	2	2	4900-170-10000	131700	193400	46500	1400	373000	
11	Naib Qasid	2	11	4900-170-10000	1250100	1543800	325500	9200	3128600	
12	Chowkidar	2	8	4900-170-10000	755100	943600	198500	5700	1902900	
13	Notice Server	2	1	4900-170-10000	90600	114900	25100	700	231300	
14	Sanitary Worker	2	826	4900-170-10000	71607800	93495400	20258000	588100	185949300	
15	Cooly	2	160	4900-170-10000	12242400	16816900	3968500	112000	33138400	
					107712100	137840600	31446300	870500	277895100	
	Overtime/Honorium				0	13000000	0	0	13000000	
	Additional Pay				10738300	4458500	0	0	15196800	
Total			1174		118450400	155299100	31446300	870500	306091900	

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**Existing Budget (2015-2016) on Solid Waste Management
of North Nazimabad Zone
(Salaries)**

										Annexure - 14
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
	Office Staff									
1	Incharge Impl Cell	14	1	8000-26300	151600	186800	23200	3600	365200	
2	Head Clerk	14	1	8000-26300	148700	184000	21000	3600	357300	
3	Accountant	11	1	6600-20400	104500	147700	21000	3600	276800	
4	Clerk	7	3	5800-15400	427000	498000	60700	6300	992000	
5	Sub Registrar	5	5	5400-13200	43300	618500	74400	10500	1136700	
6	Qasid	2	2	4900-10000	242400	299800	29300	3600	575100	
7	Naib Qasid	2	4	4900-10000	401200	529900	58600	7200	996900	
8	Chowkidar	2	4	4900-10000	371900	506000	53700	7200	938800	
9	Dispatch Rider	2	1	4900-10000	69500	107400	9800	1800	188500	
	Additional Pay	10%							235250	
	Overtime/Benefits									
Total			22		2351700	3078100	3078100	47400	6064150	

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Existing Budget (2015-2016) on Solid Waste Management of North Nazimabad Zone

(Salaries)

Annexure -14										
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
	Field Staff									
1	DTO (Sanitation)	18	1	2000-50000	322500	340300	44100	10500	717400	
2	Inspector	14	4	8000-26300	774400	908100	92800	14400	1789700	
3	Sub Inspector	11	14	6600-20400	2461500	2902000	293900	50300	5707700	
4	Motor Vehicle Ins	11	1	6600-20400	146400	179000	21000	3600	350000	
5	Driver	7	5	5800-15400	754800	873700	101200	10500	1740200	
6	Driver	5	22	5400-13200	2725300	3445100	327100	46200	6543700	
7	Munshi	5	11	5400-13200	1294500	1626400	163600	23100	3107600	
8	Time Keeper	5	1	5400-13200	104100	135300	14900	2100	256400	
9	Mukaddam	4	13	5200-12100	1240800	1576800	261700	23400	3102700	
10	SWorker	2	656	4900-10000	8386000	12263800	1187700	192600	22030100	
11	Cooly / Karkun	2	107	4900-10000	45933800	69284900	7985200	1180800	124384700	
	Total				64142500	93535400	10493200	1557500	169728600	
	Overtime/Honorium								3000000	
	Additional Pay	10%							6414250	
Total			835		64142500	93535400	10493200	1557500	179142850	

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Existing Budget (2015-2016) on Solid Waste Management of Gulberg Zone

(Salaries)

Annexure - 15										
S. No.	Designation	BP S	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
	Office Staff									
1	OFFICE SUPTD.	17	1	20680-1550-51780	248160	291108	69485	5700	614453	
2	MOTOR VEH. OFFICER	16	1	12910-1035-43960	190080	243720	48384	4275	659259	
3	DY. DIR. (ESTTB.)	16	1	12910-1035-43960	200640	246612	51072	4275	684999	
4	HEAD CLERK	14	1	10340-790-34040	174042	213356	44302	2850	592770	
5	ASSISTANT	14	1	10340-790-34040	168713	177990	42945	2850	545873	
6	DATA ENTRY OPERATOR	12	1	9055-650-28555	128700	174447	32760	2850	455757	
7	ASSTT/ ACCOUNTANT	11	1	8540-595-26390	102300	150675	26040	2850	374865	
8	SENIOR CLERK	9	1	8015-495-22865	169620	192237	43176	1662	560895	
9	CLERK	7	8	7490-415-19940	874368	1143732	222566	1662	3037209	
10	QASID	2	5	6335-220-12935	501666	662595	127697	7125	1755143	
11	NAIB QASID	2	14	6335-220-12935	1188462	1732910	302518	19950	4324260	
	Overtime/Benefits									
Total			35		3946751	5229382	1010944	56050	10243127	

Existing Budget (2015-2016) on Solid Waste Management of Gulberg Zone**(Salaries)**

											Annexure - 15
S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum		
Field Staff											
1	DIRECTOR SANITATION	18	1	25940-1950-64940	455280	413994	127478	8312	1005065		
2	CHIEF SANITARY INSP.	16	1	12910-1035-43960	295680	317640	82790	4275	700385		
3	ATO (SANITATION)	16	3	12910-1035-43960	623040	751020	158592	12825	1545477		
4	INSPECTOR	14	4	10340-790-34040	845856	971815	215309	11400	2044380		
5	SUB-INSPECTOR	11	15	8540-595-26390	2784408	3343990	644175	42750	6815323		
6	REGISTRAR	8	2	7750-455-21400	150480	177099	38304	3325	369208		
7	DRIVER (HEAVY)	7	4	7490-415-19940	601920	702157	153216	1662	1458955		
8	DRIVER	5	17	6985-340-17185	2366034	2824305	602263	1662	5794265		
9	MUNSHI	5	30	6985-340-17185	3373920	4333201	858816	1662	8567599		
10	SUB-REGISTRAR	5	5	6985-340-17185	847308	1058582	215678	1662	2123231		
11	SECURITY SUPERVISOR	5	4	6985-340-17185	364056	514700	92669	1662	973087		
12	MUQQADAM	4	15	6730-300-15730	1928322	2339156	490846	21375	4779699		
13	NOTICE SERVER	2	5	6335-220-12935	341550	534218	86940	7125	969833		
14	COOLY	2	96	6335-220-12935	7452390	11281138	1896972	136800	20767300		
15	SANITARY WORKER	2	545	6335-220-12935	54859662	72486196	13964278	776625	142086761		
16	CHOWKIDAR	2	5	6335-220-12935	381150	565538	97020	7125	1050833		
17	SECURITY GUARD	2	3	6335-220-12935	285186	384702	72593	4275	746756		
	Overtime/Honorium					4600000			4600000		
Total			755		77956242	107599451	19797939	1044525	206398157		

Existing Budget (2015-2016) on Solid Waste Management of New Karachi Zone

(Salaries)

Annexure - 16										
S. No.	Designation	BP S	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum	
	Office Staff									
1	Deputy Director	17	1	16000-1200-40000	272400	248592	57792	0	578784	
2	Head Clerk	14	1	8000-610-26300	173470	203148	38844	712	416174	
3	Computer Operator	11	1	6600-460-20400	93460	133716	0	712	227888	
4	Sr. Clerk	9	3	6200-380-17600	459180	524184	92736	1248	1077348	
5	Clerk	5	5	5800-320-15400	570400	725148	139740	2080	1437368	
6	Qasid	2	2	4900-170-10000	158720	237168	23892	712	420492	
7	Naib Qasid	2	5	4900-170-10000	359030	564360	26172	1780	951342	
8	MOTOR VEHICLE OFFICER	17	1	16000-1200-40000	229200	227844	47040	2850	506934	
9	ASSTT.M.V.O	16	1	10000-800-34000	164000	177696	36288	2137	380121	
10	COMPUTER OPERATOR	11	1	6600-460-20400	93460	133716	0	1425	228601	
11	SR. CLERK	9	2	6200-380-17600	172360	236016	0	1662	410038	
12	TIME KEEPER	7	2	5800-320-15400	223702	286392	37368	2850	550312	
13	QASID/D/R	4	2	5200-230-12100	147340	218652	34272	2850	403114	
14	NAIB QASID	2	4	4800-150-9300	256200	424176	0	5700	686076	
15	CHOWKIDAR	2	2	4800-150-9300	128100	212088	0	2850	343038	
	Overtime/Benefits					1500000				
Total			33		3501022	6052896	534144	29568	10117630	

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Existing Budget (2015-2016) on Solid Waste Management of New Karachi

Annexure - 16

(Salaries)

S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum
Field Staff									
1	Chief San. Inspector	16	2	10000-800-34000	404800	476388	63168	712	945068
2	Sr. Inspectors	16	3	10000-800-34000	712800	821688	162624	0	1697112
3	Inspector	14	12	8000-610-26300	1737600	2136672	241320	8544	4124136
4	Sub-Inspector	11	16	6600-460-20400	2533120	3092448	611868	11392	6248828
5	Muccadam	4	16	5200-230-12100	2075720	2548732	553704	5696	5183852
6	Chowkidar	2	4	4900-170-10000	374580	519984	79104	1424	975092
7	Cooly	2	80	4900-170-10000	6022580	9185940	1371876	28480	16608876
8	Sanatary worker	2	815	4900-170-10000	67496580	98663388	15747780	287292	182195040
9	S.Guard	2	10	4900-170-10000	755680	1155132	109368	3560	2023740
10	MOTOR VEHICLE INS.	16	1	10000-800-34000	202400	254712	43812	2137	503061
11	VEHICLE INSPECTOR	14	2	8000-610-26300	229820	297480	Nil	2850	527150
12	DRIVER	7	29	5800-320-15400	3260296	4168864	622248	41325	8092733
13	LOADER DRIVER	9	1	6200-380-17600	122660	150648	29160	831	303299
	Total				85928636	123472076	19636032	394243	229427987
	Overtime/Honorium					2000000			2000000
	Additional Pay								
Total			991		85928636	125472076	19636032	394243	231427987

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Existing Solid Waste Machinery / Vehicles in Liaquatabad Zone

Annexure- 17					
S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	GL-4131	VOLVO	ARM ROLL	1994	ON ROAD
2	GL-4120	VOLVO	ARM ROLL	1994	ON ROAD
3	GL-4070	VOLVO	ARM ROLL	1994	ON ROAD
4	GL-8039	VOLVO	ARM ROLL	1994	ON ROAD
5	GL-4111	VOLVO	ARM ROLL	1994	ON ROAD
6	GL-4073	VOLVO	ARM ROLL	1994	OFF ROAD
7	CH-100756	VOLVO	ARM ROLL	1994	OFF ROAD
8	GL-8040	VOLVO	ARM ROLL	1994	OFF ROAD
9	AR-08	HINO FF	ARM ROLL	2006	ON ROAD
10	AR-09	HINO FF	ARM ROLL	2006	ON ROAD
11	AR-11	HINO FF	ARM ROLL	2006	ON ROAD
12	AR-15	HINO FF	ARM ROLL	2006	ON ROAD
13	AR-18	HINO FF	ARM ROLL	2006	ON ROAD
14	AR-06	HINO FF	ARM ROLL	2006	ON ROAD
15	GL-4107	NISSAN	ARM ROLL	1995	OFF ROAD
Total			15 Arm Roll		
1	CH-01204	MILLAT	BLADE Tractor	2006	ON ROAD
2	CH-01104	MILLAT	BLADE Tractor	2006	OFF ROAD
3	CH-01005	MILLAT	BLADE Tractor	2006	OFF ROAD
4	CH-01101	MILLAT	BLADE Tractor	2006	ON ROAD
5	CH-0418/02	MILLAT	BLADE Tractor	2006	OFF ROAD
6	CH-0482/03	MILLAT	BLADE Tractor	2006	ON ROAD
7	CH-0483/01	MILLAT	BLADE Tractor	2006	ON ROAD
8	CH-94904	MILLAT	BLADE Tractor	2006	OFF ROAD
9	CH-01103	MILLAT	BLADE Tractor	2006	OFF ROAD
10	CH-041582	MILLAT	BLADE Tractor	2006	ON ROAD
11	CH-010101	MILLAT	BLADE Tractor	2006	ON ROAD
Total			11 Blade Tractor		
1	CH-017645	CHASE	BOBCAT	1994	ON ROAD
2	CH-00562	KUMATSU	BOBCAT	2002	ON ROAD
Total			02 Bobcat		
1	GL-4039	HINO FF	DUMPER	1994	ON ROAD
2	GL-4079	HINO FF	DUMPER	1994	ON ROAD
3	CH-12730	HINO FF	DUMPER	1994	ON ROAD
4	CH-11481	HINO FF	DUMPER	1994	OFF ROAD
Total			04 Dumper		
1	ZL-15	KUMATSU	LOADER	1994	OFF ROAD
2	950-B	CAT	LOADER	1999	ON ROAD
Total			02 Loader		

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1	GL-4101	HINO FD	MULTI ARM ROLL	1995	OFF ROAD
2	GL-4103	HINO FD	MULTI ARM ROLL	1995	ON ROAD
3	GL-4105	HINO FD	MULTI ARM ROLL	1995	ON ROAD
4	GL-4064	HINO FF	MULTI ARM ROLL	1995	ON ROAD
5	GL-4065	HINO FF	MULTI ARM ROLL	1995	ON ROAD
Total			05 Multi Arm Roll		
1	CH-11478	HINO FF	REFUSE VAN	1994	ON ROAD
Total			01 Refuse Van		
1	CH-138595	MILLAT	TRACTOR TROLLY	2006	ON ROAD
2	CH-903926	MILLAT	TRACTOR TROLLY	2006	ON ROAD
3	CH-003117	MILLAT	TRACTOR TROLLY	2006	ON ROAD
4	CH-138184	MILLAT	TRACTOR TROLLY	2006	ON ROAD
5	CH-003301	MILLAT	TRACTOR TROLLY	2006	ON ROAD
6	CH-003122	MILLAT	TRACTOR TROLLY	2006	ON ROAD
7	CH-003111	MILLAT	TRACTOR TROLLY	2006	ON ROAD
8	CH-0127/01	MILLAT	TRACTOR TROLLY	2006	ON ROAD
9	CH-9007/66	MILLAT	TRACTOR TROLLY	2006	ON ROAD
10	CH-138634	MILLAT	TRACTOR TROLLY	2006	ON ROAD
11	CH-003304	MILLAT	TRACTOR TROLLY	2006	OFF ROAD
12	CH-903453	MILLAT	TRACTOR TROLLY	2006	OFF ROAD
13	CH-003123	MILLAT	TRACTOR TROLLY	2006	OFF ROAD
14	CH-0123/62	MILLAT	TRACTOR TROLLY	2006	OFF ROAD
15	CH-003116	MILLAT	TRACTOR TROLLY	2006	OFF ROAD
16	CH-003216	MILLAT	TRACTOR TROLLY	2006	OFF ROAD
Total			16 Tractor Trolley		

Existing Solid Waste Machinery / Vehicles in North Nazimabad Zone

					Annexure- 18
S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	GL-4072	Volvo	Arm Roll	1992	
8	GL-4109	Nissan	Arm Roll	1992	
9	CH-14880	Hino FF	Arm Roll	1982	
10	CH-15824	Hino FF	Arm Roll	1982	
			04 ARM ROLL		
2	CH-155828	Volvo	Compactor	1994	
3	CH-158099	Volvo	Compactor	1994	
4	CH-158093	Volvo	Compactor	1994	
5	CH-158398	Volvo	Compactor	1994	
6	CH-158101	Volvo	Compactor	1994	
7	CH-158097	Volvo	Compactor	1994	
13	CH-11165	Hino FF	Compactor	1982	
14	CH-13708	Hino FF	Compactor	1982	
15	CH-11157	Hino FF	Compactor	1982	
			09 Compactor		
50	161-223	Isuzu JCR	Dumper	1987	
51	161-224	Isuzu JCR	Dumper	1987	
52	161-225	Isuzu JCR	Dumper	1987	
53	Dumper4	Isuzu TX	Dumper	1982	
54	Dumper14	Isuzu FTR	Dumper	1982	
			05 Dumper		
11	GL-4066	Hino FF	Multiloader	1992	
12	GL-4104	Hino FF	Multiloader	1992	
			02 Multiloader		
19	CH-16111	Hino FB	Open Truck	2002	
20	CH-16077	Bedford	Open Truck	2002	
21	161-106	Bedford	Open Truck	1988	
22	161-107	Bedford	Open Truck	1988	
			04 Open Truck		
16	CH-14503	Hino FB	Refuse Van	1994	
17	161-113	Hino Super	Refuse Van	1989	
18	CH-12732	Hino FB	Refuse Van	1994	
			03 Refuse Van		
23	161-119	Massey Ferguson 385	Shawl	1988	
24	0058-06	Massey Ferguson 385	Shawl	2007	
25	0045-06	Massey Ferguson 385	Shawl	2007	
26	0044-07	Massey Ferguson 385	Shawl	2007	
27	0048-03	Massey Ferguson 385	Shawl	2007	
28	0059-01	Massey Ferguson 385	Shawl	2007	
29	0043-05	Massey Ferguson 385	Shawl	2007	

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30	0047-01	Massey Ferguson 385	Shawl	2007	
31	013-07	Massey Ferguson 385	Shawl	2007	
32	0003-04	Massey Ferguson 385	Shawl	2007	
			10 Shawl		
45	0175650	Case	Skid Loader	1993	
46	00488	Komatso	Skid Loader	2002	
47	02421	Komatso	Skid Loader	2002	
48	02515	Komatso	Skid Loader	2002	
			04 Skid Loader		
33	9009	Massey Ferguson 260	Tractor Trolley	2007	
34	0456-19	Massey Ferguson	Tractor Trolley	2007	
35	0128	Massey Ferguson	Tractor Trolley	2007	
36	9008-86	Massey Ferguson	Tractor Trolley	2007	
37	9008-84	Massey Ferguson	Tractor Trolley	2007	
38	0413-16	Massey Ferguson	Tractor Trolley	2007	
39	GL-8076	Massey Ferguson	Tractor Trolley	1992	
40	GL-8019	Massey Ferguson	Tractor Trolley	1992	
41	GL-8050	Massey Ferguson	Tractor Trolley	1992	
42	0059-03	Massey Ferguson	Tractor Trolley	1992	
43	2025-02	Massey Ferguson	Tractor Trolley	1992	
44	0058-05	Massey Ferguson	Tractor Trolley	1992	
			12 Tractor Trolley		
49	101091	China	Wheel Loader	2002	
			01 Wheel Loader		

Existing Solid Waste Machinery / Vehicles in Gulberg Zone**Annexure- 19**

S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
6	GL-4136	Volvo	Arm Roll		On Road
7	GL-4092	Volvo	Arm Roll		On Road
8	GL-4071	Volvo	Arm Roll		On Road
9	GL-4071	Hino	Arm Roll		On Road
26	GL-4112	Volvo	Arm Roll		Defected
27	GL-4068	Volvo	Arm Roll		Defected
13	GL-4102	Hino	Arm Roller (Jhoola)		On Road
14	GL-4119	Hino	Arm Roller (Jhoola)		On Road
Total			08 Arm Roll		
2	GL-4086	Hino	Big Dumper		On Road
3	CH-11475	Hino	Big Dumper		On Road
4	CH-11480	Hino	Big Dumper		On Road
5	CH-4084	Hino	Big Dumper		Defected
31	CH-11484	Hino	Big Dumper		Defected
Total			05 Dumper		
10	CH-04582	KOMATSU	Bob Cat		Defected
23	CH-04584	CAT	Bob Cat		Defected
24	CH-00556	CAT	Bob Cat		Defected
Total			03 Bobcat		
1	CH-57147	ZL30H	Loader		On Road
20	CH-57148	ZL30H	Loader		On Road
30	CH-203137	ZL30H	Loader		Defected
Total			03 Loader		
11	CH-16105	Hino	Small Dumper		On Road
12	CH-16066	Hino	Small Dumper		On Road
25	CH-161-127	Hino	Small Dumper		Defected
Total			03 Dumper		
19	CH-97065	Messey	Tractor Blade		Defected
32	CH-151610	Messey	Tractor Blade		On Road
18	CH-01201	Messey	Tractor Bucket		On Road
15	CH-8079	Messey	Tractor Trolley		Defected
16	CH-71812	Messey	Tractor Trolley		On Road
17	CH-151710	Messey	Tractor Trolley		Defected
22	CH-1945	Messey	Tractor Trolley		On Road
29	CH-97065	Messey	Tractor Trolley		Defected
Total			08 Tractor		
28	CH-11482	Hino	Compactor		Defected
Total			01 Compactor		
21	CH-12736	Hino	Open Truk		On Road
Total			01 Open Truck		

Existing Solid Waste Machinery / Vehicles in New Karachi Zone

Annexure- 20

S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
37	CH-10988	HINO F.F	ARM ROLL	2003	SANITATION
38	GL-4106	UD NISSAN	ARM ROLL	1990	SANITATION
39	CH-161-159	HINO SUPER	ARMROLL	1988	SANITATION
Total			03 Arm Roll		
15	CH-0951	KUMATSO-714	BOBCAT	2006	MACHINE
16	S-130	CAT	BOBCAT	2011	MACHINE
57	GL-8051	CAT	BOBCAT	1994	SANITATION
58	CH-0175649	CASE	BOBCAT	1994	SANITATION
59	CH-2482	KUMATSO	BOBCAT	2005	SANITATION
60	CH-0578	KUMATSO	BOBCAT	2003	SANITATION
Total			06 Bobcat		
23	CH-16072	HINO F.B	DUMPER	2002	SANITATION
40	CH-158091	VOLVO FL-6	DUMPER	1992	SANITATION
41	CH-158095	VOLVO FL-6	DUMPER	1992	SANITATION
42	CH-158399	VOLVO FL-6	DUMPER	1992	SANITATION
43	CH-158401	VOLVO FL-6	DUMPER	1992	SANITATION
44	CH-15820	HINO SUPER	DUMPER	1988	SANITATION
45	GL-4088	ISSUZU FTR	DUMPER	1992	SANITATION
Total			06 Dumper		
61	WA-180	KUMATSO	LOADER		SANITATION
Total			01 Loader		
1	CH-12733	HINO SUPER	OPEN TRUCK	1994	REFUSEVEN
2	CH-12734	HINO SUPER	OPEN TRUCK	1994	REFUSEVEN
3	CH-12735	HINO SUPER	OPEN TRUCK	1994	REFUSEVEN
4	CH-12737	HINO SUPER	OPEN TRUCK	1994	REFUSEVEN
5	CH-12739	HINO SUPER	OPEN TRUCK	1994	REFUSEVEN
6	GL-4055	ISSUZU FTR	OPEN TRUCK	1992	REFUSEVEN
7	GL-4056	ISSUZU FTR	OPEN TRUCK	1992	REFUSEVEN
8	GL-4058	ISSUZU FTR	OPEN TRUCK	1992	REFUSEVEN
9	GL-4057	ISSUZU FTR	OPEN TRUCK	1992	REFUSEVEN
10	CH-16110	HINO F.B	OPEN TRUCK	2002	REFUSEVEN
17	CH-1647	ISSUZU NPR	OPEN TRUCK	2005	SANITATION
18	CH-1648	ISSUZU NPR	OPEN TRUCK	2005	SANITATION
19	CH-1651	ISSUZU NPR	OPEN TRUCK	2005	SANITATION
20	CH-0538	ISSUZU NPR	OPEN TRUCK	2007	SANITATION
21	CH-0539	ISSUZU NPR	OPEN TRUCK	2007	SANITATION
22	CH-0540	ISSUZU NPR	OPEN TRUCK	2007	SANITATION
52	161-101	BEDFORD	OPEN TRUCK	1988	SANITATION
54	161-143	BEDFORD	OPEN TRUCK	1988	SANITATION
55	CH-15164	HINO F.F	OPEN TRUCK	1982	SANITATION
Total			19 Open Truck		

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47	GL-4048	HINO SUPER	SEESPOOL	1988	SANITATION
Total			01 Seespool		
56	GL-9075		TRACTOR BLAD	1988	SANITATION
Total			01 Tractor Blade		
12	CH-28/08	MESSY-385	TRACTOR LOADER	2005	MACHINE
13	CH-45/01	MESSY-385	TRACTOR LOADER	2007	MACHINE
14	CH-45/02	MESSY-385	TRACTOR LOADER	2007	MACHINE
63	4X4	MESSAY-385	TRACTOR LOADER	2002	SANITATION
66	CH-26/03	MESSAY-385	TRACTOR LOADER	2007	SANITATION
Total			05 Tractor Loader		
11	CH-640/415	FIAT-240	TRACTOR TROLLY	1999	MACHINE
24	CH-27/44	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
25	CH-28/11	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
26	CH-30/10	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
27	CH-31/01	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
28	CH-31/02	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
29	CH-39/09	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
30	CH-39/10	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
31	CH-39/18	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
32	CH-39/23	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
33	CH-38/43	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
34	CH-38/47	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
35	CH-39/03	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
36	CH-38/45	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
46	CH-28/08 II	MESSAY-240	TRACTOR TROLLY	2007	SANITATION
49	GL-8055	MESSAY-240	TRACTOR TROLLY	1990	SANITATION
50	GL-8077	MESSAY-240	TRACTOR TROLLY	1988	SANITATION
51	GL-8078	MESSAY-240	TRACTOR TROLLY	1988	SANITATION
62	2X2	MESSAY-240	TRACTOR TROLLY	2005	SANITATION
Total			19 Tractor Trolly		

Format for Performance Guarantee

To be provided to the successful bidder/contractor
after acceptance of the bid.

Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC; PAYABLE BY CONTRACTORS.

(FOR CONTRACTS WORTH RS. 10.00 MILLION OR MORE)

Contract No. _____ Dated _____

Contract Value: _____

Contract Title: _____

..... [name of Contractor] 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 Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, [name of Contractor] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from, from Procuring Agency (PA) except that which has been expressly declared pursuant hereto.

[name of Contractor] accepts full responsibility and strict liability 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 PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Contractor] 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 PA under any law, contract or other instrument, be voidable at the option of PA.

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

[Procuring Agency]

[Contractor]

**Format for Contract Agreement
To be provided at the time of Agreement**