



## **Agra Smart City Limited, Agra**

### **REQUEST FOR PROPOSEL**

Ref. No.22/ASCL/SWD/OCT-18

Selection of Agency to establishing Municipal Solid Waste management system in TajGanj area for Agra under smart city mission for the ABD area.

(Second Call)

**Agra Smart City Limited (ASCL), Office of Nagar Nigam,  
Agra, UP-282001**

**Issued on: 27.10.201**

## Contents

1. Section 1. Letter of Invitation .....	6
2. Section 2: Instructions to Bidders - Part I.....	7
2.1. Definitions.....	7
2.2. Introduction .....	8
2.3. Eligibility of Association of bidders and sub-bidders .....	8
2.4. Clarification and Amendment of RFP Documents.....	8
2.5. Conflict of Interest.....	8
2.6. Unfair Advantage.....	9
2.7. Proposal .....	9
2.8. Proposal Validity .....	10
2.9. Preparation of Proposals .....	10
2.10. Taxes .....	10
2.11. Currency.....	10
2.12. Earnest Money Deposit (EMD) and Bid Processing Fees .....	11
2.13. Bid Processing Fees.....	11
2.14. Submission, Receipt and Opening of Proposal .....	11
2.15. Proposal Evaluation .....	12
2.16. Negotiation .....	12
2.17. Award of Contract.....	13
2.18. Confidentiality .....	13
2.19. Project Management Consultancy: .....	13
3. Instructions to Bidders - Part II.....	15
4. Section 3: Terms of Reference (TOR) .....	18
4.1. Background .....	18
4.2. Project Brief .....	18
4.3. Objective of Project .....	18
4.4. Scope of Work.....	18
a) <i>Collection</i> .....	18
b) <i>Sorting, processing and transformation of Solid Waste</i> .....	19
c) <i>Transfer and transport</i> .....	19
d) <i>Disposal of Waste at Dump site, Kuberpur,</i> .....	19
e) <i>Area of Involvement</i> .....	19
f) <i>All the activity to be integrated GPS tracking with Command Control Center monitoring system for Garbage collection and transportation</i> .....	20
4.5. Suggested Team Composition & Qualification Requirements.....	20

4.6. Time Schedule.....	20
4.7. Payment Schedule .....	21
4.8. Penalty clause .....	21
5. Section 4: Technical Proposal .....	22
6. Section 5: Financial Proposal.....	33

**Tender Details:**

Name of Work	Selection of Agency to establishing solid waste management system in Taj Ganj area for Agra under smart city mission for the ABD area-Second Call
Name of Client	Agra Smart City Ltd.
Date of Issue/ Publication	27 <sup>th</sup> October 2018
Pre-Bid meeting	11 <sup>th</sup> November 2018
Bid Document Cost	Rs.5,000/- (Rupees Five Thousand only) + 18% GST
Bid Security (Earnest Money)	Rs 17,35,000/- (Rupees Seventeen Lacs Thirty Five Thousand only) to be submitted along with the RFP.
Due Date of Bid Submission	13 <sup>th</sup> November 2018
Time and Date of Bid Opening	14 <sup>th</sup> November 2018 after 16:00 Hrs.
Validity of the Bid	90 days from the date of receipt of the Tender.
Undertaking the work	Within 15 days from the date of signing of agreement

## **DISCLAIMER**

The information contained in this Request for Proposal document ("RFP document) or subsequently provided to Applicant(s), whether verbally or in documentary or in any other form, by or on behalf of Agra Smart City Ltd. or any of its employees or advisors, is provided to the Applicant(s) on the terms and conditions set out in this RFP document and all other terms and conditions subject to which such information is provided in writing.

This RFP document is intended to be and is hereby issued only to the prospective Applicants. The purpose of this RFP document is to provide the Applicant(s) with information to assist the formulation of their Proposals for establishing Municipal Solid waste management system in Taj ganj area . This RFP document does not purport to contain all the information that each Applicant may require. This RFP document may not be appropriate for all persons, and it is not possible for the Agra Smart City Ltd., its employees or advisors to consider the investment objectives, financial situation and particular needs of each Applicant who reads or uses this RFP document. The assumptions, assessments, statements and information contained in the RFP document may not be complete, accurate, adequate or correct. Each Applicant should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP document and where necessary obtain independent advice from appropriate sources. The Agra Smart City Ltd., its employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, adequacy, correctness, reliability or completeness of the RFP document.

Information provided in this RFP document to the Applicant(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Agra Smart City Ltd. accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The Agra Smart City Ltd., its employees and advisors make no representation or warranty and shall have no liability to any person, including any Applicant under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP document or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP document and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP document or arising in any way for participation.

The Agra Smart City Ltd. also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Applicant upon the statements contained in this RFP document.

The Agra Smart City Ltd. may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP document before the last date of bid submission.

The issue of this RFP document does not imply that the Agra Smart City Ltd. is bound to select an Applicant or to appoint the selected Applicant or Concessionaire, as the case may be, for the Project and the Agra Smart City Ltd. reserves the right to reject all or any of the Applicants or Bids without assigning any reason whatsoever.

The Applicant shall bear all its costs associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Agra Smart City Ltd. or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Applicant and the Agra Smart City Ltd. shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Bid, regardless of the conduct or outcome of the Bidding Process.

For more details contact Chief Executive Officer, ASCL address- CEO, ASCL Nagar Nigam, Agra, contact no. 0562-2520615 and through mail at amcagra1@gmail.com  
Also, the tender document can be downloaded from the following portals:  
[www.nagarnigamagra.com](http://www.nagarnigamagra.com), <http://etender.up.nic.in>, [www.smartnet.niua.org](http://www.smartnet.niua.org)

## **1. Section 1. Letter of Invitation**

1. The Agra Smart City Ltd. (hereinafter called “Employer”) is inviting proposals for selection of agency to establishing Municipal Solid waste management system in Taj Ganj area for Agra under smart city mission for the ABD area.
2. More details on the services are provided in the Terms of Reference in this RFP document and qualification requirement is at Instructions to Bidders.
3. AN AGENCY will be selected under “Quality and Cost Based System (QCBS)” and procedures described in this RFP.
4. The RFP includes the following documents:
  - Section 1 - Letter of Invitation
  - Section 2 - Instructions to Bidders
  - Section 3 - Terms of Reference
  - Section 4 - Technical Proposal
  - Section 5 - Financial Proposal
  - Section 6 - Forms of Contract

**Chief Executive Officer (CEO)**

**ASCL**

## 2. Section 2: Instructions to Bidders - Part I

### 2.1. Definitions

- a) "Addendum" means the clarification issued against the bidder's query placed before the employer in writing before or during the pre-bid meeting. It may be release in form of addendum or corrigendum.
- b) "Employer" means the Agra Smart City Ltd. who have invited the bids for the services and/ or with which the selected Bidder signs the Contract for the Services and to which the selected bidder shall provide services as per the terms and conditions and TOR of the contract.
- c) "Bidder" means any entity or person or associations of person who have been requested to submit their proposals that may provide or provides the Services to the Employer under the Contract.
- d) "Contract" means the Contract signed by the Parties and all the attached documents listed in its Clause, that is the General Conditions (GC), the project Specific Conditions (SC), and the Appendices.
- e) "Project specific information" means such part of the Instructions to Bidders used to reflect specific project and assignment conditions.
- f) "Day" means calendar day.
- g) "Government" means the government of India /State/Local Government/Agra.
- h) "Instructions to Bidders" means the document which provides Bidders with all information needed to prepare their proposals.
- i) "LOI" means the Letter of Invitation being sent by the Employer to the bidders.
- j) "Personnel" means professionals and support staff provided by the Bidder or by any Sub-Bidder and assigned to perform the Services or any part thereof; "Foreign Personnel" means such professionals and support staff who at the time of being so provided had their domicile outside the Government's country; "Domestic Personnel" means such professionals and support staff who at the time of being so provided had their domicile in India.
- k) "Proposal" means the Technical Proposal and the Financial Proposal.
- l) "RFP" means the Request for Proposal prepared by the Employer for the selection of Bidders, based on the SRFP.
- m) "SRFP" means the Standard Request for Proposals, which must be used by the Employer as a guide for the preparation of the RFP.
- n) "Assignment / job" means the work to be performed by the Bidder pursuant to the Contract.
- o) "Sub-Bidder" means any person or entity with whom the Bidder subcontracts any part of the Assignment/ job.
- p) "Terms of Reference" (TOR) means the document included in the RFP as Section 5 which explains the objectives, scope of work, activities, tasks to be performed, respective responsibilities of the Employer and the Bidder, and expected results and deliverables of the Assignment/ job.

## **2.2. Introduction**

- a) The Employer named in the Data Sheet will select an Agency (the Bidder) meeting basic eligibility criterion as mentioned in document and in accordance with the method of selection specified in the document.
- b) The name of the Assignment/ job has been mentioned in the Data Sheet. Detailed scope of the assignment/ job has been described in the document.
- c) The date, time and address for submission of the proposals has been given.
- d) The Bidders are invited to submit their Proposal, for Assignment/ job named. The Proposal will be the basis for contract negotiations and ultimately for a signed Contract with the selected Bidder.
- e) Bidders should familiarize themselves with Local conditions and take them into account in preparing their Proposals. To obtain first-hand information on the Assignment/job and Local conditions, Bidders are encouraged to submit the clarification online before or on the date of pre-bid meeting and are also advised to attend a pre-bid meeting. Attending the pre-proposal meeting is optional.
- f) The Employer will provide at no cost to the Bidders the inputs and facilities specified in the document, assist the bidders in obtaining licenses and permits needed to carry out the Assignment/ job, and make available relevant project data and reports.
- g) Bidders shall bear all costs associated with the preparation and submission of their proposals and contract negotiation. The Employer is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the Bidders.

## **2.3. Eligibility of Association of bidders and sub-bidders**

- a) Bidder shall be permitted to form an association, joint-venture or consortium of bidders for this proposal. If the bidder has formed an association of bidders, such an association of bidder is liable to be rejected by the Employer.

## **2.4. Clarification and Amendment of RFP Documents**

- a) Bidders may request a clarification on any clause of the RFP documents till or on the date of pre-bid meeting. Any request for clarification must be sent by standard electronic means to the Employer's address indicated.
- b) At any time before the submission of Proposals, the Employer may amend the RFP by issuing an addendum by standard electronic means.

## **2.5. Conflict of Interest**

- a) Employer requires that Bidders provide professional, objective, and impartial advice and at all times hold the Employer's interests paramount, strictly avoid conflicts with other Assignment/ jobs or their own corporate interests and act without any consideration for future work.
- b) Without limitation on the generality of the foregoing, Bidders, and any of their affiliates, shall be considered to have a conflict of interest and shall not be recruited, under any of the circumstances set forth below:



- **Conflicting activities:** (i) An Agency that has been engaged by the Employer to provide goods, works or Assignment/ job other than Assignment/ job for a project, and any of its affiliates, shall be disqualified from providing Assignment/ job related to those goods, works or Assignment/ job. Conversely, an AN AGENCY hired to provide Assignment/ job for the preparation or implementation of a project, and any of its affiliates, shall be disqualified from subsequently providing goods or works or Assignment/ job other than Assignment/ job resulting from or directly related to the AN AGENCY's Assignment/ job for such preparation or implementation. For the purpose of this paragraph, Assignment/ job other than consulting Assignment/ job are defined as those leading to a measurable physical output, for example surveys, exploratory drilling, aerial photography, and satellite imagery.
  - **Conflicting Assignment/ job;** (ii) A Bidder shall not be hired for any Assignment/ job that, by its nature, may be in conflict with another Assignment/ job of the Bidder to be executed for the same or for another Employer. For example, a Bidder assisting an Employer in the privatization of public assets shall not purchase, nor advice purchasers of, such assets. Similarly, a Bidder hired to prepare Terms of Reference for an Assignment/ job shall not be hired for the Assignment/ job in question.
  - **Conflicting relationships** (iii) A Bidder (including its Personnel) that has a business or family relationship with a member of the Employer's staff who is directly or indirectly involved in any part of (i) the preparation of the Terms of Reference of the Assignment/ job, (ii) the selection process for such Assignment/ job, or (iii) supervision of the Contract, may not be awarded a Contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Employer throughout the selection process and the execution of the Contract.
- c) Bidders have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Employer, or that may reasonably be perceived as having this effect. Any such disclosure shall be made as per the Standard forms of technical proposal provided herewith. If the bidder fails to disclose said situations and if the Employer comes to know about any such situation at any time, it may lead to the disqualification of the Bidder during bidding process or the termination of its Contract during execution of assignment.

## 2.6. Unfair Advantage

- a) If a Bidder could derive a competitive advantage from having provided consulting Assignment/job related to the Assignment/job in question and which is not defined as conflict of interest, the Employer shall make available together with this RFP all information that would in that respect give such Bidder any competitive advantage over competing Bidders.

## 2.7. Proposal

Bidders may only submit one proposal. If a Bidder submits or participates in more than one proposal, such proposals shall be disqualified.

## **2.8. Proposal Validity**

90 days from the date of receipt of the Tender.

## **2.9. Preparation of Proposals**

- a) The Proposal as well as all related correspondence exchanged by the Bidders and the Employer, shall be written in English language.
- b) In preparing their Proposal, Bidder is expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of a Proposal.
- c) While preparing the Technical Proposal, Bidder must give particular attention to the following:
  - i. Depending on the nature of the Assignment/ job, Bidders are required to submit a Technical Proposal (TP) in forms provided in the RFP. Form Tech – I is a sample letter of technical proposal which is to be submitted along with the technical proposal.
  - ii. A brief description of the bidder's, organization will provide details of experience of assignments which are similar to the proposed assignment/ job as per the terms of reference. For each Assignment/ job, the outline should indicate the duration of the Assignment/ job, contract amount, and Bidder's involvement. Information should be provided only for those Assignment/ jobs for which the Bidder was legally contracted by the Employer as an AGENCY. Bidders should be prepared to substantiate the claimed experience along with the proposal and must submit letter of award / copy of contract for all the assignments mentioned in the proposal.
  - iii. A description of the approach, methodology and work plan for performing the Assignment/ job covering the following subjects: technical approach and methodology, work plan, and organization schedule. Guidance on the content of this section of the Technical Proposals is provided. The work plan should be consistent with the Work Schedule which will show in the form of a bar chart the timing proposed for each activity.
- d) Financial Proposals: The Financial Proposal shall be prepared using the attached Standard Forms. It shall list all costs associated with the Assignment/ job. The financial proposal shall not include any conditions attached to it and any such conditional financial proposal shall be rejected summarily.

## **2.10. Taxes**

- a) The Bidder shall fully familiarize themselves about the applicable taxes (such as: GST or income taxes, duties, fees, levies) on amounts payable by the Employer under the Contract. All such taxes must be included by the bidder in the financial proposal excluding GST.

## **2.11. Currency**

- a) Bidders must express the price of their Assignment/ job in India Rupees.

## **2.12. Earnest Money Deposit (EMD) and Bid Processing Fees**

All bids must be accompanied by a Bid Security (EMD) of Rs.17,35,000/- (Rupees Seventeen Lacs Thirty Five thousand only) in accordance with the provisions of this RFP in the form of FDR/TDR of scheduled Bank which shall be duly pledged in favor of "Chief Executive Officer, Agra Smart City Ltd" payable at Agra. The scanned copy of bid document fee (Tender Cost), Earnest Money, Power of attorney must be up loaded electronically along with all the bid documents.

## **2.13. Bid Processing Fees**

All bidders are required to pay Rs.5,000/- (Rupees Five Thousand only) +18% GST in the form of FDR/TDR of scheduled Bank which shall be duly pledged in favor of "Chief Executive Officer, Agra Smart City Ltd. The Bid Processing Fee is Non-Refundable. Non-submission of Bid Processing fee along with the Technical Proposal will be treated as non-responsive bid.

## **2.14. Submission, Receipt and Opening of Proposal**

- a) The original proposal, both technical and Financial Proposals shall contain no interlineations or overwriting, except as necessary to correct errors made by the Bidders themselves. The person who signed the proposal must initial such corrections. Submission letters for both Technical and Financial Proposals should respectively be in the format of TECH-1, and FIN- 1.
- b) An authorized representative of the Bidders shall initial all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompany the Proposal or in any other form demonstrating that the representative has been dully authorized to sign.
- c) Applicant (authorized signatory) shall submit its offer for preliminary qualification, technical and financial proposal e-procurement system. However, Tender Document Fees, and Earnest Money Deposit (EMD) should be deposited as per details provided in the bid document. The bid document complete in all respect is to be submitted on or before the time of last date of submission of bid through e-procurement system. Agra Smart City Ltd. will not be responsible for delay in submission due to any reason.
- d) Bidders who wish to participate in this proposal will have to register on e- procurement system of UP Govt. to participate in online proposals, bidders will have to procure Digital Signature Certificate. Bidders who already have a Valid Digital Certificate need not procure a new digital certificate. Before electronic submission of proposal, it should be ensured that all the proposal papers including conditions of contract are read, understood by the Applicant. The uploaded document of the bid shall contain no alteration, or additions, unless notified. In case, the bidder makes addition and/or correction, the provision written in the original document, read with the addendum or corrigendum issued shall prevail. However, scanned copy or proposals technical eligibility document and financial eligibility documents and all original papers related to Bank Guarantee, Power Attorney etc. should be uploaded with the technical bid. The Applicant shall provide all the information sought under this RFP document. The Agra Smart City Ltd. will evaluate only those Bids that are received in the required formats and complete in all respects.

- e) The Bid shall be typed or written in indelible ink and signed by the authorized signatory of the Applicant who shall also initial each page, in blue ink. All the alterations, omissions, additions or any other amendments made to the Bid shall be initialed by the person(s) signing the Bid.
- f) Bidder shall submit their offer only in online electronic format both for technical and financial proposal and all documents should be digitally signed. However, scanned copy of Proposal fees, EMD and all original papers related to Bank guarantee, power of attorney etc. as mentioned in Table and should be uploaded along with the technical bid.

### **2.15. Proposal Evaluation**

- a) From the time the Proposals are opened to the time the Contract is awarded, the Bidders should not contact the Employer on any matter related to its Technical and/or Financial Proposal. Any effort by Bidders to influence the Employer in the examination, evaluation, ranking of Proposals, and recommendation for award of Contract may result in the rejection of the Bidders' Proposal.
- b) The employer has constituted an Evaluation Committee which will carry out the entire evaluation process.
- c) **Evaluation of Technical Proposals:** The Evaluation Committee while evaluating the Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded and the competent authority accepts the recommendation.
- d) The Evaluation Committee shall evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference and by applying the evaluation criteria, sub-criteria specified in the Data sheet. In the first stage of evaluation, a Proposal shall be rejected if it is found deficient as per the requirement indicated in the Data sheet for responsiveness of the proposal. Only responsive proposals shall be further taken up for evaluation. Evaluation of the technical proposal will start first and at this stage the financial bid (proposal) will remain unopened. The qualification of the bidder and the evaluation criteria for the technical proposal shall be as defined in the Data sheet.
- e) **Opening of the Financial Proposals:** Financial proposals of only those an AGENCY that are technically qualified shall be opened.
- f) In case of discrepancy between a partial amount and the total amount, or between word and figures, the former will prevail. In addition to the above corrections the items described in the Technical Proposal but not priced, shall be assumed to be included in the prices of other activities or items.
- g) After opening of financial proposals, appropriate selection method shall be applied to determine the bidder who will be declared winner and be eligible for award of the contract. The methods of selections are described in the RFP document [The employer shall mention here which method out of all listed method shall be applied for selection of bidder for this assignment / job]. This selected bidder will then be invited for negotiations, if considered necessary.

### **2.16. Negotiation**

- a) Negotiations will be held at the date, time and address intimated to the qualified and selected bidder. Representatives conducting negotiations on behalf of the Bidder must have written authority to negotiate and conclude a Contract.

- b) Conclusion of the negotiations: Negotiations will conclude with a review of the draft Contract. To complete negotiations the Employer and the Bidder will initial the agreed Contract. If negotiations fail, the employer will reject all the proposals received and invite fresh proposals.

#### **2.17. Award of Contract**

- a) After completing negotiations, the Employer shall issue a Letter of Intent to the selected Bidder and promptly notify all other Bidders who have submitted proposals about the decision taken.
- b) The bidders will sign the contract after fulfilling all the formalities/ pre-conditions including Performance Guarantee as mentioned in the standard form of contract within 10 days of issuance of the letter of intent.
- c) The Bidder is expected to commence the Assignment/ job on the date and at the location specified in the document.

#### **2.18. Confidentiality**

- a) Information relating to evaluation of Proposals and recommendations concerning awards shall not be disclosed to the Bidders who submitted the Proposals or to other persons not officially concerned with the process, until the publication of the award of Contract. The undue use by any Bidder of confidential information related to the process may result in the rejection of its Proposal and may be subject to the provisions of the Employer's antifraud and corruption policy.
- b) The employer reserves the right to verify all statements, information and documents submitted by the Applicant in response to the RFP. Any such verification or the lack of such verification by the Employer to undertake such verification shall not relieve the Applicant of its obligation or liabilities here under nor will it affect any rights of the Employer here under.
- c) The selection process shall be governed by and construed in accordance with the laws of India and Distt. Courts at Agra and High Court of judicature at Allahabad shall have exclusive jurisdiction and all disputes arising under pursuant to and/or in connection with the Selection Process.

#### **2.19. Project Management Consultancy:**

**OBJECTIVE** The objective of this Consultancy (the "Objective") is to assist the ASCL in implementation of the Project till the successful completion and handing over of all works to the ASCL and comprehensively supervise the works and activities carried out by the Bidder(s) as Engineer's Representative under the respective contract(s) in a manner that would ensure:

- a. Total compliance of technical specifications and various other requirements contained in the respective contracts by the Bidder(s);
- b. High standards of quality assurance system in the Consultancy as well as the works and activities of the Bidder(s);
- c. Comprehensive and documented reporting to the ASCL of Consultant's

own activities, progress of the Project(s) and compliances/ non-compliances by the Bidder(s);

- e. Proper verification of measurements and bills submitted by the Bidder(s) so that payments made by the ASCL against these bills truly reflect the actual work done at site complying with the requirements of the respective contract(s);
- f. proper interface and coordination among the ASCL, Bidder(s), other Bidders/ Bidders and local bodies/ state government; and
- g. Full documentation of the completed works including applications for various approvals.

The objectives of the PMC is not limited to the above, CEO of ASCL have discretion implement other objectives or the completion of the project.

### 3. Instructions to Bidders - Part II

#### DATA SHEET

1. Name of the Assignment	:	Selection of an Agency to establishing Municipal Solid waste management system in Taj Ganj area for Agra under smart city mission for the ABD area.
2. Eligibility of Association of bidders and sub-bidders		<p>1) The applicant can be Single firm. The applicant should submit valid incorporation/registration certificate of the firm, PAN Card and GST registration certificate.</p> <p>2) Agency should have experience in Door to door waste collection minimum 12000 households in all category along with ULB in India</p> <p>3) Bidder shall form any association, join-venture or consortium of bidders for this proposal.</p>
3. Evaluation Criteria: Criteria, sub- criteria, for evaluation of Technical Proposals have been prescribed		Detailed evaluation as mentioned below this Table of Data Sheet
4. Last date for Purchase of Tender	:	13.11.2018 till 17:30 Hrs.
5. Last date of Pre bid quires through mail at <a href="mailto:gm@agrasmartcity.in">gm@agrasmartcity.in</a>	:	02.11.2018 at 18:00 Hrs.
6. Pre-Bid Meeting	:	03.11.2018 at 16:00 Hrs.
7. Last date for submission of tender	:	13.11.2018 till 17:30 Hrs.
8. Last date for Submission of Hard Copy of Technical Bid	:	13.11.2018 till 15:00 Hrs.
9. Technical Bid Opening Date	:	13.11.2018 after 16:00 Hrs.
10. Tender Document and other details shall be available on:-		<a href="https://etenders.up.gov.in">https://etenders.up.gov.in</a> , <a href="https://smartnet.niua.org">https://smartnet.niua.org</a> , <a href="http://www.agrasmartcity.in">www.agrasmartcity.in</a> , <a href="http://www.nagarnigamagra.com">www.nagarnigamagra.com</a> .
11. Address for Correspondence :		<b>Chief Executive Officer</b> , Agra Smart city Limited, Agra Nagar Nigam Agra, ( utter Pradesh)
12. Amendment to NIT, if any would be published on website only.		

**Procedure for Detailed evaluation of technical qualifications**

The AN AGENCYs will be shortlisted against the pre-qualification criteria. Those who qualify/fulfill these criteria, shall be considered for technical evaluation.

Sr.	Particulars	Supporting Documents to be Submitted
1.	The applicant can be Single firm. The applicant should submit valid incorporation/registration certificate of the firm, PAN Card and GST registration certificate.	Attested Copy
2.	The Bidder must have experience of at least 5 years in the field of a) Door to Door collection of MSW from Residential, group housing, vegetable/fruit markets, Temple, Commercial, educational, garden, open dumping poins	The work orders with the details of employer has to be submitted.
3.	The Bidder must have a valid GSTN certificate and EPF registration.	Copy of GSTN Certificate & EPF registration certificate
4.	The bidder should not be blacklisted/ debarred/ terminated of contract except by any Government/ Government Board/ Corporation Agency/ firm/ Statutory Board/ PSU agency/ AN AGENCY/ Non- Government/ Government of any sovereign countries/ Private agencies and Funding agencies in the last 05 years.	Self-Certification by the bidder
5.	The Bidder should have an average minimum annual turnover of Indian Rs.3.39 crores (Three Cr. Thirty Nine lakhs) during the last three (3) financial years, i.e., 2015- 16, 16-17 & 17-18.	Copy of the audited profit and loss account along with audited balance sheet of the an AGENCY showing turnover of the an AGENCY for last three years
6.	The bidder must have on its payroll at least 10 technically qualified staff (on permanent payrolls of the AGENCY) as on date.	Certificate from bidder's statutory auditor/ agency/ firm secretary/ HR Head for number of technically qualified staff employed by them.



The detailed technical evaluation of Proposals satisfying minimum eligibility conditions as above shall be done. The Criteria, sub-criteria and point system for detailed evaluation shall be as follows:

S.No.	Evaluation parameter	Marks
<b>1.</b>	<b>Financial turnover</b>	<b>10</b>
	Rs. 3.39 crores and above	5
	Above Rs.4.0 and above	10
<b>2.</b>	<b>Specific experience of the Bidder AN AGENCY relevant to the assignment / job</b>	<b>30</b>
	Single Work Door to door waste collection, minimum 12000 households in all category along with ULB in India	10
	Two work of Single Work Door to door waste collection, minimum 12000 households in all category along with ULB in India	20
	Three work a Single Work Door to door waste collection, minimum 12000 households in all category along with ULB in India	30
<b>3.</b>	<b>Organization structure and set up</b>	<b>10</b>
	Established above 5 years	05
	Established above 10 years	10
<b>4.</b>	<b>Proposed Strategy, methodology and work plan in response to the terms of reference.</b>	<b>30</b>
	Presentation for Technical Approach and Methodology, including assumption in door to door waste collection, segregation at source, transportation of waste and processing of waste.	
	a) Organization structure of the Agency	5 Marks
	b) For preparation of block and rout system	5 Marks
	c) Door to door waste collection/Segregation at source	5 Marks
	d) Benefits given to the employees of the organization	5 Marks
	e) IEC activities to create awareness of SWM	5 Marks
	f) Processing technology of waste and disposal methodology	5 Marks
<b>5.</b>	<b>Organization &amp; staffing</b>	<b>20</b>
	20 Nos technically qualified staff on permanent payroll	10
	25 Nos technically qualified staff on permanent payroll	20

**Note:** The financial bids of only those bidders who qualify technically (above 75 marks) will be opened.

## 4. Section 3: Terms of Reference (TOR)

### 4.1. Background

Agra city is governed by Municipal Corporation which comes under Agra Metropolitan Region. The Agra city is located in Uttar Pradesh state of India. As per provisional reports of Census India, population of Agra in 2011 is 1,585,704; of which male and female are 845,902 and 739,802 respectively. Although Agra city has population of 1,585,704; its urban / metropolitan population is 1,760,285 of which 939,875 are males and 820,410 are females.

### 4.2. Project Brief

The management of municipal solid waste has become an acute problem due to enhanced economic activities and rapid urbanization. Increased attention has been given by the government in recent years to handle this problem in a safe and hygienic manner. Municipal Solid Waste (MSW) management is one of the essential services for maintaining quality of life in urban areas and for ensuring better standards of health and sanitation. Presently, this service falls short of the desired level, as systems adopted are outdated and inefficient. Institutional weakness, shortage of manpower, financial resources, and improper choice of technology, inadequate coverage and lack of short and long-term planning are responsible for the inadequacy of service.

The Government of India launched its flagship "100 Smart Cities Mission" on June 25, 2015. Smart city is a city equipped with basic infrastructure to give a decent quality of life, a clean and sustainable environment through application of some smart solutions. Ministry of Urban Development (MoUD) has shortlisted Agra, a historical city of Uttar Pradesh as one of the smart cities under the competitive process of 'Smart City Challenge'. The Agra ABD covers about 2200 acres covering Agra Fort, Old city, Jama Masjid, Taj Mahal, Tajganj, roads connecting to Fatehabad road, and inner ring road will be retrofitted

### 4.3. Objective of Project

The main objective to introduce this system has been the implementation of SWM rules-2016. The other objective to create awareness towards overall conditions of health of the resident and hygiene of the city. It also aims at improving environmental by timely collection of waste from every residence/shop/institution on daily basis. Reduction in the no of placing big contenders at certain spot will eventually help in less number of stray animals moving around contemptors spot and will also reduce air and water pollution due to filthy and overflowing of semi liquid waste.

### 4.4. Scope of Work

#### *a) Collection*

This includes gathering the solid wastes and recyclable materials and transport of these materials to either the processing facility, transfer facility or the disposal site.

Types of Collection

- i. Community bins - they are placed in convenient locations, where the community members carry the waste and throw it in. This method is comparatively cheaper to other methods. This is the most widely adopted method in western countries. For this method to be adopted it is important that the Bins are covered, they are aesthetic, they are attended to

regularly, kept clean, easy to handle and separate bins are provided for recyclable, mixed, paper and biodegradable waste.

- ii. Door-to-Door collection – The waste is placed at the doorstep at a set time when the waste collector arrives. In this method, it is the collector of the waste has the responsibility to collect the waste separately. This method is very convenient for the householder, however requires homeowner cooperation and scheduled service for homeowner cooperation.
- iii. Block collection - the collection vehicles arrive at a particular place or a set day and time to collect waste from the households. Households bring their waste containers and empty directly into the vehicle. This method requires a higher homeowner cooperation and scheduled service for homeowner cooperation.
- iv. Curbside collection – the homeowner is responsible for placing the containers to be emptied at the curb on the collection day and for returning the empty containers to their storage location until the next collection (Tchobanolous, G et al 1993). Street cleansing is another type of collection method mainly for collection of street litter.

**b) Sorting, processing and transformation of Solid Waste**

This functional unit encompasses the recovery of the sorted materials, processing of solid waste and transformation of solid waste that occurs primarily in locations away from the source of waste generation.

Sorting of the mixed waste usually occurs at a material recovery facility, transfer stations, combustion facilities and disposal sites. Sorting includes separation of bulky items, separation of waste components by size using screens, manual separation of waste components, and separation of ferrous and non-ferrous metals.

Waste processing and transformation solid waste processing reduces the amount of material requiring disposal and, in some cases produces a useful product. Examples of solid waste processing technologies include material recovery facilities, where recyclable materials are removed and/or sorted; composting facilities where organics in solid waste undergo controlled decomposition; and waste-to-energy facilities where waste becomes energy for electricity.

**c) Transfer and transport**

This involves two steps :

The transfer of wastes from smaller collection vehicle to larger transport vehicle

subsequent transport of the wastes usually over long distances, to a processing or disposal site. The transfer usually takes place at a transfer station.

**d) Disposal of Waste at Dump site, Kuberpur,**

There was one scientific disposal site. It exists for disposal of inert/composting residue/non-biodegradable/non-recyclable material. Scientific Landfill Site is totally closed. Presently waste is being thrown in Kuberpur, near Yamuna Express. The total area is 71.7 acres.

**e) *Area of Involvement***

Solid waste for a project area shall be done in integrated manner i.e. from Door-to-Door collection to final and safe disposal. The private entrepreneur getting contract shall be awarded

through an integrated package for solid waste management which scope of work shall include:

- Door-to-Door collection
- Transportation of waste from primary storage depot to processing plant
- Processing of waste
- Final disposal of waste

However, local body may also encourage NGOs/RWA to involve into this sector and organize the segregated waste collectors in doorstep collection of waste and provide them an opportunity to earn their living. The local body can give incentive in cash or kind to these organizations in their effort of organizing waste collectors in primary collection of recyclable and/or organic waste. The involvement of these group ensure collection of source segregated waste which play an important role to make the entire practices effective and successful.

- f) All the activity to be integrated GPS tracking with Command Control Center monitoring system for Garbage collection and transportation

S.No	Item	Quantity in numbers
1	No. of Households in ABD area	12924
2	Restaurant, Dhaba Hotel	692
3	Whole sale & Retailer shop	5450
4	Vegetable & Fruit shop	446
5	Meat & Fish shop	66
6	Institutions	223
7	Total waste generation Tones per day	93.0
	Per capita generation for Domestic waste ( Kg/Day)	0.496

#### 4.5. Suggested Team Composition & Qualification Requirements

Project Manager having graduate in MSW having experience of 15 years and minimum 3 years similar experience in Solid waste management system organization. Supervisor having graduate in any discipline.

#### 4.6. Time Schedule

The project duration is for 15 months from the date of contract. If the work is not completed within the stipulated period as per approved proposal, Agra Smart City Ltd. will not give any extra payment during the extended time period.

S No	Activity	Time Schedule
1.	Door to Door Collection a) Housing Area b) Commercial and institutional area	06:00 AM to 10:00 AM 10:30 AM to 11:30 AM
2.	Market ( Two Shift)	07:30 AM to 12:30 AM 04:00 PM to 08:00 PM
3.	Park and other the Specified	Daily
4.	Cleaning of Nali/ Nalas and removal of Sludge/Silt	Daily

#### **4.7. Payment Schedule**

Payment will be made against achieving milestones of the project as stated in the contract as submitted by the invoice within 15 days after verification of the work.

#### **4.8. Penalty clause**

- a) In case of delay in delivery of material, the purchaser may at his option, impose a penalty calculated at the rate of 0.1% per each day of the delayed goods and up to a maximum deduction of 5% of the delayed supply or services as per tender conditions of such portion only of the quantity as have not been delivered on the specified date ( three month from the date of agreement). Such reduction shall be in full satisfaction of the supplier's liability for the delay but shall not in any case exceed five per cent of the value. Once the maximum is reached the department may consider termination of contract.
- b) Agency worker will work in proper dress with duly attested ID card. In case of Worker found without dress and ID card then agency will be fined for Rs 500.00 ( five Hundred) per day per worker.
- c) In case of worker strike last for more than a day then agency will be fined for Rs. 10,0000.00 ( Ten thousand) per Day. If agency worker don't perform their duty continuously for 10 days then ASCL right to cancel the agreement.

## 5. Section 4: Technical Proposal

### FORM TECH-1

#### LETTER OF PROPOSAL SUBMISSION

*[Location, Date]*

To,

The Chief Executive Officer,

Agra Smart City Ltd., Agra

Dear Sir,

We, the undersigned, offer to provide the Assignment/ job for **“selection of Agency to establishing Municipal Solid Waste management system in Taj Ganj area for Agra under smart city mission for the ABD area”** in accordance with your Request for Proposal dated *[xxxxxxxxxxxxxx]* and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal with requisite EMD and bid processing fees.

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signatory

*[In full and initials]*

Name and Title of Signatory:

Name of Organization:

Address:

**FORM TECH-2**

**FORM 2 A: BIDDER'S ORGANIZATION AND EXPERIENCE**

**Details of Bidder**

a.	Name of AN AGENCY with full address	
b.	Tel. No.	
c.	Fax No.	
d.	Email	
e.	Year & Date of Registration.	
f.	Name and address of the person holding the Power of Attorney.	
g.	Name of Bankers with full address.	
h.	GSTN Registration Number (copy).	
i.	Permanente Account Number (copy).	
j.	Are you presently debarred / Blacklisted by any Government Department /Public Sector Undertaking /Any Employer? (If Yes, please furnished details)	
k.	Name and details (Tel / Mobile / E mail) of contact persons	

**FORM 2B: FORMAT FOR FINANCIAL CAPABILITY OF THE BIDDER**

(Equivalent in Rs. crores)

<b>Bidder</b>	-----( <i>Name of Bidder</i> )				
<b>FY</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>Total</b>	<b>Average</b>
<b>Annual Turnover</b>					

**Certificate from the Statutory Auditor**

This is to certify that..... (*Name of the Bidder*) has received the payments and annual turnover as shown above against the respective years.

Name of the audit firm:

Seal of the audit firm Date:

(*Signature, name and designation of the authorized signatory*)



**FORM 2C: ENGAGEMENT EXPERIENCE**

**LIST PROJECTS IN THE LAST TEN YEARS WHICH ARE SIMILAR TO THAT IN THE RFP.**

Assignment name:	Value of the contract (in current INR):
Country:	Duration of assignment (months):
Name of Employer:	Total No of staff-months of the assignment:
Address:	
Start date (month/year): Completion date (month/year):	
Narrative description of Project:	

*(Along with the details the bidder is also required to submit the supportive documents/ Work undertaken for each of the projects)*

### FORM TECH-3

#### DESCRIPTION OF APPROACH, METHODOLOGY, AND WORK PLAN IN RESPONDING TO THE TERMS OF REFERENCE

A description of the approach, methodology and work plan for performing the assignment, including a detailed description of the proposed methodology and staffing for training.

1. Technical Approach and Methodology
  2. Work Plan
  3. Organization and Staffing
- a) **Technical Approach and Methodology.** Please explain your understanding of the objectives of the assignment as outlined in the Terms of Reference (TORs), the technical approach, and the methodology you would adopt for implementing the tasks to deliver the expected output(s), and the degree of detail of such output.
- b) **Work Plan.** Please outline the plan for the implementation of the main activities/tasks of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and tentative delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing your understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents (including reports) to be delivered as final output(s) should be included here. The work plan should be consistent with the Work Schedule Form.
- c) **Organization and Staffing.** Please describe the structure and composition of your team, including the list of the Key Experts, Non-Key Experts and relevant technical and administrative support staff.}

## FORM TECH-4

### CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. Proposed Position:  
*[For each position of key professional separate form Tech-6 will be prepared]:*
2. Name of Organization:  
*[Insert name of AN AGENCY proposing the staff]:*
3. Name of Staff:  
*[Insert full name]:*
4. Date of Birth:
5. Nationality:
6. Education:  
*[Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:*
7. Membership of Professional Associations:
8. Other Training:
9. Countries of Work Experience:  
*[List countries where staff has worked in the last ten years]:*
10. Languages [For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:
11. Employment Record:  
*[Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]:*  
  
From [Year]: To Year]:  
  
Employer:  
  
Positions held:
12. Detailed Tasks Assigned  
*[List all tasks to be performed under this Assignment/job]*
13. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

*[Among the Assignment/jobs in which the staff has been involved, indicate the information for those Assignment/jobs that best illustrate staff capability to handle the tasks.]*

Name of Assignment/job or project:

Year:

Location:

Employer:

Main project features:

Positions held:

Activities performed:

14. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date:

[Signature of staff member or authorized representative of the staff]

Place:

[Full name of authorized representative]

**FORM TECH-5**

**STAFFING SCHEDULE**

Sr.	Name of Staff	Staff input (in the form of bar chart)							Total Months
		1	2	3	4	....	....	N	
1									
2									
3									
4									

**FORM TECH-6**

**LETTER OF DECLARATION FOR NOT HAVE BEEN BLACK LISTED**

*[Location, Date]*

To,  
The Chief Executive Officer,  
Agra Smart City Ltd.  
Agra Municipal Corporation, Agra

**Subject:** Letter of Declaration for not have been Blacklisted

We, *[Name of AN AGENCY]* have not been black listed/ debarred/ termination of contract except for reasons of convenience of Employer by any Government/ Government board/ Corporation/ Agency/ firm/ Statutory Body/ PSU Agency/ firm/ Non-Government/ Government of any sovereign countries/ Private Agencies and Funding Agencies in the last 15 years.

For *[Name of AN AGENCY]*,

*Authorized Signatory [In full and initials]*

*Name and Title of Signatory:*

*Name of AN AGENCY:*

*Address*

**FORM TECH-7**

**POWER OF ATTORNEY**

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Power of Attorney to be provided by the Bidding AN AGENCY in favor of its representative as evidence of authorized signatory's authority.

Know all men by these presents, We.....(name and address of the registered office of the Bidding AN AGENCY, as applicable) do hereby constitute, appoint and authorize Mr./ Ms.....(name and residential address) who is presently employed with us and holding the position of ....., as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to submission of our "....." in response to the TOR Document dated.....issued by Agra Smart City Ltd.), (the AN AGENCY) including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the AN AGENCY may require us to submit. The aforesaid Attorney is further authorized for making representations to the AN AGENCY or any other authority, and providing information/responses to the AN AGENCY, representing us in all matters before the AN AGENCY, and generally dealing with the AN AGENCY in all matters in connection with our Bid till the completion of the bidding process as per the terms of the TOR Document and further till the Contract is entered into with the AN AGENCY and thereafter till the expiry of the Contract.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the TOR Document.

Signed by the within named ----- [Insert the name of the executant AN AGENCY] Through the hand  
of Mr..... Duly authorized by the Board to issue such Power of Attorney

Date this.....day of..... Accepted..... Signature of Attorney

(Name, designation and address of the Attorney)

Attested

.....

(Signature of the executant)

(Name, designation and address of the executant)

.....

Signature and tamp of Notary of the place of execution



## **6. Section 5: Financial Proposal**

**FORM FIN-1**

**FORMAT FOR SUBMISSION OF FINANCIAL QUOTE**

To be submit financial bid in e-Tender mode only

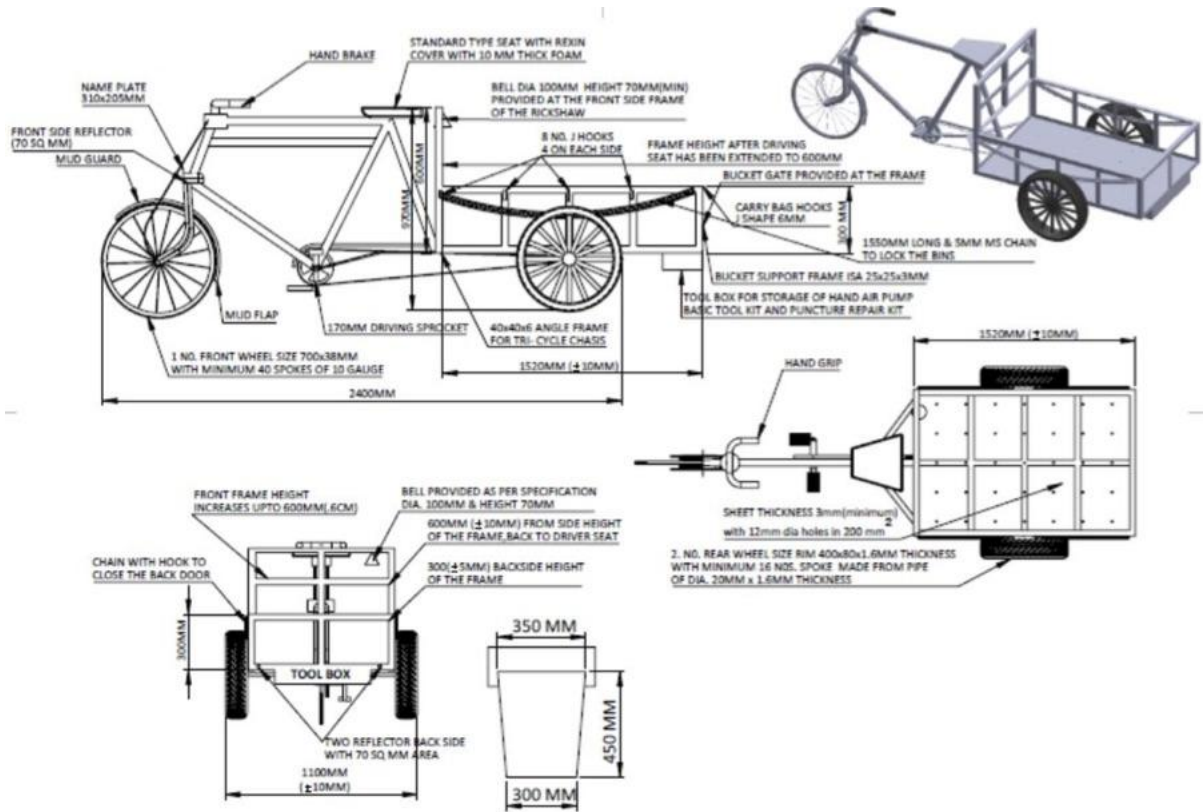
# TECHNICAL SPECIFICATIONS

## TECHNICAL SPECIFICATIONS FOR THE SUPPLY OF HANDCARTS AND TRICYCLES

### Tricycle:

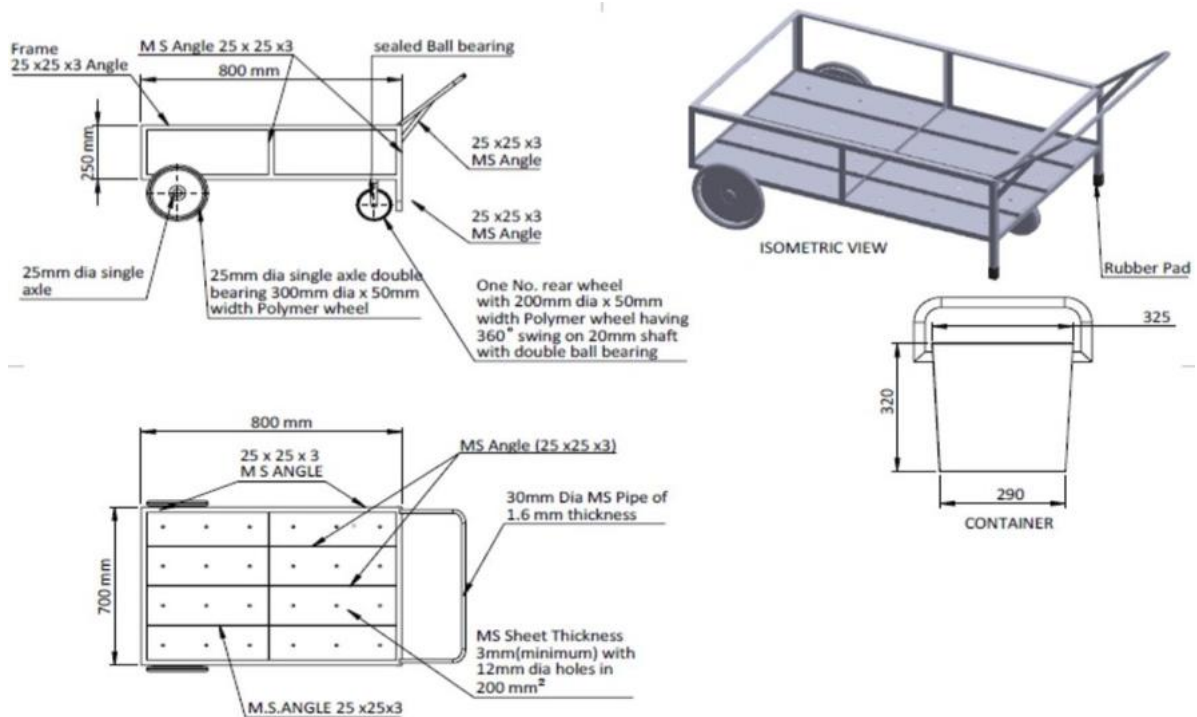
1. Tricycle should have 8 Nos detachable plastic containers capacity of 50 litres made from Roto Moulding/ Injection Moulding with lockable chain arrangement and as per GTR.
2. The tricycle shall have 3 Nos wheels out of which 2 Nos back wheels shall be puncher-less rubberised of 16 Nos spokes 20 mm x 1.6 mm thick or better, M S pipe welded on the rim & one front wheel of standard type with puncher-less rubberized and double sealed bearing to support rickshaw. It should have a locking arrangement and have suitable arrangement for placing 8 Nos. containers in 8 Nos. slots made of MS angle of size 25x25x3 mm. It should have a standard bell, cycle lock, reflectors, hooks, toolkit, locker, first aid box, seat with cover, hangers for broom, wiper etc.
3. Platform of tricycle will have 3mm MS sheet fixed with 12 mm dia holes in 200 mm square matrix.
4. Special standard Control Point rounded rubber grip should be provided in the handle.
5. A name plate of size 310x205 mm and 0.7 mm thick should be welded at the front side of the tricycle.
6. Frame, fork with fitting should be made from mild steel heavy duty tubular frame with 5 tubes, made from tube of size 28.6 X 1.63 mm.
7. It should have heavy duty pedal.
8. Handle bar shall be of heavy duty Nickel and chrome plated and the size shall not be less than 410 mm between the two grips. The front fork supported by flat steel anvil shall conform to IS 2061/1995 (reaffirmed 2010) with amendment no. 1.
9. Chain wheel & crank should be heavy duty Nickel and chrome plated conforming to IS 1281/2014.
10. Chain should be 212- links- heavy duty extra strong chain conforming to designation 083-1 of IS 2403/1991.
11. It should have a Quarter Chain Cover with black colour of thickness 1.2 mm and 90 mm wide Mud guard of thickness 1.2 mm with steel stays should be fitted with red reflectors on each mud guard rear and front
12. Cotter pin should be 9.5 mm zinc plated
13. Front rim should be 700 mm x 38 mm heavy 3.2 mm, 1.6 Kg
14. Rear rim should be bullet rim-400 mm dia x 80 mmx 1.6 mm thickness and hub fitted with bearing 2204/2205 and with MS round spokes of heavy duty.
15. Bell should be 100 mm round heavy duty and lock should be 7 levers.

Request for Proposal for selection of agency Establishing Municipal Solid Waste Management in Taj Ganj area for Agra under smart city mission for the ABD area.



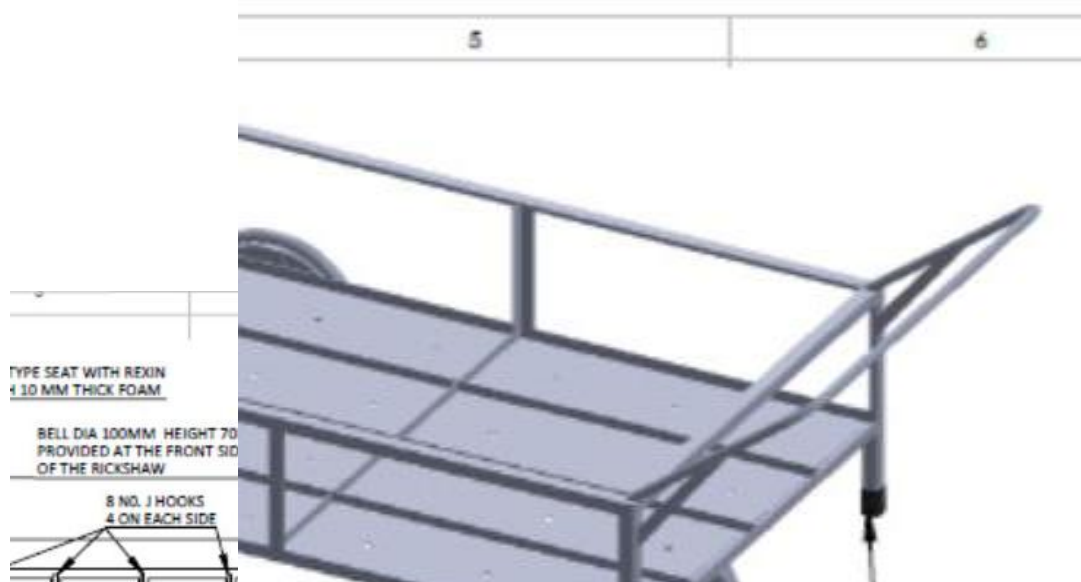
**Hand Cart:**

1. Handcart should have 4 detachable plastic containers of 25 litres capacity made from Roto Moulding/Injection Moulding with lockable chain arrangement.
2. It should have two nos wheels of polymer on front side on a 25 mm dia axle with double bearing in wheel size 300 mm dia and 50 mm width and one no wheel of polymer on the rear of 200 mm dia and 50 mm width with double sealed ball bearing.
3. Frame should be made of MS angle of size 25x25x3 mm of size 800 mm(L), 700 mm(W) and 250 mm (H).
4. The handcart handle should be made of MS pipe of dia 30 mm of thickness 1.6 mm
5. Bottom and side stiffener with 25x25x3 mm M S Angle as per drawing.
6. Platform of handcart will have 3mm thickness MS plate fixed with 12 mm dia holes in 200 mm square matrix.



### Plastic Container: 50 litre capacity and 25 litre capacity

1. Plastic Containers (Injection/Roto Moulding) made of HDPE/ PP material should be of size 350x350 mm at the top, 300x300 mm at the bottom and its internal height should be 450 mm. The minimum wall thickness of the plastic container should be 4 mm. The colour of the container should be yellow, green and blue.
2. Ash content of the HDPE container shall not be more than 1% when tested as per method as described in Annex D of IS 14887/2014 - 1 No. sample size from each lot of 500 nos. containers.
3. The plastic container should have at least 0.25 % UV additive and pass the UV Resistance Test as per requirement of SI No (ix) of table 1 when tested as per Annex C of IS 14887/2014.



## **SPECIFICATIONS OF THE CNG LOAD AUTO RICKSHAW**

Single Seated CNG load Auto Rickshaw with a maximum loading capacity of 500 kg, maximum speed of 30 to 40 kmph, minimum range of 70 km with full load.

1. Engine: Four Stroke: Oil Cooled, Twin Spark Engine
2. No. of Cylinders: One
3. Max. Net Power: Not less than 7.5 kw at 6000 rpm
4. Pedal Assistance: Not required
5. Reverse Gear: Required
6. Maximum Speed: 20 to 25 kmph (To be tested with full load)
7. Loading Capacity: 500 kg
8. Range: 70 km or more
9. Ground Clearance: 120 mm or more (To be tested as per IS:9435)
10. Overall size of the Auto Rickshaw:
  - Length < 3 m
  - Width < 1.5 m
  - Height < 1.8 m
11. Front Windshield & Wiper: Windshield shall be made out of laminated safety glass. Wiper shall be electric motor operated. Front windshield shall conform to IS:2553
12. Brakes: Parking & service brakes, safe & efficient.
13. Instrument Panel: Speedometer and Fuel indicator
14. Roof: Made out of good quality metal for driver cabin
15. Carrier Platform: Made out of 3 mm good quality M.S sheet with proper support from the vehicle body
16. Controls: Start/Stop switch and indicators
17. Tyres: 3 -12" minimum

### **Overall Rickshaw Design:**

The overall CNG Auto rickshaw design shall meet all the requirements of safety, reliability, repeatability, efficiency, strength, smoothness in riding, driver comfort in climbing/entering the rickshaw, sitting at steady state and during the ride, getting down from the rickshaw, loading and unloading the luggage, etc. The rickshaw shall not be noisy and should have the proper control and instrument panel to indicate the speed, state of fuel, km, etc. It should have sufficient braking system, suspension system, start and stop buttons, key, front and back lights with parking lights too, power supply system for these auxiliaries. The rickshaw has to be fabricated with good quality steel properly plated/painted to avoid rusting for more than five years. The body shall be of good quality metal, and the roof shall be metal of good quality. It shall have sufficient height and the vehicle integration, packaging of electrical and electronic wires and devices shall be such that the rickshaw can run even in rainy season/during the rain without any problems.

**Supplier/Manufacturer Conditions:**

The supplier of the CNG Auto Rickshaw shall be an original manufacturer of such vehicles. The supplier shall not be a trader/importer or simply an assembler for various components. The supplier shall have the facility and capability for the design, fabrication, assembly and testing of the offered Rickshaws. The supplier can use the motors, controllers, batteries and battery charges procured preferably from various reliable and quality sources. All these components have to be tested at the supplier's site independently before assembling into the Rickshaws. The supplier shall be capable of providing reliable and economical after-sales service including provision of spares for all components used. It will be the responsibility of the supplier of the CNG Auto Rickshaws to get all the components used in the rickshaw and also the CNG Auto Rickshaw as a whole to be tested by the Government of India approved testing centers.

## **TECHNICAL SPECIFICATION FOR 8 CUM CAPACITY VEHICLE CHASSIS MOUNTED, REAR END MANUAL LOADING AND AUTO LOADING MOVABLE REFUSE COMPACTOR WITH TIP CART MECHANISM.**

### **GENERAL DESCRIPTION**

Manufacture & supply of a Truck Chassis mounted, Rear End Auto Loading, Refuse Compactor, capable of collecting garbage/organic waste, compacting the same and transporting it to dumping ground. Truck mounted equipment should be of versatile capabilities and to be effective & economical to operate for disposing mixed waste which will include garden waste, market waste, domestic waste, commercial waste and others as generated in Municipal area.

The Compactor to be designed to allow loading of refuses:

1. Manually,
2. By an independent refuse collection, hopper vehicle
3. By hydraulically lifting and emptying of all Bins of capacities up to 500 liters into the hopper of compactor.
4. The loose waste should be compacted up to 800-900 kg./cum (approx.)

The compactor should be with the following main components:

1. Container should be 8 m<sup>3</sup> capacity.
2. The container body shall be made of anti corrosive steel.
3. An ejector plate driven by double acting hydraulic cylinder
4. A tailgate body with two numbers double acting cylinders to facilitate it's opening/closing operations.
5. A set of carrier and packer plates, each operated by a pair of hydraulic cylinders
6. A universal hydraulic bin lifter at the rear end, with two numbers of double acting hydraulic cylinders.
7. A suitably rated, vehicle's PTO driven, Hydraulic pump unit. The equipment shall have a loading height of maximum 1000 mm from the ground. System with lower height for easy loading will be preferred. The equipment to be designed for at least continuous 8 hours operations under average conditions without any ill effects on its components.

### **VEHICLE CHASSIS**

The complete equipment to be mounted on a vehicle chassis. The Chassis to be supplied by the supplier with a factory fitted auxiliary PTO and Hydraulic Jack.

### **Technical Data**

Manufacturer & Model: Reputed manufacturer with standard design make BS-IV compliant chassis as per the Govt. notification Applicable within the Municipal jurisdiction. Details of Make / Model / Specification must be Mentioned by the bidder without which the tender may not be considered.



1. GVW : Min 11 MT
2. HP : Min 90 HP
3. Wheel Base: Min 3600 mm.
4. Engine: 4 or 6 cylinder and water cooled.
5. Tyre size: 8.25 x 20-16PR.
6. Fuel Tank: 100 ltr. (Min.)

### **CABIN**

The Cabin should be sleeper type having Driver seat and Co-Driver seat of 3 (three) accommodation provided with single / two part front view wind shield glass & window with proper ventilation. There should be two emergency lights on both side of the top of the cabin.

### **MOUNTING**

The Refuse Collection Body to be welded to a skid / sub-frame and to be directly bolted on to the long-bearers of the chassis frame with shear plates. The front end of the collector body to be supported on each side using springs / special rubber mountings.

### **REFUSE COLLECTION BODY**

The skid mounted Refuse Collection Body to be of a min 8 m<sup>3</sup> volumetric capacity and of rectangular cross section. The body shall be fabricated from high tensile steel. The container to be of an all electrically welded and construction will be conformed to IS 2825. A hydraulically operated ejector plate should be located at the forward end of the container body. At the rear end should be fitted a hinged tailgate assembly, consisting of a hopper, a slider and packer plate assembly which constitutes the compacting unit. The top, bottom and sidewalls, as also the tailgate, should be reinforced with steel rectangular hollow sections & an automatic tailgate locking arrangement to be incorporated in the system.

Material: High tensile steel one piece rolled side sheets & braced by front and rear hooks with pressed integral channels & keel type floor.

Volumetric Capacity: Min 8 m<sup>3</sup>

Side Plates: Min 4 mm thick

Floor: Min 5 mm thick

Emergency light: Two emergency lights to be fitted on the top of the body of the back side.

The Compactor should have the following.

### **TAILGATE:**

Tailgate with double lip type rubber seal cord for leak-proof and Automatic Gate locking arrangement to be provided mode of 7 mm plate side panel.

#### HOPPER:

Min 1 m<sup>3</sup> capacity steel hopper with maximum loading height of 1000 mm to be welded between the sides of the Tailgate hopper bottom & side of 7 mm plates.

#### SLIDER PLATE:

The plate to be of robust design to withstand harsh operating condition and actuated by hydraulic cylinder.

#### PACKER PLATE:

The plate to be of robust design with strong reinforced bearing arms with hydraulic cylinder to be provided. Proven two plate fabrication packer of high tensile abrasion steel. slides within hooper channels on low friction self lubricating bearing.

#### UNIVERSAL BIN LIFTER:

Hydraulically operated Universal Bin Lifter unit capable to lift 240 liter & 1100 litre EN/ DIN standard Bin to be provided along with fittings

#### BIN/TIP CART LIFTER:

Bin cart should be 3 to 4 times the size of traditional hand cart. Bin cart should be fitted on the body properly to prevent unwanted noise during transportation of municipal solid waste. Tip cart should be detachable and not to be bolted but connected with the compactor in such a way that tip cart can be easily detached within few minutes.

#### HYDRAULIC SYSTEM & DRIVE

1. Hydraulic Pump & Drive WIPRO or equivalent makes hydraulic Pump of adequate capacity to meet the operational requirements of the complete system to be provided with the equipment. The hydraulic pump should be axial piston type/ gear Type with min. flow rate 64 lpm & speed 1500 rpm. The hydraulic pump to be driven by the auxiliary PTO supplied with the chassis. Engaging & disengaging of the PTO should be from the driver's cabin.
2. Hydraulic Cylinders Hydraulic cylinders to be provided to carry out the functions of following component of the refuse collector unit:
  - Double acting cylinder for Slider Plate
  - Double acting cylinder for Packer Plate
  - Double acting cylinder for Tailgate lifting and Auto-locking arrangement
  - Double acting cylinder for Universal Bin Lifting arrangement
  - Double acting, 3-stage cushioned cylinder for Ejector Panel Block The cylinders to be manufactured by an ISO-9001/9002 certified company. All cylinders to be double acting and cushioned, manufactured from ST-52 Grade steel and seals of reputed ISO-9000 manufacturer to be used. All cylinders to be provided with lubricated bearings and should be of a standard reputed make.
3. Mobile Control Valves 1 no 2-bank direction control valve block to be provided to facilitate lifting & lowering the Tailgate and movement of the Refuse Ejector Plate. 1 no 2-bank direction control valve block to be provided to facilitate movement of the Carrier Plate, Packer Plate for compaction. 1 no 2-bank direction control valve block to be provided to facilitate Stabilizer unit. The valves to be designed so as to allow operations by two hands only to avoid risks of accidents. The mobile Control valves to be of a standard reputed make such as that of Valvoil of Italy or Bucher of Germany or equivalent.

4. Tank & Filters: The hydraulic oil storage tank should have a volumetric capacity of a minimum 100 litres and should come equipped with a suction strainer of 125 microns, steel cartridge type return line filter of 25 microns, filler/filter/breather for the tank and a level indicator. Tank to be made of min. 3 mm steel as per IS: 2062 grade A/ IS: 1079.

#### SURFACE PREPARATION AND FINISH

Both the exterior and interior surfaces of the compactor to be thoroughly sanded prior to spray painting. The container exterior should be spray-painted with two coats of superior quality, anti-corrosive primer and two coats of enamel metal paint of a reputed make. The colour shade to be that of the customer's choice. To resist corrosion due to weak acids, the interior will be coated with 2 coats of anti-corrosive gray epoxy paint.

#### Compactor Material Thickness:

1. Main container body: Side plate : Min. 4 mm : Floor plate : Min 5 mm : Roof plate : Min 3 mm
2. Refuse Ejection Barrier: Min. 3 mm plate
3. Hopper: Min 3 mm plate
4. Packer: Min 5 mm plate

#### Safety features & Instructions:

- Repairs / Adjustments if any to be carried only when the vehicle is stationary and if the tailgate is lifted it has to be supported by 'hopper props' that should be provided by the manufacturer.
- The vehicle with compactor body to be fixed securely while moving from place to place.
- Hoper lift rams should be fitted with integral pilot operated load holding valves so that even if a hose fails, or is removed, the hopper cannot descend unless positively powered downwards.
- An emergency push button should be provided for stopping the compaction operation in the event of any emergency.

## **SPECIFICATION OF TRUCK MOUNTED GARBAGE COMPACTOR**

### **GENERAL**

Vehicle mounted rear loading garbage compactors shall be robust in construction and shall be able to collect of garbage and refuse from different spots and then transport it to dumping ground. The volume of the compactor shall be around 15 m<sup>3</sup>. The unit shall be operated by hydraulic systems. The positive compaction against the ejector plate shall be used to enable desired compaction to be achieved at all times for even loading. Proper distribution of load on front & rear axles should be achieved without overloading the axles in any circumstances. The refuse shall be pressed into the compactor by a pressing plate & the mechanism shall enable the full body volume to be filled with compacted refuse. The refuse shall be unloaded by an ejector plate.

The operations of this unit shall be such that one driver assisted by two helpers shall be adequate.

### **COLLECTION & DISPOSAL OF GARBAGE**

Collection of garbage shall be done by emptying/unloading the garbage into the hopper of the compactor from the bins. These bins shall be emptied hydraulically by the bin lifter or even emptied manually as the hopper is easily accessible. The compacting process shall be carried out in stages as described below.

- The packer plate, which initially is at a closed position parallel to the floor of the body, shall open hydraulically.
- Due to the actuation of the carrier plate hydraulic cylinders, the carrier shall come down and the hopper shall shut by the packer plate.
- The garbage from the hopper shall be swept by the packer plate and pulled into the container body by the reverse actuation of the carrier plate cylinder.
- The garbage shall be compacted against the ejector plate as the carrier ascends.
- The tailgate shall be unlocked from the self locking/unlocking arrangement and the entire assembly shall be hydraulically lifted using the two cylinders.
- The compressed garbage within the container body shall be unloaded by the ejector plate by pushing the garbage out of the body with its double acting multi stage hydraulic cylinder.
- This system shall facilitated easy and quick unloading with assured machine stability during discharge.

The skid-mounted unit shall consist of;

- Suitable power takes off arrangement from the truck chassis which shall be used for driving various components of the unit.
- Body
- Tail gate
- Packer plate
- Carrier plate
- Ejector Plate
- Bin lifter
- Controls
- Hydraulic system

- High Pressure Washing System (Optional)
- Safety Features
- Standard Accessories
- Painting

The above equipment shall be mounted on client supplied chassis with cabin & PTO like TATA / ASHOK Leyland or equivalent of 30T GVW and 4200 mm wheelbase. Bidder shall furnish full details of vehicle chassis. The Client will make direct payment to the Chassis manufacturer/ their dealer against their Proforma Invoice to avail special Govt. rates. The standard tools accessories and spares supplied with the chassis shall be handed over to the client at the time of delivery of the unit.

The Bidder shall make arrangements for mounting equipment on the chassis according to the rules laid down by the Regional transport Office, and loads recommended by the chassis manufacturer on the front and rear axles. The Client shall make arrangements for registration of the complete unit with the Regional Transport Office. The Government fees required for registration & insurance of the units shall be paid by the client directly to the concerned authorities.

**REAR LOADER: -**

The skid mounted rear loader unit and its hydraulically assisted packer body shall be designed to perform the assigned work. Unit shall conform to the best practice known to the body fabrication trade in design, quality of material and workmanship. Assemblies, subassemblies, components and accessories shall be standard and interchangeable. Accessories not specifically mentioned herein but necessary to furnish complete unit ready for use shall be included.

Unit shall be rear-loading type with loading height approx 1 meter from ground level. The operation of compacting, ejecting the refuse shall be hydraulic system. The system shall include the hydraulic pump driven by the chassis engine overheating, necessary filter, adjustable relief valves, DOCV's directional control valves, restriction valves and associated pipelines.

The hydraulic cylinders, hydraulic pump and control valves shall be of reputed make, manufactured by the firm having vast experience in the same field.

Hydraulic seamless pipes, hoses, couplings should be of high quality and standard to withstand high pressures. The pipe ends should be flared to ensure perfect seal and prevent leakage even at high pressure.

**a) PRIME MOVER:-**

The unit shall be run on the power transmitted from vehicle engine through P.T.O. (Power Take Off Unit). The P.T.O. shall be of sturdy design of reputed make and should be able to provide sufficient power to run the system.

**b) BODY**

- Body shall be fabricated from IS 2062 Steel sheets (5 mm thick floor, 3 mm side wall and top plate) having Hexagonal shape for better aesthetic and reinforced by front and rear stiffeners so as to withstand continuous operation at maximum imposed loads & without harmful deformation or excessive wear.
- The body interior shall have a smooth floor, sides and roof in order to prevent damages. No cylinders, valves and other hydraulic components shall come in contact with refuse into the body.
- The body sides shall be equipped with extra heavy structural steel guide rails so that will guide and support the ejector panel having UHMWPE / PTFE slider blocks provided on both

side of ejector.

- To prevent the corrosion from leachate, the body floor is provided with Stainless Steel grade 304 having Keel shape plate and ensure proper collection of leachate in the floor sump at the front of the body.

#### **c) TAIL GATE**

- Tailgate side shall be fabricated from high strength mild steel IS 2062 (3mm thick).
- Hopper floor shall be fabricated from Stainless steel Grade 304 (5mm thick).
- Loading height shall not be higher than the top of the chassis frame rails or 1m .
- The tailgate shall have self locking / unlocking arrangement and raise to permit ejection of the refuse when hydraulic valve is manually actuated.
- Tailgate shall be provided with sturdy arrangement for raising and controlling of descent.
- The valve that operates the tailgate lift action shall be located at the front end of the body (far away from the tailgate) to prevent any harm to the operator when the refuse is being ejected from the body.
- The valve operating the tailgate shall be of the spring centered (dead man) type so that the operator must stand at side of tailgate (away from moving packing blades) and physically hold the handle that activates the valve all of this for safety purposes.
- The hydraulic system shall include relief valves to prevent excess pressure that may damage hoses, tubes and other hydraulic components.
- A hydraulic fluid velocity fuse restrictor (Pilot Check valve) shall be installed at the base of the tailgate cylinder to prevent rapid and dangerous fall of tailgate in case of a hydraulic hose or tube rupture.

#### **d) PACKER PLATE:**

- Packer plate shall be heavily reinforced & fabricated from high strength IS 2062 mild steel 3mm thickness.
- Packing cycle complete shall be around 20 seconds.
- The truck's engine shall be accelerated to sufficient speed (rpm) when the packing plate valves are actuated to packing sequence at the rated speed and pressures to compact the refuse.
- Press Compaction: - Each hopper full of material shall be compressed between the packing blade and ejector panel.
- The heavy duty packer shall be fitted with sturdy mountings for rams.

#### **e) CARRIER PLATE:**

The carrier plate shall be fabricated from high strength mild steel sheets IS 2062 (3mm) and shall be made strong enough to withstand all the abuse imposed upon it by the refuse.

The carrier plate shall slide on integrated side channels provided with low friction, self lubricating UHMWPE / PTFE guides.

#### **f) DISCHARGE OF LOAD: (EJECTOR PLATE)**

- Discharge shall be by means of positive ejection.
- The ejector panel shall be fabricated from high strength IS 2062 6mm thick mild steel plate. The ejector panel should be angled and smooth to ensure clean discharge and eliminate risk of waste adhering to the plate. The ejector plate should be suitably reinforced.
- The hydraulic telescopic cylinder shall extend and retract ejector over full length of the body and shall be double acting.

- Ejector plate shall be supported as well as glide on heavy duty UHMWPE / PTFE self lubricating slider blocks to move smoothly along the side rails provided within the body.
- A large access opening at the front of the body shall be provided to attend to the front of the ejection mechanism.

**g) BIN LIFTING:**

A hydraulically operated bin lifter should be provided at the rear end along with the equipment, and should be capable of lifting the EN standard containers of various sizes of bins. Two double acting hydraulic cylinders one on each side to be provided. Control lever for operation to be installed at a convenient position such that the working of hydraulic cylinders can be controlled safely. The bin arms shall have self locking arrangement to prevent bins sliding over during unloading operation. The arms shall be locked in folded position during vehicle movement on road.

**h) CONTROLS:**

- Power take-off controls mounted in the cabin shall be conveniently located by chassis manufacturer.
- The position of Ejector and tailgate controls by two-spool directional control valve shall be outside the body on the left side at the front part of the body.
- The position of carrier plate, packer plate and bin lifter controls by three spools. Directional control valve shall be outside the body on the left side near the rear part of the body.
- A Pneumatic acceleration device to raise engine speed to required R.P.M. during packing cycle shall be provided.

**i) HYDRAULIC SYSTEM:**

- A heavy duty, single speed power take-off shall be provided by chassis manufacturer and shall be compatible with that of chassis transmission.
- The power take-off must run quietly. Gearing shall be selected for minimum engine R.P.M. compatible with recommended R.P.M. for correct operating pressure and flow per minute.
- The hydraulic pump shall be designed to operate continuously with peak loading at frequent and short interval. The pump displacement at 1500 rpm should be 75 L/min. It shall be driven by the PTO via propeller shaft.
- All hydraulic hoses shall be as per relevant standards for designed pressure. Hoses shall have adequate safety factor over maximum relief valve pressure setting. The hoses shall be rigidly mounted on the body, wherever possible.
- The hydraulic system shall incorporate relief valves to protect all components from excessive pressure and overloads.
- A replaceable, 10 micron filter should be provided in return line of hydraulic system.
- All hydraulic components should be easily accessible for inspection.

**HYDRAULIC VALVES:**

All the valves provided shall be of reputed make and of international standard. The valves shall be rated  $140 \text{ kg/cm}^2$  pressure.

**HYDRAULIC CYLINDERS:**

- All cylinders must be tested at 1.5 time the rated working pressures.
- There must be a minimum of 9 cylinders as follows :
  - a) 1 No.: Heavy duty Multi stage telescopic, double acting hydraulic cylinder for Ejection plate.

b) 2 Nos.: Heavy duty double acting Hydraulic cylinder with spherical bearings at one end, for tailgate.

c) 2 Nos.: Heavy duty double acting hydraulic cylinder with spherical bearings at one end, for carrier plate.

d) 2 Nos.: Heavy duty double acting hydraulic cylinder with spherical bearings at one end, for packer plate.

e) 2 Nos.: Heavy duty double acting hydraulic cylinder with spherical bearings at one end, for Bin lifter.

- Cylinder rods of all cylinders shall be constructed of high strength, hardened steel rods, centreless ground to an RMS smoothness rating of 8 and shall be hard chrome plate to a minimum thickness of 0.13 mm.
- Pin mounting connections of packer and compaction cylinders shall incorporate hardened spherical bushings on hardened pins where necessary.
- The cylinders should be of reputed make.

#### **HYDRAULIC RESERVOIR TANK AND FILTERS:**

The reservoir tank shall be minimum 200 liters capacity and includes a sight fluid level indicator, spin on return filter of 10 micron rating, suction line shut-off cock, and filter cap with chain to prevent loss.

#### **j) HIGH PRESSURE WASHING SYSTEM: (OPTIONAL)**

Stainless steel water storage tank of 750 Ltrs. and hydraulic motor driven Jetting Pump is provided for washing the internal walls of Compactor after dumping the garbage at garbage station. The pump operated by hydraulic direction control valve.

#### **k) SAFETY FEATURES:**

- Hose burst valve shall be fitted to the system to prevent the tailgate descending in the event of the hydraulic failure. Emergency stop switch shall be provided to stop all the operations instantaneously in case of emergency. The switch shall be provided on either side of the vehicle.
- There shall be a 'body prop' provided on the tailgate to hold the tailgate in the open position for safety of workshop personnel when entering the body for maintenance or repair.

#### **l) STANDARD ACCESSORIES**

- Following accessories as a part of the machine shall be provided alongwith each model to enhance the performance and safety features of the machines.
  - (i) Mud flaps - 2 nos.
  - (ii) Mud guard – 2 Nos.
  - (iii) Aluminium chequered plate lockable tool box – 1 No.

#### **m) PAINTING**

The entire unit shall be painted with two coats of superior quality anti-corrosive primer with two coats of approved quality paint. The bidder shall get the paints and shades approved from the client.



## **SPECIFICATION OF CHASSIS TIPPER TRUCK**

### SPECIFICATION OF CNG AUTO RICKSHAW

Name of the item/Equipment: - Two Stroke CNG Auto Rickshaw 145 CC Engine or Less Chassis Only

Quantity Required: - 25 No. Technical Specifications: -

<ul style="list-style-type: none"> <li>☑ Displacement</li> <li>☑ Max. Power, kW @ rpm</li> <li>☑ Max. Torque, Nm @ rpm</li> <li>☑ Air cleaner type</li> <li>☑ Clutch Type</li> </ul>	<ul style="list-style-type: none"> <li>. 145.45 cc or less</li> <li>. 4.9 kW or less @ 5000 rpm</li> <li>. 10.8 N.m or less @ 3500 rpm</li> <li>. Foam element</li> <li>. Wet multidisc type</li> </ul>
<ul style="list-style-type: none"> <li>• Transmission</li> </ul>	<ul style="list-style-type: none"> <li>• 4 Forward + 1 Reverse</li> </ul>
<ul style="list-style-type: none"> <li>• Chassis Type</li> </ul>	<ul style="list-style-type: none"> <li>• Monocoque</li> </ul>
<p>Suspension:</p> <ol style="list-style-type: none"> <li>1. Type / Description</li> <li>2. Spring</li> <li>3. Shock absorbers</li> </ol>	<ol style="list-style-type: none"> <li>1. Front – Swing arm with Antidive Link, Rear – Swing arm.</li> <li>2. Front - Helical coil compression spring, Rear -Helical coil compression spring</li> <li>3. Front - Hydraulic, double acting, Rear – Hydraulic, double acting.</li> </ol>
<p>Brake:</p> <ol style="list-style-type: none"> <li>3. Service brake (Brief description)</li> <li>4. Wheel rim size</li> <li>5. Tyre size Front &amp; Rear</li> </ol>	<ol style="list-style-type: none"> <li>1. Single control, right foot operated hydraulic brakes with TMC</li> <li>2. Front-3.00 x8,Rear-3.00 x8</li> <li>3. Front &amp; Rear - 4.00-8, 4PR</li> </ol>
<p>Electrical:</p> <ol style="list-style-type: none"> <li>8. System voltage, V</li> <li>9. Battery rating, Ah</li> <li>10. Wiper motor</li> <li>11. Wiping system (Brief description)</li> </ol>	<ol style="list-style-type: none"> <li>1. 12V,AC+ DC</li> <li>2. 12 V, 9 A.h</li> <li>3. Electrical</li> <li>4. Single speed electrical wiper motor with wiper arm and blade</li> </ol>
<p>Dimensions:</p> <ol style="list-style-type: none"> <li>1. Wheel base, mm</li> <li>2. Overall width, mm</li> <li>3. Overall length, mm</li> <li>4. Overall height, mm</li> <li>5. Rear track, mm</li> <li>6. Min. ground clearance, mm</li> </ol>	<ol style="list-style-type: none"> <li>4. 2000</li> <li>5. 1300</li> <li>6. 2625</li> <li>7. 1710</li> <li>8. 1150</li> <li>9. 200</li> </ol>
<p>Weights:</p> <ol style="list-style-type: none"> <li>1. Maximum GVW, kg</li> <li>2. Kerb weight ,kg</li> </ol>	<ul style="list-style-type: none"> <li>. 665 or less</li> <li>. 335 or less</li> </ul>

## Technical Proposal for Transfer Station

### 1. Essential Details of Items / Services required

#### 1.1. Scope of Project/ Objective of the Project:

Construction and Installation of Solid Waste Transfer Stations at two locations in the Agra City with Defect Liability Period of 1 Year. The Civil Structure to be constructed shall be constructed using First Class materials as per the state Schedule of Rates.

The Scope of work also includes the following works:

Site filling/ Levelling	<p>.....</p> <p>The detail is attached in the Annexure-1</p> <p>.....</p>
Earth Compacting	
Filling of Aggregate / PCC bed	
CC & RCC Work as per drawing	
Brickwork as per drawing	
Finishing Work including Plastering, Painting & Tile work	
MS Truss work on hollow pipe for roofing	
ACP Cladding as per drawing wherever applicable	
Aluminum Roofing	
MS Rolling shutter	

The successful bidder may also carry out the following works:

- Detailed topographical survey and preparation of contour plan of the site
- Site clearance and preparatory works
- Excavation, as per requirement
- Greenbelt development/ compensatory greenbelt development
- Washing area and water storage
- Vehicle minor repair/ maintenance area
- Office/ admin room/ Toilet/ washroom
- Control boundary wall along the periphery
- Wastewater disposal mechanism
- Water pump and other electro-mechanical items, as applicable
- Site restoration, utility shifting work, if any

**Design & Specifications:** Please refer ANNEXURE-1.

**1.2. Scope not exhaustive** The Scope of Services specified in the Clause above are not exhaustive and the Successful Bidder shall undertake such other tasks as may be necessary to appraise the project feasibility technically and financially.

**1.3. Completion Time Schedule**

The work covered under this Bidding Document and, in particular, in the Technical Specifications of the Bidding Document shall be commissioned at the Site within the completion period i.e, 6 months specified in the Technical Specifications from the effective date of Contract.

**1.4.** In case the Successful Bidder fails to achieve the completion of the commissioning and establishing agreed guaranteed technical parameters within the period specified in the Technical Specification from the effective date of Contract, the Authority, without prejudice to its other remedies under the contract, shall levy a penalty on the Bidder at the rate of one percent of the Contract Price per week of delay or part thereof subject to maximum of ten percent of the Contract Price. Once the maximum is reached, ASCL may consider termination of the contract.

**1.5. Special conditions of contract:**

**1.5.1.** The contractor shall ensure presence of at least one site in charge/supervisor in the construction area all the time for better control.

**1.5.2.** The contractor shall deploy adequate resources, tools and tackles etc. so as to suit the smooth functioning of works and shall submit the list of the equipment he proposes to deploy with standardization.

**1.5.3.** There must be 1-year comprehensive Defect Liability Period (DLP) from the date of completion of work/handing over to Agra Smart City Limited, Agra.

**1.5.4.** During DLP, in case of any written report from Agra Smart City Limited about any manufacturing defect, if not rectified within Seven Days from the day of written report, ASCL will impose penalty of Rs 500.00 per day.

**1.5.5.** Under the definition of warranty, the manufacturing defects/faults liability shall be covered with all the items in the executed work including all parts of civil works/on site construction.

**1.5.6.** During the one years of Operation & Maintenance, entire project will be maintained by the successful Bidder. Machines, Materials, Equipment and labours are to be arranged by the successful bidder.

**1.5.7.** If there is some damage to the structure made, the repair work shall be executed by the tenderer immediately

**1.6. Advance Payments.** No advance payment (s) will be made.

**1.7. Transfer and Sub-letting:** The bidder has no right to give, bargain, sell, assign or sublet or otherwise dispose off the contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present contract or any part thereof.

**1.8. Warranty.** The following Warranty will form part of the contract placed on successful bidder.

a) The bidder warrants that the goods supplied under the contract conform to technical specifications prescribed and shall perform according to the said technical specifications.

b) The Bidder commits for a period of 1year from the date of acceptance of stores by joint receipt inspection or date of installation and commissioning, whichever is later, that the goods/stores supplied under the contract and each component used in the manufacture thereof shall be free from all types of defects/failures.

c) If within the period of warranty, the goods are reported by the authority to have failed to perform as per the specifications, the bidder shall either replace or rectify the same free of charge, within a maximum period of 10 days of notification of such

defect received by the bidder. Warranty of the equipment would be extended by such duration of downtime. Record of the down time would be maintained by the user in the logbook. Spares required for warranty repairs or defect liability period shall be provided free of cost by the bidder. The bidder also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the authority and the bidder. Spares required for post defect liability period shall be chargeable.

**1.9. Fall clause.** The following fall clause will form part of the contract placed on successful bidder.

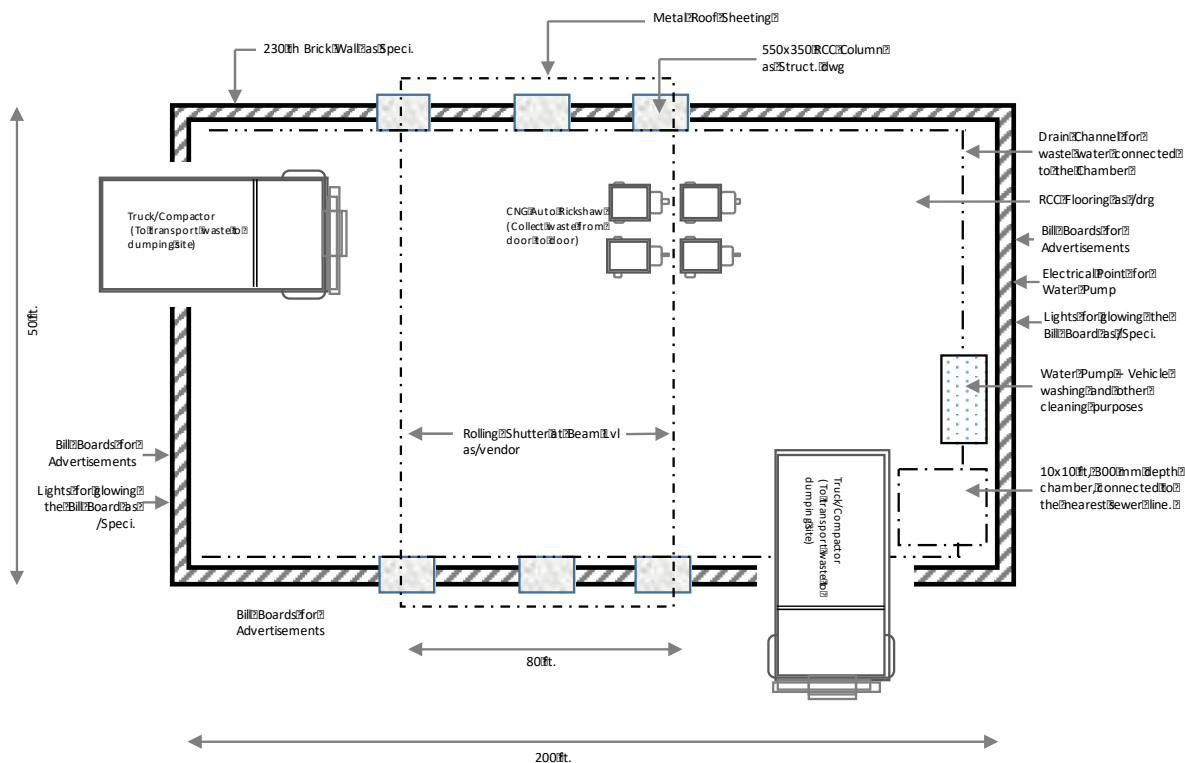
- a) The price charged for the stores supplied under the contract by the bidder shall in no event exceed the lowest prices at which the bidder sells the stores or offer to sell stores of identical description to any persons/Organization including the purchaser or any department of the Central Government or any Department of State Government or any statutory undertaking the Central or State Government as the case may be during the period till performance of all Supply Orders placed during the currency of the rate contract is completed.
- b) If at any time, during the said period the Bidder reduces the sale price, sells or offer to sell such stores to any person/ organization including the Authority or any Dept. of central Govt. or any Department of the State Government or any Statutory undertaking of the Central or state Government as the case may be at a price lower than the price chargeable under the contract, he shall forthwith notify such reduction or sale or offer of sale to the Director General of Supplies & Disposals and the price payable under the contract for the stores of such reduction of sale or offer of the sale shall stand correspondingly reduced.
- c) The bidder shall furnish the following certificate to the Authority along with each bill for payment for supplies made against the Rate contract – *“We certify that there has been no reduction in sale price of the stores of description identical to the stores supplied to the Government under the contract herein and such stores have not been offered/sold by me/us to any person/organization including the purchaser or any department of Central Government or any Department of a state Government or any Statutory Undertaking of the Central or State Government as the case may be up to the date of bill/the date of completion of supplies against all supply orders placed during the currency of the Rate Contract at price lower than the price charged to the Government under the contract”*.

**1.10. Franking clause.** The following Franking clause will form part of the contract placed on successful bidder.

- a) **Franking Clause in the case of Acceptance of Goods** - “The fact that the goods have been inspected after the delivery period and passed by the Inspecting Officer will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the authority under the terms and conditions of the contract”.
- b) **Franking Clause in the case of Rejection of Goods** - “The fact that the goods have been inspected after the delivery period and rejected by the Inspecting Officer will not bind the Authority in any manner. The goods are being rejected without prejudice to the rights of the authority under the terms and conditions of the contract.”

- 2. Specification.** The following Specification Clause will form part of the contract placed on successful bidder. The bidder guarantees to meet the specifications as per RFP and design proposal submitted and to incorporate the modifications to the existing design configuration to meet the specific requirement of the Authority as per modifications/requirements recommended. All technical literature and drawings shall be amended as the modifications by the bidder before execution to the Authority. The Bidder, in consultation with the Authority, may carry out technical up-gradation/ alterations in the design, drawings and specifications due to change in manufacturing procedures, indigenization or obsolescence. This will, however, not in any way, adversely affect the end specifications of the equipment. Changes in technical details, drawings, and repair and maintenance techniques along with necessary tools as a result of up-gradation / alterations will be provided to the authority free of cost within 60 days of affecting such up-gradation/alterations.
- 2.1. Quality Assurance.** Bidder would provide the Standard Acceptance Test Procedure (ATP) within 1 month of the date of contract. Authority reserves the right to modify the ATP. Bidder would be required to provide all test facilities at his premises for acceptance and inspection by Authority. The details in this regard will be coordinated during the negotiation of the contract. The item should be of the latest manufacture, conforming to the current production standard and having 100% defined life at the time of delivery.
- 2.2. Inspection agency:** Item should meet ISO/ISI standard specification. Inspection will be carried out by ASCL.
- 2.3. Inspection Authority.** The Inspection will be carried out by an Officer / Agency / Institution detailed by the Chief Executive Officer, Agra Smart City Limited. The mode of Inspection will be User Inspection. The items will be subjected to detailed Acceptance Testing Procedure (ATP) to test individual components and successful integration of all components. The vendor and the user will work out the details of the procedure jointly. The specifications of the equipment should be in conformity with the details provided by the vendor and as per the given specifications. The user would issue an Acceptance Certificate on successful completion of acceptance testing after delivery. The date of issuing the Acceptance Certificate would be deemed to be the date on which the warranty will commence.

**ANNEXURE – 1 DESIGNS, DRAWINGS & SPECIFICATIONS OF TRANSFER STATION**

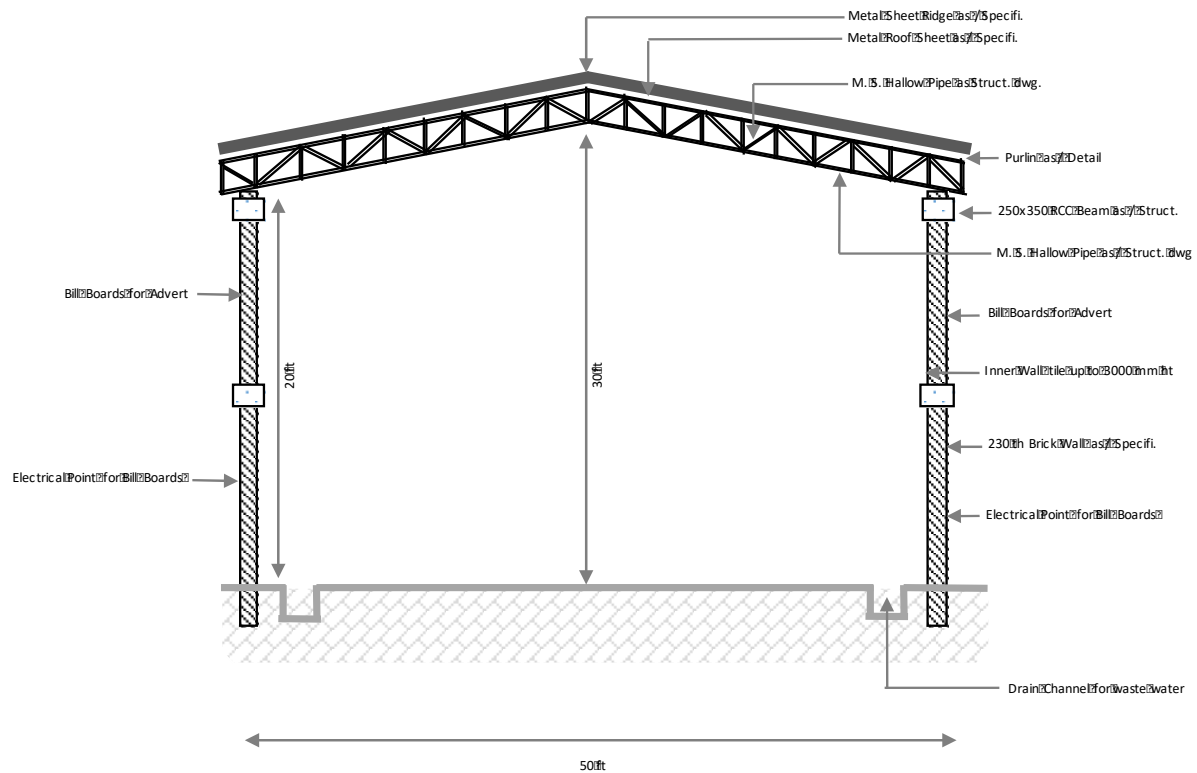


**Project:** Proposed Transfer Station for Municipal Solid Waste

**Drawing Title:** Layout Plan

**Client:** Agra Smart City Limited, Agra

**Consultant:** Life Shell Labs India Private Ltd, Chennai, 600077.



**Project:** Proposed  
Transfer Station for  
Municipal Solid  
Waste

**Drawing Title:** Shed  
and Roof

**Client:**  
Agra Smart City  
Limited, Agra

**Consultant:**  
Life Shell Labs India  
Private Ltd,  
Chennai, 600077.

### Detailed Specification:

**Civil Works** (all the works shall be designed as per the relevant Indian Standard codes and approved by Independent Engineer)

- **Shed:** The structure should be an RCC framed structure designed as per the relevant IS codes. The structure should have an M. S. Roofing system with suitable protective coating and support system of trusses and purlins design as per the relevant Indian Standard codes and attached design and drawings. The structure should be covered by brick masonry walls from all sides and have openings with ventilators and rolling shutters large enough for the movement of vehicles for the project.
- **Concrete flooring:** The flooring should be impermeable and designed to withstand the load impacts from the vehicles used for collection and transportation of waste. The floor should further be able to withstand the load from the portable compactors.
- **Drainage system:** The leachate generated from the compaction of waste should be collected from the drains and connected to the nearest ETP/STP.



