

# **Standard Operating Procedure (SOP)**

**Cum**

**Macro Plan**

**FOR**

**Door to Door Collection of Segregated Municipal Solid Waste in**



**Lohamandi Zone, Agra**

**Date 11<sup>th</sup> April 2019**



**Submitted by**

**M/s SRMT Waste Management Private Limited**

**EH-21, DeenDayal Nagar, Airport Road**

**Gwalior (Madhya Pradesh)**

## **Introduction**

### **SRMT Waste Management Private Limited**

One of the reputed company having ISO: 9001 & 14001 along with OHSAS 18001:2007 in Solid & Liquid waste management and committed towards creating a quality waste collection, transportation, processing & recycling program to assist the Organizations in treating their waste in a scientific & safe manner.

About us : SRMT a emergent & efficient service provider in the field of municipal solid waste management, construction & demolition waste management, bio remediation of dump site (Legacy Waste), Geo-Technical Services, GIS, Remote Sensing, Waste Management products related to decentralised model of municipal solid waste management (Organic waste converter, Bio gas plant, PET bottle crusher unit, Compactor unit) etc, segregation of waste & recycling and Composting.

Backed by reach Industries Experience, we are engaged in successfully offering complete Project handling services that is aimed at building a clean, healthy and self-sustaining environment. Meant for welfare of human capital and environment, our wide range of services is backed by Extensive research that helps us to successfully accomplish various challenging projects. Our well planned &executed methodologies have also allowed us to successfully customers with services in a more streamlined manner.

Further, for achieving Smother business operations, we have Segregated our operations under various department like data Analysis and Managements, Research and Field work, Professionals handling these departments ensure that every task is performed as per the requirement of our Clients Apart from our clear as well as flexible methodologies, we are also well equipped with latest facilities that allow us to correctly execute our work procedures.

“Door to Door Collection of MSW" means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, collected from the source of generation and transfer to the processing facility without touching graoun in any case in the areaLohamandi zone under AgraNagarNigam.

Solid Waste management is fast coming to be recognized as priority area requiring intervention, if life in urban areas is to be sustained and improved. The menace of municipal solid waste/garbage and slaughter house waste is increasing everyday on account of growing population, limitations of existing infrastructure and technologies for its management. In this light, M/s SRMT Waste Management Private Limited, Gwalior has been engaged into municipal solid waste management in the city for the following services.

## Scope of Work

- 1- Door to Door collection of Municipal Solid Waste within the allotted zone i.e. Lohamandi
- 2- Information, Education, Communication (IEC) for Segregation and storage of Domestic Hazardous waste
- 3- User charge collection from the service area and deposition in the account of Agra Nagar Nigam

## Execution Plan

### *1- Primary (Door to Door) Collection of Municipal Solid Waste*

The Methodology for door to door collection: following are the vehicles which shall be deployed for door to door collection according to roads/streets and density of the area. The capacity of the vehicle to cover house hold & commercial properties as below...

- 1- Auto Tipper: Approximately average coverage of 900 to 1500 properties
- 2- Tricycle: with Eight detachable bins of 60 ltrs approximately coverage of 250 to 300 properties



*AutoTipper (2CuM)*



*Tricycle with 8 Detachable Bins*

- *Time of primary operations shall be in Summer season from 06:00 hrs in the morning till 14:00 hrs. Some special and commercial collection shall be completed from 14:00 hrs to 22:00 hrs as and when desired and in winter season from 7.00 hrs to 15.00 hrs in first shift, from 16.00 hrs to 21.00 hrs in second shift as and when required .*
- *Door to Door collection shall be completed by 80% of total residential Properties using Mini tipper fitted with two hopper of 1 CuM each and auto tipper with 1.5 Cum fitted hopperto collect segregated waste & 20% of total residential properties by tricycle with 8 detached 60 Ltrs bin system for narrow and inner streets of the city.*

- *Commercial wastes under shop to shop collection shall be catered by Mini tipper fitted with 2.0 Cu.M two hopper of 1 CuM each to collect segregated waste*
- *Each vehicle for residential area will be having one driver & Two helper only for collection of segregated waste.*
- *After collection of segregated waste from both Residential & Commercial areas, the Dry waste transfer to ISBT and Wet waste transfer to the composting plant.*
- *Provision of personal protective equipments(PPE)- including uniform, fluorescent jacket, hand gloves, raincoats, appropriate foot wear and masks to all workers handling solid/liquid waste.*
- *Each vehicle for commercial area will be having one driver & Two helper for shop to shop collection*
- *A route chart of each vehicle shall be prepared, freeze and fixed to each vehicle, which bound to concern driver and helper for timely collection of waste. **(Format enclosed as Annexure A)***
- *Swachhta Music on each vehicle and whistle to each tricycle shall be fitted to intimate the users for giving their segregated stored waste*
- *All the vehicles deployed for door to door collection shall be equipped with GPS system which shall be monitored with a control room specially built for the purpose. The control room equipped for real time and resource management.*
- *Monitoring of timely collection and trips according to route chart will be recorded through GPS system every day*
- *An complaint redressal system shall be developed by providing a customer care number which shall be flashed in each document like UCC receipt banners etc. to resolve the complaints within the stipulated time*
- *An dedicated employee will be deployed for the customer complain handling and redressal system to ensure the timely and effective services*
- *One Supervisor in each ward called as **ward supervisor** will be deployed for implement, execution and monitoring the timely and effective services, who will be in touch with the concern sanitary inspector/ward official/Parshad for effectively implementation and instant resolution of any issue*

## Ward Wise Vehicle & Manpower deployment Plan

SRMT Waste Management Private Limited														
Deployment Plan for Door to Door Collection in LohaMandi Zone Agra														
			Asset Deployment Plan			Manpower Deployment Plan			Manpower Relievers		Total Manpower		Nos of Supervisors	Nos of UCC Collector
Sr No	Ward No	Nos of House Hold & Commercial Properties	Qty of waste generated	Nos of Mini Tipper	Nos of Tricycles	Nos of Helper	Nos of Drivers	Nos of Supervisor	Nos of Helper	Nos of Drivers	Nos of Helper	Nos of Drivers		
1	3	5064	10	3	2	11	3	1	2	0	13	3	1	2
2	6	4228	9	2	1	8	2	1	1	0	10	3	1	1
3	7	2114	4	1	2	6	1	1	1	0	7	1	1	1
4	18	2069	4	1	2	6	1	1	1	0	7	1	1	1
5	37	5773	12	3	2	12	3	1	2	1	14	4	1	2
6	45	4312	9	2	2	9	2	1	2	0	11	3	1	1
7	46	2656	5	2	2	7	2	1	1	0	8	2	1	1
8	49	5358	11	3	2	11	3	1	2	1	13	4	1	2
9	69	4953	10	3	2	11	3	1	2	0	12	3	1	2
10	73	6361	13	4	1	12	4	1	2	1	14	4	1	2
11	74	4223	9	2	2	9	2	1	2	0	11	3	1	1
12	75	4198	9	2	2	9	2	1	2	0	11	3	1	1
13	80	6945	14	4	2	14	4	1	2	1	16	5	1	2
14	82	2733	6	2	2	7	2	1	1	0	8	2	1	1
15	84	7134	14	4	3	15	4	1	3	1	18	5	1	2
16	86	4476	9	3	3	11	3	1	2	0	13	3	1	1
17	89	4500	9	3	3	11	3	1	2	0	13	3	1	2
	<b>Total</b>	<b>77097</b>	<b>156</b>	<b>45</b>	<b>35</b>	<b>169</b>	<b>45</b>	<b>17</b>	<b>28</b>	<b>7</b>	<b>197</b>	<b>52</b>	<b>17</b>	<b>25</b>

*Note: waste quantity calculated @ 450 gms per capita and one house hold having 4.5 person approx*

### 2- IEC Activities for Awareness for segregation at source

- *Banners/Hoardings for awareness: Banners of Swachhta for awareness shall be displayed in all the public places subject to the availability of place to be allotted by Nagar Nigam Agra*
- *One special vehicle (e rickshaw) equipped with all promotional equipment's like banners, pamphlets & announcement etc. which will be covering approximately 250 house hold properties visited daily on random basis in each war, in the campaign users shall be aware educate for segregation of waste and storage of domestic hazardous waste generated within the premise,*

- *In this process we are planning to achieve 100% segregation as separate storage of Dry waste (Blue), Wet waste (Green) & Domestic Hazardous waste (Red) and to achieve minimum two wards every month is the target.*

**3- User charge collection from the service area and deposition in the account of Agra Nagar Nigam**

- Monthly user charges as per notification of rates, notified by Agra Nagar Nigam shall be collected and deposited in the bank account of Agra Nagar Nigam.
- Weekly list of defaulters (who are not paying user charges or not giving garbage) shall be submitted to the authority for penalization and support

**Ward wise User Charge Potential as per Rate List**

<b>Sr No</b>	<b>Ward No</b>	<b>Total Nos of Properties</b>	<b>Total UCC Projection (Rs)</b>
1	3	5064	452030
2	6	4228	266800
3	7	2114	195280
4	18	2069	148300
5	37	5773	395190
6	45	4312	271110
7	46	2656	232060
8	49	5358	436060
9	69	4953	413540
10	73	6361	554720
11	74	4223	405850
12	75	4198	498220
13	80	6945	510980
14	82	2733	150970
15	84	7134	580260
16	86	4476	232900
17	89	4500	327970
	<b>Total</b>	<b>77097</b>	<b>6072240</b>

### Monthly Projected User Charge Target

Sr. No.	Name of Activities	May-19	June-19	July-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20
1.	User Charge Collection	40%	40%	40%	40%	40%	70%	70%	80%	100%	100%

#### Required Support to achieve the above target of UCC

- 1- Ward ZSO/CSFI/SFI to support in achieving 100% services and 100 % source segregation& User Charge Collection.
- 2- All the workers of municipal corporation and their relatives to be penalized for involving in D2D activities and user charge collection..
- 3- Above monthly target of user charge may be achieved only after the strong support to be provided by ANN (authority) by penalizing to the defaulters within one week as per the defaulters list to be submitted by agency.
- 4- Regular street sweeping and drain cleaning by ANN is required to get the 100% collection of MSW and user charge as well.
- 5- Street bins(CP AND DP BINS) to be removed which are placed in residential areas as per plan finalized to achieve the targets.

#### Control Room and implementation of Smart System for Monitoring of daily operations

- Control room will be set up in the office premises of SRMT Waste Management Private Limited Avastika sector 4 near Police Chowki Agra from where the movement of vehicles can be monitored,
- A Customer care number+ whats app number (6397556167)and facebook link <HTTPS://www.facebook.com/S-R-M-T-Waste-Management-900184743498422> has been created and will be provided under complain redressal system for proper services and feedback of the services.
- Efficient training to the workers as drivers & helper for their scope of work for the execution of project shall be provided to make the project successful
- Biometrics Attendance machine for the monitoring of daily attendance of workers will be fixed for monitoring of manpower
- GPS devices shall be installed to each mechanized vehicle for the monitoring of daily movement

#### Month wise Achievement Plan for Source Segregation of MSW

Sr No	Name of Activities	April 19	May 19	June 19	July 19	Aug 19	Sep 19	Oct 19	Nov 19	Dec 19
1-	IEC for Source Segregation and	10%	25%	35%	45%	60%	70%	80%	90%	100%

	Storage of MSW									
2	Ward Numbers to be developed for 100% source segregation	75 69	37 46	73 89	45 6	80 3	18 86	82 7	49 84	74

### Schedule of IEC Activities

Sr No	Item	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
		2 Wards	2 Wards	2 Wards	2 Wards	2 Wards	2 Wards	2 Wards	2 Wards	2 Wards
	Tie ups with FM radio & local cable TV network for Awareness tag line, All the events will be covered with both still photographs & video recording,									
2	Event RWA Meetings/ Quiz Show/Painting Competition/School Assemblies/ NukkadNatak	2	2	2	2	2	2	2	2	1
3	Hoardings for Awareness (10*8) Complete Installation	2	2	2	2	2	2	2	2	1
4	Kiosk	2	2	2	2	2	2	2	2	1