

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



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



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## Disclaimer

Though adequate care has been taken while preparation of this document and information provided therein, but it is advised that bidder must satisfy himself for the 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 the time of submission date, it shall be presumed that this document is correct and complete in all respects. Sindh Solid Waste Management Board (SSWMB) reserves the rights to modify, amend or supplement this document, if considered necessary in the interest of work.

# **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 (wherever applicable) and SPPRA Rules and Regulations to submit their technical/operational and financial proposals for sweeping, collection/Transportation and disposal of MSW of Zone West (District Municipal Corporation West 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 bin system.
2. Sweeping of roads, streets, lanes, footpaths, 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 (as part of the main Community Awareness & Participation programme of SSWMB).

**1.3. Brief Description of DMC West**

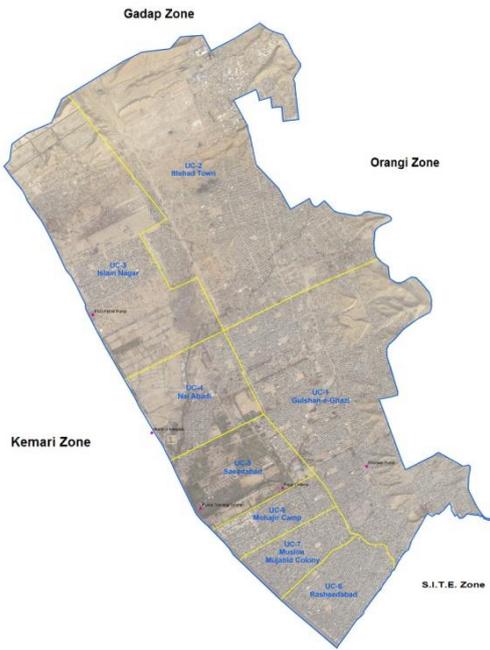
District Municipal Corporation (DMC) West is one of the Six DMCs of Karachi City. DMC West comprises of the following zones:

- a) Orangi Zone.
- b) SITE Zone
- c) Baldia Zone.
- d) Kemari 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	4513695	469.59	1732.71	632439	157	66	2353	1-20

1.4. **Map of DMC West**

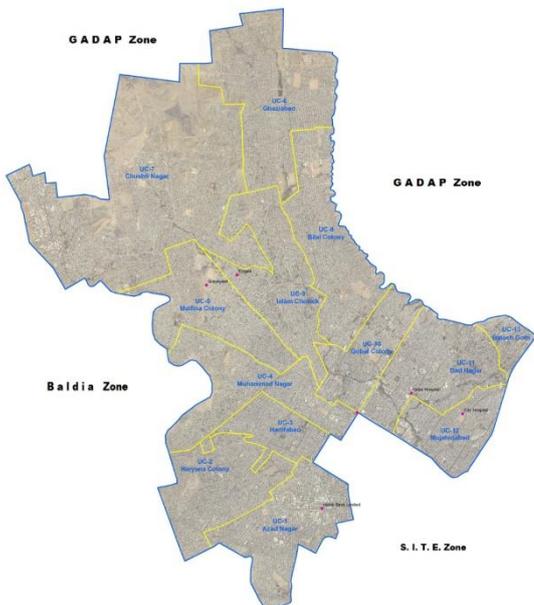
**Baldia Zone**



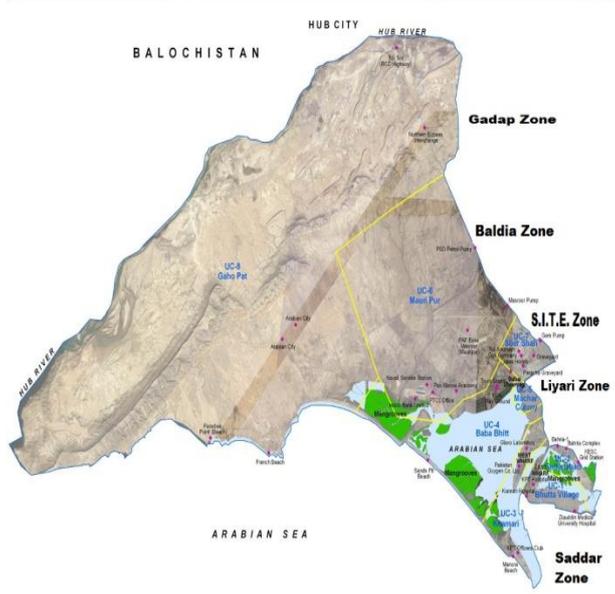
**S.I.T.E. Zone**



**ORANGI ZONE**



**Kemari 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 (SSWMB) - 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 the client.
- g. "Proposal" means the technical / operational proposal and financial proposal.
- h. "W&S" means 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" 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 work tender document with bidding document and proposal document / RFP 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 client appointed from time to time.
- n. "work(s)" means all services to be provided and work to be done by the contractor under the contract.

**1.6. Abbreviations**

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

**1.7. Sections of RFP/Bidding Documents**

All Section of RFP and Annexure, Forms are integral part of RFP and 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 reserves the rights to annual the selection process at any time prior to agreement award 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 35372982-4 and +92 21 3586 3026  
Fax No. : +92 21 35372985  
e-mail : [info@sswmb.gos.pk](mailto:info@sswmb.gos.pk)  
Website : [www.sswmb.gos.pk](http://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) Years based on mutual written consent of the contractor and the 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 18<sup>th</sup> February 2016 at 1500 hours in the Committee Room of 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's 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(s) mentioned in this section.

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

- a. The bidders are advised to visit the area of service/site of works and its surroundings and obtain all information that may be 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 (West). However, the contractors / bidders can do so at their own risk and cost.
- b. The bidders and any of their personnel or agents shall 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, its personnel and agents from and against all liabilities 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 carry 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 West (mandatory)**

- a) It is mandatory upon the contractor/bidder to utilize the transferred staff out of the existing SWM workforce of DMC West under this contract. The proposal must include the utilization plan for existing workforce.
- b) Zone wise details 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%) shall be transferred on detailment basis to the contractor. The approximate salary paid to them by the DMC (West) would be around Pak Rs. 300 million. The bidder must keep this in mind and must separately give a proportionate discount in the Tipping Fee proposed.
  - b(i) If need arises, the Procuring Agency, at its discretion, may ask the contractor to take up services of more than 1000 employees out of the existing workforce of sanitation / solid waste management department of DMC (West). In this case salaries of these additional employees shall be payable by the contractor and shall be deducted / adjusted from monthly bill of the contractor.
- 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 is 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 / may arise 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 West, 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 West reference be made to technical specification of RFP document

## **2.9. Utilization of Existing Solid Waste Collection and Transportation Vehicles of DMC West (Optional)**

- i. The Contractor may inspect the existing fleet that DMC West can spare and decide to take over but these old vehicles of DMC must not be more than 20% vehicles of the new fleet that the contractor is supposed to bring in.
- 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 (West), 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 West**

The contractor may be allowed to utilize existing offices in the area of respective UCs of the Zone and the West workshop of DMC West, 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 (West) / 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, shall be nominated as being lead firm / 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 and Agreement shall be signed by the authorized partner so as to be legally binding on all partners/firms;
- (c) the Lead 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 or duration of agreement, 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 partner 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 in the office of Sindh Solid Waste Management Board not later than **22<sup>nd</sup> March 2016 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 West 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 ORIGINAL proposal / bid document HAVING ORIGINAL STAMP OF SSWMB 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, may 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 (except specifically required in the RFP). 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 (West) workforce, machinery and facilities including administrative support, office, workshop and rehabilitation of

scavengers and any other allied matters. 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 (\$). 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 bidders' 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) The national Bidders must be:
  - (i) This is a 'Service Contract' hence registration with PEC is not required.
  - (ii) Registered with relevant tax authorities (income / sales tax, Sindh Board of Revenue wherever applicable)

- (c) The international bidders can participate and if they are successful, they will be given appropriate time to get them registered with relevant tax authorities in Pakistan before signing of the Agreement.
- (d) 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.

## **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 insolvent by court of law or tribunal or any other authority 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 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 on 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 / abroad 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.

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, 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, it shall not be evaluated further.

Note: The international bidders can participate and when they are successful, they will be given appropriate time to get them registered with relevant tax authorities in Pakistan before signing of the Agreement.

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 envelope 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 affect 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/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:

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

NOTE: a. BIDDERS MUST SUBMIT THEIR BIDS ON THE ORIGINAL RFP DOCUMENTS (WITH STAMP OF SSWMB ON EACH PAGE) OBTAINED FROM THE OFFICE OF SSWMB ON PAYMENT OF PRESCRIBED TENDER FEE AND ALSO PUT SIGNATURE OF AUTHORISED PERSON ON EACH AND EVERY PAGE.

b. IN CASE THE BIDDER HAS DOWNLOADED THE DOCUMENTS FROM SPPRA OR SSWMB WEBSITE, HE MUST PUT SIGNATURE OF AUTHORISED PERSON ON EACH AND

EVERY PAGE AND ALSO ATTACH PROOF OF PAYMENT OF PRESCRIBED TENDER FEE.

BIDS NOT COMPLYING WITH CONDITIONS MENTIONED ABOVE SHALL NOT BE EVALUATED.

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

- a. The proposal/bid shall be publically opened **on 22<sup>nd</sup> March 2016 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 (or sub-technical committee) 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 figures, the amount in words shall prevail.

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

1. The client (Procuring Agency) shall 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 proof of payment of Tender Fee is not available.
  - b. If it is not accompanied by the required Bid Security.
  - c. If the Bid is not submitted on the original RFP document obtained from SSWMB office. Even if the documents have been downloaded from website, each page must be signed by the bidder and contain stamp of the firm / company / bidder.
  - d. If its validity is less than specified period.
  - e. If it is submitted for incomplete scope of work.
  - f. If it is conditional and contained alternative proposals.
  - g. If it indicates that bid price not inclusive the amount of all taxes, incidental charges.

Note: The bidders are required to provide component wise break up of his price. The Procuring Agency shall carry out 'Financial Analysis' of the 'Financial Proposals' (Bids) received. The lowest evaluated bid shall be determined on the basis of total amount of money which procuring agency shall have to pay in a year for the job and not individual components.

- h. If not accompanied with bid security
- i. If bidder has submitted more than one bids.
- j. If received after the deadline for submission of bid.
- k. 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 shall 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 shall 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 shall 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.
  - (c) Tax liability shall be calculated on the basis of rate of tax on the date of submission of bids (Service Tax of Sindh Board of Revenue, WHT of FBR & Sales Tax wherever applicable etc.) payable by any Company Registered with SBR, FBR and has a 'Filer' status.

Note: However Procuring Agency shall make payments to the successful bidders after deduction of all applicable taxes according to status of the contractor (e.g. Company, filer) on the date of payment.

- 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.
- 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 (or rates prescribed by the government at that time) 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.

### **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 12<sup>th</sup> (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 of Contract Agreement**

Format of Contract Agreement at annexure part of RFP.

#### **2.45 Form of Bank Guarantee for Performance Security**

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

#### **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	<b>Front End Collection and Disposal of Municipal Solid Waste for Zone West (DMC West Area) Karachi, Sindh, Pakistan.</b>
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, 35863026
	E-mail	<a href="mailto:info@sswmb.gos.pk">info@sswmb.gos.pk</a>
	Facsimile	+92 21 35372985
3	Website	<a href="http://www.sswmb.gos.pk">www.sswmb.gos.pk</a>
	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 &amp; 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.	

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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 <b>on 18<sup>th</sup> February 2016 at 1500 hours.</b>
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. <b>22<sup>nd</sup> March 2016 at 1430 hours</b>
8	Proposal must remain valid for 120 (One Hundred and Twenty) days after the proposal/bid submission deadline.
9	<b>Bid Security</b> 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.
10	Clarification may be requested not later than 7 (Seven) days before the submission date. 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 <a href="mailto:info@sswmb.gos.pk">info@sswmb.gos.pk</a> , Facsimile +92 21 35372985
11	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.
12	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.
13	Valid Registration Certificate of the following Authorities must be attached with the proposal: a. Sindh Borad of Revenue b. Federal Board of Revenue (NTN Number)
14	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.
15	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.
16	Contractor/ Bidder must submit the original Technical/Operational Proposal and the original Financial Proposal along with copies of the both.
17	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.
18	Contractor/bidder shall undertake to sign Integrity Pact as per Format provided by SSWMB under this contract.

## **Section III**

### **Description of Zone West (DMC West Area)**

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

Orangi Zone is in the south west of Karachi city and adjacent to the west part of Baldia Zone. Total area of the zone is about 20.90 KM<sup>2</sup> and the population according the population statistics of 1998 is 721694 persons and in view o growth rate 5% per annum, the population of this zone is 1648268 persons/km in the year 2015. The average population density of the zone is 78827 persons / KM<sup>2</sup>. Orangi zone is near to the existing Gond pass landfill site while the far most union council of the zone i.e. UC-12 is only 10 KM away from it. Thus MSW of each UC of Orangi Zone will be transported to Gond pass landfill site directly. The MSW generation in Orangi zone is large due to its population density per KM<sup>2</sup>. Orangi Zone is congested and mostly undeveloped with many Katchi abadis comprising of small housing units, in fact Orangi Zone itself is a big Katchi abadi. It may be considered as a congested and compacted unit, while planning for MSW collection and transportation.

The details of Municipal Solid Waste generation in each UC of the Zone, its population and other details are given in Annexures.

**3.2. Demographics.**

The Orangi Zone belongs to low to middle income group very congested comprising of small housing units, small home industries exist in most of its union councils. Except peripheral and connecting roads, other internal and link roads and lanes are narrow in general.

The zone comprises of following UCs:

<b>UC No.</b>	<b>UC Name</b>	<b>UC No.</b>	<b>UC Name</b>
1	Mominabad	8	Bilal Colony
2	Haryana Colony	9	Iqbal Baloch Colony
3	Hanifabad	10	Gobal Colony
4	Muhammad Nagar	11	Data Nagar
5	Madina Colony	12	Mujahidabad
6	Ghaziabad	13	Baloch Goth
7	Chushti Nagar		

**UC-1 Mominabad**

The UC-1 Mominabad 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	Mominabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Zia Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Mujahid Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Qaid-e-Awam Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Agarwar Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Khaber Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Bijli Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Islam Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
9	Kashmir Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-2 Nasir Colony/Qayumabad**

The UC-2 Haryana 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	Faqir Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Haryana Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Bismillah Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Shah Muhallah NO.01	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Shah Muhallah NO.02	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Qayaum Khani Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Usmani Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Hazarvi Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-3 Hanifabad**

The UC-3 Hanifabad 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	Al Farooq Society	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Arshi Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Hanifabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Kashmire Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Miraj un nabi Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Ghazi Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-4 Muhammad Nagar**

The UC-4 Muhammad Nagar 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	Muhammad Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Sector 11-D	Undeveloped	Low to Middle	80 & 120 Sq Yards	

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3	Sector 11-E	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Al Mustufa Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Madina Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Faiz-e-aam Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Raheem Shah Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Farid Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
9	Islam Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
10	Baba Willayat Ali Shah Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	

### **UC-5 Madina Nagar**

The UC-5 Madina Nagar 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	Iqbal Baloch Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	D Block	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	J Block	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Imam Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Millat Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Gharib Nawaz Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	L Block	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Baba Willayat Ali Shah Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
9	Bawa Quater	Undeveloped	Low to Middle	80 & 120 Sq Yards	
10	Siddiq Akber Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	

### **UC-6 Gulshan-e-Behar**

The UC-6 Gulshan-e-Behar 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	Gulshan-e-behar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Gulshan-e-ahbab	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Bismillah Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Ghaziabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Gulshan-e-zia	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Arkaniy Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Al Ghaza Society	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Christan Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	

### **UC-7 Chishti Nagar-C**

The UC-7 Chishti Nagar 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	Chishti Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Mansoor Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Lal Shahbaz Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Yaqoobabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Sadiqabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Rais Amrohe Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Sadat Quarter	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Tori Banggash Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
9	Rehmat Chowk	Undeveloped	Low to Middle	80 & 120 Sq Yards	
10	Khalidabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-8 Bilal Colony**

The UC-8 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 Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Shamsi Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Bangla Bazar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Sector 14 C	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Sector 14 H	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Sector 14 J	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Azizabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Sector No.15	Undeveloped	Low to Middle	80 & 120 Sq Yards	
9	Foji Hotle	Undeveloped	Low to Middle	80 & 120 Sq Yards	
10	Thorani Goth	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-9 Iqbal Baloch Colony**

The UC-9 Iqbal Baloch 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	Iqbal Baloch Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Ghosia Baloch Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Aziz Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Junaid Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Thorani Goth	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Mehmoodabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Habib Bank Quarter	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Ali Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-10 Gabool Colony**

The UC-10 Gabool 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	Gabool Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Sector 13 H	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Sector 13 F	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Secto 13 D	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Multani Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Jinnah Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Zia ul haq Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Ittafaq Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
9	Ittihad Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
10	Sector 13 C	Undeveloped	Low to Middle	80 & 120 Sq Yards	
11	Sector 12 L	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-11 Data Nagar**

The UC-11 Data Nagar 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	Data Nagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Sector 8 A	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Sector 8 B	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Sector 8 L	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Sector 7 B	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Sector 7 C	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Sector 7 A	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Naseemabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	

**UC-12 Mujahidabad**

The UC-12 Mujahidabad 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	Mujahidabad 6 E	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Ali Ghar Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	Bukhari Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Banaras Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	BanarasNagar	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Gulshanabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Sector 1 A	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Sector 1 D	Undeveloped	Low to Middle	80 & 120 Sq Yards	
9	Gulfamabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	

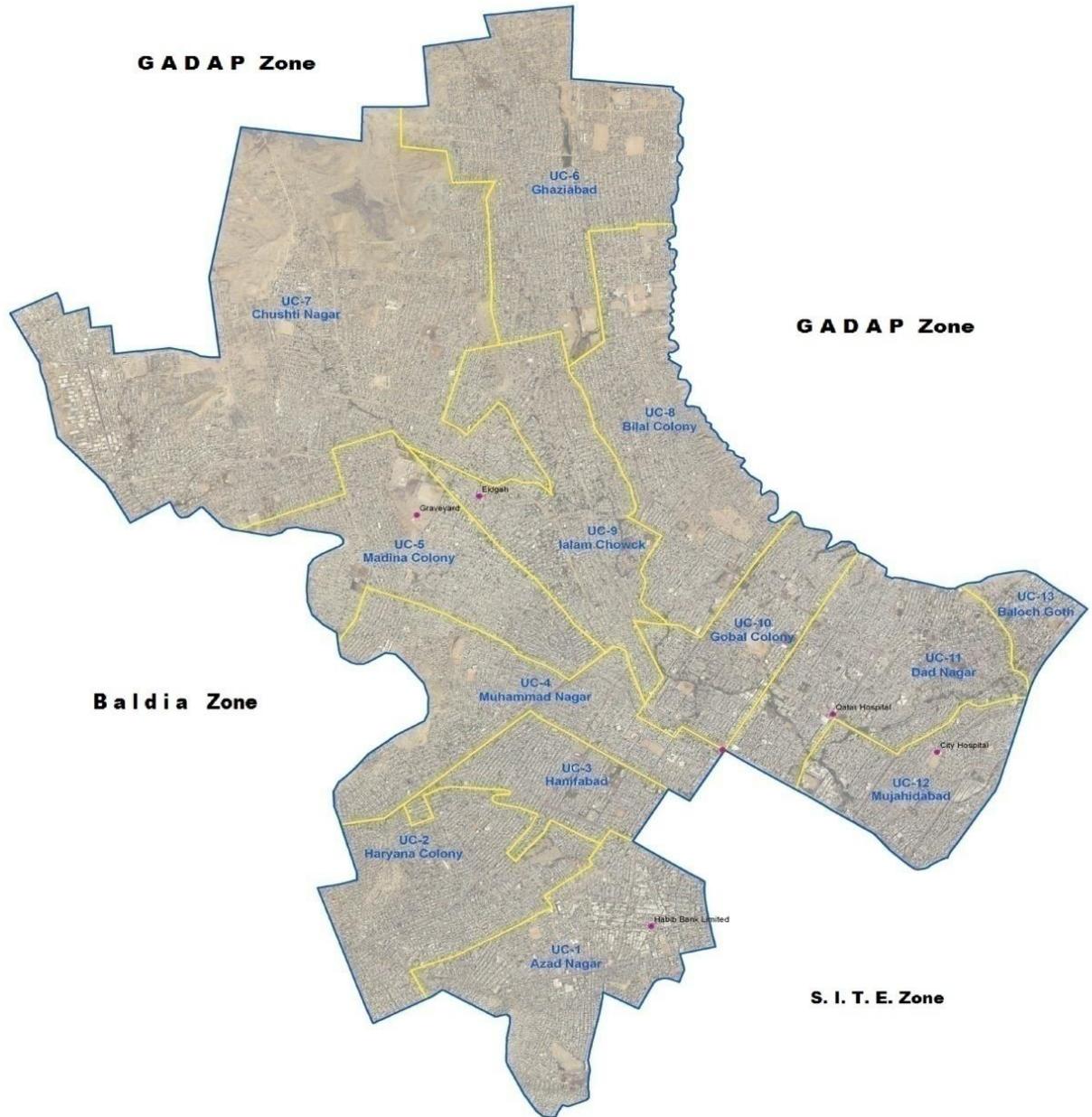
**UC-13 Baloch Goth**

The UC-13 Baloch 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	Baloch Goth	Undeveloped	Low to Middle	80 & 120 Sq Yards	
2	Shahfasal Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
3	M P R Colony	Undeveloped	Low to Middle	80 & 120 Sq Yards	
4	Bakra Chowk	Undeveloped	Low to Middle	80 & 120 Sq Yards	
5	Jamot Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	
6	Naseemabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
7	Muslimabad	Undeveloped	Low to Middle	80 & 120 Sq Yards	
8	Banaras Muhallah	Undeveloped	Low to Middle	80 & 120 Sq Yards	

3.3. Maps of Orangi Zone.

# ORANGI ZONE



### 3.4. SITE Zone - Brief Description

The area of SITE Zone is about 24.2 KM<sup>2</sup>. The total estimated population according to population statistics of 1998 is 463593 persons and in view of grown rate of 5% per annum, the population of this zone in the year 2015 is estimated to 1064901 persons. The average population density of this zone is 44022 persons/KM<sup>2</sup>. The MSW generation is about 405 Ton Per Day. The Union Councils of the Zone i.e. UC-1 (Pak Colony), UC-2 (Old Golimar), UC-5 (Pathan Colony), UC-6 (Frontier Colony), UC-7 (Banaras Colony), UC-8 (Qasba Colony) are area wise small, but MSW Generation is on higher side, i.e. 46.86 Tons per day.

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

### 3.5. Demographics of SITE Zone

SITE Zone is a well demarcated area, well developed but thickly populated and congested, the zone belongs to low to middle income group, the housing unit ranges from 60 to 80 Sq Yard in general but in some areas, high-rise flat type of residences exist, the infrastructure, particularly roads are wide and developed, but internal road and link roads are narrow. The zone is of residential cum commercial type. However, SITE Industrial area is a separate unit under control of SITE Industrial Association and is not a part of SITE Zone as far its solid waste generation and other infrastructural facilities are concerned.

The Zone comprises of the following UCs.

UC No.	UC Name	UC No.	UC Name
1	Pak Colony	6	Frontier Colony
2	Old Golimar	7	Banaras Colony
3	Jahanabad	8	Qasba Colony
4	Matroville	9	Islamia Colony
5	Pathan Colony		

#### UC-1 Pak Colony

The UC-1 Pak 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	Hasrat Mohani Colony ABCD	Developed	Middle	40 Sq Yards	
2	Willayatbad No: 1,2	Developed	Middle	80 Sq Yards	
3	Zubari Colony Block- A.B.C.D.E.F	Developed	Middle	80 Sq Yards	
4	Asif Colony Ward A.B.C.D.E.F.G	Developed	Middle	80 Sq Yards	
5	Fatori Compound	Developed	Middle	80 Sq Yards	
6	Johear Colony	Developed	Middle	80 Sq Yards	
7	Pak Colony	Developed	Middle	120 Sq Yards	
8	Pak Modern Colony	Developed	Middle	120 Sq Yards	

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**UC-2 Old Golimar**

The UC-2 Old Golimar 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	Chatagang Colony	Developed	Lower/ Middle	80 & 120 Yards	
2	Saleh Muhammad Village	Developed	Lower/ Middle	80 & 120 Yards	
3	Noor Muhammad Village	Developed	Lower/ Middle	80 & 120 Yards	
4	Mola Dad Village	Developed	Lower/ Middle	80 & 120 Yards	
5	Haji Pirya Village	Developed	Lower/ Middle	80 & 120 Yards	
6	Ghulam Muhammad Village	Developed	Lower/ Middle	80 & 120 Yards	
7	Kadeemi Mohallah	Developed	Lower/ Middle	80 & 120 Yards	
8	Naik Muhammad Para	Developed	Lower/ Middle	80 & 120 Yards	
9	Badal Village	Developed	Lower/ Middle	80 & 120 Yards	
10	Ghafoor Village	Developed	Lower/ Middle	80 & 120 Yards	
11	Gorgage Village	Developed	Lower/ Middle	80 & 120 Yards	
12	Ali Muhammad Village	Developed	Lower/ Middle	80 & 120 Yards	
13	West Muslimabad	Developed	Lower/ Middle	80 & 120 Yards	
14	Ghareeb Nawaz Colony	Developed	Lower/ Middle	80 & 120 Yards	
15	Bariga Village	Developed	Lower/ Middle	80 & 120 Yards	
16	Hingora Village	Developed	Lower/ Middle	80 & 120 Yards	
17	Mistari Khan Village	Developed	Lower/ Middle	80 & 120 Yards	
18	Rexer Colony	Developed	Lower/ Middle	80 & 120 Yards	
19	Muslimabad	Developed	Lower/ Middle	80 & 120 Yards	

**UC-3 Jehanabad**

The UC-3 Jehanabad 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	Haroonabad Main Bazar	Developed	Middle	40,80,120	
2	Haroonabad Baloch Mohallah	Developed	Middle	40,80,	
3	Bilal Aria	Developed	Middle	80,120	
4	T.P One Colony	Undeveloped	Middle	80,120	
5	Baloch Mohallah	Undeveloped	Lower	40,80,120	
6	Bradari Mohallah	Developed	Middle	40,80,120	
7	Brohi Mohallah	Developed	Middle	80,120,200	
8	Nazim Sahib House	Developed	Middle	120,200	
9	Ismaili Mohallah	Developed	Lower	80,120	
10	Magsi Mohallah	Developed	Middle	40,80,120	
11	Lashari Mohallah	Developed	Middle	40,80,120	
12	Dahani Mohallah	Developed	Middle	80,120	
13	Sindhi Mohallah	Undeveloped	Lower	120,200	
14	Azra Mohallah	Undeveloped	Lower	80,120	
15	Minawali Colony	Undeveloped	Lower	40,80,120	
16	Chaghi Mohallah	Developed	Middle	80,120	
17	Hasan Oliya	Developed	Middle	80,120	
18	Salahi Para	Developed	Middle	80,120	
19	KMC Flat New	Developed	Middle	40,80	
20	KMC Flat Old	Developed	Middle	40,80	
21	Pangu Village	Developed	Middle	40,80	
22	United Colony	Developed	Middle	40,80	
23	Mewa Shah Road	Developed	Middle	40,80,120	
24	Phool Chowk To Habib Muhammad	Developed	Middle	40,80,120	

**UC-4 Metroville**

The UC-4 Metroville 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	Metroville Sector 1	Developed	Middle	120 To 240		Some House 80 Sq Yard
2	Metroville Sector 2	Developed	Middle	120 To 240		Nil
3	Metroville Sector 3	Developed	Middle	120 To 240		Nil
4	Metroville Sector 4	Developed	Middle	120 To 240		Nil
5	Metroville Sector 5	Developed	Middle	120 To 240		Nil
6	Bhawani Chali	Developed	Lower & Middle	100,80,40		
7	Labor Squire	Developed	Lower & Middle	Flat 4 <sup>th</sup> & 5 <sup>th</sup> Floor		
8	Al Falhah Colony	Undeveloped	Lower	40,60,100		
9	Postal Colony	Developed	Middle	Flat 4 <sup>th</sup> Floor		

**UC-5 Pathan Colony**

The UC-5 Pathan Colony 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	Hyder Chali	Developed	Middle	40,60,80,100		
2	Shahi Bagh	Developed	Middle	60 To 80		
3	Sunyara Bazar	Developed	Middle	80 To 120		Pahari Area
4	Haqani Mohallah	Developed	Middle	80 To 120		
5	Sectory Road	Developed	Middle	40 To 120		
6	Pahari Area	Developed	Middle	40 To 120		
7	Malang Hotel	Developed	Lower	40 ,80, 120		
8	Bacha Karai Chowk	Developed	Lower	40,80		
9	Rehmani Mohallah	Developed	Lower	40,120		
10	Rubani Mohallah	Developed	Middle	80,120		
11	Rehmania Pahari Wala	Developed	Middle	80,120		
12	PMT Chowk	Developed	Middle	40,80		
13	Graveyard Road	Developed	Middle	80,120		
14	Jilani Mohallah	Developed	Middle	40,80		
15	Toehti Mohallah	Developed	Middle	40,80,120		
16	Makka Chowk	Developed	Lower	80,120		
17	Subhani Mohallah	Developed	Lower	40,80		
18	Muhammadi Mohallah	Developed	Lower	80,120		
19	Akbari Mohallah	Developed	Lower	80,120		
20	Mastan Chali	Developed	Middle	40,80,120		
21	Khyber Mohallah	Developed	Middle	8,120		
22	Main Bacha Chowk	Developed	Middle	40,80,120		
23	Noor Shah Mohallah	Developed	Middle	80,120		
24	Mala Kand Mohallah	Developed	Middle	80,120		

**UC-6 Frontier Colony**

The UC-6 Frontier 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	Sector 5/E	Developed	Middle	80 & 120 Yard	
2	Sector 4-CDEF	Developed	Middle	80 & 120 Yard	
3	Darul Salam	Developed	Middle	80 & 120 Yard	
4	Sher Khanabad	Developed	Middle	80 & 120 Yard	
5	Elahi Colony	Developed	Middle	80 & 120 Yard	
6	Shahiabad	Developed	Middle	80 & 120 Yard	
7	Metro Cinema	Developed	Middle	80 & 120 Yard	
8	Akbar Siddiq Mohallah	Developed	Middle	80 & 120 Yard	
9	Noor Ul Kalam	Developed	Middle	80 & 120 Yard	
10	Makka Basti	Developed	Middle	80 & 120 Yard	
11	Madina Basti	Developed	Middle	80 & 120 Yard	
12	Qadiria Mohallah	Developed	Middle	80 & 120 Yard	
13	Rabani Mohallah	Developed	Middle	80 & 120 Yard	

**UC-7 Banaras Colony**

The UC-7 Banaras 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	Post Office	Developed	Middle	80 & 120 Yard	
2	Bahrin Road	Developed	Middle	80 & 120 Yard	
3	Muhammadi Mohallah	Developed	Middle	80 & 120 Yard	
4	Rehmani Mohallah	Developed	Middle	80 & 120 Yard	
5	Police Wala Road	Developed	Lower & Middle	80 & 120 Yard	
6	Farooqi Mohallah	Developed	Lower & Middle	80 & 120 Yard	
7	Siddique Mohallah	Developed	Middle	80 & 120 Yard	
8	Tuba Mohallah	Developed	Middle	80 & 120 Yard	
9	Noorani Mohallah	Developed	Middle	80 & 120 Yard	
10	Qubah Mohallah	Developed	Lower & Middle	80 & 120 Yard	
11	Islamia Mohallah	Developed	Lower & Middle	80 & 120 Yard	
12	Subhani Mohallah	Developed	Lower & Middle	80 & 120 Yard	
13	Qadri Mohallah	Developed	Lower & Middle	40,80,100,120 Yard	
14	Madina Mubark	Developed	Lower & Middle	40,80,100,120 Yard	
15	Nazerya Mohallah	Developed	Lower & Middle	40,80,100,120 Yard	
16	Muslim Town	Developed	Lower & Middle	40,80,100,120 Yard	
17	Bilal Unit	Developed	Lower & Middle	40,80,100,120 Yard	
18	Ghosia Mohallah	Developed	Middle	40,80,100,120 Yard	
19	Seweri Baba Chowk	Developed	Middle	40,80,100,120 Yard	
20	Lal Baz Chowk	Developed	Middle	40,80,100,120 Yard	
21	Al Wajid Town	Developed	Lower & Middle	40,80,100,120 Yard	
22	Bukhari Colony	Developed	Middle	40,80,100,120 Yard	
23	Haqani Mohallah	Developed	Middle	40,80,100,120 Yard	
24	Khyber Bazar	Developed	Middle	40,80,100,120 Yard	

**UC-8 Qasba Colony**

The UC-8 Qasba 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	Peerabad	Developed	Lower	60, 80,120 Yard	
2	Muslimabad	Developed	Lower	60,80,120 Yard	
3	Muhammad Pur	Developed	Middle	60, 80,120 Yard	
4	F-Area	Developed	Middle	120 Yard	
5	K-Area	Developed	Middle	120 Yard	
6	E-Area	Developed	Middle	120 Yard	
7	H-Area	Developed	Middle	120 Yard	
8	G-Area	Developed	Middle	120 Yard	
9	4/L Quarter R-1	Developed	Middle	80, 120 yard	
10	A-Area	Developed	Middle	120 Yard	
11	L-S, 5 AL	Developed	Middle	40, 80,120 Yard	
12	A-1, Area	Developed	Middle	200 Yard	
13	Gareeb Nawaz colony	Developed	Middle	80,100 Yard	

**UC-9 Islamia Colony**

The UC-9 Islamia 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	Islamia Colony No-01	Developed	Middle	No	80,120,200
2	Islamia Colony No-02	Developed	Middle	No	80,120,200
3	New Mianwali Colony	Developed	Middle	Yes	80,120,200,400
4	Nusrat Nager	Developed	Middle	Yes	60,80,120
5	Farooq-e-Azam	Developed	Middle	Yes	40,60,80
6	Baloch Mohallah	Developed	Middle	Yes	80,120
7	Gilgati Mohallah	Developed	Lower	Yes	60,80,120
8	Kwari Colony	Developed	Middle	Yes	80,120
9	Awan Colony	Developed	Middle	Yes	80,120

3.6 Maps of SITE Zone

**S.I.T.E. Zone**



### 3.7. Baldia Zone - Brief Description

The Baldia Zone is in the North West of Karachi and it is nearer to the existing Gond pass Landfill site, the farthest Union Council of the Zone i.e. UC-8 is about 9.8 KM away from Gond pass landfill site, so MSW in each UC of Baldia Zone will be collected and transported to Gond pass Landfill site.

The area of Baldia Zone is 34.3 KM<sup>2</sup>, The total estimated population according to statistics of 1998 was about 406165 persons and in view of growth rate of 5% per annum, the population of this zone in the year 2015 is estimated 925073 person. The average population density of this zone is 26,970 person / KM<sup>2</sup>. The area of UC-1, UC-02 and UC-03 is relatively large, but the population density is smaller, it is about 12002 person/KM<sup>2</sup>. the density of garbage is also relatively smaller and it is about 4.56 Ton/KM<sup>2</sup>, the area of UC-4, UC-5, UC-6, UC-7 and UC-8 is small but population density high more than 89241 person/KM<sup>2</sup>, the Density of garbage is also relatively high and it is about 45.10 Ton /KM<sup>2</sup>.

The detail of MSW generation in each UC of the Zone, its population and other details are given in Annexures.

### 3.8. Demographics of Baldia Zone

The Baldia Zone is a well-demarcated area, it is bordered by SITE Zone and Orangi Zone to the east and by Kemari Zone to the North and West with most of the western boundary farmed by part of RCD Highway. Baldia Zone belongs to low to middle income group, mostly undeveloped, comprising of small housing units ranging from 80 to 120 Sq Yard, congested areas with narrow internal roads and streets.

The Zone comprises of the following UCs.

UC No.	UC Name	UC No.	UC Name
1	Gulshan-e-Ghazi	5	Saeed Abad
2	Ittehad Town	6	Muslim Mujahid Colony
3	Islam Nagar	7	Muhajir Colony
4	Nai Abadi	8	Rasheed Abad

#### UC-1 Gulshan-e-Ghazi

The UC-1 Gulshan-e-Ghazi 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	Abidabad	Undeveloped	Low to Middle	80 Yards	
2	Gulshan-e-Ghazi	Undeveloped	Low to Middle	80 Yards	
3	Islam Nagar	Undeveloped	Low to Middle	80 Yards	
4	Jaddah Colony	Undeveloped	Low to Middle	80 Yards	

**UC-2 Ittehad Town**

The UC-2 Ittehad Town 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	Ittehad Town	Undeveloped	Low to Middle	80 Yards	
2	Nawab Colony	Undeveloped	Low to Middle	80 Yards	
3	Qaim Khani Colony	Undeveloped	Low to Middle	80 Yards	
4	Sector 9-B	Undeveloped	Low to Middle	80 Yards	
5	Sector 9-D	Undeveloped	Low to Middle	80 Yards	
6	Sector 9-E	Undeveloped	Low to Middle	80 Yards	
7	Sector 9-F	Undeveloped	Low to Middle	80 Yards	
8	Khyber Chowk	Undeveloped	Low to Middle	80 Yards	

**UC-3 Islam Nagar**

The UC-3 Islam 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	Dawood Goth	Undeveloped	Low to Middle	80 Yards	
2	Naval Colony	Undeveloped	Low to Middle	80 Yards	
3	Yousuf Goth	Undeveloped	Low to Middle	80 Yards	
4	Mouch Goth	Undeveloped	Low to Middle	80 Yards	
5	Hassan Goth	Undeveloped	Low to Middle	80 Yards	
6	Sajjan Goth	Undeveloped	Low to Middle	80 Yards	
7	Sector 11	Undeveloped	Low to Middle	80 Yards	
8	Saad Ullah Goth	Undeveloped	Low to Middle	80 Yards	
9	Sector 14	Undeveloped	Low to Middle	80 Yards	
10	Sector 9-F-1	Undeveloped	Low to Middle	80 Yards	

**UC-4 Nai Abadi**

The UC-4 Nai Abadi 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	Sector 8-A, B, C, D	Undeveloped	Low to Middle	80 Yards	
2	Sector 4-A, B, C, D, E, F	Undeveloped	Low to Middle	80 Yards	
3	Sector 4-I, H, G.	Undeveloped	Low to Middle	80 Yards	

**UC-5 Saeed Abad**

The UC-5 Saeed Abad 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	Sector A-3, B-3, D-3, C-3	Undeveloped	Low to Middle	80 Yards	
2	Sector 5-A, 5-B, 5-C, 5-D	Undeveloped	Low to Middle	80 Yards	

**UC-6 Muslim Mujahid Colony**

The UC-6 Muslim Mujahid 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	Sawat Colony	Undeveloped	Low to Middle	80 Yards	
2	Azeemabad	Undeveloped	Low to Middle	80 Yards	
3	Lasi Para	Undeveloped	Low to Middle	80 Yards	
4	Madina Colony	Undeveloped	Low to Middle	80 Yards	
5	Mianwali Colony	Undeveloped	Low to Middle	80 Yards	
6	Majoti Colony	Undeveloped	Low to Middle	80 Yards	
7	Shamozai Colony	Undeveloped	Low to Middle	80 Yards	
8	Balouch Muhallah	Undeveloped	Low to Middle	80 Yards	
9	Ghose Nagar	Undeveloped	Low to Middle	80 Yards	
10	Chor Ward	Undeveloped	Low to Middle	80 Yards	
11	afradi colony	Undeveloped	Low to Middle	80 Yards	
12	shahfaisal colony	Undeveloped	Low to Middle	80 Yards	

**UC-7 Muhajir Colony**

The UC-7 Muhajir 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	Madina Colony	Developed	Low to Middle	80 Yards	
2	Anjam Colony	Developed	Low to Middle	80 Yards	
3	Wadi Para	Developed	Low to Middle	80 Yards	
4	Patni Muhallah	Developed	Low to Middle	80 Yards	
5	Rohani Muhallah	Developed	Low to Middle	80 Yards	
6	Ghosia Muhallah	Developed	Low to Middle	80 Yards	
7	Shehanshah Colony	Developed	Low to Middle	80 Yards	
8	Kachi Colony	Developed	Low to Middle	80 Yards	
9	Turk Muhallah	Developed	Low to Middle	80 Yards	
10	Qasai Muhallah	Developed	Low to Middle	80 Yards	
11	Kokan Colony	Developed	Low to Middle	80 Yards	

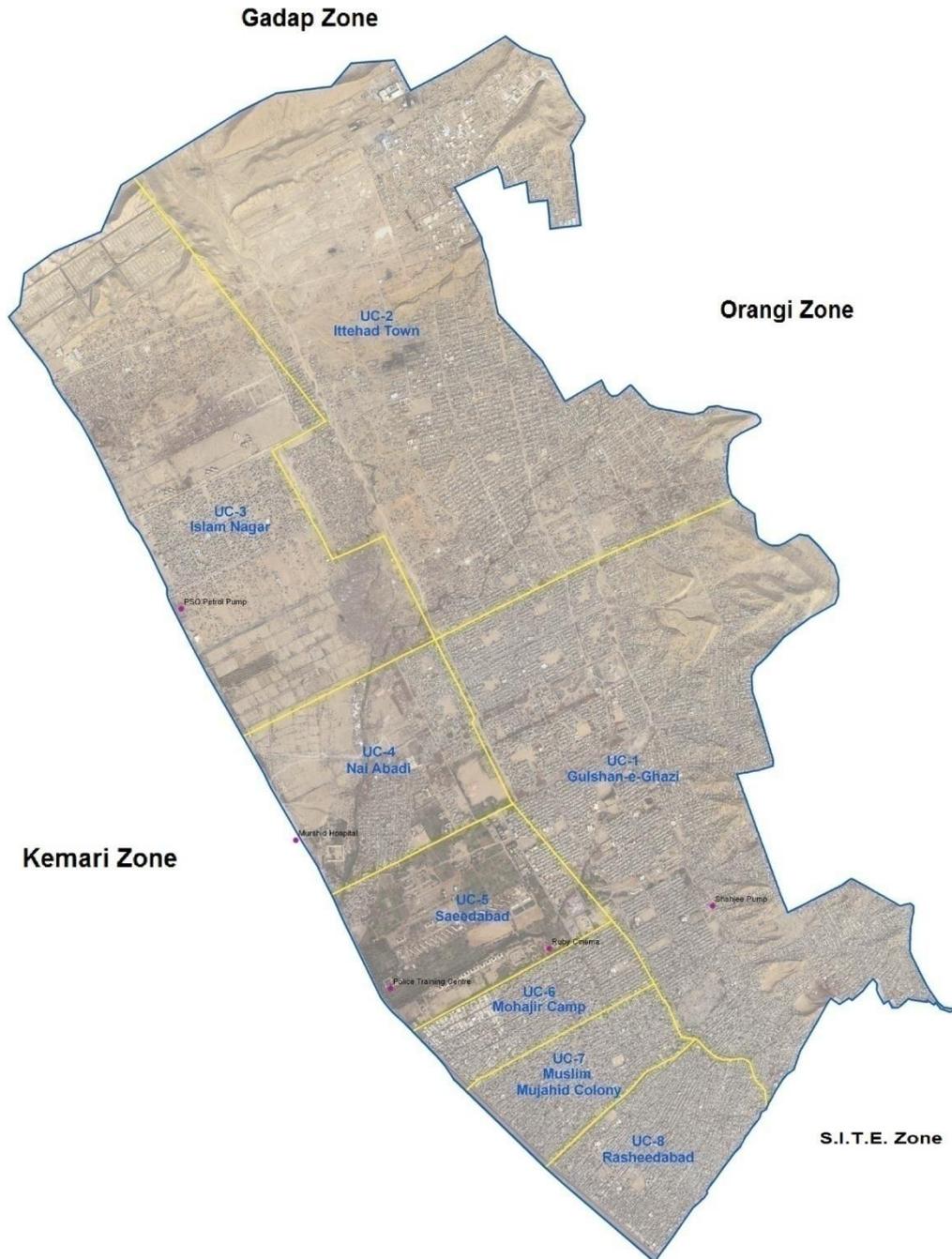
**UC-8 Rasheed Abad**

The UC-8 Rasheed Abad 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	Kumhar Wara	Developed	Low to Middle	80 Yards	
2	Dehli Colony	Developed	Low to Middle	80 Yards	
3	Banglori Muhallah	Developed	Low to Middle	80 Yards	
4	Gujrat Colony	Developed	Low to Middle	80 Yards	
5	Qasai Muhallah	Developed	Low to Middle	80 Yards	
6	Balouch Muhallah	Developed	Low to Middle	80 Yards	
7	Punjabi Muhallah	Developed	Low to Middle	80 Yards	
8	Jona Garh Muhallah	Developed	Low to Middle	80 Yards	
9	Niyazi Muhallah	Developed	Low to Middle	80 Yards	
10	Arab Muhallah	Developed	Low to Middle	80 Yards	

3.9. Maps of Baldia Zone

**Baldia Zone**



### 3.10. Kemari Zone Brief Description

Kemari Zone is situated at west of Karachi the total area of the zone is 417.2 Sq KM and population as of 1998 census statistics is 384378 persons and in view of growth rate at 5% per annum the population of this zone in 2015 is about 875453 persons. The population density of this zone is 2098 persons Per Sq KM, however this density does not reflect the actual situation on ground as the area of the zone is widely spread and residential populations are in pockets at considerable distance to each other the zone MSW generation is about 420 tons per day.

Eastern part of Kemari Zone of UC#01, 02, 03, 05 and 07 is of greater population density and MSW generation is also on higher side in this part. Western region of Kemari Zone is sparsely populated of UC# 04, 06, 08 with population density on lower side and MSW density in these UCs is also respectively low. There is an existing Gondpass landfill site in the North East of UC#8 of this zone near Gadap Zone.

The detail of MSW generation in each UC of the Zone, its population and other details are given in Annexures.

### 3.11. Demographics of Kemari Zone.

Kemari Zone consists of a blend of thinly and thickly populated pockets. In comparison of its area, the population density is very low and in pockets type of residential Goths, at distance to each other. It is mainly a costal zone having large area and low population. Its UC# 04 Baba Bhit comprises three Islands.

Kemari Zone is a compact unit bordered by prominent physical features such as RCD Highway, Lyari River, Circular Railway Track, M.T. Khan Road and connected with the boundary of Balochistan Province. Karachi Port also exists in this zone. Kemari Zone comprises of low-income group, small houses of 80 to 100 Sq Yard in majority and some parts of its apartments type dwelling exist. Area of Kemari Zone is large as compare to the area of other zones. The disposal of solid waste in its UC name Baba Bhit needs special attention as it comprises of the three Islands.

The Zone comprises of the following UCs.

UC No.	UC Name	UC No.	UC Name
1	Bhutta Village	5.	Machar Colony
2	Sultan Abad	6.	Maripur
3	Kemari	7.	Sher Shah
4.	Baba Bhit	8.	Gabo Pat

**UC-1 Bhutta Village**

The UC-1 Bhutta Village 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	Opp. Shirin Jinnah Colony	Undeveloped	Low to Midder	60 and 80 Sqyrd	
2	Kambella Chowk	-do-	Low	120 Sqyrd	
3	Yaqub Munda Chowk	-do-	Low	120 Sqyrd	
4	Zarobi Colony	-do-	Low	120 Sqyrd	
5	Katchi Para	-do-	Low	120 Sqyrd	
6	Panjri Para	-do-	Low	120 Sqyrd	
7	Charnal Road Area	-do-	Low	120 Sqyrd	
8	Massan Road Area	-do-	Low	120 Sqyrd	

**UC-2 Sultanabad**

The UC-2 Sultan Abad Town 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	Behind MT Khan Road and Mai Kolachi Road	Undeveloped	Low to Middle	60 and 80 Sqyrd	
2	Samaji Tanzeem Road	Undeveloped	Low to Middle	60 and 80 Sqyrd	
3	Kohati Mohalla	Undeveloped	Low to Middle	60 and 80 Sqyrd	
4	Ashfaque Colony	Undeveloped	Low to Middle	60 and 80 Sqyrd	
5	Gali No. 13. to Block-5	Undeveloped	Low to Middle	60 and 80 Sqyrd	
6	Tikes Road	Undeveloped	Low to Middle	60 and 80 Sqyrd	
7	Tauheed Masjid Road	Undeveloped	Low to Middle	60 and 80 Sqyrd	
8	Jadun Road 60ft.	Undeveloped	Low to Middle	60 and 80 Sqyrd	
9	Block. 1,2,3,4,5 area	Undeveloped	Low to Middle	60 and 80 Sqyrd	
10	Intelligence Colony Sultanabad	Undeveloped	Low to Middle	60 and 80 Sqyrd	
11	Nomania Masjid Road.	Undeveloped	Low to Middle	60 and 80 Sqyrd	
12	New Haji Camp Road.	Undeveloped	Low to Middle	60 and 80 Sqyrd	
13	Jadun Ground Area	Undeveloped	Low to Middle	60 and 80 Sqyrd	

**UC-3 Kemari**

The UC-3 Kemari 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	Jackson/ Jungle Shah area	50% Develop and 50% undeveloped	Low to Middle	Yes	Flats and 60/80 Sqyds
2	KPT Gate No. 1 to 17	Developed	Middle to High	Yes	Flats.
3	Jackson Bazar Area	Developed	Middle to High	Yes	Flats.
4	Humayun Khan Road.	Developed	Middle to High	Yes	Flats.
5	Hussain Bux Road	Developed	Low to Middle	Yes	Flats.
6	Tara Chand Road Block 1 to 44	Developed	Low to Middle	Yes	Flats.
7	Docks Colony	Undeveloped	Low to Middle	Yes	Flats.
8	Majeed Colony	Undeveloped	Low to Middle	Yes	Flats.
9	Umer Khan Road	Undeveloped	Low to Middle	Yes	Flats.
10	Saeedia Muhallah	Undeveloped	Low to Middle	Yes	Flats.
11	Tashkand Colony	Undeveloped	Low to Middle	Yes	Flats.

**UC-4 Baba Bhit**

The UC-4 Baba Bhit 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	Islands Keamari Area	50% Develop and 50% undeveloped	Low	60 Sqyds and Below	Garbage Burned and Dumped in Earth
2	Baba Island	Developed	Low	60 Sqyds	Garbage Burned and Dumped in Earth
3	Bhitt. Island	Developed	Low	60 Sqyds	Garbage Burned and Dumped in Earth
4	Shams Pir Island	Developed	Low	60 Sqyds	Garbage Burned and Dumped in Earth
5	Younasabad Island	Developed	Low	60 Sqyds	Garbage Burned and Dumped in Earth
6	Salehabad Island	Developed	Low	60 Sqyds	Garbage Burned and Dumped in Earth

**UC-5 Machar Colony**

The UC-5 Machar 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	Adjacent at Fisheries area	Undeveloped	Low	60 Sqyds and Below	Katchi Abadi
2	Siraj Muhallah	Undeveloped	Low	60 Sqyds and Below	
3	Shah Jalal Muhallah	Undeveloped	Low	60 Sqyds and Below	
4	Akhase Muhallah	Undeveloped	Low	60 Sqyds and Below	
5	Shamsha Muhallah	Undeveloped	Low	60 Sqyds and Below	
6	Kalpana Muhallah	Undeveloped	Low	60 Sqyds and Below	
7	Madina Colony	Undeveloped	Low	60 Sqyds and Below	
8	Meharban Chowk Area	Undeveloped	Low	60 Sqyds and Below	
9	Muree Chowk Area	Undeveloped	Low	60 Sqyds and Below	
10	Azad Muhallah	Undeveloped	Low	60 Sqyds and Below	
11	Shahi Muhallah	Undeveloped	Low	60 Sqyds and Below	
12	Alfalah Muhallah	Undeveloped	Low	60 Sqyds and Below	

**UC-6 Maripur**

The UC-6 Maripur 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	Maripur area near PAF Base Masroor	Undeveloped	Low	60 Sqyds and Below	
2	Moosa Para Grex	Undeveloped	Low	60 Sqyds and Below	
3	Jiskani Muhallah	Undeveloped	Low	60 Sqyds and Below	
4	Masoori Muhallah	Undeveloped	Low	60 Sqyds and Below	
5	Muslim Colony No. 1, 2	Undeveloped	Low	60 Sqyds and Below	
6	Silk Colony	Undeveloped	Low	60 Sqyds and Below	
7	Baloch Muhallah	Undeveloped	Low	60 Sqyds and Below	

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8	Father Colony	Undeveloped	Low	60 Sqyds and Below	
9	Madni Colony	Undeveloped	Low	60 Sqyds and Below	
10	Sher Muhammad Village	Undeveloped	Low	60 Sqyds and Below	
11	Tikri Village	Undeveloped	Low	60 Sqyds and Below	
12	Masroor Colony	Undeveloped	Low	60 Sqyds and Below	
13	Dil Falah Abad Colony	Undeveloped	Low	60 Sqyds and Below	
14	Baloch Muhallah Near Bilal Masjid	Undeveloped	Low	60 Sqyds and Below	
15	Megwar Muhallah	Undeveloped	Low	60 Sqyds and Below	
16	Navel Colony	Developed	Middle/High	120 and Above Sqyards Bungalows	
17	Budhni Goth Area	Undeveloped	Low	120 and Above Sqyards Bungalows	
18	Custom Colony Area	Developed	Low to Middle	120 and Above Sqyards Bungalows	

### UC-7 Sher Shah

The UC-7 Sher Shah 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	Shershah area and Gul Bai area	Undeveloped	Low to Middle	60 Sqyds and Below	100 Nos. and above Nos. Good owns along with 200 small factories.
2	Toor Baba Road Block-C	Undeveloped	Low to Middle	60 and 80 Sqyds.	
3	Alamgir Muhallah	Undeveloped	Low to Middle	60 and 80 Sqyds.	
4	Jinnah Road Block-C	Undeveloped	Low to Middle	60 and 80 Sqyds.	
5	Urdu Bazar Road Block-A	Undeveloped	Low to Middle	60 and 80 Sqyds.	
6	Muhammadi Road Block. A & B	Undeveloped	Low to Middle	60 and 80 Sqyds.	
7	Delight Cinema Road Block-D	Undeveloped	Low to Middle	60 and 80 Sqyds.	

### UC-8 Gabo Pat

The UC-8 Gabo Pat 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	Hawksbay Road area 500 Qts. And Mushra Factor Muach Goth area	Undeveloped	Low to Middle	60 to 240 Sqyds	250 Nos. Goodowns.
2	Wichari Muhallah	Undeveloped	Low to Middle	60 Sqyds	
3	Mianwali Para	Undeveloped	Low to Middle	80 to 120 Sqyds	
4	Katchi Para	Undeveloped	Low to Middle	80 to 120 Sqyds	
5	Baloch Para	Undeveloped	Low to Middle	80 to 120 Sqyds	
6	Ghafoori Chowk Area	Undeveloped	Low to Middle	80 to 120 Sqyds	
7	Sheikh Muhallah	Undeveloped	Low to Middle	80 to 120 Sqyds	
8	Bukhari Muhallah	Undeveloped	Low to Middle	80 to 120 Sqyds	
9	Noor Shah Muhallah	Undeveloped	Low to Middle	80 to 120 Sqyds	
10	Lasi Para	Undeveloped	Low to Middle	80 to 120 Sqyds	
11	Pathan Colony	Undeveloped	Low to Middle	80 to 120 Sqyds	
12	Katchi Abadi Area	Undeveloped	Low to Middle	80 to 120 Sqyds	
13	Qasim Ali Shah Colony	Undeveloped	Low to Middle	80 to 120 Sqyds	
14	Sindhi Para	Undeveloped	Low to Middle	80 to 120 Sqyds	
15	Amma Zeenat Road.	Undeveloped	Low to Middle	80 to 120 Sqyds	

3.12. Maps of Kemari Zone

# KEAMARI ZONE



### **3.13. Existing Solid Waste Management System in DMC West**

i. Door to Door Collection.

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

Residents of DMC West throw their household waste to nearby kachrakundi (dustbin) during all times of the day without any schedule. The shopkeepers of commercial areas and attendants of shopping malls, and residents of DMC West usually throw garbage at the corner of each streets, and in front of shops etc. No any strategy or collection plan for door step collection do exists in DMC West in general. No any MSW collection system in the industrial area exists though a considerable quantum of MSW is generated in the industrial area too.

ii. Street Sweeping.

Main roads, and lanes in DMC West 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 2:00PM to 5:00PM. Mechanical sweeping is not done in DMC West 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 made 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 unavailability 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 West garbage is dumped, at open places, such garbage is lifted using loaders and bobcat type of machinery and labours using basket to pick and to load into refuse vanes or compactor which is then transported to GTS of Zones. The machinery for lifting and transportation of MSW available with DMC West 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 West.

Orangi Zone, Baldia Zone is nearest to the existing Gondpass Landfill site therefore its GTS is located at Gondpass Landfill. Whereas for Kemari Zone the Gondpass Landfill site is in the North East of UC-8 of this zone near Gadap therefore GTS for Kemari Zone is also at Gondpass Landfill site. However for SITE Zone GTS is located at UC-1 Pak Colony and UC-8 Qasba Colony.

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

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 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-steps, road sides, in the bushes, open ground and collection points, dustbins sites etc. creating an unclean environment with a pungent odor of blood which is seen almost in each area on this 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 that is collected and buried in DMC West are about 292639 numbers.

Days of Eid-ul-Azha	Orangi	SITE	Baldia	Kemari	Total
1 <sup>st</sup> Day	18500	15000	24500	18000	76000
2 <sup>nd</sup> Day	38200	31215	39259	35160	143834
3 <sup>rd</sup> Day	18040	13969	23200	17596	72805
Total	74740	60184	86959	70756	292639

### **3.15. Problem & Short Coming in Existing System**

- Waste has never been assigned priority by Government.
- Non-existence of Door to Door Collection System.
- Poor attendance of Sanitary Workers /Officials affecting street sweeping and waste disposal.
- In effective 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 road side 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 (West)**

**Proposed Plan for Zone West (DMC West 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 entire 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 West 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 collecting in various zones of DMC West

### Orangi Zone

Name of UC		Door to door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.																												
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**SITE Zone**

Name of UC		Door-to-door collection Strategy	Suggested Tools and Machinery for door-to-door collection type.																				
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**Baldia Zone**

Name of UC		Door to door collection Strategy	Suggested Tools and Machinery for door to door collection type.																		
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**Kemari Zone**

Name of UC	Door to door collection Strategy	Suggested Tools and Machinery for door to door collection type.
<p>UC#1 Bhutta Village</p> <p>UC#2 Sultan Abad</p> <p>UC# 3 Kemari</p> <p>UC#4 City Baba Bhit</p> <p>UC# 5 Machar Colony</p> <p>UC#6 Maripur</p> <p>UC#7 Sher Shah</p> <p>UC#8 Gabo Put</p> <ul style="list-style-type: none"> <li>• Low Income Group</li> <li>• Residential area in pockets and distant to each other</li> </ul>	<p><b>Shared Containers Type Collection</b></p> <ul style="list-style-type: none"> <li>• Steel Containers of appropriate size &amp; 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</li> <li>• Block Collection Strategy: 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.</li> </ul>	<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 mechanisms are given in technical specification.</p> <p>Small Compactor vehicles type or small Suzuki / pick up type vehicles may be used.</p>

## 4.3 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 Zone mostly single carriageways. However in some parts double carriageway facility is present. Planned and constructed on normal Engineering practices with without outside walks, 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 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 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 wheelbarrow and Suzuki Pickup type of vehicles to transport the

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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 market/commercial areas and in bazaar type of market areas, sweeping is required two times in a day as mentioned in the schedule of sweeping in technical specification. Contractor must make his 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)
<b>Orangi Zone</b>		
1	Malik Chowk to Mujahid Colony UC-01	0.76
2	Badar Chowk (Mominabad Police Station to Noori Masjid	0.61
3	Faqir Colony Road Madina Chowk to Shah Mohallah UC-02	1.22
4	Faqir Colony to Zaheer Chowk	1.09
5	Faqir Colony to Malik Chowk	1.09
6	10 No Market Road UC-03	0.67
7	Noori Masjid to Madina Masjid Chowk & Faqir Colony	1.52
8	Urdu Chowk to Baldia Town	2.20
9	Urdu Chowk to T & T Office UC-04	0.91
10	Nishan-e-Hyder to Fareed Colony	2.20
11	5 No Roundabout to Shell Petro Pump	0.55
12	Molana Shoukat Ali Road UC-05	1.50
13	Ali Nagar Road UC-06	6.00
14	German School to Bay Pass Road	6.00
15	Islam Nagar Duba More to Raja Tanveer Colony UC-07	5.00
16	Al Mustufa Colony Road	0.30
17	Shah Wali ullah Nagar Road	2.00
18	Shahra-e-Qaddafi Sony Chowk to German School UC-08	3.00
19	Sony Chowk ro Grave Yard	4.00
20	Shahra-e-Orangi from Nishan-e-Hyder Chowk to Habib Bank Quarter UC-09	1.00
21	Ali Nagar Road Old Police Station to Rehmat Cowk	1.00
22	Power House to Sony Chowk UC-10	1.00

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23	Shahra-e-Qaddafi 1 No Chowk to Sony Chowk UC-11	1.50
24	Shahra-e-Qaddafi to Qasba More to 1 No Chowk UC-12	0.50
<b>SITE Zone</b>		
1	Road from love lane Bridge to Banaras Chowk	4.87
2	M.P Road from Bacha Khan Chowk to New Nazimabad Road	3.96
3	Main Metroville Road from Bab-e-Khyber Badar Chowk	1.68
4	Main Qasba Road Shehzad Mor to Qalandaria Hotel	0.91
5	Qalandaria Hotel To Muhammadi Masjid	1.83
6	Main Wali Gate to Bismillah Hotel Mominabad Road	0.61
7	Faiz-ur-Rehaman Road from Master C.N.G to Moinabad	1.22
8	UC Office Road from Saher Plaza to Shoe Maker Sho[	0.61
9	Fatima Masjid Road from Model Park to Dilawar House	0.55
10	Model Park Road from K.E.S.C Office Metroline Hospital	0.46
11	Sector IV & III Road from Tea Hotel to Educator School	0.46
12	Quba Masjid Road	0.31
13	Block V Road from P.C.O to Graveyard	0.76
14	Block V Road Agha Khan Flat to Graveyard	5.5
15	Shahen Hotel to Ali Imam Bargh	0.25
16	Road from Bhitai Library Grak Bridge	1.46
17	Stadum Road from Badar Chowk to Bori Khan Hospital	0.46
18	Imam Bargh Road from Bori Khan Hospital to Imam Bargh	1.07
19	Road from Dhobi Gath Bridge to Bakra Piri Bridge	0.91
<b>Baldia Zone</b>		
1	Hub River road 02 number to Hassan Goath	13.00
2	5.B Road	2.00
3	13.D Road	4.00
4	Gulshan e Ghazi Dabble Road Uc.4	3.00
5	Stadium Road Uc 03	5.00
6	Naval Colony Roaduc.03	4.00
7	Rasheedabad Road uc.07	2.00
<b>Kemari Zone</b>		
1	M.A. Jinnah Road from Netti Jetti Bridge to Gate No. 1	4.50
2	Massan Road	1.50
3	Noor Uddin Road	1.50
4	Qasim Shah Road	1.50
5	M.T. Khan Road	3.00
6	Mai Kolachi Road	4.00
7	Maripur Road	3.50
8	Hawksbay Road	15.00
9	Dockyard Road	2.50
10	Whest Wharf Road	2.50
11	Agha Khan Road	1.00
12	Main Sher Shah Road from Paracha Chowk to Meran Naka Bridge	2.00

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13	Sparco Road	12.00
<b>Total</b>		<b>161.00</b>

**Secondary main roads (Single Carriageway)**

S No.	Name of Road	Length (KM)
<b>Orangi Zone</b>		
1	Bijli Nagar Road UC-01	0.85
2	Mominabad chowk to Zia Colony Grave Yard	1.22
3	Metrowill Road to Water Tank Zia Colony sheet II	1.50
4	Mominabad Block A Market to Zia Colony Sheet I	1.50
5	Mominabad Niazi Chowk Road B/W Block A & B	0.55
6	Mominabad Nasir Hotal Road B/W Block B & D	0.51
7	Mominabad Tayyaba Masjid Road up to Zia Colony	1.22
8	Khyber Colony Road Sector 4	1.00
9	Aggror Colony Road Sector 4	0.31
10	Islam Nagar Colony Quetta Hotel to UC-02 area Hill Side	1.22
11	Bismillah Colony Road up to Mominabad UC-02	1.22
12	Admore pump to Mominabad	1.20
13	Zahoor Chowk to Mominabad	1.22
14	Umer Baloch Mohallah Road	0.60
15	Muslimabad Road from Faqir Colony Main Road	1.98
16	Haryana Colony Mangal Bazar Road	1.16
17	Haryana Colony Aslam Chowk K K Colony	0.67
18	K K Colony Road to Faqir Coony	0.76
19	Shahfasal Masjid Road from Faqir Colony Road to UC-03	1.21
20	10 No Market Road Fareed Colony UC-03	1.00
21	Phool Wali Gali to Ibrahim Ali Bahi School	0.54
22	Hyder Imam Bargha to Faqir Colony	0.54
23	K K Abdul School to Faqir Colony Road	0.55
24	Madni Masjid 10 No Road to Noori Masjid Road	0.60
25	Al Fatha Grave Yard Road	0.37
26	Madni Masjid to Panjab Chowk	0.55
27	Maraj un Nabi Masjid to Ara Machine road	1.22
28	DMC Office to 10 No Market Road UC-04	0.49
29	National Bank to Sabbari Chowk	0.85
30	Pakistan Book Centre to Muhammadi Chowk	0.85
31	Rizwan Steel to Chamcha Hotel Road	0.60
32	Chamcha Hotel to 10 No Market Road	0.67
33	Raheem Shah Colony Road up to Ploice Station Chowki	1.22

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34	Urdu Chowk to Irani Camp Road	0.67
35	Madina Colony Road up to Awami Chowk	1.00
36	Mustfa Colony Road (Allah Wali Masjid Road)	1.00
37	Ali Madical Store Road up to Raheem Shah Hill Side	1.06
38	Shahzadi Patti Road up to Raheem shah Colony	0.85
39	Faeedi Masjid Gali No 6 Fareed Colony	1.22
1	Al Fatha Hall to Last Z Bus Stop UC-05	1.00
2	Masjid Firdous to Chandni Chowk	1.00
3	Pakistan Bazar Road	1.22
4	Dillagi Road	1.00
5	Khalil Market Road Baba Willayat Ali Shah Colony	1.37
6	Opp Masjid Quba to Masjid Siddiq -e-akber Block j	1.22
7	Noori Hotel to Molana Shoukat Ali Road Block D	0.73
8	Islimi-e-Masjid to Baldia Willayat Ali Shah Colony	1.22
9	Islimi-e-Masjid to Bawa Qatter	1.00
10	Touheed Chowk Baldia town	1.22
11	Touheed Colony Road via Grave Yard to Raheem Shah Colony	1.00
12	Bissmillah Chowk Road UC-06	1.50
13	Pakistan Chowk Road	0.70
14	Rehmat Chowk to Mawaty Chowk	2.50
15	Chirstan Colony Road	2.00
16	Zia ul haq Chowk to Datta Chawk Road UC-07	2.00
17	Al Hira pump lal Masjid road	1.00
18	Sadiqabad road	1.00
19	Qureshi Market Road	1.00
20	Al Mughani School Road	0.50
21	Safina-e-ahlabat Road	0.75
22	New 1-D Bus Stop road	0.65
23	All Jannat Hall to Ejtimagha Road UC-08	1.00
24	Sector 14 Road	2.00
25	Faisal Chowk Road	1.00
26	Akber Shaheed Road (Market Wali Road)	1.00
27	Islam Chowk to Disco More UC-09	0.50
28	Islam Chowk to 1 K	0.50
29	Old Police station to Bangla Bazar	0.75
30	Pakistan Bazar to Safaid Chowk	0.75
31	12 L Road UC-10	0.60
32	Kamal Pump to Shahra-e-Qaddafi	1.00
33	Power House to Govt School	0.50
34	12 L Road to Allah Wala College	1.00
35	Gabol Colony Road	1.00

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36	Banaras Chowk to Sohni Chowk via Qatter Hospital UC-11	1.00
37	1 No Chowk to Mangopir Road UC-12	1.00
38	Metro Cenima ti 1 No Chowk	0.50
39	Mangopir Road to Grave Yard MPR Colony UC-13	0.75
40	Bilal Masjid to Ladies Park	2.00
41	Babo Hotel to Qater Hospital	1.00
<b>SITE Zone</b>		
1	Saud Hospital to Babu Hotel	4.57
2	Road from Hafiz Textile Mill to Parada Park	1.83
3	Road from Bakra piri Bridge to KMC Work Shop to KMC Flat Via Tajuddin Baba Mazar	1.22
4	Main Shair Kahanbad Road from Hazara Chowk to Matro Cause way	1.22
5	Rabbani Mohallah Block B,C,D.	3.78
6	Hammad Chicken Shop to Zahoria MAzar	0.25
7	Muhammad Pur Road Bismillah Masjid to Mujeeb House	0.30
8	Khyber Road Khyber Bridge to Ghosia Pumping Station	2.13
9	Chota graveyard to Frontier Colony	1.52
10	Mian Wali Road Muhammad Khan Niazi House to Masjid Aqsa	0.24
11	Back Side Road Sarhad Petrol Pump	1.22
12	Najeebullah House to Graveyard	0.61
13	Road from Chatri Chowk to Nadra Office and parada Park Road	1.22
14	Road from Asif Colony to MAhajir Chowk	0.76
15	Road From Noorani MASjid to new abadgari	0.91
16	Road from Union Council Office to Punjabi Mohallah	0.61
17	Road from Union Council Office to Eidgah Ground	0.76
18	Main MAnghopir Road to Waja Wali Muhammad	0.46
19	Road from Shireen Bakery to GAreeb Nawaz Colony	0.67
20	Road from Bakra Piri to Lashari Mohallah	0.61
21	Road from Union Council Office to Magsi Muhallah	1.22
22	Road from Jahanbad Thana to pankha Hotel Main Khabari Bazar	0.76
23	Main Khyber Road from Gate to Sewru Baba Mazar	0.55
24	Muhammad Pur Police Chowki to Graveyard	0.25
25	Road from Barood Khana School Main Manghopir Road and Warsi Masjid	0.91
26	Road from Dish Mandi to SMD Culvert	0.61
27	Const: of Road from SMD Culvert to Birohi Muhallah , Sindhi Muhallah and Meva Shah Graveyard	0.98
28	Jameel Biryani Road Hazara Chowk to Technical College	0.46
29	Sector 4/E Road from Chudhary School to Grill Shop	0.91
30	Main Pirabad Road Bacha Khan Markaz to Katti Pahari	1.83
31	A Or A-1 Area Road	4.57
32	Madina Hotel to Opposite Office	9.15

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33	Subhani Road	0.37
34	Nadir House to F-11 Bus Stop	1.24
35	Different Road from Christen Mohallah	0.46
36	Road from Warsi Masjid to Chatri Chowk	0.30
37	Road from Bismillah Hotel to Bangali Masjid	0.30
38	Road from Ayesha Manzil to K.B Contractor School	0.24
39	E, F Area Road	0.91
40	Kanwari Colony Road Ibrahim Masjid to Christen Abadi	0.46
<b>Baldia Zone</b>		
1	K.S Mujahid Road uc.08	2.00
2	Gosiea Road uc.07	1.25
3	Mir Alam Baloch Mohala Road uc. 08	1.00
4	Kosor ChockRoad Uc.07	1.00
5	Guldad Shah Uc 06	1.00
6	Iqbal Roaduc.06	1.00
7	7 Number Graveyard Road uc. 06	1.00
8	Tipu Sultan Road uc. 06	2.00
9	Jhangir Road uc.05	1.05
10	Quaid avenue road muc.05	1.05
11	Rana ground Road uc.05	1.00
12	Police Training Road uc.04	1.50
13	Lahori Hotel Road uc.04	1.05
14	Qabail Road uc.04	1.05
15	Memon Colony uc.04	1.05
16	Jungle Colony Road uc 04	1.05
17	Jaddah colony Road uc.04	1.05
18	Dabba Colony Road uc.05	1.05
19	Madina colony road uc.05	1.05
20	24 Marcket Road uc.05	1.05
21	Jam sahib Road uc.05	1.05
22	Shahrah e Ali road uc.05	1.00
23	Baba Ishaq Road uc.05	1.05
24	Peala Hotel Road uc.05	1.00
25	Govt School Road uc.05	1.00
26	Jhangir road uc.02	1.00
27	Eid gah to m.khan colony roadm uc.02	3.00
28	Hahi Iqbal road uc.02	2.00
29	Malik Fafaz road uc 01	1.05
30	Gulshan e ghazi hazara block D uc.01	1.05
31	09 number road uc.04	1.05
32	Power House road uc.04	1.00
33	100 Quarter to bin qasim road uc.04	2.00
34	Ahmed raza road uc.04	1.00
35	Lagari shoes to pakora chock road uc.03	1.05
36	Qazi hospatil road Dubble road uc.03	1.05
37	Al sadad chock road uc.03	1.50
38	Qaimkhani road uc.03	3.00
39	K.S.Mujahiditthad town road uc.02	1.50
40	Maki Masjid road uc.02	1.00

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<b>Kemari Zone</b>		
1	NLC Road Sultanabad	1.20
2	New Haji Camp Road Sultanabad	1.50
3	Rehmania Masjid Sultanabad	0.75
4	Saifur Rehman Road Sikandarabad	1.25
5	Sadia Masjid Road	1.50
6	Hussain Bux Market Road, Keamari	2.50
7	Umer Khan Road	3.00
8	Samaj Tanzeem Road	1.00
9	Tara Chand Road	1.75
10	Jungle Shah Road	1.50
11	Endrus Road	1.00
12	Custom Club Road	1.00
13	Zia Uddin Hospital Road Keamari	2.00
14	Mohammadi Road Sher Shah	1.50
15	Urdu Bazar Road	1.50
16	Toor Baba Road	1.50
17	Akber Road	1.50
18	Nayab Road	1.50
19	Caltex Pump Road Gul Bai	1.50
20	Marine Academy Road Maripur	1.50
21	Father Colony Maripur	1.50
22	Madina Colony Maripur	0.50
23	Dil Falah Abad.	0.50
24	Tikri Village Road	1.00
25	Thandi Sarak Road.	1.00
26	Bilal Masjid Road	1.50
27	Katchi Para Road Muach Goth	1.50
28	Qasim Shah Colony Road	1.00
29	Brohi Mohalla Road	1.00
30	Bukhari Mohalla Road	1.00
31	Sheikh Mohalla Road	1.00
32	Main Market Road	1.00
33	Lassi Road	1.00
34	Pathan Colony Road	1.00
35	Qasim Ali Shah Colony Road	1.00
36	Amma Zeenat Road	1.00
<b>Total</b>		<b>228.10</b>

**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= 08 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= 04 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 1732 Tons Per day MSW generation of DMC West satisfactorily is 70 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 save labour cost and frequent cleaning of bin, buckets and containers help discourage scavengers, reduce 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 emphasizes is made to use appropriate machinery for solid waste management and transportation.

The bins, buckets and containers mechanism the vehicle type that is 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 M<sup>3</sup>
  - 10 M<sup>3</sup>
  - 12 M<sup>3</sup>
  - 16 M<sup>3</sup>
- Number required
  - A suggested number of machines having different container capacity that are required to handle MSW generation of DMC West on Daily Basis are mentioned as under:
    - **Vehicle with Container Capacity of 6.6 M<sup>3</sup> = 08 No.**
    - **Vehicle with Container Capacity of 10 M<sup>3</sup> = 06 No.**
    - **Vehicle with Container Capacity of 12 M<sup>3</sup> = 08 No.**
    - **Vehicle with Container Capacity of 16 M<sup>3</sup> = 09 No.**
    - Total = 31 No.**



#### Small vehicle tipping mechanism

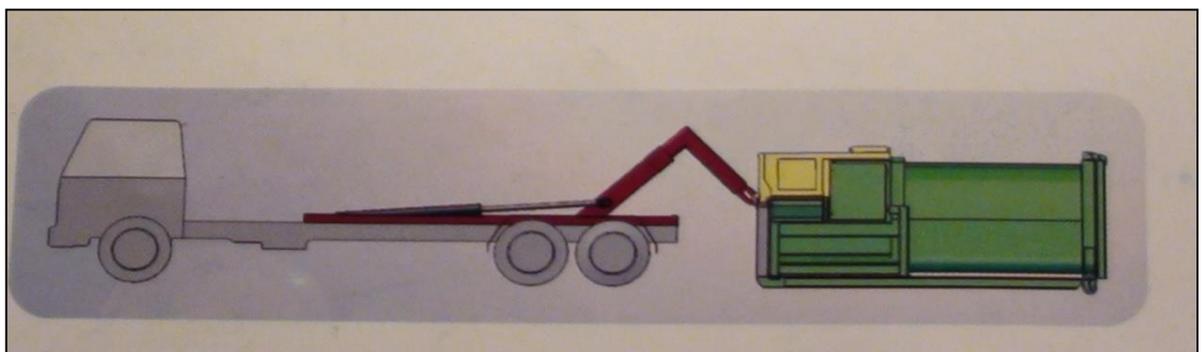
Appliances- auto tipping bucket  
Small vehicle bucket cubage = 1.4 meter cube  
Capacity of in-built container = 1.5 to 2.5 meter cube

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 m<sup>3</sup>
2. 07 m<sup>3</sup>
3. 05 m<sup>3</sup>

Number required

- Suggested number of machines required of different container Volume capacity is

<b>05 M<sup>3</sup> Volume=</b>	<b>13 No.</b>
<b>07M<sup>3</sup> Volume=</b>	<b>13 No.</b>
<b>10M<sup>3</sup> Volume=</b>	<b><u>13 No.</u></b>
<b>Total =</b>	<b>39 No.</b>

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. Orangi Zone, Gondpass Landfill site or as designated by Procuring Agency.
- b. Baldia Zone, Gondpass Landfill site or as designated by procuring agency.
- c. Kemari Zone, Gondpass Landfill site or as designated by procuring agency.
- d. SITE Zone GTS is at UC-1 Pak Colony & UC-8 Qasba Colony 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 and include 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 estimated MSW generation in DMC West is 1732 Tons 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 represent at 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, canes, 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 cane, 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 as well as garden waste.

## 5.2 Transition Period

Transition period for the purpose of implementation of this contract is 03 (three) months starting from date of signing of agreement and work order. The contractor shall be liable to start 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 or Landfill sites (depending upon feasibility).
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 services 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. Tasks 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 West 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 noted below

**Orangi Zone – Golden Brown**  
**SITE Zone – Sky Blue**  
**Baldia Zone – Silver Brown**  
**Kemari Zone – Sea Green**

#### 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 Litterbins 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 m<sup>3</sup>.
  - b. Bucket cubage of 1.4 to 2 m<sup>3</sup>.
  - c. Big bucket cubage 3.35 to 4 m<sup>3</sup>.
3. Standard Metal Container of container cubage 5 to 10 m<sup>3</sup>.  
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
Orangi	1500 Nos.	1000 Nos.	200 Nos.
SITE	1000 Nos.	500 Nos.	150 Nos.
Baldia	1500 Nos.	1000 Nos.	200 Nos.
Kemari	300 Nos	500 Nos.	150 Nos.
<b>Total</b>	<b>4300 Nos.</b>	<b>3000 Nos.</b>	<b>700 Nos.</b>
Area of placement	in market & shops	in market shopping malls & commercial centre & 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 guideline for revamping of bins system.

The plan submitted by successful bidder shall be reviewed by client after award of the contract and a revise plan shall be prepared with mutual consent of client and contractor and with the approval of client, the approved plan shall be implemented for provision work and services under this contract.

**C. Polythene bag**

Polythene bag of size 0.5X1 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 week 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 solid waste to the residents.

## **D. Cost of Polythene bags provided free of cost**

All cost towards providing/supplying of polythene bags free of cost (for the first two week 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 review and reworked with the consent of client and successful bidder and shall 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 their own appropriate plan and strategy. Innovation and out of box ideas shall encourage

## **F. Handcarts and other tools for door to door collection**

1. Contractor will collect waste from narrow streets, which can not access by garbage vehicle through workers using wheeled handcart and empty them to nearby container or to the compactor vehicle standing nearby locality.  
Wheeled handcart bin cubage = 120 Litters
2. Contractor may also collect waste from congested residential colonies through workers using wheel barrow 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) Orangi Zone \_\_\_\_\_ 667.80 KM
- b) SITE Zone \_\_\_\_\_ 222.75 KM
- c) Baldia Zone \_\_\_\_\_ 451.35 KM
- d) Kemari Zone \_\_\_\_\_ 731.46 KM
- Total 2073.36 KM
- e) Length and area for manual sweeping under following subhead is noted below.
  - a) Medians \_\_\_\_\_ 103890 Sq Meter
  - b) Footpath \_\_\_\_\_ 34545 Sq Meter
  - c) Roundabouts \_\_\_\_\_ 14300 Sq Meter
  - d) Open spaces \_\_\_\_\_ 24000 Sq Meter
  - Total 176735 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 2500 persons.

**J. Schedule for manual sweeping**

Type of roads	Manual sweeping length meter	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Secondary Main Road	309500	Yes	No	Yes	No	Yes	No	No
Streets	897550	No	Yes	No	Yes	No	Yes	No
Narrow lanes	766313	Yes	No	Yes	No	Yes	No	No
Type of Area	Manual sweeping Square meter	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Medians	103890	Yes	No	No	Yes	No	No	No
Footpath	34545	No	No	Yes	No	No	Yes	No
Open spaces	24000	No	No	No	No	No	Yes	No
Roundabouts	14300	Yes	No	No	No	No	No	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
West	264932	8	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 guideline given herein above and will attached the same with the contract document. The plan submitted by the successful bidder shall be reviewed by the client 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 West	1732	70	Yes						
Door to door collection	Inclusive as above	Tool as per requirement	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 West	600	04	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 supposed 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**

S. No.	Designation	Nos.	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	114	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/lubricants 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) 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 procuring agency have either supplied free, of cost or at fixed prices as well as for those elements for which an umbrella ex-gratia 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 than 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 bags to the resident free of cost for the first two weeks of the contract period, afterwards the contractor shall charge the cost of polythene bags from the area residents to whom the bags are provided, however the cost of the bags 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 weeks of the contract. After two

weeks, the residents shall be at liberty to buy these polythene bags either from the contractor or open market (as per approved specification).

## **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, check 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.

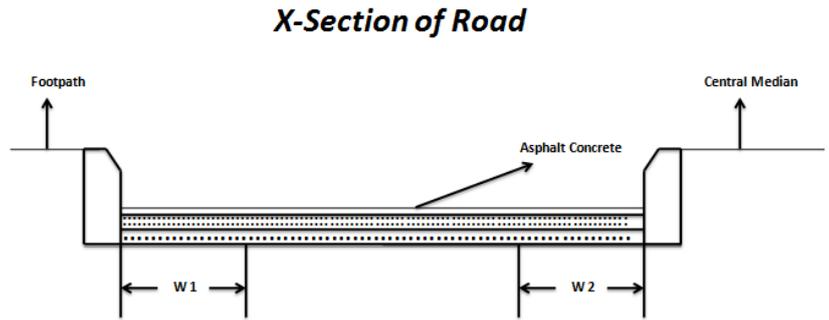
## 5.12 Rating System and Payment Criteria for sweeping work (Manual and Mechanical).

### 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 pile 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 pile of liter; the litter is straight line along the curb. b) Dust is highly concentrated with no gaps in the heaps of dust and particle. The dust is straight line along the curb.	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 curb. b) 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.

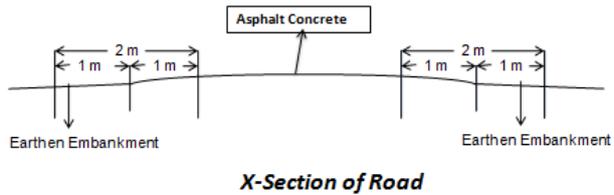


W1= 2 Meters Minimum from the edge stone of road  
 W2= 2 Meters Minimum from the edge stone of road  
 L = Length of sweeping

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

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

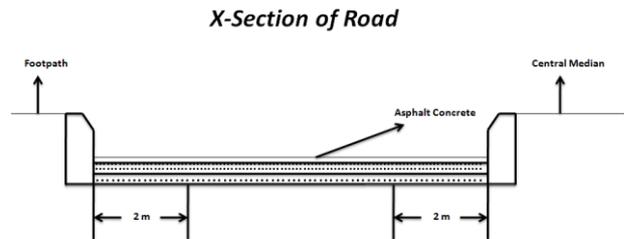
- ii. Manual sweeping of Road/Streets with earthen embankments or sides without kerbs.



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 kerbs at both edge with or without footpath, but not including sweeping of footpath

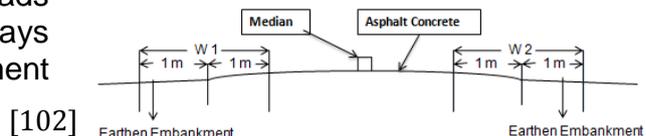


W1= 2 Meters Minimum from the edge stone of road  
 W2= 2 Meters Minimum from the edge stone of road

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



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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 7<sup>th</sup> 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 West at his own risk and cost. For the purpose of this management the contractor shall be required to:

- a) Provide as much number of vehicles 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 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 Statistic (FBS), Statistical Division Govt. of Pakistan Statutory Notification.
Adjustable portion			
(i)	Fuel Diesel	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 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)*

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

Sr. No.	Description	Current Date Price	Source
1	2	3	4
(i)	Fuel (Diesel)		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.

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

**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**

<b>Owned Purchased or Leased</b>	<b>Description of Unit (Make, Model, Year</b>	<b>Capacity HP Rating</b>	<b>Condition</b>	<b>Present Location or Source</b>	<b>Dated of Delivery at Site</b>	<b>Fuel consumption Per Kilometer</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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.*

**List of Solid Waste Machinery / Vehicles that the contractor intend to purchase  
from the DMC (West)**

<b>Make Model of the Machinery</b>	<b>Type of Machinery</b>	<b>Registration No.</b>
1	2	3

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

**Breakdown of Unit Cost of the items 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.

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

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## **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**

- Central as well as District Command and Control Centre is planned to be established by SSWMB.
- However the Contractor shall have to set up his own Control Room for effective monitoring and execution of the scheme.
- Members from District Municipal Corporation and Sindh Solid Waste Management Board shall be given access to the control room.
- Radio monitoring system to be established at control room.
- Android-based monitoring system be established at control room.
- GPS tracking system for garbage transportation vehicles.

## **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 procedure 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. / laws
- 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.

All substantive and procedural laws of Islamic Republic of Pakistan including Sindh Public Procurement Rules 2010 amended 2013 shall govern this document.

**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 West              |
| iv)   | Section IV   | Proposed plan for DMC West                        |
| 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. 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 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 caused by his or his subcontractor's personnel 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 expenses, 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.

## 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 their 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.

If the procuring agency finds any non-conformity / activity contrary to the job description defined in this document, the contractor shall be bound, given 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.

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 routs.	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	Rs.50000/-

	found less than the requirement as proposed by bidder in their proposal.	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 roadsides 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 disputes and differences arise between procuring agency and contractor in connection 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, 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 force 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 bid and this situation shall be penalized administratively.

The contractor shall act objectively and trust worthy in accordance with rules of business, ethic. He 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 in any inconsistent way towards his obligation against the procuring agency and he shall not accept any type of the contributions that may affect 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's 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 such condition and situation shall be certified by procuring agency and competent authorities.

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 violates and continues to 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 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

That procuring agency failure to perform its material obligations under this contract in timely manner. If the failure is not redressed properly by the procuring agency in 30 (thirty) days, but in no case such redressal is made beyond 90 (ninety) days except if procuring agency continues 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 quoted 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 <b>collection of MSW waste, sweeping waste including cost of door to door collection</b> , management, operational, monitoring cost and cost of machineries, labourers, sweepers, coolies, drivers, transportation, etc, cost of all taxes and other incidental cost as per the contract document.	Tons	632439 Per Year		
2.	Providing for and <b>manual sweepings of roads and streets</b> 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	284164 Kilo Meter Per Year		

[122]

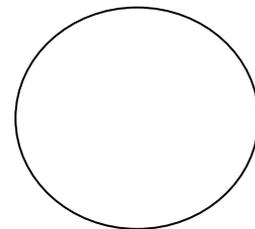
Sindh Solid Waste Management Board

3.	Providing for and <b>manual sweeping of footpath, Greenbelts, medians, Roundabouts, open spaces</b> 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	15.13 Square Kilo Meter Per Year		
4.	Providing for and <b>mechanical sweeping of roads</b> 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	61216 KM Per Year		
5.	Providing for and <b>mechanical washing of main roads</b> 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	600 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	500 Nos 1000 Nos 1500 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	200 Nos 300 Nos 100 Nos 100 Nos		
7.	Providing for and collection and transportation of offals and other	Ton	2341 Tons Per		

Sindh Solid Waste Management Board

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 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		Year (approximate)		
---	--	-----------------------	--	--

- I. Per Year cost / Rate of work and services for item listed in price list / B.O.Q. in Figures \_\_\_\_\_
- II. Per Year cost / rate of work and services for item listed in price list / B.O.Q. in words \_\_\_\_\_
- III. Discount on account of labourers / workforce obtained from DMC. Total Amount Per Year \_\_\_\_\_
- IV. Net Cost / Rate of Works and services for item listed in Price List/B.O.Q in Figures \_\_\_\_\_
- V. Net Cost / Rate of Works and services for item listed in Price List/B.O.Q in Words \_\_\_\_\_



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.
8. 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**

**Annexure**

<b><u>Orangi Zone</u></b>	
Annexure-1	MSW Details in Each Union Council
Annexure-2	Statistics of House Hold Units
Annexure-3	Road, Footpath, Median & Open Spaces
<b><u>SITE Zone</u></b>	
Annexure-4	MSW Details in Each Union Council
Annexure-5	Statistics of House Hold Units
Annexure-6	Road, Footpath, Median & Open Spaces
<b><u>Baldia Zone</u></b>	
Annexure-7	MSW Details in Each Union Council
Annexure-8	Statistics of House Hold Units
Annexure-9	Road, Footpath, Median & Open Spaces
<b><u>Kemari Zone</u></b>	
Annexure-10	MSW Details in Each Union Council
Annexure-11	Statistics of House Hold Units
Annexure-12	Road, Footpath, Median & Open Spaces
Annexure-13	Salaries Orangi Zone
Annexure-14	Salaries SITE Zone
Annexure-15	Salaries of Baldia Zone
Annexure-16	Salaries of Kemari Zone
Annexure-17	Existing SW Machinery in Orangi Zone
Annexure-18	Existing SW Machinery in SITE Zone
Annexure-19	Existing SW Machinery in Baldia Zone
Annexure-20	Existing SW Machinery in Kemark Zone
<b><u>Forms</u></b>	
Annexure-21	Performance Guarantee format
Annexure-22	Integrity Pact.
Annexure-23	Format for Contract Agreement

## MSW Details in Each Union Council of Orangi Zone (including Sweeping waste and land scape 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	Mominabad	56160	85273	127909	2.13	48.61	9.15	0	20	0
2	2	Haryana Colony	64570	98042	147063	1.13	55.88	8.50	0	12	0
3	3	Hanifabad	54372	82558	123837	1.27	47.06	8.29	0	12	0
4	4	Muhammad Nagar	63753	96802	145203	1.90	55.18	7.50	0	29	0
5	5	Madina Colony	58772	75916	113874	1.88	43.27	5.78	0	29	0
6	6	Ghaziabad	57402	90195	135292	1.29	51.41	5.99	0	29	0
7	7	Chushti Nagar	58582	88950	133425	4.56	50.70	5.00	0	18	0
8	8	Bilal Colony	64776	98355	147532	2.12	56.06	7.19	0	27	0
9	9	Iqbal Baloch Colony	53474	94517	141775	1.43	53.87	6.40	0	18	0
10	10	Gobal Colony	56121	85213	127819	1.15	48.57	8.65	0	23	0
11	11	Data Nagar	56964	86493	129739	0.55	49.30	9.64	0	25	0
12	12	Mujahidabad	51866	78753	118129	0.85	44.89	10.13	0	27	0
13	13	Baloch Goth	24882	37781	56671	0.65	21.53	10.40	0	25	0
<b>Total</b>		<b>13 UC</b>	<b>721694</b>	<b>1098848</b>	<b>1648268</b>	<b>20.91</b>	<b>626.34</b>		<b>0</b>	<b>294</b>	<b>0</b>

**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 Orangi Zone.

									<b>Annexure- 2</b>	
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	Mominabad	2.13	56160	127909	7561	17221	Low	Congested	48.61
2	2	Haryana Colony	1.13	64570	147063	9327	21243	Low	Congested	55.88
3	3	Hanifabad	1.27	54372	123837	7705	17549	Low	Congested	47.06
4	4	Muhammad Nagar	1.90	63753	145203	9500	21637	Low	Congested	55.18
5	5	Madina Colony	1.88	58772	113874	8842	17132	Low	Congested	43.27
6	6	Ghaziabad	1.29	57402	135292	8947	21087	Low	Congested	51.41
7	7	Chushti Nagar	4.56	58582	133425	9404	21418	Low	Congested	50.70
8	8	Bilal Colony	2.12	64776	147532	9489	21612	Low	Congested	56.06
9	9	Iqbal Baloch Colony	1.43	53474	141775	8044	21327	Low	Congested	53.87
10	10	Gobal Colony	1.15	56121	127819	8006	18234	Low	Congested	48.57
11	11	Data Nagar	0.55	56964	129739	8481	19316	Low	Congested	49.30
12	12	Mujahidabad	0.85	51866	118129	7576	17255	Low	Congested	44.89
13	13	Baloch Goth	0.65	24882	56671	3191	7268	Low	Congested	21.53
<b>Total</b>		<b>13 UC</b>	<b>20.91</b>	<b>721694</b>	<b>1648268</b>	<b>106073</b>	<b>242259</b>			<b>626.34</b>

**Note:**

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi West, 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.

**Roads, Footpaths, Medians & Open spaces in Orangi 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	20.91	Mechanical Sweeping	44520	a) 30 to 36 Dual Carriageway	1469160	
				25970	b) 18 to 30 Single Carriageway	623280	
B	Secondary Main Roads		Manual Sweeping	111300	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	1669500	
	Streets			296800	b) 12 to 15 Single Carriage (internal roads)	4006800	
	Narrow Lane			259700	c) less then 9 Meters (Back Lane/ Narrow Lane)	2337300	
C	Medians		Manual Sweeping		a) 01 Meter	45000	
D	Footpaths		Manual Sweeping		b) 01 to 02 Meter	7500	
E	Chowrangi		Manual Sweeping			6000	
F	Open Spaces		Manual Sweeping			10000	
<b>Total</b>						<b>10174540</b>	

**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 SITE Zone (including Sweeping waste and land scrape waste)

### Annexure-4

S. No.	Union Council		Population Statistics in 1998	Population (Forecasted) in Karachi Master plan 2005	Population forecasted in 2015 at growth of 5% Per anum	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	Pak Calony	54955	83443	125164	0.76	47.56	1.02	0	31	2
2	2	Old Golimar	42662	64777	97165	0.79	36.92	1.81	0	24	0
3	3	Jahanabad	39702	66306	99459	7.24	37.79	2.43	0	21	0
4	4	Matroville	55907	84889	127333	10.03	48.39	3.52	0	23	3
5	5	Pathan Colony	50225	76261	114391	0.94	43.47	3.39	0	10	5
6	6	Frontier Colony	60795	67676	101514	1.66	38.58	3.52	0	47	0
7	7	Banaras Colony	47655	96993	145489	0.76	55.29	3.39	0	0	4
8	8	Qasba Colony	59051	89662	134493	0.88	51.11	1.02	0	44	0
9	9	Islamia Colony	52641	79929	119893	1.13	45.56	1.41	0	22	0
<b>Total</b>		<b>09 UC</b>	<b>463593</b>	<b>709936</b>	<b>1064901</b>	<b>24.19</b>	<b>404.66</b>		<b>0</b>	<b>222</b>	<b>14</b>

**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 SITE Zone.

									<b>Annexure-5</b>	
S. No.	Union Council		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per anum	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	Pak Calony	0.76	54955	125164	7318	16667	Middle to Low	Congested	47.56
2	2	Old Golimar	0.79	42662	97165	6333	14424	Middle to Low	Thickly congested	36.92
3	3	Jahanabad	7.24	39702	99459	5925	14843	Middle to Low	Congested	37.79
4	4	Matroville	10.03	55907	127333	8022	18271	Middle to Low	Congested	48.39
5	5	Pathan Colony	0.94	50225	114391	6705	15271	Middle to Low	Thickly congested	43.47
6	6	Frontier Colony	1.66	60795	101514	7690	12841	Middle to Low	Thickly congested	38.58
7	7	Banaras Colony	0.76	47655	145489	5734	17506	Middle to Low	Thickly congested	55.29
8	8	Qasba Colony	0.88	59051	134493	8109	18469	Middle to Low	Thickly congested	51.11
9	9	Islamia Colony	1.13	52641	119893	7084	16134	Middle to Low	Congested	45.56
<b>Total</b>		<b>09 UC</b>	<b>24.19</b>	<b>463593</b>	<b>1064901</b>	<b>62920</b>	<b>144531</b>			<b>404.66</b>

**Note:**

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi West, 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.

**Roads, Footpaths, Medians & Open spaces in SITE Zone.**

							<b>Annexure-6</b>	
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	<b>24.19</b>	Mechanical Sweeping	27500	a) 30 to 36 Dual Carriageway	907500		
				24750	b) 18 to 30 Single Carriageway	594000		
B	Secondary Main Roads		Manual Sweeping	49500	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	742500		
	Streets			96250	b) 12 to 15 Single Carriage (internal roads)	1299375		
	Narrow Lane			77000	c) less then 9 Meters (Back Lane/ Narrow Lane)	693000		
C	Medians		Manual Sweeping		a) 01 Meter	4000		
D	Footpaths		Manual Sweeping		b) 01 to 02 Meter	5625		
E	Chowrangi		Manual Sweeping			2500		
F	Open Spaces		Manual Sweeping			5000		
<b>Total</b>						<b>4253500</b>		

**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 Baldia 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 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	Gulshan-e-Ghazi	51096	77584	116376	8.30	44.22	6.34	0	29	0
2	2	Ittehad Town	46475	82942	124413	11.94	47.28	4.78	0	45	0
3	3	Islam Nagar	39879	60552	90828	7.40	34.51	5.12	0	49	0
4	4	Nai Abadi	41182	59138	88707	2.13	33.71	7.02	0	42	0
5	5	Saeed Abad	62000	85157	127735	1.41	48.54	7.90	6	5	0
6	6	Muslim Mujahid Colony	63557	96504	144756	1.19	55.01	9.24	0	23	0
7	7	Muhajir Colony	50571	76786	115179	1.00	43.77	8.65	0	13	0
8	8	Rasheed Abad	51405	78053	117079	0.93	44.49	10.01	3	22	0
<b>Total</b>		<b>08 UC</b>	<b>406165</b>	<b>616716</b>	<b>925073</b>	<b>34.30</b>	<b>351.53</b>		<b>9</b>	<b>228</b>	<b>0</b>

**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 Baldia Zone.****Annexure- 8**

S. No.	Union Council		Area of UC in Sq KM	Population Statistics in 1998	Population forecasted in 2015 at growth of 5% Per anum	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	Gulshan-e-Ghazi	8.30	51096	116376	7770	17697	Middle	Congested	44.22
2	2	Ittehad Town	11.94	46475	124413	6798	18198	Middle	Vast	47.28
3	3	Islam Nagar	7.40	39879	90828	5717	13021	Middle	Congested	34.51
4	4	Nai Abadi	2.13	41182	88707	5992	12907	Middle	Congested	33.71
5	5	Saeed Abad	1.41	62000	127735	9220	18995	Middle	Congested	48.54
6	6	Muslim Mujahid Colony	1.19	63557	144756	8571	19521	Middle	Congested	55.01
7	7	Muhajir Colony	1.00	50571	115179	7320	16672	Middle	Congested	43.77
8	8	Rasheed Abad	0.93	51405	117079	6926	15775	Middle	Congested	44.49
<b>Total</b>		<b>09 UC</b>	<b>34.30</b>	<b>406165</b>	<b>925073</b>	<b>58314</b>	<b>132815</b>			<b>351.53</b>

**Note:**

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi West, 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.

**Roads, Footpaths, Medians & Open spaces in Baldia Zone.**

							<b>Annexure-9</b>	
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	<b>34.30</b>	Mechanical Sweeping	33150	a) 30 to 36 Dual Carriageway	1093950		
				25500	b) 18 to 30 Single Carriageway	612000		
B	Secondary Main Roads		102000	Manual Sweeping	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	1530000		
	Streets		178500		b) 12 to 15 Single Carriage (internal roads)	2409750		
	Narrow Lane		170850		c) less then 9 Meters (Back Lane/ Narrow Lane)	1537650		
C	Medians			Manual Sweeping		a) 01 Meter	45000	
	Footpaths			Manual Sweeping		b) 01 to 02 Meter	6750	
D	Chowrangi			Manual Sweeping			5000	
E	Open Spaces			Manual Sweeping			8000	
<b>Total</b>						<b>7248100</b>		

**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 Kemari Zone (Including Sweeping waste and land scrape waste)

### Annexure-10

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	Bhutta Village	62125	94330	141495	3.39	56.60	9.00	2	6	0
2	2	Sultan Abad	49544	75227	112840	5.22	45.14	6.00	1	13	0
3	3	Kemari	55420	84149	126223	7.67	50.49	8.00	2	10	0
4	4	Baba Bhit	19043	28915	43372	37.34	17.35	0.00	Burned & Dumped on Earth		
5	5	Machar Colony	40637	89260	133890	3.86	53.56	5.00	0	15	5
6	6	Maripur	47925	72769	109153	95.54	43.66	3.00	3	12	6
7	7	Sher Shah	71629	81203	121804	4.87	48.72	4.21	3	14	8
8	8	Gabo Put	38055	57782	86673	259.30	34.67	8.00	2	14	6
<b>Total</b>		<b>08 UC</b>	<b>384378</b>	<b>583635</b>	<b>875450</b>	<b>417.19</b>	<b>350.18</b>		<b>13</b>	<b>84</b>	<b>25</b>

**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 Kemari Zone.**

									<b>Annexure-11</b>	
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	Bhutta Village	3.39	62125	141495	7081	16128	Low Income	Congested	56.60
2	2	Sultan Abad	5.22	49544	112840	7117	16209	Low Income	Congested	45.14
3	3	Kemari	7.67	55420	126223	8018	18262	Low Income	Congested	50.49
4	4	Baba Bhit	37.34	19043	43372	2735	6229	Low Income	Congested	17.35
5	5	Machar Colony	3.86	40637	133890	6617	21802	Low Income	thickly congested	53.56
6	6	Maripur	95.54	47925	109153	7015	15977	Low Income	Congested	43.66
7	7	Sher Shah	4.87	71629	121804	9316	15842	Low Income	thickly congested	48.72
8	8	Gabo Put	259.30	38055	86673	6383	14538	Low Income	congested in the area of residents	34.67
<b>Total</b>		<b>08 UC</b>	<b>417.19</b>	<b>384378</b>	<b>875450</b>	<b>54282</b>	<b>123631</b>			<b>350.18</b>

**Note:**

1. Numbers of Houses figures are taken from 1998 District Census Report of Karachi West, 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.

**Roads, Footpaths, Medians & Open spaces in Kemari Zone.**

							<b>Annexure-12</b>	
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	<b>417.19</b>	Mechanical Sweeping	55013	a) 30 to 36 Dual Carriageway	1815429		
				28529	b) 18 to 30 Single Carriageway	684696		
B	Secondary Main Roads		Manual Sweeping	146700	a) 12 to 18 Single / Dual Carriageway (Inter connected roads)	2200500		
	Streets			326000	b) 12 to 15 Single Carriage (internal roads)	4401000		
	Narrow Lane			258763	c) less then 9 Meters (Back Lane/ Narrow Lane)	2328867		
C	Medians		Manual Sweeping		a) 01 Meter	9890		
D	Footpaths		Manual Sweeping		b) 01 to 02 Meter	14670		
E	Chowrangi		Manual Sweeping			800		
F	Open Spaces		Manual Sweeping			1000		
<b>Total</b>						<b>11456852</b>		

**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 Orangi 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
	<b>Office Staff</b>								
1	D.T.O. (Sanitation)	17	1	16000-1200-40000	314400	288396	94080		696876
2	A.T.O. (Sanitation)	16	3	10000-800-34000	604800	559608	221760		1386168
3	Accounts Assistant	14	1	8000-610-26300	224100	247188	57624	2856	531768
4	Head Clerk	14	1	8000-610-26300	143580	177564	57642	2856	381642
5	Comp Operator	11	2	6600-460-20400	186000	284808	90760	5712	567280
6	Sub-Registrar	5	1	5400-260-13200	144360	170940	31248	1668	348216
7	Clerk	7	5	5800-320-15400	495840	662964	178080	8340	1345224
8	Naib Qasid	2	4	4900-170-10000	390240	544176	100128	5712	1040256
	<b>Overtime/Benefits</b>								
<b>Total</b>			<b>18</b>		<b>2503320</b>	<b>2935644</b>	<b>831322</b>	<b>27144</b>	<b>6297430</b>

## Existing Budget (2015-2016) on Solid Waste Management of Orangi 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
	<b>Field Staff</b>								
1	Inspectors	14	6	8000-610-26300	1286040	1581444	345744	17136	3230364
2	Sub-Inspector	11	13	6600-460-20400	1938000	1977004	579936	35940	4530880
3	Driver	7	4	5800-320-15400	543360	485236	142464	6672	1177732
4	Driver	5	24	5400-260-13200	2740800	3552221	749952	40032	7083005
5	Munshi	5	8	5400-260-13200	885540	1117440	236880	11904	2251764
6	Muccadum	4	16	5200-230-12100	1903360	2409346	465024	22848	4800578
7	Muccadum	3	10	5050-200-11050	1084760	1387659	270480	14280	2757179
8	Naib Qasid	2	4	4900-170-10000	390240	544176	100128	5712	1040256
9	Karkun (Cooly)	2	33	4900-170-10000	2768100	3299665	450576	25704	6544045
10	Tractor Cooly	1	60	4800-150-9300	3834000	6228720	1421280	85680	11569680
11	Cleaner	1	30	4800-150-9300	1917000	3114360	710640	42840	5784840
12	Sanitary Worker	2	337	4900-170-10000	36230500	46074148	13371994	481236	96157878
	<b>Total</b>				55521700	71771419	18845098	789984	146928201
	<b>Overtime/Honorium</b>								5304000
<b>Total</b>			<b>545</b>		<b>55521700</b>	<b>71771419</b>	<b>18845098</b>	<b>789984</b>	<b>152232201</b>

**Existing Budget (2015-2016) on Solid Waste Management of SITE 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
	<b>Office Staff</b>								
1	Head Clerk	14	1	8000-610-26300	136260	174504	57624	1428	369816
2	Clerk	7	5	5800-320-15400	568800	716880	178080	4200	1467960
3	Naib Qasid	1/2	3	4900-170-10000	227700	342720	72408	2160	644988
4	Chokidar	1/2	3	4900-170-10000	297780	396504	73752	2160	770196
	<b>Overtime/Benefits</b>								
<b>Total</b>			<b>12</b>		<b>1230540</b>	<b>1630608</b>	<b>381864</b>	<b>9948</b>	<b>3252960</b>

## Existing Budget (2015-2016) on Solid Waste Management of SITE 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
	<b>Field Staff</b>								
1	Chief Sanitary Officer	17	1	16000-1200-40000	285600	333336	94080	0	713016
2	Asst. Sanitary Officer	16	3	10000-800-34000	681600	807456	221760	0	1710816
3	Sanitary Inspector	14	3	8000-610-26300	518580	617940	172872	4284	1313676
4	Motor Vehicle Inspector	14	1	8000-610-26300	136260	183372	57624	1428	378684
5	Sub Inspector	11	10	6600-460--20400	1349520	1662192	1662192	14280	4688184
6	Driver	5/6/7	30	5800-320-15400	3778320	4666812	989856	25200	9460188
7	Munshi	4/5	6	5400-260-13200	696780	880260	176568	4440	1758048
8	Mucaddam	3/4	14	5200-230-12100	1618860	2039160	386736	10080	4054836
9	Cooly	1/2	142	4900-170-10000	10217640	19075656	3510192	102240	32905728
10	Sweeper	1/2	290	4900-170-10000	26552520	41356632	7249872	208800	75367824
	<b>Total</b>				45835680	71622816	14521752	370752	132351000
	<b>Overtime/Honorium</b>								2500000
<b>Total</b>			<b>500</b>		<b>45835680</b>	<b>71622816</b>	<b>14521752</b>	<b>370752</b>	<b>134851000</b>

## Existing Budget (2015-2016) on Solid Waste Management of Baldia 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
	<b>Office Staff</b>								
1	Chief Sanitation Officer.	18	1	20000-1500-50000	352000	418264	98560		868824
2	Asstt. Sanitary Officer	17	1	16000-1200-40000	345840	231506	96835		674181
3	Asstt. Solid Waste Officer	17	2	16000-1200-40000	396880	418352	111126		926358
4	Office Superintendent	16	2	10000-800-34000	324280	264385	90798		679463
5	Computer Operator	11	2	6600-460--20400	298276	308330	83517		690123
6	Head Clerk	14	2	8000-610-26300	324302	313830	90805		728937
7	Accountant (SCUG)	11	1	6600-460--20400	131736	148940	36886		317562
8	Clerk	7	5	5800-320-15400	655820	1079020	183630		1918470
9	Chowkidar	2	2	4900-170-10000	266244	231682	74548		572474
10	Naib Qasid	2	3	4900-170-10000	385902	378670	108053		872625
	10% Increase					824902			824902
	<b>Overtime/Benefits</b>								
<b>Total</b>			<b>21</b>		<b>3481280</b>	<b>4617881</b>	<b>974758</b>	<b>0</b>	<b>9073919</b>

**Existing Budget (2015-2016) on Solid Waste Management of Baldia 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
	<b>Field Staff</b>								
1	Health Inspector	14	4	8000-610-26300	1187208	1200725	332418		2720351
2	Sub Inspector	7	16	5800-320-15400	2280432	2339599	638521		5258552
3	Munshi	4	5	5400-260-13200	609246	536052	170589		1315887
4	Muccaddam	4	20	5400-260-13200	2433530	2442440	681388		5557358
5	Sanitary worker	2	525	4900-170-10000	62267150	55187264	17434802		134889216
6	MV Inspector	14	1	8000-610-26300	244860	268675	68561		582096
7	Time Keeper	5	1	5400-260-13200	121550	116182	34034		271766
8	Heavy Vehicle Driver	9	4	6200-380-17600	506638	528286	141859		1176783
9	Driver	7	5	5800-320-15400	721402	747175	201993		1670570
10	Driver	5	25	5400-260-13200	3327038	3354175	931571		7612784
11	Coolies	2	70	4900-170-10000	7507830	7618160	2102192		17228182
	<b>Total</b>				81206884	74338733	22737928	0	178283545
	<b>Overtime/Honorium</b>					3000000			3000000
	Additional Pay	10%				17828354			17828354
<b>Total</b>			<b>676</b>		<b>81206884</b>	<b>95167087</b>	<b>22737928</b>	<b>0</b>	<b>199111899</b>

**Existing Budget (2015-2016) on Solid Waste Management  
of Kemari Zone.**

**(Salaries)**

**Annexure- 16**

S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum
	<b>Office Staff</b>								
1	Director-II (Health)	18	1	20000-1500-50000	330000	419604	117600	8312	875516
2	Clerk	7	3	5800-320-15400	335520	566532	106848	4986	1013886
3	Munshi	5	5	5400-260-13200	508080	752160	156240	8310	1424790
4	Sub Registrar	5	1	5400-260-13200	161520	150432	31248	1662	344862
5	Chowkidar	2	3	4900-170-10000	245040	370584	72396	4275	692295
6	Peon	2	2	4900-170-10000	133200	244200	47376	2850	427626
					1713360	2503512	531708	30395	4778975
	<b>Overtime/Honorium</b>								
	Additional Pay	10%				477898			477898
<b>Total</b>			<b>15</b>		<b>1713360</b>	<b>2981410</b>	<b>531708</b>	<b>30395</b>	<b>5256873</b>

**Existing Budget (2015-2016) on Solid Waste Management of Kemari Zone****(Salaries)****Annexure- 16**

S. No.	Designation	BPS	Total Number of Employees	Basic Pay Scale	Establishment Charge / Pay	Allowances	Pension Contribution	Group Insurance	Gross Salary Per Annum
	<b>Field Staff</b>								
1	Assistant Sanitation Officer	17	1	16000-1200-40000	292800	365544	94080	5700	758124
2	M.V.I	17	1	16000-1200-40000	321600	365544	94080	5700	786924
3	Inspector (Health)	16	3	10000-800-34000	705600	874260	221760	12825	1814445
4	Driver	7	29	5800-320-15400	3275280	3610368	749952	39888	7675488
5	Mucadam	4	14	5200-230-12100	1514400	1898232	406896	19950	3839478
6	Notice Surveyor	2	1	4900-170-10000	110880	115299	25020	1425	252624
7	Cleaner	2	1	4900-170-10000	113880	126384	25020	1425	266709
8	Sanitary Worker	2	542	4900-170-10000	61290680	49927062	13567344	772350	125557436
9	Karkun/Motor Cooly	2	40	4900-170-10000	4684014	3974557	1001280	57000	9716851
	<b>Total</b>				72309134	61257250	16185432	916263	150668079
	<b>Overtime/Honorium</b>					3700000			3700000
	Additional Pay	10%				15066808			15066808
<b>Total</b>			<b>632</b>		<b>72309134</b>	<b>80024058</b>	<b>16185432</b>	<b>916263</b>	<b>169434887</b>

## Existing Solid Waste Machinery / Vehicles in Orangi Zone

Annexure- 17

S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	0713584	Bobcat	Bobcat		Off Road
2	CH-708915	Kamatso	Bobcat		Off Road
<b>Total</b>			<b>02 Bobcat</b>		
1	GS-3188		Cess Poll		Off Road
<b>Total</b>			<b>01 Cess Poll</b>		
1	CH-159038	Volvo FL-6	Dumper		Off Road
2	CH-101122	Volvo FL-6	Dumper		On Road
3	CH-101284	Volvo FL-6	Dumper		On Road
4	CH-21291	Hino FF	Dumper		Off Road
5	CH-10044	Hino FD	Dumper		On Road
6	CH-16068	Hino FB	Dumper		On Road
7	CH-11398	Hino FB	Dumper		Off Road
8	CH-21287	Hino FF	Dumper		On Road
9	159039	Volvo	Dumper		On Road
10	158505	Volvo	Dumper		On Road
<b>Total</b>			<b>10 Dumper</b>		
1	702571	Wheel Loader 385	Loader		On Road
2	CH-12912	Kamatso Loader	Loader		On Road
3	0774990	Bach Hoe Front Loader	Loader		On Road
4	0702570	Bob Cat Skid Loader	Loader		Off Road
<b>Total</b>			<b>04 Loader</b>		
1	CH-10905	Hino FB	Refuse Van		On Road
2	CH-10784	Hino FB	Refuse Van		On Road
3	CH-16112	Hino FB	Refuse Van		On Road
4	636	Hino (Titan)	Refuse Van		On Road
5	GS-3246	Bed Ford	Refuse Van		Off Road
6	GS-8756	Issuzu	Refuse Van		On Road
7	992	Master	Refuse Van		On Road
8	972	Master	Refuse Van		On Road
<b>Total</b>			<b>08 Refuse Van</b>		
1	CH-2806	Tractor Front Loader 385	Tractor Loader		Off Road
2	CH-500253	Tractor Front Loader 385	Tractor Loader		Off Road
<b>Total</b>			<b>02 Tractor Loader</b>		
1	CH-G002807	Tractor Trolley	Tractor Trolley		On Road
2	CH-G002907	Tractor Trolley	Tractor Trolley		On Road
3	CH-161453	Tractor Trolley MF 240	Tractor Trolley		On Road
4	16427	Tractor Trolley	Tractor Trolley		Off Road
5	GS-9056	Tractor MF-240	Tractor Trolley		On Road
6	CH-2808	Tractor Trolley 385	Tractor Trolley		On Road
7	CH-2902	Tractor Trolley	Tractor Trolley		On Road
8	161-353	Tractor	Tractor Trolley		Off Road
<b>Total</b>			<b>08 Tractor Trolley</b>		

**Existing Solid Waste Machinery / Vehicles in SITE Zone****Annexure- 18**

S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	10990		Arm Roll	2001	MAJOR DEFECT
2	15817		Arm Roll	1988	ON ROAD
<b>Total</b>			<b>02 Arm Roll</b>		
1	CH-07708		Bobcat	2007	MAJOR DEFECT
2	02728		Bobcat	2006	MAJOR DEFECT
3	CH-07707		Bobcat	2007	MAJOR DEFECT
4	CH-02729		Bobcat	2006	ON ROAD
5	00490		Bobcat	2001	MAJOR DEFECT
<b>Total</b>			<b>05 Bob Cat</b>		
1	GS-3236		Cess Poll	1979	ON ROAD
<b>Total</b>			<b>01 Cess Poll</b>		
1	Applied	Rickshaw Garbage Careier		2015	ON ROAD
2	Applied	Rickshaw Garbage Careier		2015	ON ROAD
3	Applied	Rickshaw Garbage Careier		2015	ON ROAD
4	Applied	Rickshaw Garbage Careier		2015	ON ROAD
5	Applied	Rickshaw Garbage Careier		2015	ON ROAD
<b>Total</b>			<b>05 Rickshaw Garbage Carrier</b>		
1	CH-16104		Dumper	2001	MAJOR DEFECT
2	11402		Dumper	1992	MAJOR DEFECT
<b>Total</b>			<b>02 Dumper</b>		
1	000302		Front Loader	2001	MAJOR DEFECT
2	84138		Front Loader	2010	ON ROAD
3	84134		Front Loader	2010	ON ROAD
<b>Total</b>			<b>03 Front Loader</b>		
1	Applied		FAW Mini Van	2015	ON ROAD
<b>Total</b>			<b>01 FAW Mini Van</b>		
1	CH-10054	Hino F.D	Loader	1992	ON ROAD
2	CXG-00953		Loader	2010	ON ROAD
3	045532		Loader	1993	MAJOR DEFECT
<b>Total</b>			<b>03 Loader</b>		
1	CH-10046		Multi Loader	1992	ON ROAD
2	21288		Multi Loader	1992	MAJOR DEFECT
<b>Total</b>			<b>02 Multiloader</b>		
1	GS-8992	Bedford	Refuse Van	1979	MAJOR DEFECT
2	GS-3068	Bedford	Refuse Van	1979	ON ROAD
3	700060	Bedford	Refuse Van	1988	ON ROAD
4	600822	Bedford	Refuse Van	1988	ON ROAD
5	CH-10913	Hino F.B	Refuse Van	1989	MAJOR DEFECT
6	CH-16058	Hino F.B	Refuse Van	2001	ON ROAD
7	10786	Hino F.B	Refuse Van	1989	ON ROAD
8	CH-10900	Hino F.B	Refuse Van	1989	MAJOR DEFECT

Sindh Solid Waste Management Board

		<b>Total</b>	<b>08 Refuse Van</b>		
1	CH-0236	Tractor	Tractor Trolley	2003	ON ROAD
2	GL-9058	Tractor	Tractor Trolley	1988	ON ROAD
3	CH-0481	Tractor	Tractor Trolley	2007	ON ROAD
4	CH-0442	Tractor	Tractor Trolley	2007	MAJOR DEFECT
5	CH-0444	Tractor	Tractor Trolley	2007	MAJOR DEFECT
6	CH-0499	Tractor	Tractor Trolley	2007	ON ROAD
7	GL-8012	Tractor	Tractor Trolley	1988	ON ROAD
8	CH-0440	Tractor	Tractor Trolley	2007	MAJOR DEFECT
9	CH-214120	Tractor	Tractor Trolley	1988	ON ROAD
10	161-357	Tractor	Tractor Trolley	1988	ON ROAD
11	0487	Tractor	Tractor Trolley	2007	ON ROAD
12	0457	Tractor	Tractor Trolley	2007	ON ROAD
13	0464	Tractor	Tractor Trolley	2007	ON ROAD
		<b>Total</b>	<b>13 Tractor Trolley</b>		

## Existing Solid Waste Machinery / Vehicles in Baldia Zone

Annexure- 19

S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	CH-101482		Arm Roll	1990	Off Road
2	CH-21302		Arm Roll	1990	On Road
3	CH-14888		Arm Roll	1982	Off Road
<b>Total</b>			<b>3 Arm Roll</b>		
1	CH-03300	Bobcat	Bobcat	2008	Off Road
2	CH-1505	Bobcat	Bobcat	2008	Off Road
3	CH-00376	Kumatso	Bobcat	2002	Off Road
4	CH-175659	Case	Bobcat	1990	On Road
<b>Total</b>			<b>4 Bobcat</b>		
1	GL-3062	Bedford	Cess Poll	1979	Off Road
2	GL-8754	Bedford	Cess Poll	1979	Off Road
<b>Total</b>			<b>02 Cess Poll</b>		
1	CH-3601068	Isuzu FTR	Dumper	1991	On Road
2	CH-16041	Hino FB	Dumper	2002	On Road
3	CH-12156	Hino KR	Dumper	1980	On Road
4	CH-3500492	Isuzu JCR	Dumper	1991	On Road
<b>Total</b>			<b>04 Dumper</b>		
1	CH-0101	Tractor	Front Loader	2002	Off Road
2	CH-0300	Tractor	Front Loader	2008	Off Road
3	CH-0056	Tractor	Front Loader	2007	On Road
<b>Total</b>			<b>03 Front Loader</b>		
1	CH-21289		Multiloader	1990	Off Road
2	CH-10045		Multiloader	1990	On Road
<b>Total</b>			<b>02 Multiloader</b>		
1	CH-204228	Master	Refuse Van	2007	Off Road
2	CJ-204225	Master	Refuse Van	2007	Off Road
3	CH-204227	Master	Refuse Van	2007	On Road
<b>Total</b>			<b>03 Refuse Van</b>		
1	CH-95742	Loinggong	Shawl	2008	On Road
<b>Total</b>			<b>01 Shawal</b>		
1	CH-161-373	Tractor	Tractor Trolley	1988	On Road
2	CH-0343/08	Tractor	Tractor Trolley	2004	On Road
3	CH-0346-23	Tractor	Tractor Trolley	2008	Off Road
4	CH-0338/06	Tractor	Tractor Trolley	2004	On Road
5	CH-9006/09	Tractor	Tractor Trolley	2004	Off Road
6	CH-161-351	Tractor	Tractor Trolley	1988	Off Road
7	CH-0346/20	Tractor	Tractor Trolley	2008	Off Road
8	CH-0326/06	Tractor	Tractor Trolley	2008	Off Road
9	CH-0346/30	Tractor	Tractor Trolley	2008	On Road
10	CH-161-398	Tractor	Tractor Trolley	1988	Off Road

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			<b>Total</b>	<b>10 Tractor Trolley</b>		
1				Motorcycle Rickshaw with container		
			<b>Total</b>	<b>19 Motorcycle Rickshaw with container</b>		

## Existing Solid Waste Machinery / Vehicles in Kemari Zone

**Annexure- 20**

S.NO.	VEHICLE NO.	MAKE	TYPE	MODEL	Remarks
1	CH-101281	Volvo	Arm Roll	1993	On Road
2	CH-101279	Volvo	Arm Roll	1993	On Road
3	CH-15869	HINO (FF)	Arm Roll		On Road
4	CH-21303	HINO (FF)	Arm Roll		On Road
<b>Total</b>			<b>04 Arm Roll</b>		
1	CH-713591	Bob Cat	Bob Cat	2007	On Road
2	CH-175658	Case	Bob Cat	1993	On Road
<b>Total</b>			<b>02 Bob Cat</b>		
1	CH-159041	Volvo.	Compactor	1993	On Road
2	CH-159040	Volvo	Compactor	1993	Off Road
<b>Total</b>			<b>02 Compactor</b>		
1	CH-16043	HINO (FB)	Dumper	2003	On Road
2	CH-16099	HINO (FB)	Dumper	2003	On Road
<b>Total</b>			<b>02 Dumper</b>		
14	CH-84192-1	MF-385	Front Loader	2008	On Road
15	CH-84093-3	MF-385	Front Loader	2005	On Road
16	CH-01-04	MF-385	Front Loader	2003	Off Road
<b>Total</b>			<b>03 Front Loader</b>		
1	CH-10053	HINO	Multi Loader		On Road (With Container)
<b>Total</b>			<b>01 Multiloader</b>		
1	CH-02481	Kumartsu	Skid Loader	2006	On Road
2	CH-00591	Kumartsu	Skid Loader	2005	On Road
<b>Total</b>			<b>02 Skit Loader</b>		
1	GS-3203	Bedford	Sucking Vehicles	1972	On Road
2	GS-3210	ISUZU	Sucking Vehicles	1993	On Road
<b>Total</b>			<b>02 Sucking Vehicles</b>		
1	GL-8013	MF-240	Tractor Trolley	1985	On Road
2	GL-9057	MF-240	Tractor Trolley	1985	On Road
3	CH-066	Bellarus	Tractor Trolley	1982	On Road
4	CH-40731-11	MF-240	Tractor Trolley	2010	On Road
5	CH-40731-12	MF-240	Tractor Trolley	2009	On Road
6	CH-40731-14	MF-240	Tractor Trolley	2009	Off Road
7	41592-19	MF-240	Tractor Trolley	2008	On Road
8	CH-97065	MF-240	Tractor Trolley	1982	Off Road
<b>Total</b>			<b>08 Tractor Trolley</b>		

## 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**