SCHEDULE "3"

PAYMENT OF TIPPING FEE

2.0 Tipping Fee

2.1 Tipping Fee for RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation

TIPPING FEE

(Amount in Rupees)

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User Charges Collection.				
1(a)	Residential Household	Per Household/ day	1233833		
1(b)	Commercial Unit	Per Commercial Unit/day	2115		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/day	771		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/ day	91		
2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	1062		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	81		

Note: Quantity may very +/- 20%

1. Tipping Fee for Door-to-Door Collection, Segregation at MRF and Transportation of MSW = TF*W*F
Where,

TF is the Tipping Fee Rate per MT of waste transported to Processing Plant

W is the actual Weight of waste Transported to Processing Site

F is **Multiplication Factor for performance-based payment equals to the ratio of** Total Marks obtained and Total Marks designated for 100% performance of work in Schedule 8 of this Concession Agreement.

SCHEDULE "4 "

Performance Security for Operation & Maintenance Requirements

The AUTHORITY

LUCKNOW NAGAR NIGAM

Lucknow, Uttar Pradesh

WHEREAS

1. …….. (The "Concessionaire") and the LUCKNOW NAGAR NIGAM (the "Authority") have entered into a Concession Agreement dated …….. (the "Agreement") whereby AUTHORITY has agreed to the Concessionaire undertaking the Door-to-Door Collection & Transportation of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation, subject to and in accordance with the provisions of the Agreement.
2. The Agreement requires the Concessionaire to furnish a Performance Security to AUTHORITY in a sum of Rs..... (Rupees ..... only) (The "Guarantee Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, towards Construction and Operation &Maintenance of the Project (as defined in the Agreement).
2. We ……through our Branch at……. (The "Bank") have agreed to furnish this Bank Guarantee by way of Performance Security.

NOW THEREFORE, The Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Concessionaire's obligations during the Operation & Maintenance Period, under and in accordance with the Agreement, and agrees and undertakes to pay to AUTHORITY, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the Guarantee Amount as AUTHORITY shall claim, without AUTHORITY being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from AUTHORITY, under the hand of the Additional AUTHORITY, stating that the Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the

Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that AUTHORITY shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Operation & Maintenance Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the Bank, notwithstanding any differences between AUTHORITY and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Concessionaire for any reason whatsoever.

3. In order to give effect to this Guarantee, AUTHORITY shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Concessionaire and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for AUTHORITY to proceed against the Concessionaire before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/ or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by AUTHORITY against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to AUTHORITY, and the Bank shall not be released from its liability and obligation under these presents by any exercise by AUTHORITY of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of AUTHORITY or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by AUTHORITY in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee will remain in force until compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee, no later than 6 (six)

months from the date of expiry of this Guarantee, all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.

8. The Performance Security will be valid for 12 months and shall be renewed before its expiry till the end of concession period.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of AUTHORITY in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred Branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of AUTHORITY that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months from the date hereof or until it is released earlier by AUTHORITY pursuant to the provisions of the Agreement.

Signed and sealed this ……. day of……., 20…… at ……..

SIGNED, SEALED AND DELIVERED

For and on behalf of the BANK by:

(Signature)

(Name)

(Designation)

(Address)

NOTES:

The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

SCHEDULE "5"

Date: _____

LETTER OF AUTHORISATION

To whomsoever it may Concern

This is to confirm that to pursuant to the Concession Agreement dated _____ entered into between the AUTHORITY and _____ ("the Concessionaire"), the Concessionaire has been authorised to **RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation** for the city of LUCKNOW and for that purpose, to apply for and obtain all approvals, licenses and permits required therein and to avail the utilities such as power, water, telecommunication and any other incidental utilities or services required in connection therewith.

Yours faithfully,

MUNICIPAL COMMISSIONER

LUCKNOW NAGAR NIGAM,

LUCKNOW

Schedule "6"

<u>घर - घर से प्रत्येक दिन अपशिष्ट संग्रहण के लिए निर्धारित सेवा शुल्क</u> (रुपया में)

Schedule "7"

APPLICABLE PERMITS

1. Applicable Permits

1.1 The Concessionaire shall obtain, as required under the Applicable Laws, the following Applicable Permits on or before the Appointed Date, save and except to the extent of a waiver granted by the Authority in accordance with Clause 4.2.1.

Sl No	Approval/ Clearances	Concerned Agencies	Responsibility
1	Site Authorization under MSW Rules	SPCB	Concessionaire
2	License in accordance with the rules and provisions of Labour (Regulation and Abolition) Act, 1970	MoLE	Concessionaire
3	Consent to establish under Air and Water Act	SPCB	Concessionaire
4	Consent to operate under Air and Water Act	SPCB	Concessionaire
6	NOC from Fire Services	Home Department	Concessionaire
7	Vehicle Registration	RTO	Concessionaire
8	Electricity Approval	Distribution Company	Concessionaire
9	All drawings and document approval	Authority	Concessionaire
10	Water Supply	Authority	Concessionaire

Where;

SPCB- State Pollution Control Board

MoLE-Ministry of Labour and Employment

MoEF- Ministry of Environment and Forest

RTO- Regional Transport Office

ERC- Electricity Regulatory Commission

DoI- Directorate of Industries

Schedule "8"

Safety requirements

1.1 Safety Requirements

Concessionaire is responsible for maintaining an incident/hazard free work environment. In compliance with these provisions, the Concessionaire shall comply with the latest edition of the Contractor Safety Requirements and perform the following:

a. Concessionaire is expected to pre-plan all work to minimize the potential for personal injury and property damage.
b. Develop the plan in a Project specific nature, which is designed to anticipate and identify hazards before work begins. Know in advance what measures will be taken to eliminate hazards or adequately control the anticipated risks for each scope of work. This information shall include, but is not limited to: scope of work, sequence of activities, site specific fall protection, high angle rescue procedures, safety control methods, training records, competent persons, lead abatement, asbestos abatement and excavations. The planning does not stop at the pre-planning stage, but is a continuous process of assessment and evaluation. When changes occur or new hazards are identified during the course of the Project, the work should be suspended while the plan is revised.
c. Ensure all subcontractors, suppliers and vendors are informed of their obligations with regard to safety and of the Contractor Safety Requirements.
d. Plan and execute all work to comply with the stated objectives and safety requirements contained in the Contractor Safety Requirements, contract provisions, federal, state, and local laws and regulations, and standards.
e. Concessionaire or their contractors/subcontractors with 25 or more employees on a single shift will establish a full-time position of a Contractor Safety Manager to perform safety in sections and training services. In addition, for every additional 100-job site employee added, an additional Safety Management Representative shall be required. In the event that the Contractor has less than 25 employees, the contractor shall appoint an onsite person who along with other concurrent duties shall serve as the Contractor's Safety Representative.
f. Concessionaire shall maintain its own orientation program for its employees that shall include as a minimum are view of(1) hazards present in the area in which they will be working and (2) the personal protective equipment and apparel the workers will be required to use or wear as

specified under Occupational Safety and Health Administration (OSHA).

g. Concessionaire shall provide and maintain a chemical and flammable material storage area as described in the Contractor Safety Requirements. Be responsible for the control, availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.
h. Take an active part in all supervisory safety meetings, including the discussion of observed unsafe work practices or conditions and a review of any incidents and corrective actions. Additionally, encourage, solicit and follow up on safety related suggestions from Concessionaire employees.
i. Report all injuries and incidents in a timely manner in accordance with federal and/or state laws and regulations and the Contractor Safety Requirements.
j. Analyse all incidents and implement immediate corrective action.
k. Provide job supervisors with appropriate training materials to conduct weekly safety meetings and attend said meetings to evaluate their effectiveness.
l. Review safety meeting reports submitted by job supervisors and take necessary action to ensure that the job supervisors hold meaningful weekly safety meetings.
m. Implement safety-training programs for Contractor supervisors and employees applicable to their specific responsibilities.
n. Maintain list on-site of personnel available for first aid and emergency treatment for injured Contractor employees.
o. Concessionaire will be responsible for providing a safety orientation training session for all workers before they are allowed to begin work. The orientation safety training will be conducted by the authorized representative as suggested by AUTHORITY and will include a summary of the Contractor Safety requirements/ Heads-Up Safety Training and awareness.
p. At a minimum Contractor representative to adequately train its employees according to applicable safety standards. This training may include but is not limited to: fall protection, fire watch, scaffolds, forklifts, excavation, ladders, confined space entry, respiratory protection, OSHA-PSM (Process Safety Management), grounding, shoring and traffic control etc.
q. In the event of a work-related incident resulting in a Contractor employee injury or near miss, Contractors shall notify their Appointed Representative immediately.
r. Contractors shall provide the appointed representative with an initial report of incident, in writing, within 24 hours of the accident. Hard copy or electronic formats are acceptable.
s. Contractors shall provide a completed accident investigation report within three (3) working days of the incident. In the event, their investigation

requires more time to investigate due to the complexity of the incident, Contractors shall communicate to the appointed Representative in writing including intimation to higher authorities of availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.

t. All first aid injuries shall be documented for record keeping purposes. In the event a first aid case develops into a Contractor employee injury, accident reporting and investigation procedure shall be initiated as outlined previously.

u. In order to maintain a safe and healthy work environment in emergency situations, Concessionaire has developed this emergency action plan to help safeguard Contractor employees while working on AUTHORITY Sites. All Contractor employees will be trained in the use of this plan and informed of their role in implementing it during their required safety orientation training. This policy is mandatory and must be strictly followed by all Contractors and their personnel while working on Sites.

v. When notified of an emergency evacuation (an audible alarm/verbal announcement will be used by Concessionaire to alert employees of an evacuation), Contractors must immediately. Evacuate their personnel from the Project Site, perform a head count and report missing personnel to concerned in-charge of the facility and take appropriate steps for investigation. When evacuating any building, structure or job site, employees should utilize the nearest exit to them. Personnel will remain at the designated site until an all-clear is announced or further evacuation steps are ordered.

w. Concessionaire shall comply with the latest revision Safety Rules & Procedures Permit. Contractors shall provide adequate fire protection equipment in each of their storage areas, offices and other temporary structures.

x. Concessionaire is responsible for orienting employees on the specific safety rules that must be followed by all persons working on Project Facilities. Other personal protective equipment (PPE) is also required in accordance with the appropriate safety standards and equipment as set by the manufacture's specifications. A list of the minimum personal protective requirements is as follows:

   i. The Concessionaire shall be responsible for providing and ensuring the use of required personal protective equipment for its employees.
   ii. Approved hard hats, shall be worn at all times while on the Site. It is required that each employee use an American National Standards Institute (ANSI) approved hardhat.
   iii. Safety glasses, which meet applicable ANSI standards, are required at all times while on the Site and should include approved side

shields. Only clear safety glasses are allowed to be used inside buildings or enclosed structures. Shaded goggles or hoods may be used while welding or cutting requires. Prescription safety glasses with self-tinting capabilities may be worn on-site.

iv. PPE shall be worn while travelling from the security gate, while travelling through the plants, working outside or otherwise engaged in work at each station, except in areas specifically designated as PPE not required.

v. Concessionaire's vendors and visitors will be required to meet these same standards.

y. Good housekeeping affects safety, quality and production. It is the responsibility of Concessionaire onsite to keep their work area clean. Concessionaire are responsible or trash and debris that is generated by their work. Trash and debris must be collected and placed in proper containers on a daily basis.

z. Trash shall not be randomly thrown off a floor or through openings in the floor. Trash chutes, trash boxes, or other approved means such as barricading and/or flagging shall be utilized.

aa. Safety requirement mentioned in the Environment and Social Impact Assessment (ESIA) Report shall be complied in accordance to Schedule XXI and Schedule XIV.

Schedule "9"

Reports

1. Door to Door/Street level Primary Solid Waste Collection Service

Table 1: Deployment of Waste Collection Vehicles

Route No.:			Route No.:		
Vehicle Type:			Vehicle Type:		
Ward:			Ward:		
Halt point	Time	Area to be serviced	Halt point	Time	Area to be serviced
Recycling Center		ID of Recycling Center	Recycling Center		ID of Recycling Center
End point		Compactor Location ID	End point		Compactor Location ID

Table 2: SCP's / Street Corner bins situated in areas covered in Door to Door/Street level collection system

ID: Ward/ Location	Capacity of Solid Waste (no. of bins)	Capacity of Silt (no. of bins)	Whether it receives waste from non-street level areas as well?	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 3: Recycling Centers situated in areas covered in Street level collection system

ID: Ward/ Location	No. of Staff to be deployed	Open Timings	Weigh-bridge capacity	Computerized (Y/N)	Nature of dry waste that is accepted

2. Collection of Solid Waste from Commercial Establishments/ Market Areas

Table 4: Deployment of Waste Collection Vehicles

Route No.:			Route No.:		
Vehicle type:			Vehicle Type:		
Ward:			Ward:		
Halt point	Time	Area to be serviced	Halt point	Time	Area to be serviced
Recycling Center		ID of Recycling Center:	Recycling Center		ID of Recycling Center:
End point		Compactor Location ID:	End point		Compactor Location ID:

Table 5: Compacting Servicing Stations for solid waste collection from

commercial establishments

ID: Ward/ Location	Mobile/ Fixed	Capacity	Whether it receives waste from non-commercial establishment	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 6: SCP's / Street Corner bins situated in commercial areas/ markets

ID: Ward/ Location	Capacity of Solid Waste (no. of bins)	Capacity of Silt (no. of bins)	Whether it receives waste from non-commercia l	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 7: SCP's / Street Corner bins specifically for drain silt

ID: Ward/ Location	Capacity of Silt (no. of bins)	Whether it receives waste from non-commercial Establishment	No. of times per week – to be cleared	Days of week when to be cleared	Scheduled clearing time(s)

3. Clearing Service of Recycling Centers

Table 8: Clearing Service of Recycling Centers

Rout No.:			Rout No.:		
Vehicle type:			Vehicle Type:		
Ward:			Ward:		
Waste type collected by vehicle:			Waste type collected by vehicle:		
Halt point	Time	Location ID to be serviced	Halt point	Time	Location ID to be serviced
End point		Disposal Location ID:	End point		Disposal Location ID:

4. Bin Washing Schedule

Table 9: Bin Washing Schedule

Location ID	No. of Bins at location	Date of proposed washing	Time of proposed washing

5. Vehicle Servicing Schedule

Table 10: Vehicle Servicing Schedule

Vehicle Registration	Type of Vehicle	Date of proposed washing	Date of proposed

6. Fleet Deployment for the Month

Table 11: Fleet Deployment for the Month

Reg. No. Make	Vehicle Type	Volume (cu m)	SW Capacity (MT)	Green waste capacity (MT)	Silt Capacity (MT)

7. Plan for deployment of manpower-

Table 12: On Vehicles (including secondary transportation vehicles, Hook Loaders etc.)

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Vehicle Reg No. on which deployed

Table 13: On Static Compactors

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Location ID on which deployed

Table 14: On Recycling Centers

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Location ID on which

Table 15: Supervisory Manpower

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Area of Supervision

8. Daily (Real Time) Reports

Following reports are generated daily on real time basis.

a) Report on Door-to-Door Collection from Households

Date_____

Colony/ Locality (covered under door to door) _____

Table 16: Household collection report

Waste Collector ID*	Service Area/Beat	No of Households	No of Households	Time period during which

* Waste Collector ID shall be designed in such a manner that it reflects the linkage with type of vehicle that waste collector is assigned to (Motorized tricycle/E-rickshaws, Auto Tipper etc.)

Table 17: Exception reports (Not serviced Areas)

Service Area/Beat No.	No of Households in beat	Whether serviced previous day?	Reason for non-service	Action taken for remedy

Table 18: Motorized Vehicles deployment for door-to-door collection (Report from GPS data - real-time)

Route No. Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time**	Scheduled end time Actual End time*	Drivers' report on waste collection	Quantity of Recyclable waste delivered at Recycling
				<Report sent Visa SMS at the end of route>	

* Excess/ Normal/ Short, **SMS shall be sent by driver at the start of route

Table 19: Exception Report on vehicle deployment (Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled start time	Likely start time	Reason for delay	Remedial action

Table 20: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes	Normal Weight Routes No.	Short Weight Route No

Table 11: Report of SCP's/ Street Corner bins servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 22: Exception Report of SCP (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID	Scheduled clearing	Likely clearing time	Reason for delay	Remedial action

Table 23: Report of Recycling Centers servicing the colony/ locality

Location ID	Schedule d clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste cleared	Whether non-confirming waste in the Center (Y/N)	Upload photo with date & time stamp

b) Collection and Transportation of SW from All Markets, Hotels, Dhabas, Restaurant, Banquet Hall, Institution, Farm House & Other Commercial Establishment

Date_____ Ward No. _____

Name of Market / Commercial or Institutional Area _____

Table 24: Deployment of Primary Collection &Transportation Vehicles for waste collection from such entities (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess /Normal/	Quantity of Recyclable waste delivered at Recycling

Table 25: Exception Report on deployment of Primary Collection & Transportation Vehicles
(Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled start time	Likely start time	Reason for delay	Remedial Action taken

Table 26: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes serviced	Normal Weight Routes No.	Short Weight Route No	Excess Weight Route No

Table 27: Report of SCP's/ Street Corner bins servicing the market/area

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF /disposal	Whether non-confirming waste in Dhalao?	Upload photo with date & time stamp

Table 28: Exception Report of SCP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID	Scheduled clearing time	Likely Clearing time	Reason for delay	Remedial action taken

Table 29: Report of Recycling Centers servicing the market etc.

Location ID	Scheduled clearing time	Actual Start time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste delivered at Recycling center	Whether non-confirming waste in the Center	Upload photo with date & time stamp

c) Report on Street Level Primary SW Collection System

Date_____ Ward _____

Table 30: Primary Collection &Transportation Vehicles deployment for street level collection (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess /Normal/ Short	Quantity of Recyclable waste delivered at Recycling center

Table 31: Exception Report on vehicle deployment (Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No.	Scheduled start time	Likely start time	Reason for delay	Remedial action taken

Table 32: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes serviced	Normal Weight Routes No.	Short Weight Route No	Excess Weight Route No

Table 33: Report of SCP's/ Street Corner bins servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 34: Exception Report of SCP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 35: Report of Recycling Centers servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste cleared	Whether non-confirming waste in the Center	Upload photo with date & time stamp

d) Report on Compactor Stations

Date_____

Ward No._____

Table 36: Report of Fixed Compactor Station

Compactor Location ID	Scheduled clearing time(s)	Actual clearing time(s)	Time of arrival at SLF / disposal site	Hook Loader Reg No Driver Name Driver Mobile

Table 37: Report on Mobile Transfer Stations

Location ID	Vehicle Reg. No Driver Name Driver Mobile	Scheduled clearing time	Actual Clearing time	Time of arrival at SLF / disposal site

Table 38: Exception Report of Compactor Clearance (Where compacting station/Point has not been cleared within 2 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action Taken

e) Report on Collection and Transportation of Horticulture Waste:

Date_____ Ward no. ___

Table 39: Primary Collection & Transportation vehicles deployment for street level collection of Horticulture Waste (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess

Table 40: Exception Report on Primary Collection & Transportation vehicles deployment
(Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 41: Overall performance self-assessment of Ward

Estimated quantity of Horticulture Waste expected from ward (MT)	(a)
Horticulture Waste Collected at Street level (MT)	(b)
Approximate quantity of Horticulture waste that could not be collected	(c=a-b)
Collection Efficiency	(d=b/a in %)

f) Report on Collection and Transportation of Street Sweeping Waste/ Clearing of Bins

Date_____ Ward No. ____

Table 42: Report of Dhalao/ Street Corner bins designated for sweeping silt

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 43: Exception Report of CSP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 44: Exception report where sweeping silt was found to be disposed in non-confirming manner (e.g. disposed in Dhalao meant for solid waste)

Location ID	Nature of Non-conformity	Approximate quantity of silt	Upload photo with date and time stamp	Remedial action taken

g) Report on collection and disposal of Drain Silt

Date_____ Ward No. _____

Table 45: Report of Clearing of Drain silt as requisitioned by LMC staff (Report from GPS data – real-time report)

Requisition ID Date and time of Requisition	Street ID and Name	Scheduled Clearing date and time	Actual Clearing date and time	Requisition - OPEN/ CLOSED	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF / Disposal

Table 46: Exception Report of Drain silt clearance (Where silt has not been cleared within 1 hour of scheduled time)

Requisition ID Date and time of Requisition	Street ID and Name	Scheduled clearing date & time	Likely clearing date & time	Reason for delay	Remedial action taken

Table 47: Exception report where Drain silt was found to be disposed in non-confirming manner (e.g. disposed in SCP meant for Solid Waste)

Location ID	Nature of Non-conformity	Approximate quantity of silt found	Upload photo with date and time stamp	Remedial action taken

h) Bin washing Report

Table 48: Bin washing undertaken during the day

Location ID	No of Bins at location	Washing Time	Mechanical Washer Reg. No	Driver Name Tel No

Table 49: Exception report of Bins not washed in last week (to be submitted once a week – Every Sunday for last week)

Location ID	No of Bins at location	Last washing date	Reason for default	Remedial action taken

i) Report of Complaints Redressal System (real-time)

Date_____ Ward No. _____

Table 50: Report of complaints and their closure

Complaint ID Time	Source- Phone/ email/ SMS	Nature of complaint	OPEN/CLOSED	If Closed, How addressed?	Date of redressal/ closure

9. Consolidated Report of Zone (Generated at the end of the day)

Table 51: Summary Report of Deployment of Vehicles/ Infrastructure

Main Activity	No of Routes/items to be serviced in the day	No of Routes/items actually serviced	No of Vehicles to be deployed in the day	No of vehicles actually deployed in	No of Manpower to be deployed	No of Manpower actually deployed
Door-to-door /street level						
Collection of SW etc. from Commercial etc.						
Collection of horticulture waste						
Collection of drain silt						
Collection of Sweeping Waste						
Clearing of Dhalao/ bins/ open sites						
Clearing of Fixed Compactor						
Collection of small dead animals						

Table 52: Summary Report of Support services

Main Activity	Expected/ received transactions /	Actual No of Transactions processed/	Unit (of transactions)	No of Manpower to be deployed for support	Actual no of manpower deployed
Workshop			Cleaning of vehicle Repair of vehicles		

Customer care (Redressal of complaints)			Complaint calls/ email/SMS Requisitions		
IT System			Receipt of Field reports: e.g- Vehicle deployment report Dhalao/bin clearing report Route servicing report Manpower deployment Fixed Compactor		

10. Inspection Report of SCP's, Open Sites, Street Corner Bins and other infrastructures. (Once a month)

Table 53: Conditions of SSC's

Location ID	Date of inspection	Physical Condition	Signboard	Paint	Flooring	Bins	Littering outside the Dhalao & Any Other	Washing date(s)

Table 54: Conditions of Fixed Compacting Stations

Location ID	Date of inspectio	Physical Condition	Signboard	Paint	Flooring	Bins	Any Other	Washing date(s)

Table 55: Conditions of Street Corner Bins

Location ID	Date of inspection	Physical Condition	Signboard	Paint	Flooring	Littering Around bins	Any Other	Washing date(s)

Table 56: Conditions of Mobile Transfer Stations (Refuge Collector cum Compactors)

The Dust/cloud formation during mechanical sweeping of roads due to non-working of water nozzle fitted In mechanical sweepers	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**
Non-cleaning of bell mouths and gully gratings						

Table 57: Conditions of Auto-tippers (4-Wheeler & 3-Wheeler)

Vehicle Registration No.	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**

Table 58: Conditions of Hook-loader vehicles

Vehicle Registration No.	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**

Note: The Monthly Action Plan of works for the next month shall be submitted on 28th of preceding month. This shall be submitted in soft form (the file shall be uploaded in MIS which shall generate reports automatically) as prescribed by PMC/Authority.

Schedule "10"

Annual Price Adjustment

1. Price Escalation/Adjustment formula

The contract price shall be adjusted for Increase or decrease in rates and price of labor, fuel and lubricants in accordance With the following principles and procedures as per formula given below. The amount certified in each payment certificate will be adjusted by applying respective price adjustment factor to the payment amounts due

Price adjustment shall be calculated only for the work earned out within the stipulated time or extension approved by the Authority

Price adjustment shall be calculated for the local components of the payment for the work done as per formula given below and expressions and meanings are assigned to the work done during each month:

Various Components are depicted as follows:

- 50% towards fuel components
- 50% towards labor cost

To the extent that full compensation for any rise or fall in the costs to new operator is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such rise or fall in costs.

2. Adjustment for fuel and lubricants

Price adjustment for increase or decrease in the cost of fuel and lubricants shall be paid in accordance with the following formula:

$Vf = 0.85 * Pf/100 * R * (Fi - Fo) / Fo$

Vf = increase or decrease in the cost of work during the year under consideration due to changes in the rates of fuels and lubricants.

Fo = The official retail price of non-branded Diesel at the existing consumer pumps of IOC at ULB, on the date of submission of Bids

Fi = The Average Annual official retail price of non-branded Diesel at the existing consumer pumps of IOC in ULB area, on the year previous to the one under consideration to which a particular interim payment certificate is related

Pf = Percentage of fuel and lubricants component of the work

shall be 50% R = Total value of work done in the month

3. Adjustment for Labor Component

Price adjustment for increase or decrease in the cost due to labor shall be paid in accordance with the following formula:

Vl = 0.85 * Pl/100 * R * (Li-Lo) / Lo
Vl = increase or decrease in the cost of work during the year under consideration.
Lo = the labor wages for unskilled adult male mazdoor notified by the ULB authority on the bid submission date.

Li = the labor wages for unskilled adult male mazdoor notified by the ULB authority on the last date of the year previous to the one under consideration to which a particular interim payment certificate is related.

Pl = Percentage of labor component of the work shall be 50% R= Total value of work done during the month

4. Final Price is sum total of Vf+Vl

5. Calculation of O&M Fee rate applicable for the year
The O&M Fee rate for a particular year would be calculated using the following formula:

Tn = To x (1+n*X%)

Where, Tn = O&M Fee rate applicable for the year 'n'
To = Base O&M Fee (as quoted by the Selected Bidder)
X% = Price escalation calculated as in point 4 of this schedule or 5% whichever is less.

NOTE:

- Price adjustment shall be applicable on all the monthly bills passed by the Official-in Charge for payment.
- Price adjustment shall be applicable at the start of every year post 365 days after COD date. COD here refer to date of start of commercial operation.
- The base price shall be the one on the date of bid submission
- Various cost components mentioned above are pre-decided and shall not be amended during entire contract period and no claim shall be entertained from the concessionaire in this regard.
- The adjustment may be positive or negative depending upon the rise or fall of Index/price/wages.

Taxes

GST is not applicable in this contract. In case in further, it GST is imposed that should be borne by Municipal corporation Lucknow Any other Taxes is extra as actual basis.

Schedule "11"

Project Milestones

Sl. No.	Indicative Milestone	Timeline (Days)
1	Issuance of LoA	0
2	Signing of Concession Agreement - Commencement Date	75
3	Appointment of PMC/ Equivalent Group of Officer	75
4	Submission of Draft OP	105
5	Review & Comments to be given by PMC (with approval of the Authority)	120
6	Submission of Revised OP (Version I)	127
7	Second Review & Comments to be given by PMC (with approval of the Authority)	134
8	Submission of Final OP and Approval by Authority	141
9	Achievement of Financial Closure	150
10	Completion of Handing Over of Zone to Concessionaire – Commercial Operation Date (COD)	180

Schedule "13"

Micro Implementation and Operation Plan

a) This schedule provides an indicative framework for preparation of MIOP. The Concessionaire shall prepare Draft Seasonal Action Plan (SAP) on the basis of MIOP. The Seasonal Action Plan shall be submitted by the Concessionaire before 15 working days prior to start of monsoon season. (SAP should be for three period's 1. Summer Period, 2. Monsoon Period, 3. Winter Period). PMC shall review and suggest modifications in the plan in consultation with Authority within seven working days, if any. Concessionaire has to submit final SAP within seven working days.

b) The Concessionaire has to formulate OP for the following activities, but not limited to:

1. Consent, Clearances and Approval

The Concessionaire shall prepare a list of consent and clearances required for the Project. The Concessionaire shall define the relevant body and timeline for each consent and clearance.

2. Labour Absorption

The Concessionaire may absorb the manpower of the existing Concessionaire for performing its operations to the extent possible.

3. Route Plan/Beat-wise Plan for Primary Collection

Concessionaire shall prepare micro level route /beat-wise plan for all the wards. The Plan shall specify location, dedicated timing, manpower, supervisory staff and infrastructure, allocated secondary collection points for waste storage for each route/beat. The Concessionaire shall also take into account extraordinary circumstances and make modifications in the plan accordingly.

4. Route Plan for Collection of DHW

Concessionaire shall be responsible for collecting segregated domestic hazardous waste from the households on bi-weekly basis and transport it to the Deposition Centre for its safe storage. Concessionaire shall prepare micro level route /beat-wise plan for bi-weekly collection of DHW which shall be accommodated in primary collection

5. Plan for Removal of horticultural waste

The Concessionaire shall prepare plan for removal of horticultural waste from colonies and road sides in the project area. The removal should be done with the help of designated vehicles. The concessionaire should also be prepared for emergency situations for removal of garden and horticultural waste

6. Asset Deployment Schedule

The Concessionaire shall prepare an Asset Deployment Schedule. The Schedule shall specify the asset deployed for all the activities as required for fulfilling the Project Scope.

7. Allocation of Priority Services Team

Concessionaire shall deploy a Priority Services team consisting of six workers and one vehicle for extraordinary circumstances. The Concessionaire shall nominate one nodal person under MIOP for each ward that shall be responsible for allocation of the Priority Services Team. Priority Services Team should be assembled within two hours.

8. Waste Diversion:

The Concessionaire shall fulfil the obligation of providing the required quantity of biodegradable and recyclable waste to the decentralized units. In this respect, the Concessionaire shall refer section 5.1under PIM, prepare a list of decentralized units and update the list, as the case may be. The Concessionaire shall define the capacity of decentralized plants, respective waste diversion quantities and the planned sources, from where the waste shall be diverted. The Concessionaire shall also prepare plan for setting up of ward wise recycling centres and other means to divert maximum waste at decentralized level

9. Operation and Maintenance Plan for DHW Deposition Centres

Concessionaire is also responsible for the operation and maintenance of DHW Deposition Centres. The Concessionaire shall deploy necessary manpower for the functioning of DHW Deposition Centres. The Plan shall include the no. of deposition centres, dedicated locations attached with the centre and the quantity of DHW. The Concessionaire shall indicate the schedule for the secondary transportation of DHW to Hazardous Waste Facility. The Authority shall be responsible to take note of the schedule, and organise secondary transportation of DHW.

10. Collection of User Charges

Concessionaire shall be responsible for the collection of user charges from households as well as commercial establishments for providing door to door collection services. The Concessionaire shall prepare the mechanism for user charges collection on monthly basis. The Concessionaire shall specify the coverage, mode of payment collection system and necessary manpower requirement for the collection of user charges.

11. Management Information System

The Concessionaire shall set-up a real-time monitoring system for tracking the daily Project Activities. The Concessionaire shall prepare MIS Formats for reporting the performance to IE and Authority on daily, weekly and monthly basis. The Concessionaire shall prepare a list of all moveable assets, bins and equipment's along with its RFID no. The Concessionaire shall also
specify space requirement for setting-up centralised Control Room in MIOP.

12. Complaint Redressal System

The Concessionaire shall set-up Complaint Redressal System for handling complaints related to Solid Waste. The Concessionaire shall prepare daily log of complaints received, action taken and complaints closed. The Concessionaire shall also display telephone nos. of concerned officials at public locations.

13. Financial Model

The Concessionaire shall submit a soft copy (excel format) of the Financial Model for this Project

14. Asset Maintenance Schedule (O&M plan)

The Concessionaire shall prepare a maintenance schedule for all the project assets. The Schedule shall be made for all the vehicles, equipment's, secondary storage points and bins. The Schedule shall contain the GPS no., date of purchase of asset, servicing schedule and servicing report. The Concessionaire shall also specify the replacement schedule for the project assets. The Schedule shall be align with the KPIs.

15. Garbage Free Vulnerable Points

The Authority shall identify the Garbage Vulnerable Points which needs to be cleared and maintained on daily basis as Garbage Free Vulnerable Points. Concessionaire shall prepare a maintenance schedule for maintaining the specified areas as Garbage Free

Vulnerable Points.

16. Disaster Management Plan

The Concessionaire shall prepare Disaster Management Plan as per the conditions given in Schedule 19.

17. IEC Plan

The Concessionaire shall prepare IEC Plan for creating awareness regarding solid waste management activities. Concessionaire shall specify frequency of IEC programmes, type of activity, date, location, population coverage and maintain records of activities including photographic evidences.

18. Carcass Disposal

The Concessionaire shall deploy one vehicle for collection and transportation of carcasses to the designated facility/ site as prescribed by the Authority during the preparation of MIOP

19. Night Conservancy works

The Concessionaire shall deploy required manpower and infrastructure to perform night conservancy which shall include a minimum of 50 (fifty) percent of mechanized street sweeping and clearance of SCP's.

Indicative Norms to be considered by the Concessionaire while preparing MIOP

S.no	Activity	Indicative Norms
1.	E-rickshaw	Once e- rickshaw for collection from 300 HH per trip (as per Authority recommendation)
2.	Auto Tippers of 1.8 cum Capacity	Once auto tipper for collection from 600 HH per trip (as per Authority recommendation)
3.	Deployment of Mechanical Sweeping Machines	Major Roads having width of 60 ft and above which includes PWD and National Highway. The speed of the vehicle shall be 5-8 km per hour
4.	Cleaning of desilted waste from drains	Cleaning of desilted waste of Storm Water Drains upto 4 feet as per the Authority recommendations.

5.	Secondary Collection bins	Green for wet waste, blue for dry waste, brown for street sweeping waste and black for DHW & Sanitary Waste. Bins should be placed on approval of the Authority and based on public needs.
6.	MTS and FCTS	The FCTS contains civil structure, detachable containers and hook loaders. The MTS is movable refuse compactors for direct transferring of waste from primary collection Vehicles. Both MTS & FCTS shall maintain a reciprocative balance but should not go below minimum number
7.	Back up	Minimum 10% backup on the vehicle infrastructure for C&T

1663

REQUEST FOR PROPOSAL

FOR

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation"

(RFP NO. D/389/EE/ 2023 Dated: 19/8/2023)

VOLUME-I

INSTRUCTION TO BIDDERS

Lucknow Municipal Corporation

1664

Disclaimer

The information contained in this **Request for Proposal** (hereinafter referred to as "RFP") document provided to the Bidders, by **Lucknow Municipal Corporation/ Lucknow Nagar Nigam, Uttar Pradesh** or any of their employees or advisors, is provided to the Bidder(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. The purpose of this RFP document is to provide the Bidder(s) with information to assist the formulation of their proposals. This RFP document does not purport to contain all the information each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for ULB, their employees or advisors to consider the business/ Investment objectives, financial situation and particular needs of each Bidder who reads or uses this RFP document. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and where necessary obtain independent advice from appropriate sources. ULB, their employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFP document. ULB may, in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

Table of Contents

1. Scope of Proposal 5
2. Eligible Bidders 6
3. Additional Requirements for submitting Proposal by a Consortium 7
4. Number of Proposals 8
5. Conflict of Interest 8
6. Validity of Proposal 9
7. Proposal Preparation Cost 9
8. Earnest Money Deposit (EMD) 9
9. Format and Signing of Proposal 9
10. Original Document to be submitted by the Bidder 11
11. Proposal Due Date 12
12. Bidder's Responsibility 12
13. Pre-Proposal Meeting 13
14. Opening of Proposals and Clarifications 13
15. Evaluation 14
16. Execution of Concession Agreement 16
17. Performance Security 16
18. Cost of RFP document 16
Appendix – A 19
Appendix – B 30
Appendix – C 31
Appendix D1 37
Appendix D2 39
Appendix – E 42
Appendix – E1 44
Appendix – F 46
Appendix – G 54
Appendix – H 55
Appendix – I 58
Appendix – J 60

SMW, Lucknow

i.) The Request for Proposal Document Contents

The RFP document includes following document

Volume-I	Instruction to Bidders
Volume- II	Project Information Memorandum
Volume-III	Draft Concession Agreement

ii.) Schedule of Bidding Process

Lucknow Nagar Nigam would Endeavour to adhere to the following schedule during the Bidding Process:

Sl. No.	EVENTS	DATE
1.	Issue of RFP	
2.	Site Visits	
3.	Last date for receiving queries	
4.	Pre-Bid meeting	
5.	Proposal due date	
6.	Hard Copy Submission	
7.	Opening of technical bid	

PMU (RCUES) LNN Lucknow

1667

Section – I

Instructions to Bidders

SMW, LUCKNOW

1668

1. Scope of Proposal

1.1 The Solid Waste Management Rules, 2016 (herein after referred to as "SWM Rules") mandate that Urban Local Bodies (ULB) shall do door to door collection and Transportation of MSW. ULB shall also carry out treatment and disposal of Municipal Solid Waste (MSW in a scientific manner in waste processing and engineered sanitary landfill facilities. SWM Rules also mandate that MSW shall be treated and only inert / non-biodegradable material should be landfilled.

1.2 With an objective to improve the urban infrastructure and municipal service delivery levels as per service level benchmark, the Government of India, along with the states and ULBs is implementing Swachh Bharat Mission.

1.3 Solid waste management, including development of Door-to-Door collection, segregation, transportation, waste processing and development of engineered sanitary landfill facilities, is a key component under Swachh Bharat Mission.

1.4 In view of providing clean and environment friendly waste management services in city Lucknow Municipal Corporation (LMC) intends to invite bid under a **Design-Build - Operate - Transfer (DBOT)** Concession framework (hereinafter referred to as "the Project") for a Concession period of 10 years after Appointed Date and extendable to 5 years for following major works to be executed by the successful bidder in the city:

a) Door to Door Collection of MSW and its transportation to the MRF/designated site on daily basis.

b) Design, Develop and Operation & Maintenance of MRF cum Transfer station and recovery of recyclables.

c) Collection of user charges from households, commercial establishment, institutional establishment & BWG's.

d) Street Sweeping & Mechanized Road Sweeping from Zone-6 area of LMC.

e) Drain Cleaning from Zone-6 area of LMC.

1.5 The extension in contract period will be solely dependent upon concessionaire performance in First 10 years of contract period.

1.6 Concessionaire shall procure shortfall of vehicle and equipment/assests for door-to-door collection & Mechanised Sweeping, MRF Cum TS, Drain Cleaning, Road Sweeping on 100 % financing of LMC as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assests and ensure its registration in the name of LMC. Concessionaire shall be responsible for operation & maintenance of project component including supply of manpower, fuel, minor tools and tackles.

1.7 Deleted

1.8 The brief scope of work is set out in Appendix A and the detailed scope of work has been set out in the Project Information Memorandum.

1.9 The proposals would be evaluated on the basis of the evaluation criteria set out in the

RFP document as per Appendix D in order to identify the successful Bidder for the Project (hereinafter referred to as "Successful Bidder"). The Successful Bidder would then have to enter into a Concession Agreement with the ULBs and perform the obligations as stipulated therein, in respect of the Project.

1.10 Terms used in this RFP document, which have not been defined herein, shall have the meaning ascribed thereto in the Concession Agreement.

2. Eligible Bidders

2.1 Bidders who fulfil the pre-qualification criteria indicated in Appendix D are eligible to submit Technical and Financial Proposal in response to this RFP Document.

2.2 The Bidders eligible for participating in the qualification process shall be any one of the following two categories:

Category 1: A single Business Entity meeting the qualification criteria as set out in Proof of Qualification

Category 2: In case the Bidder, which is a Business Entity, (hereinafter referred to as "Lead Member") does not individually fulfil qualification criteria as set out in Proof of Qualification, the same may be procured from a suitably qualified operators, (hereinafter referred to as "Operators"), with whom a valid Memorandum of Understanding (hereinafter referred to as "MoU") formalizing such an arrangement should be in place. The Operator must also be a Business Entity. This joint entity shall hereinafter be referred to as "Consortium".

The term Bidder used hereinafter would therefore apply to both the above-mentioned categories.

2.3 Only those Bidders who's Technical Bids meet the Minimum Technical Capability and Minimum Financial Capability Criteria shall be further evaluated on the basis of Evaluation Criteria as set out under Appendix D of the RFP. Bidders who's Bid do not meet the aforesaid Minimum Technical Capability and Minimum Financial Capability Criteria shall be rejected.

2.4 Any entity, which has earlier been barred/backlisted by ULBs / Government of Uttar Pradesh from participating in any project being undertaken by ULB / Government of Uttar Pradesh (insert abbreviated name of state), would not be eligible to submit a Proposal, if such bar/blacklisting subsists as on the Proposal Due Date.

2.5 The Selected Bidder shall be required to incorporate a wholly owned SPV under the Companies Act, 2013 to act as the Concessionaire. Where the Bidder is a Consortium; it shall, in addition to forming an SPV as its wholly owned company (if it is the Selected Bidder), comply with the following additional requirements:

1670

3. Additional Requirements for submitting Proposal by a Consortium

3.1 Number of members in consortium shall not exceed 2 (two).

3.2 Wherever required, the Proposal shall contain the information required of each of the members of the Consortium.

3.3 The members of the Consortium shall furnish Power of Attorney duly signed by authorized representative(s) of the members.

3.4 The Application should include a brief description of the roles and responsibilities of individual members, particularly with reference to financial, technical and O&M obligations;

3.5 The Proposal shall be signed by the duly authorized signatory of the Lead Member and shall be legally binding on all the members of the Consortium.

3.6 The Consortium shall submit a MoU as part of its Proposal. The MoU shall, inter alia, include the following:

a) Convey the intent of the Lead Member to incorporate a wholly owned SPV under the Companies Act, 2013 to act as the Concessionaire, with the Operator/operators. In case the Project is awarded to the Consortium or joint venture Company, as the case may be, Concessionaire would enter into a Concession Agreement with the LMC and shall subsequently carry out all the responsibilities as Successful Bidder in terms of the Concession Agreement.

b) The Parties undertake that they shall collectively hold 100% shareholding of the paid up Equity of the SPV [as defined in Concession Agreement] share capital of the concessionaire commencing from the Execution Date of the concession agreement until expiry of five years thereafter, and shall hold at least 51% (fifty one per cent) shareholding of the subscribed and paid up equity of the Concessionaire at all times during the remaining Concession Period i.e. from expiry of aforesaid five years period until end of concession period. Further, in case of Consortium bidding entity, besides the foregoing shareholding requirement, the bidding Consortium shall ensure that the Lead Member thereof holds at least 51% shareholding in the paid up equity capital of the Concessionaire during Lock-in-Period, and the other members of consortium shall hold during Lock in Period minimum 10% (ten per cent) shareholding in the paid up equity capital of the Concessionaire; and after the expiry of Lock-in -Period, the Lead Member shall be required to hold at least 26% shareholding in the paid up equity capital of the Concessionaire commencing from the expiry of Lock-in-Period until expiry of concession period with the aggregate shareholding of the Consortium member in the Concessionaire shall not be less than 51%. No change in shareholding of the selected bidder [either single Bidding Entity/ Bidding] as set out herein and (as to be reiterated in the Joint Bidding Agreement) in the Concessionaire shall take place.

c) Clearly set out the roles and responsibilities of each Member of the Consortium for implementing the Project.

d) Include a statement to the effect that the members of the Consortium shall be jointly liable for the implementation of the Project in accordance with the terms of the Concession Agreement.

e) In naming the Lead Member and the Operator of the Consortium, it should include their successors and permitted assigns.

A copy of the MoU should be submitted as part of the Proposal. The MoU entered into between the Members of the Consortium should be specific for the Project and should contain the above requirements, failing which the Proposal would be liable to be considered as non-responsive.

4. Number of Proposals

Each Bidder can submit only one (1) Proposal for single work, in response to this RFP. Any Bidder who submits more than one Proposal, either individually or as a part of consortia, for the single town will be disqualified and cause the disqualification of such consortia.

5. Conflict of Interest

5.1. A Bidder shall not have a conflict of interest that may affect the Selection Process or the Work (the "Conflict of Interest"). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, the Authority shall forfeit and appropriate the Bid Security as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, the time, cost and effort of the Authority including consideration of such Bidder's Proposal, without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise.

5.2. The Authority requires that the Agency provides professional, objective, and impartial solution and at all times hold the Authority's interest's paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Agency shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of the Authority.

5.3. A Bidder eventually appointed for this Project shall be disqualified from subsequently providing goods or works or services related to the implementation of any other LMC Project and any breach of this obligation shall be construed as Conflict of Interest; provided that the restriction herein shall not apply after a period of 1 (one) year from the completion of this assignment.

Any Agency who has been awarded with the work of Door to Door Collection will not be awarded with the work of secondary transportation of work in LMC area or Vice Versa.

6. Validity of Proposal

The Proposal shall remain valid for a period not less than 180 days from the Proposal Date (hereinafter referred to as "Proposal Validity Period"). LMC reserves the right to reject any Proposal, which does not meet the requirements.

7. Proposal Preparation Cost

The Bidder shall be responsible for all the costs associated with the preparation of its Proposal and its participation in the bidding process. LMC will not be responsible or in any way be liable for such costs, regardless of the conduct or outcome of the Proposal.

8. Earnest Money Deposit (EMD)

8.1 Each Proposal shall be accompanied by **EMD of Rs. Rs 780000/- (Rupees Seventy eight lakh)**, which shall be valid for a minimum period of 180 days (one hundred and eighty) from the bid due date, in the form of a demand draft/ bank guarantee (as per format attached at Appendix H) issued by a Scheduled Commercial Bank in India having a branch in Lucknow, in favour of **"Lucknow Municipal Corporation"**, payable at Lucknow ("Bid Security") and refundable not later than 180 (one hundred and eighty) days from the Bid Due Date, except in the case of the Selected Bidder whose Bid Security shall be retained till it has provided a Performance Security in terms hereof.

8.2 The EMD shall be either in the form of a Bank Guarantee / banker's cheque/FDR drawn in favour of the **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**, on any Nationalized/scheduled bank and payable at Lucknow.

8.3 The EMD of every unsuccessful Bidder would be returned within a period of 2 weeks from the date of LMC announcement of the Successful Bidder. The EMD submitted by the Successful Bidder would be released upon furnishing of the Performance Security, by way of an irrevocable Bank Guarantee, issued by a scheduled bank/nationalised bank located in India in favour of **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION** for due and punctual performance of the obligations relating to the Project.

8.4 The EMD shall be forfeited in the following cases:

a) If the Bidder withdraws its Proposal during the interval between the Proposal Due Date and expiration of the Proposal Validity Period.

b) If the Successful Bidder fails to provide the Performance Security within the stipulated time or any extension thereof provided by LMC; and

c) If any information or document furnished by the Bidder turns out to be misleading or untrue in any material respect.

9. Format and Signing of Proposal

9.1 The Proposal and all related correspondence and documents should be written in

English. Supporting documents and printed literature furnished by the Bidder with the Proposal may be in any other language provided that they are accompanied by certified translations of the pertinent passages in English language. Supporting materials, which are not translated into English, may not be considered for the purpose of interpretation and evaluation of the Proposal, the English language translation shall prevail.

9.2 The currency for the purpose of the Proposal shall be the Indian Rupee (INR). If the Proposal is submitted in any other currency, LMC reserves the right to use suitable exchange rate for the purpose of uniformly evaluating all Proposals.

9.3 The Bidder would provide all the information as per this RFP. LMC would evaluate only those Proposals that are received in the required format and are complete in all respects.

9.4 The bidder shall upload the Technical Bid and Financial Bid in the respective links for the **"RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation "** in the website https://etender.up.nic.in

9.5 Each Proposal shall comprise the following:

A. Part I Submission

a. Covering letter in the format set out in Appendix B
b. Details of the Bidder in the format set out in Appendix C
c. Copy of the certificate of registration issued by the authority concerned (In case of a registered firm or society), Proof of qualification, Work Completion Certificates (for experience in Similar Projects), Financial Capability of the Bidder as set out in Appendix D.
d. Power of Attorney set out in Appendix E (Applicable both for Single Business Entity and Consortium). Power of Attorney set out in Appendix E1 (only in case of Consortium).
e. Memorandum of Understanding entered between Lead Member and Operator as set out in Clause 3.6 and format set out in Appendix F (only in case of Consortium)
f. Anti – Collusion Certificate as per Appendix G
g. Proof of Qualification in the format set out in Appendix D
h. Tender Fee in the form of demand draft for Rs. **25,000.00 (Rupees Twenty-Five Thousand only)** in favour of **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**, Payable at Lucknow
i. Technical Proposal as per format set out in Appendix I
j. Copy of Earnest Money Deposit as per Clause no. 7

B. Part II Submission

a. Financial Proposal in the format set out in Appendix J of this RFP

9.6 Aforesaid Technical Bid and Financial Bid shall be uploaded in the respective links for the

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation " in the website https://etender.up.nic.in

9.7 The Proposal, scanned and uploaded shall be typed or written in indelible ink and each page shall be initiated by an authorized signatory of the Bidder, as applicable. All the alterations, omissions, additions, or any other amendments made to the Proposal shall also be initiated by the person(s) signing the Proposal.

10. Original Document to be submitted by the Bidder

10.1 Original Document to be Submitted by the Bidder: The Bidder shall be required to submit the following documents in Original in sealed envelope after the Bid Due Date but prior to the date of Opening of the Technical Bid as specified in the Bid document, in the office of the **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**, on the address as mentioned in clause 9.2:

a) DD/ Pay Order towards Cost of Bid Document
b) Bid Security for an amount and in the form as specified in Clause no. 7
c) Power of Attorney authorizing the signatory of bid to commit the Bidder in accordance with Appendix E and Appendix E1
d) Litigation History in the format as specified in clause 6 of Appendix C
e) Memorandum of Understanding entered between Lead Member and Operator as set out in Clause 3.6 and format set out in Appendix F (only in case of Consortium)

10.2 The queries and Original Document as mentioned under Clause 9.1 must be submitted to the following address:

Kind attention: **Municipal Commissioner, Lucknow Municipal Corporation**
Address : Triloknath Marg, Lalbagh, Lucknow-226001

10.3 The envelope shall indicate the name and address of the Bidder

10.4 The envelope shall clearly bear the following identification

"**Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation "**

"Submitted by
Name,
Address
Contact Phone No. of the Applicant"

11. Proposal Due Date

11.1 Proposals should be submitted before 5.00 PM IST of Proposal Due Date, in the LMC and form as detailed in this RFP. Only e-tenders will be accepted. Proposals submitted through speed post, facsimile transmission or telex will not be accepted.

11.2 LMC may, in exceptional circumstances, and at its sole discretion, extend the above Proposal Due Date by issuing an Addendum. Any Addendum thus issued will be sent in writing to all those who have purchased the RFP document and would also be posted on the website. The same will also be communicated to those who have downloaded the RFP document from the website and have duly intimated this fact to LMC giving their particulars including address for communication by fax.

11.3 It is desirable that each Bidder submits its Proposal after visiting the Project Site for ascertaining the location, surroundings, or any other matter considered relevant.

11.4 Bidders would be granted permission by LMC for visit of the Project Site on receipt of a formal written request, reasonably in advance of the proposed date of visit as mentioned in the Schedule of Bidding Process.

11.5 At any time prior to the Proposal Due Date, LMC may, for any reason, whether at its own initiative or in response to clarifications requested by any Bidder, modify the RFP document by the issuance of Addenda. Any Addendum thus issued will be sent in writing to all those who have purchased the RFP document and would also be posted on the website. The same will also be communicated to those who have downloaded the RFP document from the website and have duly intimated this fact to LMC giving their particulars including address for communication by fax.

12. Bidder's Responsibility

12.1 The Bidder is expected to examine carefully the contents of all the documents provided. Failure to comply with the requirements of RFP shall be at the Bidder's own risk.

12.2 The Bidder is expected to examine carefully the current condition of solid waste management in Zone-6 Lucknow and tenderer shall make his own assessment of resources required to meet the service level benchmarks/scope of work defined in this tender.

12.3 It shall be deemed that prior to the submission of Proposal, the Bidder has:

a) made a complete and careful examination of terms & conditions/requirements, and other information set forth in this RFP document;
b) Have visited the city/site and have done his own assessment of existing situation of solid waste management.
c) Have satisfied it-self with local conditions, topography of the land, drainage, accessibility, logistics, work environment etc. or any other condition affecting his price/rates before quoting their rates.
d) received all such relevant information as it has requested from LMC; and

e) made a complete and careful examination of the various aspects of the Project including but not limited to:
   i.) the Site and any other property relating to the Project;
   ii.) status of clearances
   iii.) existing facilities and structures;
   iv.) the conditions of the access roads and utilities in the vicinity of the Project Site;
   v.) All other matters that might affect the Bidder's performance under the terms of this RFP document.

12.4 LMC shall not be liable for any mistake or error or neglect by the Bidder in respect of the above.

13. Pre-Proposal Meeting

13.1 To clarify and discuss issues with respect to the Project and the RFP, LMC may hold Pre-Proposal meeting.

13.2 Prior to the Pre-Proposal meeting, the Bidders may submit a list of queries, if any, to the Project requirements and/or the Concession Agreement. Bidders must formulate their queries and forward the same to LMC prior to the meeting. LMC may, in its sole discretion or based on inputs provided by Bidders, amend the RFP.

13.3 Bidders may note that LMC will not entertain any deviations to the RFP at the time of submission of the Proposal or thereafter. The Proposal to be submitted by the Bidders would have to be unconditional and the Bidders would be deemed to have accepted the terms and conditions of the RFP with all its contents including the Concession Agreement. Any conditional Proposal shall be regarded as nonresponsive and would be liable for rejection.

13.4 LMC will endeavour to hold the Pre-Proposal meeting as per the schedule of bidding process. The details of the meeting will be separately communicated to the Bidders.

13.5 Attendance of the Bidders at the Pre-Proposal meeting is not mandatory.

13.6 All correspondence / enquiries should be submitted to the following in writing by fax/registered post / courier:

Kind attention: **Municipal Commissioner, Lucknow Municipal Corporation**
Address : Triloknath Marg, Lalbagh, lucknow-226001
E-mail : nnlko@nic.in
Phone No : 0522-2289782

14. Opening of Proposals and Clarifications

14.1 LMC would open the Proposals on any working day within 3 days of the Proposal Due Date for the purpose of evaluation.

14.2 LMC reserves the right to reject any Proposal not submitted on time and which does not contain the information/documents as set out in this RFP document.

14.3 To facilitate evaluation of Proposals, LMC may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Proposal. The request for such clarification or substantiation and the response shall be in writing or by facsimile. No material change in the substance of the Proposal would be permitted by way of such clarification/substantiation.

14.4 Information relating to the examination, clarification, evaluation, and recommendation of the Proposal shall not be disclosed to any person not officially concerned with the process. LMC will treat all information submitted as part of the Proposal in confidence and would require all those who have access to such material to treat the same in confidence. LMC will not divulge any such information unless it is ordered to do so by any authority pursuant to applicable law or order of a competent court or tribunal or any Government Authority that has the power under law to require its disclosure.

15. Evaluation

15.1 Proposal Evaluation: Part I Submission

15.1.1 The Part I Submission of the Proposal would first be checked for responsiveness with the requirements of the RFP. The Proposal would be considered as responsive if it meets the following conditions:

a) It is received / deemed to be received by the Proposal Due Date including any extension thereof.
b) It contains all the information and documents as requested in the RFP.
c) It contains information in formats specified in this RFP.
d) It mentions the Proposal Validity Period as set out in Clause 5.
e) It provides information in reasonable detail. ("Reasonable Detail" means that, but for minor deviations, the information can be reviewed and evaluated by LMC without communication with the Bidder). LMC reserves the right to determine whether the information has been provided in reasonable detail.
f) There are no inconsistencies between the Proposal and the supporting documents.

A Proposal that is substantially responsive is one that conforms to the preceding requirements without material deviation or reservation. A material deviation or reservation is one;

a) which affects in any substantial way, the scope, quality, or performance of the Project, or
b) which limits in any substantial way, inconsistent with the RFP, LMC's rights or the Bidder's obligations under the Concession Agreement, or
c) Which would affect unfairly the competitive position of other Bidders presenting substantially responsive Proposals.

15.1.2 In case the Proposal is found to be responsive, Part I Submission would be evaluated in accordance with the criteria for qualification of Bidders set out in Appendix D, based on the Proof of Experience submitted by the Bidders and such Bidders would be Qualified Bidders.

15.1.3 The Technical Proposal of the Qualified Bidders would be evaluated for adequacy of design and operations so as to comply with the conditions set out in Concession Agreement.

15.1.4 As part of the evaluation of the Part I Submission, LMC may also request the Bidder to submit clarifications.

15.1.5 The evaluation of the Part II Submission would be taken up only after Part I Submission is found to meet the requirements of this RFP. LMC reserves the right to reject the Proposal of a Bidder without opening the Part II Submission if, in its opinion, Part I Submission is not substantially responsive with the requirements of this RFP.

15.2 Proposal Evaluation: Part II Submission

15.2.1 Part II Submission of all the Bidders who's Part I Submission meets the requirements of the RFP will be evaluated. The format for quoting the Financial Proposal is set out in Appendix J and Volume III of this RFP. The Bidders would be required to submit their proposal as per this format.

15.2.2 Selection Methodology

15.2.3 Scoring and bid evaluation will be done as per criteria set out in Appendix D2.

15.2.4 The Bidder ranked first in accordance with the above procedure would be declared as the Preferred Bidder.

15.2.5 In case there are two or more Bidders quoting the same best Financial Proposal, LMC may in such case call all such Bidders for negotiations and select the Preferred Bidder on the outcome of the negotiations. The selection in such cases shall be at the sole discretion of LMC.

15.3 LMC reserves the right to reject any Proposal, if:

a) at any time, a material misrepresentation is made or discovered; or

b) The Bidder does not respond promptly and diligently to requests for supplemental information required for the evaluation of the Proposal. Rejection of a Proposal by LMC as aforesaid would lead to the disqualification of the Bidder. If the Bidder is a Consortium, then the entire Consortium would be disqualified/ rejected. If such disqualification / rejection occur after the Proposals have been opened and the Preferred Bidder gets disqualified / rejected, then LMC reserves the right to:

   a. either select the next best Bidder, or
   b. Take any such measure/s as may be deemed fit in the sole discretion of LMC, including Annulment of the bidding process.

15.4 In the event of acceptance of the Preferred Bidder with or without negotiations, LMC

shall declare the Preferred Bidder as the Successful Bidder. LMC will notify the Successful Bidder through a Letter of Acceptance (hereinafter referred to as "LoA") that its Proposal has been accepted.

16. Execution of Concession Agreement

16.1 The Successful Bidder shall execute the Concession Agreement within 4 weeks of the issue of LoA or within such further time as LMC may agree to in its sole discretion.

16.2 Failure of the Successful Bidder to comply with the requirements of Clause 7.3 or Clause 14 shall constitute sufficient grounds for the annulment of the LoA, and forfeiture of the EMD. In such an event, reserves the right to

a) either invite the next best Bidder for negotiations, or
b) Take any such measures as may be deemed fit in the sole discretion of LMC, including annulment of the bidding process.

17. Performance Security

17.1 The Successful Bidder shall furnish Performance Security of amount **equivalent to 5%** of yearly contract value by way of an irrevocable Bank Guarantee issued by a scheduled /nationalized bank in favour of **MUNICIPAL COMMISSIONER**, **LUCKNOW NAGAR NIGAM,** as required under the Concession Agreement. If yearly contract value gets escalated in succeeding year of operation, concessionaire shall submit the PBG of extended value.

17.2 The Performance Security shall be in the form of an irrevocable Bank Guarantee in favour of **MUNICIPAL COMMISSIONER**, **LUCKNOW NAGAR NIGAM,** as per the format set out in the Draft Concession Agreement. The Performance Security shall be kept valid for a period of 24 months from the Appointed Date.

17.3 The Performance guarantee shall be forfeited and en-cashed in the following cases:

a) If the Successful Bidder withdraws from the project midway during the project term
b) If during the project term, there Successful Bidder is found to charge user fees which were not agreed.
c) Any other act or acts of the successful bidder which renders the project un-operational and **LUCKNOW MUNICIPAL CORPORATION**, establishes sufficient reasons to forfeit the Performance Guarantee.
d) If the bidder fails to meet the service levels as agreed.

18. Cost of RFP document

18.1 The RFP document can be downloaded from https://etender.up.nic.in. The cost of RFP document is **Rs. 25,000.00 (Rs. Twenty-Five Thousand Only).** The Proposals must accompany with cost of RFP document in the form of a bank draft in favour of

"**LUCKNOW MUNICIPAL CORPORATION**" of **Rs. 25,000.00 (Rs. Twenty-Five Thousand Only).** The Bidders may also obtain a hard copy of the RFP from the office of **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**. The Bidders purchasing the hard copy of the RFP must attach the copy of Receipt along with the Proposal.

18.2 To assist in the examination, evaluation, and comparison of Proposals, LMC may utilize the services of consultant(s) or advisor(s)

18.3 Notwithstanding anything contained in this RFP, LMC reserves the right to accept or reject any Proposal, or to annul the bidding process or reject all Proposals, at any time without any liability or any obligation for such rejection or Annulment, without assigning any reasons thereof.

Section – II

Appendices

Appendix – A

Brief Scope of Work

The Brief Scope of Work for the Bidder is as set out below.

1. The contours of the Project include:
    a. Door to Door collection of municipal solid waste, its transfer to MRF/TS/designated site & recovery of recyclables.
    b. Collection storage & transfer of Domestic hazardous waste
    c. Development and operation of intermediate MRF cum Mini Transfer stations or standalone Mini Transfer stations as the case may be.
    d. Mechanized Sweeping of Roads / Streets, mechanized/manual cleaning of pavement / footpath / paved path /cycle track. Manual Sweeping, litter collection, Removal of garbage, litter, silt and blockages from street sides and transportation of sweeping waste up to transfer station/dustbins/secondary vehicles.
    e. Cleaning, Desilting, Removal of Obstruction and Maintenance of Storm Water Drains of depth up to 4 feet with a cleaning frequency of once in 15 days in Municipal area of Zone-7 & transportation of drain silt/waste up to TS/Dustbins/secondary vehicle provided by LMC.
    f. Collection of user charges from households, commercial establishment, institutional establishment & BWG's on behalf of Lucknow Municipal Corporation and deposit it into Escrow account of Lucknow Municipal Corporation.

    Work shall be done essentially as per guidelines of MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and guideline amended thereupon during concession period.

2. The scope of the Project includes the following:
    Preparation of Detailed Operation Plan: A Project Information Memorandum is enclosed with the RFP document as Volume II, and is **only being provided for the purpose of reference of the Bidders**. The Concessionaire shall within 1 months of the signing of Agreement provide with a Detailed Operation Plan to Authority ensuring compliance of the same with the proposed door to door collection, Street Sweeping, Drain Cleaning and MRF operation Plan, and detailing out the design, drawings, specifications and cost estimates of all the items. The Concessionaire shall have the liberty to suggest different equipment for collection, transportation of waste, provided however the DOP must adhere to the outcome as desired in MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and C&T Plan as detailed out

in the Project Information Memorandum (Volume II).

The bidder shall survey the project area (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) with digital mode only within one month from award of work. Survey data shall include address, ownership detail, communication details and geo tagged photograph of property. All such details shall be linked with GIS based platform against property/building polygon and shall be enabled with facility for public viewing and feedback mechanism. If any (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) find that their data is not linked with the application, they may be able to send their detail through such App

a. **Approvals for the Project:**
    i. Obtaining Environmental clearances from MoEF /SEIAA as the case may be.
    ii. AAI clearance if required.
    iii. Water allocation, construction power for project and any other clearances.
    iv. Renewal/ obtaining of all project related clearances required for the project.
    v. And all other clearances and permits as are required to be procured for the implementation of the Project in terms of the Concession Agreement
b. **Collection of Waste**: Door to door collection of waste from all the wards of Zone-6 under Lucknow Municipal Area. The door-to-door collection to include all government office complexes, non-government office complex, authorized colonies, unauthorized regularized colonies, all market/ commercial/ institutional places, slums and even from undesignated points by means of deployment of suitable vehicles. This shall also include by-lanes, lanes and streets.

    Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste as per relevant Rules and standards.
c. **Drain Cleaning:** Clearing and uprooting rank vegetation, grass, bushes, shrubs, and disposal of unserviceable materials, including removal and disposal of silt and any kind of temporary, permanent, RCC, PCC and other solid obstruction from the drains. Excavation and removal of silt or silt mixed with sand in slushy condition from drain bed including lift and disposing off the same.
    i. The drains must be cleaned and desilted by Manual/mechanical means or combination of both i.e., Excavator, JCB, Barge Mounted

Poclain etc. without damaging to the above ground and underground utilities / properties etc. wherever possible. In case use of machinery is not possible, then only manual human based (with all safety gadgets) cleaning is done

ii. The agency should maintain the level of drains and water way according to the level as per original construction. The depth shall be maintained any time throughout the year.

iii. Desilted material must not be dumped in road/ footpath side, it should be loaded directly in ripper/dumper/carrier etc and transfer to the site as directed by PMC.

iv. Involvement of man power should be minimum in all the nala and machineries should be engaged as far as possible.

v. Involvement of the drains along the narrow roads and Liquid state silt the desilted materials may be dumped by the side of the road temporarily which must be removed within 24 hours of dumping. Failing to remove the same within 24 hrs will attract a penalty of 0.01% of Package value per day.

d. **Road Sweeping:** The Operator shall ensure to conduct sweeping and cleaning of the Zone-6 including Main Roads, service roads, Arterial Roads (streets, narrow streets, gullies) footpaths, road berms, central verge, curb channels, curb stones gully etc., which means complete solution for RoW (right of way) by manual/mechanical means or combination of both. The objective is to keep the areas litter and dust free for 24x7. The type of work to be conducted is as under: All Roads of 7 mts and above to be mechanically swept. (Only sides of the roads are to be manually swept). For areas on these particular roads not covered by Machine/s, litter picking to be done daily.

i. All Mechanical sweeping machines to be equipped with GPS devices and both front and rear camera.

ii. It is the responsibility of the bidder to maintain a computerized central monitoring control room for the vehicles and provide monthly reports to the 3rd party / authority with actual GPS based vehicle movement report.

iii. The generated report should also include real time pictures (min no. 1 per Kms, per Pass) of the work undertaken through manual/mechanical sweeping (Vehicle mounted cameras (front and reverse both) can be used for this as well).

iv. The Operator has to share a detailed operations plan for each month (Schedule plan has to be shared by the operator at the beginning of each month), for all the areas. Mechanical, Manual Sweeping of Roads & Cleaning services in all Wards of Zone-6 Nagar Nigam Lucknow

Uttar Pradesh.

v. Swept roads shall be kept litter and dust free during the next day operation hours, from entire wall-to-wall basis. Sweeping of Roads/ Streets/ Lanes would include Bitumen, Pakka, Footpath, Ramps and kuccha portions including sides – Corner to corner.

vi. The operator needs to ensure that where ever the mechanized sweeping of road in not possible, that particular stretch of the road area has to be manually swept to ensure cleanliness. Frequency of manual cleaning including litter picking to be worked out at 7 days/week.

vii. Fuel operated Air blower to be used ahead of sweeping machines to bring the litter / leaves and dust from the pavements / cycle tracks / all difficult to reach areas on the path of the machine for easy collection by the sweeping machines.

viii. The operator would use Litter Picking machine in areas as assigned by the Authority on everyday basis.

ix. High Pressure washing of pavements, footpaths, dividers, medians, roundabout, bus stand, street furniture, signage & Monument's facia. Once a week or as per need arise.

x. Wild grass and vegetation on the side berms, footpaths, medians of all roads shall be removed by the Operator once a month.

xi. Every cleaning worker to be equipped with Litter Picking stick for comfortable collection of bulk litter like polythene, paper etc.

xii. Clearance of up to 1 Mtrs open drains running along with the carriage way.

xiii. Bush and Grass Cutting at ground level and hand-held distance to be necessarily done mechanically with help of hand-held fuel operated brush cutters.

xiv. Necessary arrangements to be made for Tree Pruning and mechanical means would be preferred.

xv. Road Sweeping of Institutional Area, Market Area, Public Places, Monuments & VVIP area shall be at least two times on daily basis or as required.

xvi. Manual Sweeping:

The Operator shall ensure that the employees are in proper dress, and also ensure placement of safety devices and signages at Project Site during the working hours, as per the specification. Every Worker, Supervisor and Manager to be equipped at all times during working hours: Safety. Caps / Helmets, Nose Mask, Rain Coats, Gloves, Radium Jackets, Safety Boots. Ignoring the safety requirements as mentioned

above by the Operator shall result in a fine of Rs 200/- per day per default per person.

e. **Setting up of MRF cum Transfer point:** The concessionaire shall set up of intermediate MRF cum Transfer point to recovery of recyclables & transfer waste from small vehicles to secondary transport vehicles.

f. **Transportation of Waste to MRF/TS/MTS:**
   i. Collected waste shall be transferred to MRF cum PCTS/transfer stations/MTS/FCTS/dustbins site in closed vehicle.
   ii. The operator shall keep in reserve sufficient number of transport vehicles for any unforeseen eventuality/festival/fair /important events/ emergency conditions.

g. **Segregation of Waste:**
   i. Segregation of waste at source as well as at the MRF cum PCTS site.
   ii. Mixed waste containing recoverable resources shall follow the route of recycling

h. **Domestic Hazardous & Domestic bio-medical waste**
Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure handover/disposal of such waste as per relevant Rules and standards.

i. **Procurement of Equipment / Machinery:** All procurement for shortfall of equipment, vehicles and machinery required for door-to-door collection, Mechanised Sweeping vehicles, drain cleaning & Setting up MRF cum Transfer Station as per operation plan shall be provided by the LMC within the stipulated time period as per operation plan provided by concessionaire and approved by LMC and PMC. Regarding existing vehicles/equipment, a committee comprising of LMC official, PMC and concessionaire will be constituted to decide the vehicle/equipment fit for project.

j. **Vehicle required for Door-to-Door Collection:** Vehicle required for Door-to-Door Collection shall be provided by LMC. Procurement of vehicles shall be done as per DPR/operation plan prepared by concessionaire and approved by LMC. Regarding existing vehicles/equipment, a committee comprising of LMC official, PMC and concessionaire will be constituted to decide the vehicle/equipment fit for project.

k. **Operation & maintenance:** The Concessionaire shall ascertain that at all times during the Operation Period, the Project conforms to the operation & maintenance requirements set forth in Schedules 2 of DCA of the RFP.

l. **Support Infrastructure development** including but not limited to workshops

and development of adequate parking Spaces, is to be done by the Concessionaire at his/her own cost. Land for workshop and parking of vehicles will be provided by LMC. The bidder shall also arrange necessary infrastructure/ spare parts etc. and manpower for the purpose of regular maintenance of the vehicles, machinery & equipment etc.

m. **Manpower:** The Concessionaire shall be responsible for deployment of all manpower for waste collection, Street Sweeping, Drain Cleaning, transportation, user charges collection & recovery of recyclables of Waste including the key personnel for the management and supervision of all Project-related activities. (This would include the designation of suitably qualified personnel for areas such as contract administration and supervision, construction management, safety, environmental management, plant and equipment maintenance, procurement, materials management and quality control),

n. **Co-ordination with LMC:** The Concessionaire shall provide project related information at regular interval in the form and manner as prescribed by LMC. In case of any law & order problems, the Concessionaire shall inform promptly the LMC about the same and will act as per the direction of the LMC.

o. The Concessionaire shall be responsible for all other activities apart from activities as listed above towards successful implementation, operation, maintenance and management of the project in line with Solid Waste Management Rules, 2016 (hereinafter referred as the "SWM Rules 2016"), SBM-2 guidelines or as revised from time to time and Good Industry Practices.

p. **Awareness Campaign:** Concessionaire shall be responsible for undertaking awareness campaigns through various medium to spread awareness about the Project and promote segregation of MSW at the individual household level. Also, it has to undertake awareness campaign regarding non-usage of plastics. It may be clarified over here that LMC on its own will be free to devise booster campaigns on these same issues at its own discretion.

q. **Smart Solid Waste Collection & Management systems {INFORMATION & COMMUNICATION TECHNOLOGY (ICT):**

Concessionaire shall be responsible to Deploy System in which all the collection, transportation and sweeping vehicles are fitted with GPS tags and Vehicle Tracking Management System (VTMS) to detect tempering, track and

monitor the vehicles and hence efficiently plan the routing and resources for transportation system.

In addition to VTS, the GIS and POI based system shall be integrated with Management Information System (MIS)/VTS for collecting information at micro level. GIS based POI of center point of each Road/lane shall be generated and MIS shall be able to generate daily attendance of such POI by their designated vehicles. The MIS system shall be as per the requirement of Authority and if any updates and revision is required during tenure of project the Contractor shall carry such revisions at no extra cost.

The total GPS/GIS system /mobile based APP for SWM monitoring is required to be integrated with ICCC, Lucknow Smart City Project.

The successful bidder shall compulsorily install Vehicle Tracking Management System (VTMS) on each vehicle used for collection & transportation of MSW, with the necessary web based software which have desired functions to monitor Door to Door collection operation, accessible from web, personal computer/ laptops, network links with antivirus installed, printer, GPS / Sim Card / Dongle and shall connect the system with ICCC. Please note that for payment of collection and transportation fee, VTMS record is mandatory.

ICT (Information and Communication Technology) based attendance system shall be undertaken by the operator for ensuring the timely presence and monitoring of work done by all its deployed manpower and such monitoring is to be based as real time reporting of time and duration spent by the employee for operation of the services. This would entail that each worker/employee deployed by the Operation for all Packages (Part A to Part C) must have a Phone with capability of smart applications to be able to communicate data and other features like photo/video in real time for reporting. Similarly, all vehicles and usage of mechanical equipment by the operator must have VTS and other suitably enabled ICT mechanism to make real time reporting about the movement and usage of such vehicles and equipment deployed by the Operator.

Authority may ask concessionaire to adopt sensors enabled smart bins with QR (Quick Response) code tags or screening system to monitor the collection efficiency, concessionaire shall implement such system and operate and maintain the system as decided by the Authority.

Concessionaire shall maintain database for manpower, vehicles, storage bins, lifting of waste, unnoticed waste, user charge collection, defaulter list, etc. as applicable. The Concessionaire shall design software compatible with mobile phone to track and monitor and report in real time on the various parameters.

Every deployed vehicle and personnel related to the execution of the project must be tracked in real time with suitable deployment of software/hardware ICT infrastructure for all project execution related work and this requires not only VTS for vehicles and suitable biometric/other IT application but also requires that the Concessionaire ensures all its deployed manpower has proper android based mobile phone with video camera recoding features that may be used for integration of smart ICT solutions envisaged by NNL to be integrated easily and it shall be absolutely mandatory for the Concessionaire to ensure that any monitoring software solution related to the project whenever is implemented by the Authority, the Concessionaire will be fully complying to it for all features in terms of recording of performance of man and resources in real time.

All the hardware such as GPS devices, RFID TAGs (Sticker Type), RFID TAG (Metal mount Type), RFID readers, Biometric Fingerprint devices, Necessary hardware for Software Application hosting at NNL Data Centre along with Software Application System and keeping 5% of devices as spare will be in scope of NNL whereas successful bidder shall operate and maintain them at their own cost.

The primary scope shall include End-to-End Solution to implement and to provide support services & maintenance which include the following:

i. Supply and Commissioning of online field data collection and real time transfer & display system for effective "Door to Door Collection Monitoring System"
ii. Designing, developing and integration of the application software for Vehicle Tracking with new Monitoring System (data feed access would be provided)
iii. Implementation of Workforce Management System through Biometric attendance/facial identification system.
iv. Supply of necessary hardware/ software and their installation, configuration Implementation of the IT solution.
v. Sizing of Hardware, Software and network devices required in the data Centers.
vi. Testing and Commissioning of the solution for necessary hardware.
vii. Monitoring of the usage, comprehensive maintenance for a period of 10 years post successful Go Live, the bidder shall maintain the sufficient spares to ensure 24 x 7 up time.
viii. Maintenance of all devices and after warranty period including the replacement of devices in cases of damage, new vehicle or any other changes as and when required.
ix. Maintenance of web-based application for Monitoring during and

after warranty period.

x. Imparting Training & Capacity Building Program/ Workshops for all staff regarding operation of new digital devices and its features for speedy actions in SWM processes.
xi. Development of Mobile Application for workforce and citizens in both language (Hindi & English) versions as per the requirements of LSCL.
xii. Responsibility of integrating this application with the Command and Control Centre through appropriate APIs (Application Programming Interfaces).
xiii. The bidder will be Responsible for providing distributed cloud server with multiple nodes till the Application is migrated to ICCC data center of Lucknow Smart City.
xiv. The bidder will be responsible for complete end to end implementation of the project. LSCL/LMC will only provide necessary space and electricity to setup monitoring control room.
xv. The bidder shall install and commission connectivity across all designated locations.
xvi. The bidder shall be be provided with the GIS layers present with the LMC and it will be responsible to integrate the existing GIS data with the proposed Intelligent SWM Solution.
xvii. The bidder shall provide the band-width required for operationalizing the project. The bandwidth requirement shall be analyzed and procured by the bidder at its own cost/ risk.
xviii. The bidder shall install and commission connectivity across all designated locations.
xix. The bidder shall establish high availability, reliability and redundancy of the network elements to meet the Service Level requirements.
xx. The bidder shall be responsible for planning and design of the access network architecture (access controllers, backhaul connectivity, routers, switches, etc.) to meet the technical, capacity and service requirements of the Project.
xxi. The Bidder shall be responsible for up-gradation, enhancement and provisioning additional supplies of network (including active/passive components), hardware, software, etc. as required by the LMC.
xxii. The bidder shall ensure that the infrastructure provided under the project shall not have an end of life within 24 months from the date of bidding.
xxiii. The bidder shall ensure compliance of all mandatory government regulations as amended from time to time.
xxiv. The Bidder shall ensure that all the peripherals, accessories, sub-

components required for the functionality and completeness of the solution, including but not limited to devices, equipment, accessories, patch cords (fiber), cables, software, licenses, tools, etc. are provided according to the requirements of the solution.

xxv. The bidder shall have to provision these & other similar things to meet the solution requirements at no additional cost and time implications to LSCL.

xxvi. All the software licenses that the bidder proposes shall be perpetual software licenses along with maintenance, upgrades and updates for the currency of the contract.

xxvii. The software licenses shall not be restricted based on location and Authority shall have the flexibility to use the software licenses for other requirements if required.

xxviii. The bidder shall ensure there is a 24x7 comprehensive onsite support for duration of the contract for respective components to meet SLA requirement.

xxix. Considering the criticality of the infrastructure, bidder is expected to design the solution considering the RFP requirement of no single point of failure with high level of redundancy and resilience to meet the network uptime requirements.

xxx. The bidder shall be responsible for periodic updates & upgrades of all equipment, cabling and connectivity provided at all locations during the contract period.

xxxi. The bidder shall be responsible for setting up / building / renovating the necessary physical infrastructure including provisioning for network, power, rack, etc. at all the locations.

r. **User Charges Collection:**

i. The selected bidder shall also undertake the user charge collection on behalf of Nagar Nigam Lucknow and ensure collection maximization. It is assumed that better service quality of the bidder shall improve the User Charge Collection.

ii. Any default in user charge collection shall be duly reported for action by Nagar Nigam.

iii. The selected bidder must ensure zero pilferage of user charge collection. Any pilferage will be considered an event of default by private partner and shall result in imposition of penalty or termination of agreement as the case maybe.

iv. User charge collection system should be computerized and well connected to Smart SWM system to ensure that waste collection, customer feedback, customer satisfaction, payment default issues

could be linked and analyzed.

v. Bidder has to deposit user charge collection amount on daily basis in escrow account of Nagar Nigam Account.
vi. Rates of user fees are as per Nagar Nigam Orders.
vii. All the collected user charges shall be deposited to Nagar Nigam Designated Account Only.

Such Collected User Charges shall be used for paying the tipping fee fully or partially as the case maybe.

s. **Financing:** All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

3. The Successful Bidder would design, procure, finance, construct, operate and maintain the Project during the Concession Period on a Design-Build – Operate – Transfer (DBOT) Concession basis. The Project would be transferred back in good running condition to the LMC at the end of the Concession Period.
4. The Successful bidder shall be provided Tipping Fee as per manner prescribed in Article 8 of Volume III i.e., Concession Agreement. The Successful Bidder shall at its cost, expenses and risk make remaining required financing arrangements, in a timely manner as would be necessary to implement the Project, and to meet all of its obligations under the Concession Agreement.
5. The Successful Bidder shall adhere to the Construction Requirements and achieve Commercial Operations Date (COD) on or before the Scheduled Project Completion Date, as specified in the Concession Agreement.
6. The Successful Bidder may undertake Construction Works by itself or through a Contractor possessing requisite technical, financial and managerial expertise /capability; but in either case, the Successful Bidder shall remain solely responsible to meet the Construction Requirements, as specified in the Concession Agreement.
7. The Successful Bidder shall operate and maintain the Project in accordance with the O&M Requirements as set out in the Concession Agreement.
8. The Successful Bidder shall, at all times, ensure that all aspects of the Project and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including rules such as SWM Rules, policies and guidelines related thereto.
9. Procurement of machine, equipment and vehicle should be done on approval of LMC and PMC.

Appendix – B

Covering Letter

(On the Letterhead of the Bidder or Lead Member in case of a Consortium)

Date:

To
MUNICIPAL COMMISSIONER
Lucknow Municipal Corporation
Lucknow, Uttar Pradesh.

Sub: **RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation** .

Dear Sir,

Being duly authorized to represent and act on behalf of ……. (Herein after referred to as "the Bidder"), and having reviewed and fully understood all of the Proposal requirements and information provided and collected, the undersigned hereby submits the Proposal on behalf of for the Project as specified in the RFP, with the details as per the requirements of the RFP, for your evaluation.

We confirm that our Proposal is valid for a period of --------- days from Proposal Due Date.

We also hereby agree and undertake as under:

Notwithstanding any qualifications or conditions, whether implied or otherwise, contained in our Proposal we hereby represent and confirm that our Proposal is unqualified and unconditional in all respects and we agree to the terms of the proposed Concession Agreement, a draft of which also forms a part of the RFP document provided to us.

Yours faithfully,

For and on behalf of (Name of Bidder)

Duly signed by the Authorised Signatory of the Bidder

(Name, Title and Address of the Authorised Signatory)

Appendix – C

Details of Bidder

(*On the Letter Head of the Bidder or Lead Member in case of a Consortium*)

1. Details of Bidder.
    a. Name of Bidder
    b. Address of the office(s)
    c. Date of incorporation and/or commencement of business

2. Brief description of the Bidder's main lines of business.

3. Details of individual(s) who will serve as the point of contact / communication for LMC with the Bidder:
    a. Name:
    b. Designation:
    c. Company/Firm:
    d. Address:
    e. Telephone number:
    f. E-mail address:
    g. Fax number:
    h. Mobile number:
4. Name, Designation, Address and Phone Numbers of Authorised Signatory of the Bidder:
    a. Name:
    b. Designation:
    c. Company/Firm:
    d. Address:
    e. Telephone number:
    f. E-mail address:
    g. Fax number:
    h. Mobile number:
5. In case of a Consortium:
    a. The information above (1-4) should be provided for all the members of the Consortium.
    b. A copy of the MOU, as envisaged in the RFP document should be attached to the Bid.
    c. Information regarding role of each member should be provided as per table below:

Sl. No.	Name of Member	Role*	Percentage of equity in the Consortium
1.			

2.			
3.			

* *The role of each member, as may be determined by the Bidder should be indicated.*

The following information shall also be provided for each member of the Consortium

Name of Bidder/ member of Consortium:

No.	Criteria	Yes	No
1.	Has the Bidder/ constituent of the Consortium been barred by the [Central/ State Government, or any entity controlled by them], from participating in any project[s] (DBOT or otherwise).		
2.	If the answer to 1 is yes, does the bar subsist as on the date of Bid.		
3.	Has the Bidder/ constituent of the Consortium paid liquidated damages of more than 5% of the contract value in a contract due to delay or has been penalized due to any other reason in relation to execution of a contract, in the last three years?		

6. A statement by the Bidder and each of the members of its consortium (where applicable) disclosing material non-performance or contractual non-compliance in past projects, contractual disputes and litigation/ arbitration in the recent past are given below (Attach extra sheets, if necessary)

Appendix D

Proof of Qualification

1. Minimum Qualification Criteria

The Bidder must satisfy following Qualification Criteria for experience in order to qualify for the Project.

a. Successfully operating and maintaining for at least one year i. one Municipal Solid Waste door to door collection & Transportation project of capacity 152 TPD or ii. Two Municipal Solid Waste door to door collection & Transportation project of capacity 112 TPD or iii. Three Municipal Solid Waste door to door collection & Transportation project of capacity 76 TPD of Municipal Solid Waste during last Five FY.

b. The bidder should have completed/ Ongoing for at least one year, project of Manual/Mechanized sweeping and/Drain Cleaning, at least i. one work of annual fee of INR 10.82 Crores, ii. Two works of annual fee of INR 7.21 Crores, iii. Three works of annual fee of INR 5.41 Crores, in the last 5 year till submission of tender document i.e., 2022-23, 2021-22, 2020-21, 2019-20 & 2018-19, for Government / Local bodies.

or

The bidder should have completed/ Ongoing project for at least one year of Manual/Mechanized sweeping for at least i. one work of Road sweeping 557 Km-Passes per day, ii. Two works of Road sweeping 371 Km-Passes per day, iii. Three works of Road sweeping 278.5 Km-Passes per day, in the last 5 year till submission of tender document i.e., 2022-23, 2021-22, 2020-21, 2019-20 & 2018-19, for Government / Local bodies.

or

The bidder should have completed/ Ongoing project for at least one year of Drain Cleaning for at least i. one work of Drain Cleaning 43 Km per day, ii. Two work of Drain sweeping 28 Km per day, iii. Three work of Road sweeping 21 Km per day, in the last 5 year till submission of tender document i.e., 2022-23, 2021-22, 2020-21, 2019-20 & 2018-19, for Government / Local bodies (i.e., Municipal Corporations / PSU's. /Railways / Metro / Private Townships.

2. Details of Experience

The Bidder should furnish the details of eligible experience as set out below:

S No.	Qualification Criteria for Experience	Project Name	Location	Year of Commissioning	Operational Since FY
1	Operating and maintaining Collection and transportation of MSW of (input waste handled in TPA)				
2	Sweeping and Cleaning				

	of Roads (input KM Per Day)				
3	Cleaning, Desilting, Removal of Obstruction and Maintenance of Drains (input KM Per Day)				

3. Supporting Documents

The following documents would need to be submitted to support the Bidder's claim of experience stated in the table above.

S. No	Qualification Criteria for Experience	Supporting Documents
1	Operating and maintaining Collection and transportation of MSW of (input waste handled in TPA)	Copy of agreement with Municipal Body or any other client for the relevant years which clearly mentions the quantum of waste being collected and transported, OR Certificate from the Municipal Body or Pollution Control Board or any other client, OR i) Certificate from an independent auditor
2	Sweeping and Cleaning of Roads (input KM Per Day)	Copy of contract agreement /work orders and successful completed performance certificate by competent Authority along with TDS Certificate
3	Cleaning, Desilting, Removal of Obstruction and Maintenance of Drains (input KM Per Day)	Copy of contract agreement /work orders and successful Completed performance certificate by competent Authority.
4	Should have at least 500 number of employees on company roll.	Self-Certification by the bidder with Challan copies

Note:

1. The Bidder should provide the details mentioned above based on its own experience or its subsidiary (ies) or its parent company. Experience of the Bidder's associate company (ies) will also be considered for evaluation of the Experience of the Bidder.
2. The financial year would be the same as the one normally followed by the Bidder for its annual Report / annual financial statement.
3. In case of consortium separate sheets shall be used for each consortium member.

4. Financial Capability

4.1. Financial Capability of the Bidders would be evaluated on the basis of the following:

a. Net worth as at the end of the most recent financial year that is FY 2022-23
b. Average turnover for the last three completed financial years that is FY 2020-21, FY 2021-22 & FY 2022-2023. The Bidder should provide information regarding the above based on audited Annual accounts for the respective financial years. The financial year would be the same as the one normally followed by the Bidder for its Annual financial statement.

4.2. The Proposal must be accompanied by the audited Annual financial statements of the Bidder for the last three financial years.

4.3. In case the Annual accounts for the latest financial year are not audited and therefore the Bidder could not make it available, the Proposal shall give an undertaking to that effect and the statutory auditor shall certify the same. In such a case, the Bidder may provide the unaudited Annual Accounts (with Schedules) for the latest financial year. The Bidder would have to provide the Audited Annual Financial Statements for the two years preceding the latest financial year, which would be used for the purpose of evaluation of the Proposal. In case the Bidder fails to provide such Audited Annual Financial Statements and certificate from statutory auditor specified hereinabove, the Application will be rejected as non-responsive.

5. Evaluation Criteria for Financial Capability

5.1. For the purpose of Qualification, a Bidder would be required to satisfy the Financial Capability measured on the following criteria:

a) Net worth of the Bidder as at the end of FY 2022-23 shall be at least equal to Rs. 15 Crores (Rupees Fifteen Crores only), and

b) The Average Turnover of the Bidder for the last three financial years that is FY 2020-21, FY 2021-22 & FY 2022-2023 shall be at least equal to Rs. 14.7 Crores (Rupees fourteen Crores Seven Lacs only)

Here
Net Worth shall mean the sum of subscribed and paid- up equity and reserves from which shall be deducted the sum of revaluation reserves, miscellaneous expenditure not written off and reserves not available for distribution to equity shareholders)
Turnover shall mean gross sales or gross revenue, as defined by the Indian Accounting Standards published by the Institute of chartered Accountants of India (ICAI).

The Bidder must satisfy above-mentioned parameters for Financial Capability in order to qualify for the Project.

6. Special Conditions for Consortium

6.1. In case of Consortium the Lead member of the Consortium should meet Minimum the required project capacity of similar nature of work in proportion to the partnership in consortium but not less than 51% and other party should meet in

proportion to the partnership in consortium but not less than 26% of required project capacity related to similar nature of work in India during the last Five years.

6.2. In case of Consortium the Lead member should meet the required turnover in the 3 financial years (FY 2020-21, FY 2021-22 & FY 2022-2023) in proportion to the partnership in consortium but not less than 51 %. Other Member should meet the required turnover in the 3 financial years (FY 2020-21, FY 2021-22 & FY 2022-2023) in proportion to the partnership in consortium but not less than 26 %.

7. Other Conditions

7.1. The Bidder should provide the details mentioned above based on its own Financial and technical Capability. Financial and Technical Capability of the Bidder's parent company or associate company can be considered for computation of the Financial and technical Capability of the Bidder.

7.2. The financial year would be the same as the one normally followed by the Bidder for its Annual Report / Annual financial statement.

Appendix D1

Financial Capability of the Bidder

(In Rs. crore)

S. No.	Applicant Type	Net worth (Applicable for application through Option III)	Annual Turnover for preceding three Financial Years (Rs. In Cr)		
		31st March, 2023 (Rs. In Cr)	2022-23	2021-22	2020-21
1	Single Entity				
2	Consortium				
	Lead Member				
	Consortium Member 1				

Certificate from the Statutory Auditor

This is to certify that .....(name of the Applicant) has Average Annual Turnover of Rs. …….. (Rupees……only) for the last three Financial Years / has a Net worth of Rs. ……...Crores as on 31st March, 2023

(Name and Signature of the Auditor/C. A along with registration number as applicable and Seal

Instructions:

1. The Bidder shall attach copies of the balance sheets, financial statements and Annual Reports for 3 (three) years preceding the Bid Due Date. The financial statements shall:
   a. reflect the financial situation of the Bidder and its Associates where the Bidder is relying on its Associate's financials;
   b. be audited by a statutory auditor; Bidder to provide copy of the last 3 years

Audited Financial Statement

c. be complete, including all notes to the financial statements; and

d. Correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Appendix D2

PROCEDURE FOR BID EVALUATION

1. TECHNICAL EVALUATION CRITERIA:

Sl No		Criteria	Weightage (%)	Maximum Marks
(i)	**Firms General Experience**	**Firms General Experience & Experience in Similar Assignments.**	**50%**	**50**
a	Experience of Projects in similar eligible sector	Experience in **Door-to-Door Collection** of Municipal Solid Waste. *Subject to Maximum 25 Marks* Marks Obtained: - Xx15 marks; X= Project completed of 76 to 112 TPD Xx20 marks; X= Project completed of 112 to 152 TPD Xx25 marks; X= Project completed of 152 TPD & Above	25	25
b	Experience of Projects in similar eligible sector	Experience in **Mechanized sweeping** of Roads. *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Project completed of 557 KM/Day to 835 KM-passes/Per Day Xx7.5 marks; X= Project completed of 835 KM-passes /Day to 1113 KM/Day Xx10 marks; X= Project completed of 1113 KM-passes /Day & Above	10	10
c	Experience of Projects in similar eligible sector	Experience in **Cleaning and Maintenance** of Drains. *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Project completed of 43 KM/Day to 28 KM/Per Day Xx7.5 marks; X= Project completed of 28 KM/Day to 21 KM/Day Xx10 marks; X= Project completed of 21 KM/Day & Above	10	10

d	Experience of Projects in similar eligible sector	Experience in **O & M of MRF Centres** of Municipal Solid Waste. *Subject to Maximum 20 Marks* Marks Obtained: - Xx2 marks; X= Project completed of 60 to 90 TPD Xx3.5 marks; X= Project completed of 90 to 125 TPD Xx5 marks; X= Project completed of 125 TPD & Above	5	5
(ii)	**Approach & Methodology**	Approach & Methodology for proposed assignment	20%	20
		Understanding of Objectives	3	3
		Quality of Methodology	8	8
		Work Program	3	3
		Organization and Personnel	3	3
		Innovative Idea	3	3
(iii)	**Financial Strength**	**Financial strength**	**30%**	**30**
		Average Annual Turnover of last 3 consecutive years i.e., 2019-20, 2020-21 & 2021-22 (As per the bank / CA statement) *Subject to Maximum 20 Marks* Marks Obtained: - Xx10 marks; X= Turnover between Rs. 11.7 Cr. To Rs. 17.6 Cr. Xx15 marks; X= Turnover between More than Rs. 17.6 Cr. to Rs. 23.4 Cr. Xx20 marks; X= Turnover More than Rs. 23.4 Cr.	20	20
		Net Worth for FY 2022-23(As per the bank / CA statement) *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Net-Worth between Rs. 3.5 Cr. To Rs. 5.3 Cr. Xx7.5 marks; X= Net-Worth between More than Rs. 5.3 Cr. To Rs. 7.0 Cr. Xx10 marks; X= Net-Worth More than Rs. 7.0 Cr.	10	10

2. Evaluations of Bids

A. Technical proposal of all the responsive bidders shall be evaluated based on the criteria set out in clause 1 of Appendix D2. Bidders scoring more than 75% marks shall qualify for financial bid evaluation.

B. In the financial bid, bidder should propose the Tipping fee as given in format for financial bid as given in table below.

TIPPING FEE (Amount in Rupees)

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User				
1(a)	Residential Household	Per Household/Day	78400		
1(b)	Commercial Unit	Per Commercial Unit/Day	2821		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/Day	490		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/Day	121		
2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	928		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	71		

Note: Quantity may very +/- 20%

C. The Technically qualified Bidder demanding the lowest Tipping Fee Rate from the LMC would be declared Successful.

D. After successful negotiation, the work shall be awarded to the firm, if the negotiation fails, the next high scorer firm shall be called for contract negotiations.

Appendix – E

FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL

(On Stamp paper of Rs.100.00 value)

POWER OF ATTORNEY

Know all men by these presents, we..... (Name and address of the registered office) 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 on our behalf, all such acts, deeds and things necessary in connection with or incidental to "RFP for Door-to-Door Collection & Transportation of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation " (hereinafter referred to as "the Project"), on behalf of the LMC including signing and submission of all documents and providing information / responses to LMC in all matters in connection with our Proposal for the Project.

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

Dated this the Day of 20XX

For

(Name and designation of the person(s) signing on behalf of the Bidder / Lead Member in case of Consortium)

Accepted

Signature)

(Name, Title and Address of the Attorney)

Date: …….

Note:

1. To be executed by the Lead Member in case of a Consortium.
2. In case of Bidders who are not resident in India, the Power of Attorney may be submitted on plain paper attested by any authorised officer of the Embassy of India and duly stamped by the Department of Stamps & Registration, Government of---------- (name of state).

3. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
4. Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a resolution/power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
5. In case an authorized Director of the Bidder signs the Proposal, a certified copy of the appropriate resolution conveying such authority may be enclosed in lieu of the Power of Attorney.

Appendix – E1

FORMAT FOR POWER OF ATTORNEY FOR DESIGNATING LEAD MEMBER OF CONSORTIUM

(On a Stamp Paper of Rs 100.00 value)

POWER OF ATTORNEY

Whereas, **MUNICIPAL COMMISSIONER, Lucknow Municipal Corporation & Lucknow Nagar Nigam** (hereinafter referred to as "Authority") has invited proposals from Bidders for taking up "RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation " (here in after referred to as "the Project").
Whereas, the Consortium being one of the Bidders is interested in bidding for the Project and implementing the Project in accordance with the terms and conditions of this Document, and

Whereas, it is necessary under this Document for the members of the Consortium to designate the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's Proposal for the Project or in the alternative to appoint one of them as the Lead Member who, would have all necessary power and authority to do all acts, deeds and things on behalf of the Consortium, as may be necessary in connection with the Consortium's Proposal for the Project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT;

We, M/s and M/s (the names and address of the registered offices),do hereby designate M/s being one of the members of the Consortium, as the Lead Member of the Consortium, to do on behalf of the Consortium, all or any of the acts, deeds or things necessary or incidental to the Consortium's Proposal for the Project, including submission of Proposal, participating in conferences, responding to queries, submission of information/ documents and generally to represent the Consortium in all its dealings with LMC, any other Government Agency or any person, in connection with the Project until culmination of the process of bidding and thereafter till the Concession Agreement is entered into with LMC.

We hereby agree to ratify all acts, deeds and things lawfully done by the Lead Member and our said attorney pursuant to this Power of Attorney and that all acts' deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us/Consortium.

Dated this the .....Day of 20XX

.....

(Executants)

(TO BE EXECUTED BY BOTH MEMBERS OF THE CONSORTIUM)

i.) Note: The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure (for a body corporate).

Appendix – F

MEMORANDUM OF UNDERSTANDING

Between

[First Member]

And

[Second Member]

THIS MEMORANDUM OF UNDERSTANDING (hereinafter called "MOU") made and entered into this ……. day of the month of …… 2022, by and among:

[Name & complete address of First/Leading Member] (hereinafter called "[short name/acronym]"), which expression shall include its successors, legal representatives and permitted assigns;

[Name and complete address of Second Member] (hereinafter called the "[short name/acronym]"), which expression shall include its successors, legal representatives and permitted assigns;

[Name and complete address of Third Member] (hereinafter called the "[short name/acronym]"), which expression shall include its successors, legal representatives and permitted assigns;

(All of the above for the purpose of this MOU shall hereinafter individually called the "Member" and collectively called the "Members")

WHEREAS,

a) **MUNICIPAL COMMISSIONER, Lucknow Municipal Corporation & Lucknow Nagar Nigam** (hereinafter referred to as "Authority") has invited proposals from Bidders for taking up "RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation " (hereinafter referred to as "the Project").

b) the Members hereby intend to join hands to form an unincorporated association for the sole purpose of, preparation and submission of joint proposal as required to be submitted to the Client for carrying out the Services for the Project. In case of acceptance of proposal by the Client, the members shall perform the Services as

shall be agreed through Joint Venture/ Consortium [Use which is appropriate] Agreement and the contract to be entered between the Client and the Joint Venture/Consortium.

NOW, THEREFORE, the Members confirm their understanding (hereinafter called the "Association") as follows:

8. DEFINITIONS AND INTERPRETATION

8.1 Definitions

The following words and expressions shall have the meanings assigned to them, except where the context otherwise requires:

8.1.1 **"Association"** means the understanding formed between the Members in accordance with this MOU;

8.1.2 "**Client"** means the person, firm, company or body named as client in the Joint Venture/Consortium Agreement and none other, except its legal successors and permitted assigns;

8.1.3 **"Contract"** means the Contract between the Client and the Joint Venture/Consortium for the provisions of professional services for the Project;

8.1.4 **"Country"** means [State the name of the "India"] where the Project is located;

8.1.5 **"Consortium"** means the consortium to be formed between the Members for the Project;

8.1.6 **"Consortium Agreement"** means the formal agreement to be entered between the Consortium Members, upon acceptance of proposal for the Project;

8.1.7 **"Proposal"** means the proposal to be prepared and submitted by the Members in response to the Invitation, by the Client;

8.1.8 **"Services"** means all the services to be performed by the Members in accordance with the Proposal or Contract, as the case may be;

8.1.9 **"Representative"** means the person nominated by the Members(s) of the Joint Venture/Consortium through Power of Attorney to sign the Proposal and the Contract on behalf of and in the name of that Member. The signature of Representative shall bind each Member in respect of all obligations and liabilities it assumes under the Joint Venture/ Consortium Agreement.

8.1.10 **"Leading Member"** means the Member which will take the lead in the management of the Association's affairs under this MOU and which will provide the Association's Representative for liaison with the Client and, unless otherwise agreed by the Members, the Services Manager for direction of the conduct of the Services;

8.1.11 **"Day"** means the period between any one midnight and the next, and "month" means a period of one month according to the Gregorian calendar commencing with any day in the month; and

8.1.12 **"Document"** means written, drawn, typed, printed, magnetized or photographic material which is capable of being copied.

8.2 Interpretation

8.2.1 Words importing the singular also include the plural and the masculine includes the feminine and vice-versa where the context requires.

8.2.2 The headings in this MOU shall not be taken into consideration in its interpretation.

8.2.3 Unless otherwise stated, all references to clauses/sub-clauses are references to clauses/sub-clauses numbered in the Conditions and Terms of this MOU and not to those in any other document attached or incorporated by them.

9. ASSOCIATION/UNDERSTANDING

9.1 The Members hereby intend to join hands to form an unincorporated association for the purpose of:

- ✓ preparing and submitting the Proposal to the Client;
- ✓ providing any further information, the Client may require or negotiating with the Client on any matters requiring negotiation in connection with the Proposal;
- ✓ Entering into a formal Joint Venture/Consortium Agreement, stipulating in detail the relations between the Members on the basis of this MOU and in accordance with the Concession Agreement with the Client, if the Proposal is accepted; the Services shall be rendered jointly by the Members in accordance with a Joint Venture/Consortium Agreement to be signed by the Members. The Joint Venture/Consortium Agreement shall be signed prior to commencing the Work and shall be based upon the terms of the Contract signed between the Joint Venture/Consortium and the Client; and
- ✓ Performing all the Work to be undertaken for the project by the Joint Venture/Consortium under the Concession Agreement.

9.2 The Members hereby appoint the Leading Member and, pursuant to Clause 3.6, the representative of the Association.

9.3 The Parties agree that the proportion of shareholding among the Parties in the Concession shall be as follows:

First Party:

Second Party:

9.4 The Parties undertake that they shall collectively hold 100% shareholding of the paid-up Equity [as defined in Concession Agreement] share capital of the concessionaire

commencing from the Execution Date of the concession agreement until expiry of five years thereafter, and shall hold at least 51% (fifty-one per cent) shareholding of the subscribed and paid-up equity of the Concessionaire at all times during the remaining Concession Period i.e. From expiry of aforesaid five years period until end of concession period. Further, in case of Consortium bidding entity, besides the foregoing shareholding requirement, the bidding Consortium shall ensure that the Lead Member thereof holds at least 51% shareholding in the paid up equity capital of the Concessionaire during Lock-in-Period, and the other members of consortium shall hold during Lock in Period minimum 10% (ten per cent) shareholding in the paid up equity capital of the Concessionaire; and after the expiry of Lock-in -Period, the Lead Member shall be required to hold at least 26% shareholding in the paid up equity capital of the Concessionaire commencing from the expiry of Lock-in-Period until expiry of concession period with the aggregate shareholding of the Consortium member in the Concessionaire shall not be less than 51%. No change in shareholding of the selected bidder [either single Bidding Entity/ Bidding] as set out herein and (as to be reiterated in the Joint Bidding Agreement) in the Concessionaire shall take place.

9.5 Unless otherwise agreed in writing by the Members, this MOU shall not terminate if a Member changes its name or is taken over by, or merged with, another company or partnership provided that such successor name, company or partnership is an independent professional firm acceptable to the Client.

10. PROPOSAL SUBMISSION

10.1 The Members shall make all reasonable endeavours to obtain from the Client the award of the Services Agreement in accordance with the conditions of the Invitation.

10.2 The preparation and submission of the Proposal shall be undertaken jointly by the Members. The Members shall be required to provide their respective information and document on the required format to the Leading Member. The Leading Member shall co-ordinate and finalize the preparation of the Proposal and its submission to the Client. The Members shall cooperate with the Leading Member. The Members shall perform with all reasonable skill, care and diligence their respective functions, as agreed between the Members, allotted by the Policy Committee until the award of the Services Agreement to the Joint Venture/Consortium or until the provisions of Sub-Clause 16.1 have been satisfied.

10.3 Once the Proposal has been submitted to the Client, no changes may be made or additional information or explanations given without the consent of all the Members until the Service Agreement is signed and have become effective.

10.4 The Members shall enter into a formal Joint Venture/Consortium Agreement, stipulating in detail the relations between the Members on the basis of this MOU and enter into the Contract, if it is awarded in accordance with the Proposal, or the Proposal as amended, subsequent to its submission, by agreement between the Client and the Joint Venture/Consortium.

10.5 Upon the execution of this MOU, each of the Members shall grant a Power of Attorney in favour of a person nominated by it as its Representative. Under the Power of Attorney granted to him, the Representative of a Member shall thereby have authority to sign the Proposal and the Concession Agreement on behalf of and in the name of that Member. The signature of its Representative shall bind each Member in respect of all obligations and liabilities it assumes under this MOU.

10.6 The Representative of the Leading Member shall be the representative of the Association for the purpose of correspondence and discussion with the Client on matters involving the interpretation of the Proposal and alterations to it and to the Services to be performed.

11. PERFORMANCE OF THE SERVICES

11.1 The Services shall be carried out by each Member in accordance with the terms and conditions as set out in the MOU and the Concession Agreement. In the event of any inconsistency between the terms of this MOU and the Concession Agreement regarding performance of the Work, the terms of Concession Agreement shall prevail.

11.2 Each Member shall be responsible for fulfilling the obligations in accordance with the terms of Concession Agreement.

11.3 The apportionment between the Members of MOU shall be recorded and amended in the Joint Venture/Consortium Agreement.

11.4 Any alterations or additions to be carried out under the Concession Agreement shall be made only with the instruction or consent of the Client. Responsibilities for carrying out additional obligations shall be agreed between the Members, subject to the consent of the Client, if required by the Concession Agreement.

12. LANGUAGE AND LAW

12.1 This MOU shall be written and interpreted in English Language and the law which is to be applied to this MOU shall be the law of India.

13. EXCLUSIVITY

13.1 Unless otherwise agreed by the Members, no Member shall engage in any activity related to the Services, unless otherwise agreed by the Members, other than as a Member of this Understanding and in accordance with the terms and conditions of this MOU. Each Member warrants that its subsidiaries and other firms or individuals over which it has control will comply with this requirement.

14. EXECUTIVE AUTHORITY

14.1 No Member shall have authority to bind or to make any commitment on behalf of any other Member unless such authority is expressed in writing by the Members jointly, or by a Member individually in regard to the (other) Member.

14.2 From the date of this MOU until the award of the Concession Agreement or until this MOU shall terminate in accordance with its terms, whichever is the earlier, the following matters shall require the unanimous consent of the Members:

a) for the purpose of submitting the Proposal, the respective responsibilities and obligations to be undertaken by the Members, subject to the conditions of the Invitation or TOR;

b) for the purpose of submitting the Proposal, the prices and terms and conditions of payment comprised in the Proposal as applicable to the Members, subject to the conditions of the Invitation; and

c) any communication to, or response to communication from, the Client either written or oral and any commitment of any kind to the Client or any other party in connection with the Proposal.

15. DOCUMENTS

15.1 All documents and/or information forwarded by either Member to the other for the preparation of Proposal shall remain sole and exclusive property of the Member which provided the same including the intellectual property rights.

15.2 Upon expiration/termination of MOU, each Member shall:

a) return to the other, all such documents and/or materials including computer diskettes and all copies thereof that are jointly prepared by the MOU Members; and

b) certify that all such documents and information and all copies have been returned to such receiving Member.

16. PERSONNEL

16.1 Each Member shall be obliged to depute as much of their personnel as are needed in timely accomplishment of the proposal for a specific project and subsequently carrying out of the project. Unless specifically agreed otherwise, under the arrangement of MOU, no employee shall be considered on its strength.

17. ASSIGNMENT AND THIRD PARTY

17.1 No Member shall assign, sell, transfer or in any way encumber its interest under this MOU, or its interests in any sums payable by the Client, without first obtaining the consent in writing of other Member.

18. SEVERABILITY

18.1 If any part of the provisions of this MOU is found in any way to be void or not applicable, such part of the provisions shall be deemed to be deleted and remainder provisions of MOU shall continue in force and effect.

19. MEMBER IN DEFAULT

19.1 In the event of insolvency of a Member, the other Member hereby irrevocably constituted and appointed attorney-in-fact for such insolvent Member to act for it in all matters affecting performance of the Service Agreement to be entered with the Client.

20. DURATION OF THE UNDERSTANDING

20.1 This MOU shall come into force and effect on the date of signing of this MOU by the Members.

20.2 Unless otherwise terminated earlier, this MOU shall expire on the date when;

a) the Proposal is not accepted by the Client; or

b) the Members entered into Joint Venture/Consortium Agreement, following acceptance of Proposal by the Client.

21. LIABILITY

21.1 Each of the Members warrants that it will indemnify and keep indemnified the other Member against all legal liabilities arising out of or in connection with the performance, or otherwise, of its obligations under this MOU.

21.2 In the event of it being alleged by one Member in writing that any legal liability is attributable to the other Member or to the Members, the Members shall use reasonable endeavours to reach agreement on the liabilities to be borne by each of the Members, and in the event of the Members failing to so agree, a proper apportionment shall be determined by resolution in accordance with Clause 19.

22. PROMOTIONAL AND PROJECT COSTS, PROFITS/ LOSSES AND REMUNERATION

22.1 Each Member shall bear and pay all of its costs and expenses incurred in connection with this MOU and all other activities concerning job acquirement prior to the signing of Joint Venture/Consortium Agreement except as otherwise agreed upon in writing.

23. FINANCIAL ADMINISTRATION AND ACCOUNTING

23.1Each Member shall be responsible for keeping its own account in respect of payments due to it and for its own financial affairs generally. Each Member shall be responsible for dealing with its own income tax affairs, and its own social security affair: where relevant, and for accounting accordingly to the relevant authorities.

24. Dispute Resolution

24.1 Any dispute arising in connection with this MOU which cannot be resolved by the Parties in accordance with the terms of this MOU shall be settled amicably through negotiations, failing which the matter shall be referred to LMC for seeking their advice.

25. NOTICES

25.1 Notices under the MOU shall be in writing and will take effect from receipt at the address stated of the each of Member. Delivery can be by hand or facsimile message against a written confirmation of receipt or by registered letter or courier.

26. SOLE AGREEMENT AND VARIATION

26.1 This MOU is the sole understanding between the Members and supersedes any previous understandings between them relating to the matters referred to herein. Variations and addenda may be made to this MOU, including the admission of new Member (s) to the Association, by written instrument which shall be effective upon being signed by all Members (or on their behalf by their Representatives), provided that if a Member is considered by the other Member to be in default pursuant to Clause 12 of this agreement and signature is not required.

IN WITNESS WHEREOF the Members hereto have executed this MOU in [State name of place] on the day, month and year first above written.

1. Signed for and on behalf of

   [Name of the Leading Member]

   Signature _____

   Name: _____

   Designation: _____

   Date: _____

   Seal

2. Signed for and on behalf of

[Name of the Member]

   Signature _____

   Name: _____

   Designation: _____

   Date: _____

Appendix – G

Format for Anti-Collusion Certificate

Anti-Collusion Certificate

We hereby certify and confirm that in the preparation and submission of our Proposal, we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing which is or could be regarded as anti-competitive.

We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or agency in connection with the instant Proposal.

Dated this .....Day of ....., 20XX

.....

(Name of the Bidder)

.....

(Signature of the Authorised Person)

.....

(Name of the Authorised Person)

Note:

1. On the Letter head of the Bidder

2. To be executed by both members in case of Consortium

Appendix – H

Format for Bank Guarantee for Bid Security

(Refer Clauses 7.1)

B.G. No. Dated:

1. In consideration of you, Lucknow Nagar Nigam, having its office at ……, (hereinafter referred to as LMC, which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of _____ [insert the name of the Bidder/Name of Consortium with name of Lead Member] and having its office at _____ [and acting on behalf of its Consortium, if applicable] (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors administrators, successors and assigns), for the Project of "RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation " (hereinafter referred to as "the Project") pursuant to the RFP Document dated ***** issued in respect of the Project and other related documents (hereinafter collectively referred to as "Bidding Documents"), we [Name of the Bank] having our registered office at _____ and one of its branches at _____ (hereinafter referred to as the "Bank"), at the request of the Bidder, do hereby in terms of Clause 7.1 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfillment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to LMC an amount of **Rs. _____ (_____ Only)** as bid security (hereinafter referred to as the "Bid Security") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by LMC stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Bank.

3. We, the Bank, do hereby unconditionally undertake to pay the amounts due and payable under this Guarantee without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of LMC is disputed by the Bidder or not, merely on the first demand from LMC stating that the amount claimed is due to LMC by reason of

failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding **Rs. _____/- (Rupees _____ Lacs Only).**

4. This Guarantee shall be irrevocable and remain in full force for a period of 180 (one hundred eighty) days from the Bid Due Date inclusive of a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between LMC and the Bidder, and agreed to by the Bank, and shall continue to be enforceable till all amounts under this Guarantee have been paid.

5. We, the Bank, further agree that LMC shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of LMC that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between LMC and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Guarantee shall not be affected by any change in the constitution or winding up of the Bidder or the Bank or any absorption, merger or amalgamation of the Bidder or the Bank with any other person.

7. In order to give full effect to this Guarantee, LMC shall be entitled to treat the Bank as the principal debtor. LMC shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Intent by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to LMC, and the Bank shall not be released from its liability under these presents by any exercise by LMC of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of LMC or any indulgence by LMC to the said Bidder or by any change in the constitution of LMC or its absorption, merger or amalgamation with any other person or any other matter

or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Bank from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Bank and sent by courier or by registered mail to the Bank at the address set forth herein.
9. We undertake to make the payment on receipt of your notice of claim on us addressed to [name of Bank along with branch address] and delivered at our above branch who shall be deemed to have been duly authorised to receive the said notice of claim.
10. It shall not be necessary for LMC to proceed against the said Bidder before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank, notwithstanding any other security which LMC may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Bank hereunder, be outstanding or un realised.
11. We, the Bank, further undertake not to revoke this Guarantee during its currency except with the previous express consent of LMC in writing.
12. The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Guarantee for and on behalf of the Bank.

Signed and delivered by _____ Bank

By the hand of Mr./Ms _____, its _____ and authorised official.

(Signature of the Authorised Signatory)

(Official Seal)

Appendix – I

Guidelines and Format for Technical Proposal

The Bidder shall submit a Technical Proposal setting out the approach to the Project. The Technical Proposal shall comply with the Construction Requirements and O&M Requirements as set out in Schedules of the Concession Agreement. The design and approach for implementing the Project shall also be in compliance with the Applicable Law, including the SWM Rules.

The Technical Proposal shall set out the following components:

a) Methodology Statement

b) Process Flow Chart and Material Balance Statement

c) Resource Utilization Statement

d) Area Allocation Statement

e) Operations & Maintenance Scheme

f) Project Schedule

g) Environment, Health & Safety Policy and Practice

a) Methodology Statement

The Bidder shall provide a methodology statement, which broadly sets out the approach to the Project. The methodology statement shall include the Bidder's appreciation of the Project, the sequencing of activities to be performed, the facilities to be provided, design standards and basis for calculations of the Material Recovery Facility/ TS /MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning. The methodology statement should address aspects relating to all the activities of weighment and Recovery of recyclables.

The methodology statement should clearly demonstrate the compliance of the approach to be adopted by the Bidder for the implementation of the Project to the minimum specifications set out in the Concession Agreement.

b) Process Flow Chart and Material Balance Statement

The Bidder shall provide a process flow chart and a material balance statement setting out the activities and the outputs at each stage. The components, which shall

be addressed. The Bidder should indicate supporting calculations and assumptions, if any.

c) Resource Utilisation Statement

A statement indicating the procurement, deployment and utilisation of the resources shall be provided. The statement shall include proposed organizational structure, employee deployment, equipment procurement and utilisation, contracting activities, utilisation of office and other facilities.

d) Area Allocation Statement

The Bidder shall set out the area utilisation plan for the Project Facilities including Workshop, MRF/TS, other facilities and common areas etc.

e) Operations and Maintenance Scheme

The Bidder shall separately set out the operations and maintenance scheme for Door-to-Door Collection and Transportation of Municipal Solid Waste Services and Other Services (Drain Cleaning, Street Sweeping and Mechanical Road Sweeping) indicating the operational practices during the Active Operations Period. The maintenance (regular and emergency) schedules and mechanism should also be indicated over the Concession Period.

f) Time Schedule

The Bidder shall indicate an activity schedule over the Concession Period including the Construction Activities and O&M Activities.

g) Environment, Health & Safety Policy and Practice

The Bidder shall indicate the environment, health and safety policy and practices, which are proposed to be adopted during the Concession Period. The aspects relating to employee and worker safety, control mechanisms of litter, pest, odour, fire, surface runoffs etc. needs to be elaborated.

Appendix – J

FORMAT FOR FINANCIAL PROPOSAL

(On the Letterhead of the Bidder or Lead Member in case of a Consortium)

Date:

To

MUNICIPAL COMMISSIONER,
Lucknow Municipal Corporation
Lucknow.

"RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation ".

Dear Sir,

We are pleased to submit our Financial Proposal for Door-to-Door Collection of Municipal Solid Waste Services and Other Services (Drain Cleaning, Manual and Mechanical Road Sweeping) in Zone-6 of Lucknow Municipal Corporation.

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User				
1(a)	Residential Household	Per Household/Day	78400		
1(b)	Commercial Unit	Per Commercial Unit/Day	2821		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/Day	490		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/Day	121		

2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane	Per KM-Passes /day	928		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	71		

Note: Quantity may very +/- 20%

We have reviewed all the terms and conditions of the Request for Proposal (RFP) Document and will undertake to abide by all the terms and conditions contained therein. We hereby declare that there are, and shall be, no deviations from the stated terms in the RFP Document.

Yours faithfully,

For and on behalf of (Name of Bidder)

Duly signed by the Authorized Signatory of the Bidder

(Name, Title and Address of the Authorized Signatory)

REQUEST FOR PROPOSAL
FOR

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation"

(RFP NO. _____2022-23 Dated: __/__/2022)

VOLUME – II
PROJECT INFORMATION MEMORANDUM

Lucknow Municipal Corporation

Table of Contents

1 Project Overview 4
1.1 Project Financing 4
2 Project Coverage Area & its detail 5
2.1 Basic Information of Lucknow 5
2.1.1 Location Map 5
2.1.2 Demographic Profile of Lucknow 5
2.1.3 Decadal population growth trend of Lucknow 6
2.1.4 Waste generations in Lucknow 6
2.1.5 Solid Waste Management 6
2.2 Basic Information of Zone-7 of Lucknow 7
2.2.1 Zonal Map of Zone-7 7
2.2.2 Ward Wise Population Distribution of Zone-7 of Lucknow 7
2.2.3 Present population and growth trend 8
2.2.4 Present Scenario of Solid waste management in Zone-7 8
3 Project Components 9
4 Scope of the Project 9
5 Preparation of Detailed Project Report: 9
6 General recommendation and Guidelines for Waste Collection, Transportation 12
6.1 Storage of Segregated waste 13
6.2 Segregation of Recyclable/ Non-Biodegradable Waste: 13
6.3 Primary collection & Transportation of waste 14
6.4 Transportation of Waste 14
6.5 Work shop for maintenance 15
6.6 Command Control & Response Mechanism 15
6.6.1 Minimum Technical Specifications 15
6.6.2 Equipment / Facilities at Customer Handling Cells 15
6.6.3 Staffing Pattern at Customer Handling Cells 16
6.6.4 Complaint Resolution Mechanism 16
Annexure – I Detail of Existing Infrastructure & Required infrastructure 16
Annexure – II Equipment and Machinery - Monitoring and Tracking of C&T Operation 17
Annexure – III Manpower Required for Primary Collection 18

Annexure – IV Manpower Required for Material Recovery Facility 18
Annexure – V Manpower Required for Green waste & Debris 18
Annexure – VI Manpower Required for Manual Road Sweeping and Drain Cleaning 19
Annexure – VII Manpower Required for Mechanised Road Sweeping 19
Annexure – VIII Existing Transfer Station Details 19
Annexure – IX Details of Existing MRF Centre 19
Annexure – X List of existing PCTS 19
Annexure – XI List of existing Open Dumping Points 20

1 Project Overview

The existing Solid Waste Management system lacks adequate infrastructure facilities to meet the norms stipulated in the Solid Waste Management Rules 2016. Lucknow Nagar Nigam immediately needs augmentation of its Solid Waste management systems to comply with SWM Rules 2016. Lucknow Nagar Nigam proposes to set up an solid waste management system by way of awareness campaign, segregation, collection, transportation of municipal waste.

This project information Memorandum is prepared to guide the bidder to prepare the bid as per existing condition. Bidder may propose his own methodology, type of vehicles, process and equipment's for collection and transportation of waste, street sweeping & drain cleaning in Zone-7. however, the methodology, proposed out come and service level to be achieved shall adhere to the principals of MSW Rule 2016, Guideline of SBM-2 and CPHEEO Manual.

1.1 Project Financing

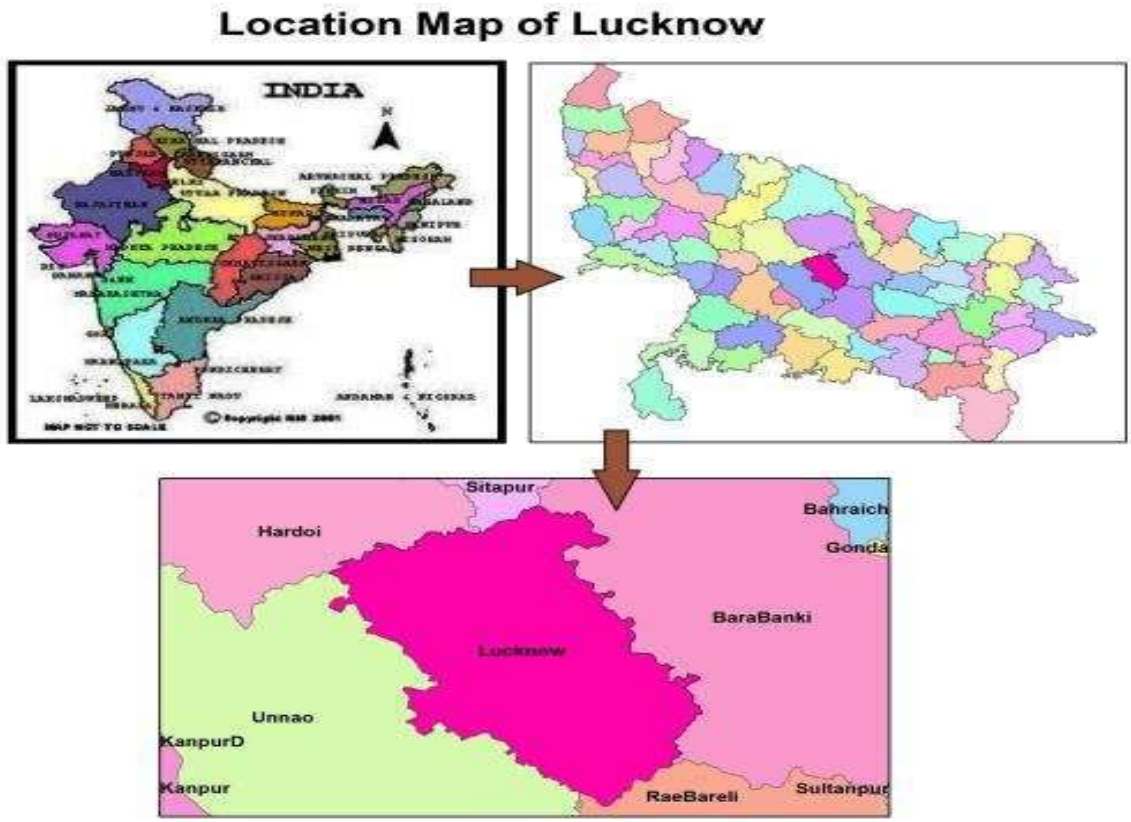
All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

The part of Operations & Maintenance cost would be recovered from sale of Recyclable recovered at MRF to ensure project sustainability. The shortfall in O&M cost shall be provided in the form of **"Tipping Fee"** as quoted by successful bidder.

2 Project Coverage Area & its detail

2.1 Basic Information of Lucknow

2.1.1 Location Map



The city is spread into total municipal area of the 619 sq.km. The whole city is divided into 8 Zones which are sub-divided into 110 wards. As per reports, population of Lucknow in 2021 is 3.6 million; of which male and female are 52% and 48% respectively. The average density is 8048 persons per sq. km.

Lucknow is located at the coordinate's 26°51′N 80°57′E. It has an elevation of approximately 123 metres (404 feet). Bounded on the east by Barabanki, on the west by Unnao, on the south by Raebareli and in the north by Sitapur and Hardoi, Lucknow sits on the northwestern shore of the Gomti River.

Lucknow is served by several railway stations in different parts of the city. The main long-distance railway station is Lucknow Railway Station located at Charbagh. It has an imposing structure built in 1923 and acts as the divisional headquarters of the Northern Railway division.

2.1.2 Demographic Profile of Lucknow

According to the provisional report of 2011 Census of India, Lucknow city had a

population of 2,815,601, of which 1,470,133 were men and 1,345,468 women. The sex ratio in Lucknow city stood at 915 females per 1000 males in 2011, compared to the 2001 census figure of 888. The average national sex ratio in India is 940 according to the Census 2011 Directorate. The city has a total literacy level in 2011 of 84.72% compared to 67.68% for Uttar Pradesh as a whole. In 2001 these same figures stood at 75.98% and 56.27%. In Lucknow city, the total literate population totalled 2,147,564 people of which 1,161,250 were male and 986,314 were female. Despite the fact that the overall work-participation rate in the district (32.24%) is higher than the state average (23.7%), the rate among females in Lucknow is very low at only 5.6% and shows a decline from the 1991 figure of 5.9%. The Scheduled Caste population of the state represented 21.3% of the total population, a figure higher than the state average of 21.15% At present there are 5,69,898 households in Lucknow. The city lies in the cultural region of Awadh.

2.1.3 Decadal population growth trend of Lucknow

Table 2-1 Decadal Growth

Year	Population 2011	Decadal growth rate
2001	2,245,509	
2011	2,902,601	29.3%

Source census of India 2001, 2011

2.1.4 Waste generations in Lucknow

Below data are for year 2023 are on the basis of Secondary source data.

A	General Information		
	Total Population	4.0 Mil.	Nos
	Number of Zones	8	Nos
	Number of Ward	110	Nos
	Total House Hold	7,62,601	Nos
	Mix (Household + Commercial)	7,96,897	Nos
	Commercial, institutional & other units	34,296	Nos

2.1.5 Solid Waste Management

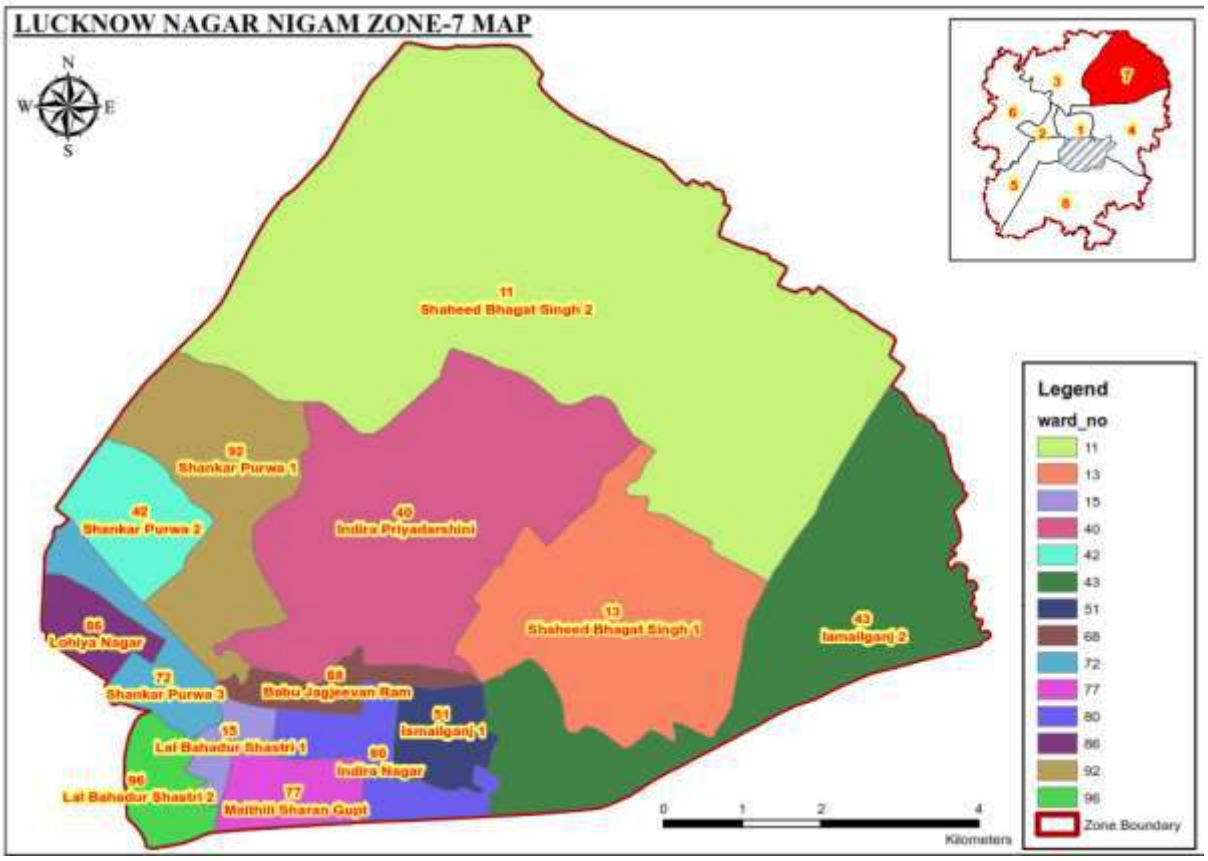
Total waste generated in the city is approximately 2200 MT with per capita waste generation of approximately 550.0 grams (Ref. Operational Guidelines Oct 2021 Ch. 6 Pg. 43). Waste generated in the city include waste from residential, commercial, institutional, industrial, construction and demolition waste and street sweeping waste. The town does not have a Solid waste management system in place. Door to door waste collection is absolutely absent from the city. Waste generated in the city is partly collected through wheel barrows and hand carts. Waste collected from streets and bins is kept in open areas from where waste is transported to dumping yard by tractor. For waste storage no transfer station is available in the city.

The Waste from residential area is collected from the dustbin provided by the Lucknow Nagar Nigam on the road side. Waste from commercial area/ market place and

institutions are dumped in open places. The Construction and demolition waste are either used for refilling the roads or left unattended on the roads.

2.2 Basic Information of Zone-7 of Lucknow

2.2.1 Zonal Map of Zone-7



2.2.2 Ward Wise Population Distribution of Zone-7 of Lucknow

S No	Zone Name	Ward No	Ward Name	HH	Ward wise Population
1	Zone-7	11	Shaheed Bhagat Singh 2	5173	27229
2	Zone-7	13	Shaheed Bhagat Singh 1	6059	31892
3	Zone-7	15	Lal Bahadur Shastri 1	4722	24857
4	Zone-7	40	Indira Priyadarshini	5867	30881
5	Zone-7	42	Shankar Purwa 2	6110	32161
6	Zone-7	43	Ismailganj 2	5430	28582
7	Zone-7	51	Ismailganj 1	5525	29084
8	Zone-7	68	Babu Jagjeevan Ram	5291	27850
9	Zone-7	72	Shankar Purwa 3	5285	27819
10	Zone-7	77	Maithili Sharan Gupt	4848	25519
11	Zone-7	80	Indira Nagar	5387	28356
12	Zone-7	86	Lohiya Nagar	4959	26103
13	Zone-7	92	Shankar Purwa 1	5912	31118
14	Zone-7	96	Lal Bahadur Shastri 2	4778	25150
TOTAL				**75346**	**396601**

Permanent migration has reduced over the years as most of the people are migrated to big cities these days due to development of transportation linkages. Presently temporary migration is happening whereby approximate 300 to 400 people daily come to Lucknow for employment. These people are generally engaging in proving informal services to the city people such as labor, masons, carpenters, rickshaw pullers, shopkeepers, auto driver etc.

2.2.3 Present population and growth trend

Estimated current Population of Zone-7 of Lucknow as per Census growth is Approx. 4.6 Lacs. Whereas an all-season floating population is approximately 5%. Ward wise population as per survey reports and the projected population in 2031, 2041 and 2051 are shown in table below.

Ward No	Current HH	Estimated population 2021	Estimated population 2031	Estimated population 2041	Estimated population 2051
11	6728	33492	41195	50670	62324
13	7881	39227	48249	59347	72997
15	6142	30574	37606	46256	56894
40	7631	37984	46720	57465	70682
42	7947	39558	48656	59847	73612
43	7063	35156	43242	53187	65420
51	7187	35773	44001	54121	66569
68	6882	34256	42134	51825	63745
72	6874	34217	42087	51767	63674
77	6306	31388	38608	47487	58410
80	7007	34878	42900	52767	64903
86	6450	32107	39491	48574	59746
92	7689	38275	47078	57906	71225
96	6215	30935	38049	46801	57565
TOTAL	**98002**	**487819**	**600018**	**738022**	**907767**

2.2.4 Present Scenario of Solid waste management in Zone-7

The present scenario of Solid Waste Management in the city of Lucknow is not up to the mark and need substantial improvement.

Year		**2023**
Population		5.2 lacs. (Aprx)
Waste generation other than C&D waste	Dom.	196
	Comm.	35
	Silt + inert	23
	Total	254
C&D waste		34
Total waste inc. C&D		284
Household		98000(Aprx)

3 Project Components

The various components of proposed project of Integrated Solid Waste Management system are based on the assessment of the existing deficiencies and mandatory requirement as per MSW Rules 2016.

a. Door to Door collection of municipal solid waste, its transfer to MRF/TS/designated site & recovery of recyclables.
b. Collection storage & transfer of Domestic hazardous waste
c. Development and operation of intermediate MRF cum Mini Transfer stations or standalone Mini Transfer stations as the case may be.
d. Mechanized Sweeping of Roads / Streets, mechanized/manual cleaning of pavement / footpath / paved path /cycle track. Manual Sweeping, litter collection, Removal of garbage, litter, silt and blockages from street sides and transportation of sweeping waste up to transfer station/dustbins/secondary vehicles.
e. Cleaning, Desilting, Removal of Obstruction and Maintenance of Storm Water Drains of depth up to 4 feet with a cleaning frequency of once in 15 days in Municipal area of Zone-2 & transportation of drain silt/waste up to TS/Dustbins/secondary vehicle provided by LMC.
f. Collection of user charges from households, commercial establishment, institutional establishment & BWG's on behalf of Lucknow Municipal Corporation and deposit it into Escrow account of Lucknow Municipal Corporation.
g. Build, Operate & Maintain workshop for maintenance of vehicle/equipment.

4 Scope of the Project

The scope of the Project includes the following:

The Successful Bidder would design, procure, finance, construct, operate and maintain the Project during the Concession Period on a Design- Build – Operate – Transfer (DBOT) Concession basis. The Project would be transferred back to the ULBs at the end of the Concession Period.

5 Preparation of Detailed Project Report:

The Project Information Memorandum is only being provided for the purpose of reference of the Bidders. The Concessionaire shall within 1 months of the signing of Agreement provide LNN with a Detailed Project Report ensuring compliance of the same with the proposed Plan, and detailing out the design, drawings, specifications and cost estimates of all the items. The Concessionaire shall have the liberty to suggest different equipment for collection of waste, Road Sweeping & Drain Cleaning provided however the DPR must adhere to the C&T Plan as detailed out in the Project Information

Memorandum.

The bidder shall survey the project area (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) with digital mode only within one month from award of work. Survey data shall include address, ownership detail, communication details and geo tagged photograph of property. All such details shall be linked with GIS based platform against property/building polygon and shall be enabled with facility for public viewing and feedback mechanism. If any (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) find that their data is not linked with the application, they may be able to send their detail through such App.

a) Approvals for the Project:

i. Obtaining Environmental clearances from MoEF/SEIAA as the case may be.
ii. AAI clearance if required.
iii. Water allocation, construction power for project and any other clearances.
iv. Renewal/ obtaining of all project related clearances required for the project.
v. And all other clearances and permits as are required to be procured for the implementation of the Project in terms of the Concession Agreement

b) Collection of Waste: Door to door collection of waste from all the wards under Zone-7 of Lucknow Nagar Nigam areas. The door to door collection to include all government office complexes, non-government office complex, authorized colonies, unauthorized regularized colonies, all market/ commercial/ institutional places, slums and even from undesignated points by means of deployment of suitable vehicles. This shall also include by-lanes, lanes and streets. All the collection vehicles shall be fitted with GPS devices and shall be conned with central server established at command & control center for their monitoring. All the household, shop, establishments shall be provided with RFID tags and one RFID reader with each collection vehicle to record attendance. System shall automatically record and transfer data to central server.

Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste as per relevant Rules and standards.

c) Transportation of Waste:

MSW collected from Door to Door shall be transported to MRF cum PCTS/TS/MTS/FCTS. All the Transportation vehicles shall be fitted with GPS

devices and shall be conned with central server established at command & control center for their monitoring.

The operator shall keep in reserve sufficient number of transport vehicles for any unforeseen eventuality/festival/fair /important events/ emergency conditions.

d) Setting up of Transfer point: The Concessionaire shall be responsible for setting up of Transfer point. during the tenure of the Concession Agreement, the Authority shall, at the request of the Concessionaire, make available an alternative site for the development of the MRF and Waste transfer facility, in accordance with the terms of the Concession Agreement (provided however, that the Concessionaire is in due compliance with its obligations with respect to handling of waste in terms of the Concession Agreement).;

e) Drain Cleaning: Clearing and uprooting rank vegetation, grass, bushes, shrubs, saplings and trees, removal of stumps of trees cut if any and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil and any kind of temporary, permanent, RCC, PCC and other solid obstruction from the drains. Excavation and removal of silt or silt mixed with sand in slushy condition from drain bed including lift and disposing off the same.

f) Road Sweeping: The Operator shall ensure to conduct sweeping and cleaning of the Zone-7 including Main Roads, service roads, Arterial Roads (streets, narrow streets, gullies) footpaths, road berms, central verge, curb channels, curb stones gully etc., which means complete solution for RoW (right of way), the objective is to keep the areas litter and dust free for 24x7. The type of work to be conducted is as under: All Roads of 7 mtrs and above to be mechanically swept. (Only sides of the roads are to be manually swept). For areas on these particular roads not covered by Machine/s, litter picking to be done daily.

g) Segregation of Waste:

i. Segregation of waste at source as well as at the MRF cum transfer station.
ii. Recovery of recyclable materials at MRF centres.

h) Domestic Hazardous & Domestic bio-medical waste

Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure disposal of such waste as per relevant Rules and standards.

i) Transportation of waste generated from Road Sweeping and Drain Cleaning Activity:

The Concessionaire shall be responsible for Transportation of waste generated from sweeping of roads and cleaning of drains falling within Zone-7 area to MRF

cum PCTS/TS/MTS/FCTS/dustbins only. Secondary transportation of waste shall not be the part of concessionaire. Sweeping of roads and Cleaning of drains is part of scope of work.

j) Procurement of Equipment/ Machinery: All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

The Successful Bidder shall operate and maintain the Project in accordance with the O&M Requirements as set out in the Concession Agreement.

The Successful Bidder shall, at all times, ensure that all aspects of the Project and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including rules such as MSW Rules, policies and guidelines related thereto.

6 General recommendation and Guidelines for Waste Collection, Transportation

The successful bidder shall design detailed plan/DPR for collection, drain cleaning & road sweeping activity. Concessionaire shall prepare fleet deployment schedule and route chart however type of vehicles shall match to the requirements of DPR.

The activities covered under proposed collection & Transportation system are as given below

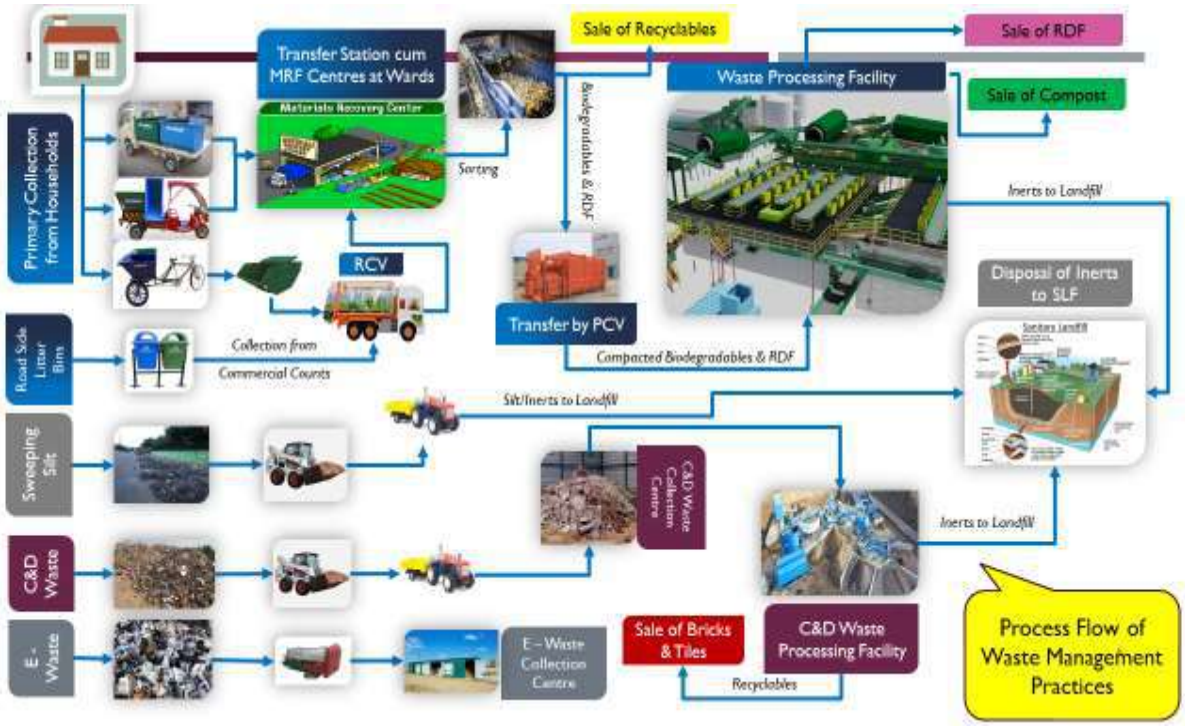
1. Storage of Segregated waste
2. Segregation of Other waste
3. Primary Collection of waste including Domestic Hazardous & Domestic Bio-medical waste
4. Drain cleaning
5. Manual & Mechanised Road Sweeping

Concessionaire shall prepare his own detailed plan for door to door collection, drain cleaning & road sweeping including route plan, vehicle deployment plan, schedule of work, scheduled maintenance plan and work plan in case of emergency.

On the basis of waste carrying capacity of vehicles, concessionaire shall assign fixed area for door to door collection of waste, drain cleaning & road sweeping that is Vehicle Traverse Area (VTA) to each vehicle. Proposed system shall be based on 100% door to door collection. Litter bins shall be proposed on main roads and market for storage of

litter.

Process flow & work plan to be adopted for proper implementation of SWM scheme in the Lucknow City



6.1 Storage of Segregated waste

It is desirable that no waste should be allowed to be thrown on the streets, footpaths, open spaces, drains or water bodies, nallas, etc.

Waste should be stored at source of waste generation in three bins/ bags, one for food waste/ bio-degradable waste and another for recyclable waste such as papers, plastic, metal, glass, rags etc. and a bin/bag for domestic hazardous waste.

Domestic Hazardous Waste such as used batteries, containers for chemicals plastics pesticides, discarded medicines and other toxic or hazardous household waste, if and when produced, should be kept separately from the above two streams of waste and will be transported on call basis.

6.2 Segregation of Recyclable/ Non-Biodegradable Waste:

A quarterly program of conducting awareness campaign in various wards of the city utilizing the ward committees, local NGOs and resident welfare association shall be planned. Simple literature may be developed for bringing in the awareness, which may be publicized through media using cable network, and group meetings in different areas through NGOs. The sanitation supervisors may also create awareness during their field visits.

As soon as the awareness campaign picks up, the local body/concessionaire may direct households, shops and establishments not to mix recyclable waste with domestic food/bio-degradable waste and instead store recyclable/non-bio degradable wastes in a separate bin or bag at the source of waste generation.

6.3 Primary collection & Transportation of waste

- For primary collection of waste two types of vehicles are proposed. For door to door collection 2.2 cum separate mounted bin for biodegradable and non-biodegradable has been proposed. Auto tripper would be used to collect waste from household near major roads.

- The waste collected from the Household will be transferred to designated transfer station. Two types of road side containers are proposed: -

  - 1100 litre CP bins – These bins will cater the requirement of commercial as well as domestic waste of household along major road and dual carriage and RCV will collect these waste directly.
  - 2 x100 litre twin Bins- The bins will be used to avoid littering along the road of project area. The waste from these bins shall be transferred to RCV directly.

Mode of Operation: Each auto tipper will collect the waste from door step and will transfer the waste to transfer point. The road side containers shall be lifted directly to RCV and it will be directly going to Material Recovery Facility for recovery of recyclables.

It is proposed that each Auto tipper and E-Rickshaw will have two sweepers to collect the waste from houses and put it into vehicles. Concessionaire is free to devise his own plan for labour and fleet deployment based on his own assessment of labour efficiency. Each sweeper shall be given a fixed area for sweeping plus a fixed number of houses on that particular beat from where to collect the domestic waste.

Proposed timing of entire operation can be summarized as under: -

Door to Door collection from houses : 6.00 Am to 11.00 AM

Collection of non-domestic waste and Litter bins : 11:00 AM to 2:00 PM

Collection of waste from 1.1 cum community bins : 6:00 AM to 2:00 PM

6.4 Transportation of Waste

Waste collected from Households, Shops, offices, Commercial areas, restaurant, sabzi market, fruit/vegetable shop and meat/fish shop shall be collected in 1.8 cum/2.5 cum Auto Tipper and it would be directly transfer to transfer station. Biodegradable waste

from restaurant, sabzi market, fruit/vegetable shop and meat/fish shop shall be transferred separately in segregated manner to transfer station which will be directly sent to compost plant.

The tentative route length to be covered by Auto Tipper are as below:

Ward No	Ward Name	Area (Km)	Route Length
11	Shaheed Bhagat Singh 2	29.3849	274.588
13	Shaheed Bhagat Singh 1	8.26241	61.713
15	Lal Bahadur Shastri 1	0.824699	25.279
40	Indira Priyadarshini	11.9246	183.393
42	Shankar Purwa 2	2.25677	50.583
43	Ismailganj 2	10.323	180.234
51	Ismailganj 1	1.45325	50.795
68	Babu Jagjeevan Ram	1.17301	34.449
72	Shankar Purwa 3	1.76303	31.617
77	Maithili Sharan Gupt	1.54046	27.479
80	Indira Nagar	1.92705	53.788
86	Lohiya Nagar	1.12945	25.521
92	Shankar Purwa 1	5.33057	87.119
96	Lal Bahadur Shastri 2	1.32273	27.119
TOTAL		**78.615929**	**1113.677**

6.5 Work shop for maintenance

The PPP partner would set up a workshop for maintenance of vehicles and equipment.

Sl. No.	NAME	AREA
1.	Infront of RR	1 acre

6.6 Command Control & Response Mechanism

6.6.1 Minimum Technical Specifications

The approximate area of the complaint handling cell shall be about 100 -200 Sq. ft., where one customer care executive can sit with 4-5 customers at a given point of time.

6.6.2 Equipment / Facilities at Customer Handling Cells

The equipment / facilities to be provided at each Customer Handling Cell are proposed as follows:

S. No.	Equipment / Implement	Number
	Computer with in-built modem & fax software	1

	Printer	1
	Telephone (land line)	1
	Wireless/ Mobile phone	1
	Complaint log book	1
	Table	1
	Chairs	4-5
	Office Stationery	As Required

6.6.3 Staffing Pattern at Customer Handling Cells

The staffing pattern to be provided at each Customer Handling Cell is as follows:

S. No.	Staffing Aspect	Details
	Total Number	1 –2 Operating staff
	Type of staff	1 Customer support executive, supervised by all department heads Graduate with good communication skills and with prior experience in customer services; With working knowledge of computers

6.6.4 Complaint Resolution Mechanism

The proposed Complaint Resolution mechanism is as follows:

- Every complaint (whether written / telephonically) will be given a reference number and will be communicated to the complainant.
- Each complaint will then be directed to the pertinent department head. All department heads will make effort.
- To resolve all complaints within 24 hours of registration.
- Complaints when resolved, the message will be sent to the complaint cell executive with a copy to the complainant.
- All complaints and their status will be available in the computerized database, which could be accessed by all department heads at their office. All records of complaints in the database will be maintained for a period as desired by municipal authority. Each record in the database will carry the complaint number, description, time of complaint registration and time of complaint redressal, pertinent official (who resolved the complaint).

Annexure – I Detail of Existing Infrastructure & Required infrastructure

Existing Infrastructures at Zone-7

Sl. No.	Description	Qty to be Procured	Unit	Existing Vehicle at Zone-7	Total Gap
1	**3**	**4**	**5**		
A	**Vehicles Required for Door to Door Collection/ Primary Collection to designated MTS in Lucknow Municipal Corporation.**				
1	Diesel/CNG Auto Tippers of capacity 2500 liter with suitable twin compartments including fabrication hydraulic lifting and unloading arrangement.	134	Nos.	38	96
2	Tricycle with 8*40 liter bin with suitable twin compartments including fabrication hydraulic lifting and unloading arrangement.	65	Nos.	65	0
3	Sweeping tools (Metal tray and metal plate, Long handled brooms, shovels and protective gears).	361	Nos	0	361
4	Carcass Lifting Vehicles	1	Nos	0	1
5	Online Monitoring System				
6	IEC Activities				
	Material Recovery Facility				
1	Cost of MRF Civil Work	4	Nos	0	4
2	Cost of MRF Machineries & equipment	4	Nos	0	4
3	Portable Compactor Bins	12	Nos.	5	7
4	Front End Loader with Tractor Attachment	4	Nos	1	3
5	Leachate Suction Machine for Leachate Collection from MRF Centres	2	Nos	0	2
C	**Drain Cleaning**				
1	50 HP Tractor with Trolley for Collection of Silts	6	Nos	1	5
2	Robo for Cleaning of Waste from Drain	2	Nos	2	0
3	Super Sucker Machines for Cleaning of Drains	2	Nos	0	2
D	**Collection & Transportation of Green Waste**				
1	35 HP Tractor with Trolley for Collection of Green Waste	1	Nos	0	1
D	**Collection & Transportation of C&D Waste**				
1	50 HP Tractor with Trolley for Collection of C&D Waste	5	Nos		5
2	Collection Centre for C&D Waste	1	Nos		1
3	JCB 3DX for Lifting of C&D Waste	1	Nos		1
E	**Road Sweeping**				
1	Mechanised Road Sweeping	3	Nos		3

Annexure – II Equipment and Machinery - Monitoring and Tracking of C&T Operation

S.No.	Qt.	Particulars	Nos	Unit
1	**2**	**3**	**4**	**5**
1	NS	RFID Tag with Survey & Installation	No	98000
2	NS	RFID Machine	No	134
3	NS	GPS with Installation of any Make	No	134

4	NS	Biometric attendance machine (4 Nos at MRF	No	4
5	NS	Software for One Years for Operation and Maintenance	No	1
6	NS	Computer and Peripherals for Monitoring System with UPS	No	6
7	NS	CCTV Camera with DVR Facility	Lot	1
8	NS	Printer	No	1
9	NS	Tables & Chairs	Lot	1
10	NS	Stationary Items (Pen, Register) Fan Lights Paper weight Dustbin & etc	Lot	1

Annexure – III Manpower Required for Primary Collection

	Particulars	**No of Man power**
	Labour Door to Door Collection	361
	Driver Auto Tipper	143
	Sanitary Supervisor	25
	Sanitary sub-Inspector	7
	Sanitary Inspector	2
	Project Manager	1
	Project Head	1

Annexure – IV Manpower Required for Material Recovery Facility

	Particulars	**No of MRF**	**Manpower / MRF**	**Shift**
	Driver for Mini Loader	4	1	2
	Labour	4	7	2
	Supervisor cum operator	4	1	2
	Security	4	3	2

Annexure – V Manpower Required for Green waste & Debris

	Particulars	**No of Man power**
	Helper for Collection of Debris	19.00
	Driver for Collection of Debris	17.00
	Sanitary Supervisor	2.00
	Sanitary Inspector	1.00
	Project Manager	1.00

Annexure – VI Manpower Required for Manual Road Sweeping and Drain Cleaning

A)	Particulars	No of Man power
	Labour Street sweeping, Drain cleaning	963.00
	Sanitary Supervisor	48.00
	Sanitary sub Inspector	2.00
	Sanitary Inspector	1.00

Annexure – VII Manpower Required for Mechanised Road Sweeping

A)	Manpower	Nos with reliving
	Driver	3
	Helper	3
	Field Supervisor	3
	Washing helper	3
	Mechanic Helper	1
	MTS supervisor	1
	Project Head	1
	Control Room	1
	Watchman	1

Annexure – VIII Existing Transfer Station Details

Sl. No.	NAME	AREA
1.		

Annexure – IX Details of Existing MRF Centre

Sl. No.	Name	Longitude	Latitude	Area	Capacity
1.					

Annexure – X List of existing PCTS

Sl no.	Zone	WARD	LOCATION	NO. OF PCTS
1	7	LAL BAHADUR SHASHTRI FIRST	LUV KUSH NAGAR	2
2	7	INDIRA PRIYADARSHINI	KHALIFA	1

3	7	BABU JAGJIVAN	Khurram Nagar	2

Annexure – XI List of existing Open Dumping Points

Sl No.	Zone	Ward Name	Open Dumping Points
1	7	Babu Jagjivan Ram	Behind Sector 14 RLB
2	7	Indira Nagar	Sector 8 Indira Nagar
3	7	Indira Priyadarshini Ward	Shani mandir bal vihar road
4	7	Ismaile Ganj 1st	D.k. marriage lawn
5	7	Ismaile Ganj 2nd	D.k. marriage lawn
6	7	Lal Bahadur Shastri 1st	Lavkush Nagar nera hind palace
7	7	Lohiya Nagar	Sector 2 Vikas Nagar
8	7	Maithli Sharan Gupt	Sector 22 Gol Chauraha
9	7	Shaheed Bhagat Singh Ward	Community Center Deen dayal Puram
10	7	Shankar Purwa 1st	Khurram Nagar near Swarna Jayanti Smriti Vihar Park
11	7	Shankar Purwa 2nd	Ganney ka purwa
12	7	Shankar Purwa 3rd	Mini Stedium Sector-11 Vikas Nagar

(Volume-III)

DRAFT CONCESSION AGREEMENT

Between

Lucknow Municipal Corporation

acting through

Its authorised Officer on this behalf

AND

_____

(Concessionaire)

For

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation"

(RFP NO. _____2023-24 Dated: __/__/2023)

Issued on: --------- 2023

Table of Contents

ARTICLE 1 9
1 DEFINITIONS AND INTERPRETATION 9
1.1 Definitions 9
1.2 The Standards 16
1.3 Interpretation 16
1.4 Inclusions of Agreement 17
ARTICLE 2 18
2 CONCESSION 18
2.1 Grant of Concession 18
2.2 Concession Period 18
2.3 Extension in Concession Period 18
2.4 Acceptance of Concession 18
ARTICLE 3 19
3 PROJECT FACILITIES & SITE 19
3.1 Handover of Project facilities & Site 19
3.2 Rights, Title and Use of the project facilities & Site 19
3.3 Peaceful Possession 20
3.4 Applicable Permits 20
ARTICLE 4 21
4 Conditions Precedents 21
4.1 Authority's Conditions Precedent 21
4.2 Concessionaire / Selected bidder's Conditions Precedent 21
4.3 Damages for delay by the Authority 23
4.4 Damages for delay by the Concessionaire 23
ARTICLE 5 25
5 PROJECT MONITORING CONSULTANT 25
5.1 Appointment 25
5.2 Payments to Project Monitoring Consultant 25
5.3 PROJECT MONITORING CONSULTANT - SCOPE OF WORK 25
5.4 Scope of Services of the Project Monitoring Consultant 25
5.5 Obligations during Implementation Period 25
5.6 Active Operations Period 26
5.7 Obligations during Operations Period 29

5.8 Awareness Campaign 32
5.9 General Obligations 32
ARTICLE 6 33
6 CONCESSIONAIRE'S OBLIGATIONS 33
6.1 Performance Security 33
6.2 Financing Arrangement 33
6.3 Project Implementation: Construction Works 36
6.4 Project Implementation: Operation and Maintenance 38
6.5 Awareness Campaign 40
6.6 Insurance 40
6.7 Environmental Compliance 40
6.8 Land Use 41
6.9 Sale/Distribution of Recyclables 41
6.10 General Obligations 41
6.11 No Breach of Obligations 42
6.12 Maintenance of Records 42
ARTICLE 7 43
7 AUTHORITY's OBLIGATIONS 43
7.1 AUTHORITY's OBLIGATIONS 43
7.2 Specific Obligations 43
7.3 General Obligations 44
ARTICLE 8 45
8 PAYMENT OF O&M FEE 45
8.1 Payment of O&M Fee 45
8.2 Mechanism of Payment 46
8.3 Sinking Fund Account 48
8.4 User Charges 48
8.5 Sale of Recyclable 49
8.6 Performance evaluation of collection, transfer and transportation of municipal solid waste (MSW) in the Concession Area 49
8.7 Performance based Payment 54
8.8 Other Conditions 54
ARTICLE 9 55
9 ESCROW ACCOUNT 55
9.1 Escrow Account 55

9.2 Deposits into Escrow Account....55
9.3 Withdrawals during Concession Period....55
9.4 Withdrawals upon Termination....56
ARTICLE 10....57
10 Insurance....57
10.1 Notice of the Authority....57
10.2 Evidence of Insurance Cover....57
10.3 Remedy for failure to insure....57
10.4 Waiver of Subrogation....58
10.5 Concessionaire's waiver....58
10.6 Application of Insurance Proceeds....58
10.7 No Breach of Insurance Obligation....58
ARTICLE 11....59
11 Accounts & Audits....59
11.1 Audited accounts....59
11.2 Appointment of auditors....59
11.3 Certification of claims by Statutory Auditors....60
11.4 Set-off....60
11.5 Dispute resolution....60
ARTICLE 12....61
12 FORCE MAJEURE AND CHANGE IN LAW....61
12.1 Force Majeure Event....61
12.2 Notice of Force Majeure Event....62
12.3 Performance of Obligations....63
12.4 Termination due to Force Majeure Event....63
12.5 Liability for other losses, damages etc....65
12.6 Change in Law....65
ARTICLE 13....67
13 EVENTS OF DEFAULT AND TERMINATION....67
13.1 Events of Default....67
13.2 Termination due to Event of Default....70
13.3 Rights of AUTHORITY on Termination....72
13.4 Accrued Rights of Parties....72
ARTICLE 14....74

14 HANDBACK OF PROJECT FACILITIES 74
14.1 Ownership 74
14.2 Concessionaire's Obligations 74
14.3 AUTHORITY's Obligations 74
ARTICLE 15 75
15 DISPUTE RESOLUTION 75
15.1 Amicable Resolution 75
15.2 Arbitration 75
15.3 Performance during Dispute 76
ARTICLE 16 77
16 REPRESENTATIONS AND WARRANTIES 77
16.1 Representations and Warranties of the Concessionaire 77
16.2 Representations and Warranties of AUTHORITY 78
16.3 Obligation to Notify Change 78
ARTICLE 17 79
17 MISCELLANEOUS 79
17.1 Assignment and Charges 79
17.2 Interest and Right of Set Off 79
17.3 Governing Law and Jurisdiction 79
17.4 Waiver 80
17.5 Survival 80
17.6 Amendments 80
17.7 Notices 80
17.8 Severability 81
17.9 No Partnership 81
17.10 Language 82
17.11 Exclusion of Implied Warranties etc 82
17.12 Counterparts 82
SCHEDULE "1" 83
SCHEDULE "2" 84
SCHEDULE "3" 111
SCHEDULE "4 " 113
SCHEDULE "5" 116
Schedule "6" 117

Schedule "7" 118
Schedule "8" 119
Schedule "9" 123
Schedule "10" 134
Schedule "11" 136
Schedule "13" 137

(To be printed on a Non-Judicial Stamp Paper of Rs.100/-)

THIS AGREEMENT is made on this ……. day of……., 20….. at Lucknow, Uttar Pradesh, India.

BETWEEN

Lucknow Nagar Nigam, a body constituted under the Municipal Act, having its office at Lucknow acting through its **Municipal Commissioner** (hereinafter referred "the Concessioning Authority" which expression shall unless excluded by or repugnant to the context, be deemed to include its successors and assigns); **OF THE FIRST PART termed as Authority**

AND

…….. [Name of the SPV incorporated by the selected bidder/ bidders in case of consortium], a company incorporated in India under the Companies Act of 2013 and having its registered office at..... [address] duly represented through its Authorized Person Mr./Ms. _____,(-

---------- Designation, if applicable) by a Board Resolution dated---------- or by a Power of Attorney dated----------executed in his favour, (hereinafter referred to as the "Concessionaire"), which expression shall, unless repugnant to the context or meaning thereof, mean and include its successors and assigns) of the SECOND PART;

AND

M/s _____, a company incorporated under the provisions of Companies Act, 2013, having its Registered Office at _____, duly represented through its Authorized Person Mr./Ms. _____,(---------- Designation, if applicable) by a Board Resolution dated---------- or by a Power of Attorney dated----------executed in his favor, in its capacity as the Confirming Party to this Agreement (Hereinafter referred to as the 'Preferred Bidder' which expression shall, unless the context otherwise requires, include its successors, and administrators) of the THIRD PART.

OR

The Consortium of (i) M/s _____ _____having its registered Office at _____, (ii) M/s _____ having its registered office at _____,(iii) M/s _____ having its registered office at _____, in their capacity as the confirming party to this Agreement (hereinafter referred to as the 'Selected bidder' which expression shall, unless the context otherwise requires, include its successors) duly represented through M/s _____, the Lead Member of the consortium, through its Authorized signatory Mr./Ms. _____, _____ of the FOURTH PART

MUNICIPAL COMMISSIONER, Lucknow Nagar Nigam, Concessionaire and the Confirming Party are hereinafter referred to individually as the "Party" and collectively as the "Parties"

WHEREAS,

A. Urban Local Body (hereinafter referred to as **"ULB"**) of Lucknow is responsible for providing municipal and civic services, which includes the collection, transportation and disposal of Municipal Solid Waste generated in the city and road sweeping and drain cleaning in municipal area.

B. The Ministry of Environment and Forests (MoEF), Government of India (GoI), has formulated the Solid Wastes Management Rules 2016 ("MSW Rules 2016"), which makes it mandatory for every municipal authority to implement a scientific solid waste management system wherein the Municipal Solid Waste is collected, transported, duly processed and the residual inert/non-biodegradable solid wastes disposed in an Engineered Sanitary Landfill (as hereinafter defined).

C. **AUTHORITY** desires to establish a system of **Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation** as per SWM Rules 2016, at Lucknow Nagar Nigam in Uttar Pradesh, on a long-term Design, Build, Operate and Transfer (DBOT) basis.

D. **AUTHORITY** carried out extensive project development work in connection with the Project (as hereinafter defined).

E. **AUTHORITY** had invited competitive proposals from eligible Bidders for implementing the Project and in response thereto AUTHORITY received proposals from several persons including the Concessionaire for implementing the Project.

F. **AUTHORITY**, after evaluating the aforesaid Proposals accepted the Proposal submitted by the Concessionaire and issued Letter of Acceptance No. _____ dated _____ to the Concessionaire for developing the Project.

G. The Parties hereto are required to enter into the Concession Agreement being these presents to record the terms, conditions and covenants of the Concession.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS: -

ARTICLE 1

1 DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively ascribed to them hereunder:

Act and Rules: The term "said Act" and "said Rules" shall mean and include the Municipal Act 2000 amended upto date and Rules framed there under from time to time, the Solid Waste Management Rules 2016 and all those/labour laws/ relevant laws and rules mentioned above/applicable to the contract.

Action against bidder: AUTHORITY shall take action against the bidder, if any worker of the bidder or any his/her employee mixes segregated waste at any point of collection, or fails to pick up waste as per the specified time schedule.

"Additional Cost" shall mean the additional capital expenditure and/or the additional operating costs or both as the case may be, which the Concessionaire would be required to incur as a result of Change in Law OR Change in Scope of work or delay on an account of non-fulfillment of obligations either during Construction period or during O&M period contained in this agreement in time by **AUTHORITY**

"Agreement" shall mean this Agreement, and include any amendments hereto made in accordance with the provisions hereof.

"Agreement Date" shall mean the date of this Agreement.

"Applicable Law" shall mean all laws in force and effect, including MSW Rules, as of the date hereof and which may be promulgated or brought into force and effect hereinafter in India including judgments, decrees, injunctions, writs or orders of any court of record, as may be in force and effect during the subsistence of this Agreement and applicable to the Project/the Concessionaire.

"Applicable Permits" shall mean all clearances, permits, authorisations, consents and approvals required to be obtained or maintained by the Concessionaire under Applicable Law, in connection with the construction, operation and maintenance of the Project during the subsistence of this Agreement.

"Appointed Date" shall mean the date on which all condition precedents are mat or the date of start of Door-to-Door collection & Transportation work whichever is earlier.

"Arbitration Act" shall mean the Arbitration and Conciliation Act, 1996 and shall include any amendment to or any re-enactment thereof as in force from time to time.

"Bank" means a nationalized/scheduled bank incorporated in India

"Bank Rate" means the rate of interest specified by the Reserve Bank of India from time to time in pursuance of section 49 of the Reserve Bank of India Act, 1934 or any replacement of such Bank Rate for the time being in effect

"Bio-degradable waste" means the waste of plant and animal origin e.g. kitchen waste, food & flower waste, leaf litter, kitchen-garden waste, animal dung, fish/meat waste and any other material that gets decomposed by the action of living organism, as defined in SWM Rules 2016.

"Bio-medical Waste" shall have the meaning ascribed to it under the Biomedical Wastes (Management & Handling) Rules, 1998.

"Book Value" shall mean the cost of the fixed assets incurred by the Concessionaire for the Project, net of accumulated depreciation computed on straight line basis in accordance with the rates specified in Companies Act, 1956 and as determined by an independent firm of chartered accountants mutually agreed upon and appointed by the Parties.

Bulk generator means the owner, occupier or any other person representing owners and occupiers of housing society / housing complexes, restaurants; hotels, markets, industrial estates, parks, garden, traffic islands etc. and shopping complexes / malls and includes any government or public office building, or other users such as clubs, gymkhanas, marriage halls, recreation/ entertainment complexes hospitals, educational institutions, commercial establishments or other establishment sources / premises etc.

"Change in Law" means the occurrence of any of the following after the date of Bid:

(i) The enactment of any new Indian law including laws related to environment;

(ii) The repeal, modification or re-enactment of any existing Indian law

(iii) A change in the interpretation or application of any Indian law by a court of record.

Provided that Change in Law shall not include:

(i) Coming into effect, after the Appointed Date, of any provision or statute which is already in place as of the Appointed Date,

(ii) Any new law or any change in the existing law under the active consideration of or in the contemplation of any government as of the Appointed Date which is a matter of public knowledge,

"Change in Ownership" means a transfer of the direct and/or indirect legal or beneficial ownership of any shares, or securities convertible into shares, that causes the aggregate holding of the Selected Bidder, in the total Equity to decline below 100% until expiry of five years from date of execution of the concession agreement, and below 51% (fifty one per cent) thereof at any time during the remaining Concession Period, provided that any material variation (as compared to the representations made by the Concessionaire during the bidding process for the purposes of meeting the minimum conditions of eligibility or for evaluation of its application or Bid, as the case may be,) in the proportion of the equity holding of selected bidder or any member thereof to the total Equity, if it occurs prior to completion of the Concession Period, shall constitute Change in Ownership;

"COD" shall mean the commercial operations date of the Project which shall be the date on which the Project Monitoring Consultant has issued the Provisional Readiness Certificate or the Readiness Certificate in accordance with the provisions of this agreement.

"Collection" means lifting and removal of municipal solid waste (MSW) from designated collection points or any other location.

"Collection at Source" means the collection of municipal solid waste by the bidder directly from the premises of any building, bulk generators or common premises of a group of buildings etc.

"Construction Requirements" shall mean collectively the MRF cum Transfer station.

"Construction Works" shall mean all works and things required to be constructed by the Concessionaire, pursuant to the Construction Requirements and O&M Requirements.

Contract: The term "Contract" shall mean and include (i) NIT (ii) Terms and conditions of Contract (iii) Tender Form (iv) Form of acceptance (v) Form of agreement vi) Additional or modified clauses added on account of the pre-bid meeting (vii) Mutually accepted conditions in writing signed by both the parties; AUTHORITY and Contractor. Thus, the Contract means the agreement between the successful Bidder (The Bidder to whom the work order is given) and AUTHORITY as recorded in the article of agreement signed by the successful Bidder and AUTHORITY, including all appendices, attachment and documents mentioned their in. The successful Bidder then becomes the Concessionaire/ service provider of the project/work.

"Contractor" shall mean any Person with whom the Concessionaire has entered into/may enter into any material contract in relation with the Construction Works and O&M Requirements.

"Contract Amount": The term "Contract Amount" shall mean the sum quoted by the Contractor in his offer and accepted by the Company.

"Concessionaire": concessionaire shall mean the "the name of the SPV formed by Bidder/Consortium……..."and includes its successors and permitted assigns expressly approved by ULB

"Conditions Precedent" shall have the meaning set forth in Clause 4.1.1

"Door Step Collection" shall mean collection of MSW from residential units, slums, vegetable/ fruit markets, slaughter house, fish/ chicken/ mutton shops, commercial and institutional areas, Marriage gardens/Hall, Thela/Khomcha, industrial area, public places and streets and any other areas, within the Lucknow Municipal Area, not excluded elsewhere in this document.

"Drawings" shall mean all of the drawings, designs, calculations and documents pertaining to the Project in accordance with the Construction Requirements and O&M Requirements.

"Emergency" shall mean a condition or situation that is likely to endanger the safety of the individuals on or about the Project Facilities or which poses an immediate threat of material damage to any of the Project Facilities.

"Encumbrance" shall mean any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, physical encumbrances, claims for any amounts due on account of taxes, cesses, electricity, water and other utility charges and encroachments on the Project Facilities.

"Engineered Sanitary Landfill" shall mean the area within the Waste Processing and Landfill Facility, designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blown litter, bad odor, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion, and utilitised for disposal of inert/non processable residue coming out of Waste processing plant.

"Environment and Social Impact Assessment Plan" shall have the meaning set forth in Schedule 15

"Excluded Waste" waste material of the nature that the Project Facilities are not designed or authorized to receive, manage, process and dispose which includes C&D Waste, Hazardous Waste, Bio-medical Waste, Treated Bio-medical waste.

"Escrow Account" means an account opened with a nationalized bank, prior to start of work, in which all inflows and outflows of cash on account of capital and revenue receipts and expenditure shall be credited and debited, as the case may be, in accordance with the provisions of this Agreement.

"Estimated Project Cost" shall mean project cost estimated in DPR prepared by Concessionaire and approved by AUTHORITY as per provisions of concession agreement.

"Expiry Date" shall mean the date on which Post Closure Period ends.

"Financial Close" means the fulfillment of all conditions precedent to the initial availability of funds under the Financing Agreements

"Financing Documents" shall mean collectively the documents evidencing Lenders' commitment to finance the Project.

"Financial Year" shall mean the period commencing from April 1 of any given year to March 31 of the succeeding year.

"Force Majeure" or **"Force Majeure Event"** shall mean an act, event, condition or occurrence as specified in Article 12.

"GoI" shall mean the Government of India.

"GoUP" shall mean the Government of Uttar Pradesh.

Good Industry Practice: The term shall mean exercise of that degree of skill, diligence prudence & foresight in compliance with the undertakings and obligations as under the agreement which would reasonably and ordinarily are expected of a skilled & experienced persons engaged in the implementation, operations and maintenance or supervision or monitoring thereof of any of them of a project similar to this project

"Government Agency" shall mean GoI, GoUP, AUTHORITY or any state government or governmental department, commission, board, body, bureau, agency, authority, instrumentality, court or other judicial or administrative body, central, state, or local, having jurisdiction over the Concessionaire, the Site/Project Facilities or any portion thereof, or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement.

"Hazardous Waste" shall have the meaning as defined under the Hazardous Wastes (Management and Handling) Rules, 1989 and as amended thereto.

Inert Solid Waste means any solid waste or remnant of processing whose physical, chemical and biological properties make it suitable for sanitary land filling.

"Implementation Period" shall mean the period from the Agreement Date to COD.

"Project Monitoring Consultant" shall mean the Project Monitoring Consultant appointed by AUTHORITY and shall have the meaning ascribed thereto in Article 5

"Lenders" shall mean financial institutions, banks, funds and trustees for bond holders or debenture holders, who have provided funds to the Concessionaire for financing any part of the Project.

"Material Adverse Effect" shall mean a material adverse effect on (a) the ability of the Concessionaire to exercise any of its rights to perform/discharge any of its duties/obligations under and in accordance with the provisions of this Agreement and/or (b) the legality, validity, binding nature or enforceability of this Agreement.

"Material Breach" shall mean a breach by either Party of any of its obligations under this Agreement which has or is likely to have a Material Adverse Effect on the Project and which such Party shall have failed to cure.

Municipal Solid Waste: Municipal Solid Waste includes commercial, residential and other waste generated within the limits of AUTHORITY either in solid or semi-solid form excluding industrial hazardous waste but including treated bio-medical waste. The term Solid Waste shall further mean the Municipal Solid Waste as described under the SWM Rules 2016 notified by MoEF, Govt. of India, notified on 8 April, 2016, generated in the Concession area by all generators which includes domestic/residential, commercial, institutional, green waste generated in the work area inclusive of private markets, recreation centers, public places and from the places of occasional accumulation of such solid waste.

"Monthly Reports" shall constitute the reports to be submitted monthly as defined in the Schedule 9

"O&M" means the operation and maintenance of the Project and includes all matters connected with or incidental to such operation and maintenance and provision of services and facilities in accordance with the provisions of this Agreement

"O&M Requirements" shall mean the requirements as to operation and maintenance of the MRF cum TS set forth in **Schedule 2**.

Party or Parties mean Lucknow Nagar Nigam and the Contractor/ Service provider who has been assigned the work. **"Parties"** shall mean the parties to this Agreement and "**Party"** shall mean either of them, as the context may admit or require.

"Performance Security" shall mean the guarantee for performance of its obligations to be procured by the Concessionaire in accordance with this agreement.

"Person" shall mean (unless otherwise specified or required by the context), any individual, company, corporation, partnership, joint venture, trust, unincorporated organisation, government or government body or any other legal entity.

"Preliminary Notice" shall mean the notice of intended Termination by the Party entitled to terminate this Agreement to the other Party setting out, inter alia, the underlying Event of Default.

"Project" shall mean design, financing, construction, operation and maintenance of the Project Facilities such as MRF cum TS in accordance with the provisions of this Agreement.

"Project Assets" means all physical and other assets relating to and forming part of the Site including (a) rights over the Site, Right of Way or otherwise; (b) tangible assets such as civil works and equipment/ vehicles including foundations, roads and pavements, drainage works, electrical systems, communication systems and administrative offices, transport vehicles; (c) Project Facilities situated on the Site; (d) all rights of the Concessionaire under the Project Agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) Applicable Permits and authorisations relating to or in respect of the Project

"**Project Monitoring Consultant**" shall mean a reputed Person being a firm, company or a body corporate appointed in accordance with this agreement for supervision and monitoring of compliance by the Concessionaire with the Construction Requirements and O&M Requirements, more particularly to undertake, perform and carry out the duties, responsibilities, services and activities set forth in this agreement which can also be termed as project Management Consultant that is **"PMC"**

"Project Facilities" shall mean all the amenities and facilities, including transportation vehicles and (a) Transfer Points, (b) MRF, (c) The machinery and equipment procured, installed and operated and (f) all other project related physical assets (g) and any other offsite facilities created for the Project.

Public place includes any road, arch road, viaduct, lane, footway, alley or passage, highway, causeway, bridge, square alley or passage whether a thoroughfare or not over which the public have a right of passage, and such places to which the public has access such as parks, gardens, recreation grounds, playgrounds, beaches, water bodies, water courses, public plazas and promenades, government and municipal buildings, public hospitals, markets, slaughter houses, courts, etc.

"Readiness Certificate" shall mean the certificate issued by Project Monitoring Consultant certifying, inter alia, that:

(i) The Concessionaire has procured/constructed all the facilities for door to door collection, MRF, Transfer and transportation of MSW.
(ii) The Concessionaire has obtained all approvals necessary for door to door collection, MRF, Transfer and transportation of MSW.

"Remuneration" shall mean all fees, costs, charges and expenses payable to the Project Monitoring Consultant in accordance with the terms of his appointment.

"Rupees" or "Rs." refers to the lawful currency of the Republic of India.

The Services means all activities direct or ancillary to the work like guarding, up keeping, operating and maintaining the vehicles, equipment, systems and related infrastructure required performing the Work assigned to the successful bidder / Contractor in a specified manner for a specified period for fulfilling the desired performance. The services will include for door to door collection, operation of MRF, Transfer and transportation of MSW as per SWM Rules 2016, on a long-term Design, Build, Operate and Transfer (DBOT) basis; for Municipal Solid Waste.

SPV means Special Purpose Vehicle Company.

"Specifications and Standards" means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project, and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Concessionaire to, and expressly approved by, the Authority

"SWM Rules" shall mean the Solid Wastes Management Rules, 2016 and includes any amendments thereto.

"SPCB" State Pollution Control Board: specifically, State Pollution Control Board.

"Tax" shall mean and includes all taxes, fees, cess, levies that may be payable by the Concessionaire under Applicable Law.

Technical offer: The term shall mean the details of the technical and financial eligibility of the bidder; acceptance of the terms and condition of the project / work and undertakings regarding the same; project plan and operational details including identification of activities, resources requirement and details of type, capability, quality and quantity; methodology of work; plan of resources deployment; implementation plan and evaluation of the results. This will be contained in a separate cover.

"Termination" shall mean early termination of this Agreement pursuant to Termination Notice or otherwise in accordance with the provisions of this Agreement but shall not, unless the context otherwise requires, include expiry of this Agreement due to efflux of time in the normal course.

"Termination Date" shall mean the date specified in the Termination Notice as the date on which Termination occurs.

"Termination Notice" shall mean the notice of Termination by either Party to the other Party, in accordance with the applicable provisions of this Agreement.

"Termination Payment" means the amount payable by the Authority to the Concessionaire upon Termination in accordance with the provisions of this Agreement.

"Tests" shall mean the tests to be carried out in accordance with the Construction Requirements or the O&M Requirements.

"O&M Fee/O&M Fee" shall mean the amounts payable by AUTHORITY to Concessionaire in accordance with **Article 8**.

"O&M Fee Statement/O&M Fee statement" shall have the meaning as ascribed thereto in **Article 8**.

"O&M Fee/O&M fee Rate" shall mean the amounts payable per tonne of Municipal Solid Waste entering at waste processing site as set out in **Schedule 6**.

Transportation means conveyance of Municipal Solid Waste from place to place hygienically through specially designed transport system, so as to prevent foul odour, littering, spillage unsightly condition and accessibility to vectors.

"UPSPCB" shall mean Uttar Pradesh State Pollution Control Board.

"Waste generators" all residential, commercial establishments, institutions and other sources/ generators of MSW, located within the service area of AUTHORITY and generating MSW as defined in SWM Rules, 2016.

OTHER DEFINITIONS of TERMS: As defined in the SWM Rules 2016 of MoEF, Govt. of India.

1.2 The Standards

The Goods, vehicles, equipment, systems and services provided under the Tender/Contract shall conform to the standard as specified in the technical specifications;

In specific, Vehicles should conform to Euro IV standards of emission and above - up graded from time to time as per statutory requirement

Where no standards are specified for particular goods, vehicles, equipment, services, they should conform to the latest minimum Bureau of Indian Standards specifications if prescribed for the product, machinery, equipment, services required in the tender, if not prescribed under BIS they should conform to the latest ISO standard.

Or the authoritative latest standards used in the country of origin, appropriate to the specified goods, vehicles, equipment systems, and services.

A declaration will be submitted by the bidder / contractor for the above with the certification of the authorized agency of the origin

1.3 Interpretation

In this Agreement, unless the context otherwise requires,

(a) any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modification or re-

enactment or consolidation applies to, or is capable of being applied to any transactions entered into hereunder;

(b) references to Applicable Law shall include the laws, acts, ordinances, rules, regulations, notifications, guidelines or bylaws which have the force of law;

(c) the words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organisations or other entities (whether or not having a separate legal entity);

(d) the headings are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;

(e) the words "include" and "including" are to be construed without limitation;

(f) any reference to day, month or year shall mean a reference to a calendar day, calendar month or calendar year respectively;

(g) the Schedules to this Agreement form an integral part of this Agreement as though they were expressly set out in the body of this Agreement;

(h) any reference at any time to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference;

(i) references to recitals, Articles, sub-articles, clauses, or Schedules in this Agreement shall, except where the context otherwise requires, be deemed to be references to recitals, Articles, sub-articles, clauses and Schedules of or to this Agreement;

(j) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or by Project Monitoring Consultant shall be valid and effectual only if it is in writing under the hands of duly authorized representative of such Party or Project Monitoring Consultant in this behalf and not otherwise;

(k) any reference to any period commencing “from” a specified day or date and “till” or “until” a specified day or date shall include both such days or dates;

1.4 Inclusions of Agreement

Following documents will be part of this Agreement, and all other agreements forming part of this document.

i. This concession agreement

ii. The LOI

iii. The Bid submitted by Bidder

iv. The RFP

ARTICLE 2

2 CONCESSION

2.1 Grant of Concession

Subject to and in accordance with the terms and conditions set forth in this Agreement, the Concessioning Authority hereby grants and authorizes the Concessionaire to investigate, study, design, engineer, procure, finance, construct, operate and maintain the Project Facilities and to exercise and / or enjoy the rights, powers, benefits, privileges, authorizations and entitlements as set forth in this Agreement ("the Concession").

2.2 Concession Period

The Concession is hereby granted for a period of 10 years of active operation period commencing from the Appointed Date and ending on the Expiry Date ("the Concession Period") during which the Concessionaire is authorised to design, finance, construct, operate and maintain the Project Facilities in accordance with the provisions hereof. Provided that in the event of Termination, the Concession Period shall mean and be limited to the period commencing from the Appointed Date and ending with the Termination Date. The word "Design" is limited to electromechanical design of waste processing unit, Design of Door-to-Door Collection system, decentralized Material recovery facilities, Transfer stations, Transportation facilities, any modification in route plan for collection transportation or any other modification proposed by concessionaire but only after duly approved and accepted by PMC/ **AUTHORITY**.

2.3 Extension in Concession Period

Contract period can be extended for a period of 5 years after successful completion of initial 10 years contract period. The extension in contract period will be solely dependent upon concessionaire performance in First 10 years of contract period and subsequent mutual consent of all parties. For further clarification, the concessionaire would be eligible for extension if he receives more than 80% marks in performance evaluation criteria as set out in clause 8.7 in minimum 80% contract months in initial 10 years contract period.

2.4 Acceptance of Concession

In consideration of the rights, privileges and benefits conferred upon the Concessionaire, and other good and valuable consideration expressed herein, the Concessionaire hereby accepts the Concession and agrees and undertakes to perform / discharge all of its obligations in accordance with the provisions hereof.

ARTICLE 3

3 PROJECT FACILITIES & SITE

3.1 Handover of Project facilities & Site

a. **AUTHORITY** shall, within 15 days from the Agreement Date, handover to the Concessionaire on as-is-where-is basis, vacant and peaceful physical possession of the project facilities and Site, for the purpose of implementing the Project.

b. The efforts will be made by the **AUTHORITY** to handover the project facilities and Site to the Concessionaire free of encumbrances. However, in case of any delay in handing over of the site to the Concessionaire, the **AUTHORITY** shall only consider suitable extension of time for the execution of the work. It should be clearly understood that the **AUTHORITY** shall not consider any revision in contract price or any other compensation whatsoever viz. towards idleness of Contractor's labour, equipment etc.

c. If **AUTHORITY** fails to handover existing sites or existing sites are not sufficient, Authority will handover additional patch of lands.

d. The information about the public utilities (whether over ground or underground) like electrical/ telephone/ water supply lines, OFC Cables, open drain etc. is the responsibility of contractor to ascertain the utilities that are to be affected by the works through the site investigation and collection of information from the concerned utility owners.

e. The **AUTHORITY** shall be responsible to obtain necessary approval from the respective authorities for shifting/ re-alignment of existing public utilities. However, the concessionaire shall assist the **AUTHORITY** for liaising in obtaining the approval from the concerned authorities.

3.2 Rights, Title and Use of the project facilities & Site

a) The Concessionaire shall have the right to the use of the Project facilities & Site in accordance with the provisions of this Agreement and for this purpose, it may regulate the entry into and use of the same by third parties.
b) The Project site and Project Facilities shall be and continue to be the property of **AUTHORITY**.
c) The Concessionaire shall not part with or create any Encumbrance on the whole or any part of the Project Facilities, including the Site save and except as set forth and permitted under this Agreement.

d) The Concessionaire shall not, without the prior written approval of AUTHORITY, use the Project Facilities for any purpose other than for the purpose of the Project and purposes incidental or ancillary thereto.

3.3 Peaceful Possession

AUTHORITY hereby warrants that:

a) The Site together with the necessary right of way/way-leaves
   i. has been acquired through the due process of law
   ii. belongs to, or has been leased to AUTHORITY and is vested in AUTHORITY and that AUTHORITY has full powers to hold, dispose of and deal with the same consistent, inter alia, with the provisions of this Agreement and that the Concessionaire shall, in respect of the Site, have no liability regarding any compensation payment on account of land acquisition or rehabilitation/resettlement of any Persons affected thereby.

- The Concessionaire shall, subject to complying with the terms and conditions of this Agreement, remain in peaceful possession and enjoyment of the Project Facilities & Project Site during the Active Operations Period, and

In the event the Concessionaire is obstructed by any Person claiming any right, title or interest in or over the Site or any part thereof or in the event of any enforcement action including any attachment, distrait, appointment of receiver or liquidator being initiated by any Person claiming to have any interest in/charge on the Site or any part thereof, AUTHORITY shall, if called upon by the Concessionaire, defend such claims and proceedings and also keep the Concessionaire indemnified against any consequential loss or damages which the Concessionaire may suffer, on account of any such right, title, interest or charge.

3.4 Applicable Permits

The Concessionaire shall obtain and maintain the Applicable Permits in such sequence as is consistent with the requirements of the Project. The Concessionaire shall be responsible and shall be in compliance with the terms and conditions subject to which Applicable Permits have been issued.

The Concessionaire shall be responsible to obtain necessary approvals at its own cost.

ARTICLE 4

4 Conditions Precedents

Save and except as expressly provided in Articles 4, 6, 9, 12 and 13 or unless the context otherwise requires, the respective rights and obligations of the Parties under this Agreement shall be subject to the satisfaction in full of the condition's precedent specified in this Clause 4 (the "Conditions Precedent").

4.1 Authority's Conditions Precedent

4.1.1 The Conditions Precedent required to be satisfied by the Authority shall be deemed to have been fulfilled when:

a. The Authority shall have handed over the Project Site & Project Facility as per Schedule 1 of this draft Concession Agreement to the Concessionaire for the development of the Project; **The Project Site shall be provided on an "as-is-where-is basis" condition for use during the Concession Period for the purpose of the Project free of any charges.**

b. The Authority shall have provided land for MRF cum PCTS/MTS & Workshop.

c. The Authority shall have appointed a Project Monitoring Consultant/ in accordance with Article 5.

d. Copies of the council resolution authorizing the Authority to execute the Agreement.

4.2 Concessionaire / Selected bidder's Conditions Precedent

4.2.1 The Conditions Precedent required to be satisfied by the Concessionaire prior to the Appointed Date shall be deemed to have been fulfilled when the Concessionaire shall have:

a. Prepare operation plan within 1 months of the signing of Agreement based on the SBM-2 Guidelines, SWM Rule 2016 and Project Information Memorandum. The Concessionaire may suggest different equipment for collection, recovery of recyclables, provided the DPR must adhere to the outcome as desired in MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and C&T Plan as detailed out in the Project Information Memorandum (Volume II).

b. obtained approval from the Project Monitoring Consultant on the following:

i. Detailed project report covering the adopted MRF cum PCTS/ MTS technology, detailed construction drawings & plans, and Construction Milestones as per provisions of the Agreement.

c. obtained approval from the Authority for the following:

i. on the detailed Construction Plan comprising of details delineating the Site for construction of Project Facilities and ensuring continued use of the Site

for managing MSW by AUTHORITY till COD;

d. procured all the Applicable Permits specified in Schedule 11 unconditionally and if subject to conditions, the all such conditions required to be fulfilled by the date specified therein shall have been satisfied in full and such Applicable Permits are in full force and effect;

e. Obtain all other requisite approvals required for the Project from various Statutory Authorities;

f. executed and procured execution of the Escrow Agreement;

g. Delivered to the Authority a confirmation from the Selected Bidder / each of the Consortium member, in original, of the correctness of their representations and Warranties set forth in Clause 16.1.

h. Undertake the Additional Works in accordance with terms hereof, to the satisfaction of the Authority

i. Prepare Operation Plan and procure approval of Authority thereon, and upon approval of Authority thereon, commence the MSW works in the municipal area of AUTHORITY.

j. Repair & modify if required, install mercenaries and make operational the existing MRF cum Transfer.

4.2.1 Each Party shall make all reasonable endeavours to satisfy the Conditions Precedent within maximum120 days including all extensions in respect thereof and shall provide the other Party with such reasonable cooperation as may be required to assist that Party in satisfying the Conditions Precedent for which that Party is responsible

Provided that upon request in writing by the Concessionaire, the Authority may, in its discretion, waive or further extend the time limit of any of the Conditions Precedent set forth in this Clause 4.2 provided the required waiver/ extension is not because of concessionaire event of default. For the avoidance of doubt, the Authority may, in its sole discretion, grant any waiver hereunder with such conditions as it may deem fit.

a. The Parties shall notify each other in writing at least once a month on the progress made in satisfying the Conditions Precedent. Each Party shall promptly inform the other Party when any Condition Precedent for which it is responsible has been satisfied.

b. Provided however that neither Party shall be entitled to terminate this Agreement if non-fulfillment of condition precedent by either party is result and/or consequence of Force Majeure event

4.3 Damages for delay by the Authority

In the event that (i) the Authority does not procure fulfilment of any or all of the Conditions Precedent set forth in Clause 4.1.1 within the period specified in respect thereof, and (ii) the delay has not occurred as a result of breach of this Agreement by the Concessionaire or due to Force Majeure, the Authority shall pay to the Concessionaire Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the Performance Security for each day's delay until the fulfilment of such Conditions Precedent, subject to a maximum of 20% (twenty percent) of the Performance Security.

Any delay by the Authority in the fulfilment of any or all of the Conditions Precedent set forth in Clause 4.1.1, save and except for reasons attributable in whole or parts to the Selected Bidder/Concessionaire or Force Majeure; beyond a period of 220 (two hundred twenty) days from the date of this Agreement or such later date as mutually agreed between the Parties, would entitle the Concessionaire to terminate this Agreement ;provided the Concessionaire has issued a written notice to Authority allowing 60 days remedy period for curing such default/delay, and the default remains un-remedied upon the expiry of such cure period.

In such an event of termination, the Authority shall

(i) release the Performance Security, subject to any outstanding dues payable to the Authority by the Concessionaire in terms hereof; provided however that in the event the Authority's failure to fulfill its Conditions Precedent is attributable to the Concessionaire's default, the Authority shall forfeit the Performance Security as damages; and

(ii) In the event the access to and right of way in respect of the land parcels comprising the Project Site shall have been granted to the Concessionaire in terms hereof on or before such date of termination; then the Project Site shall immediately revert to the Authority, free and clear from any encumbrances and along with all associated easementary rights, irrespective of any outstanding mutual claims between the parties or any third-party claims;

4.4 Damages for delay by the Concessionaire

a) In the event that (i) the Concessionaire does not procure fulfillment of any or all of the Conditions Precedent set forth in Clause 4.2.1 within a period specified in respect thereof, and (ii) the delay has not occurred as a result of failure to fulfill the obligations under Clause 4.2.1 or other breach of this Agreement by the Authority, or due to Force Majeure, the Concessionaire shall pay to the Authority Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the Performance Security for each day's delay until the fulfillment of such Conditions Precedent, subject to a maximum of 20% (twenty percent) of the Performance Security.

b) Notwithstanding anything to the contrary in the event delay referred to in aforesaid clause 4.3 (a) above, exceeds a period of 220 (two hundred twenty) days from the date of this Agreement or goes beyond such later date as may be mutually agreed between the Parties for fulfilment of condition precedent, then the Authority would be entitled to terminate this Agreement in accordance with the provisions hereto.

In such an event, notwithstanding anything to the contrary contained in the Agreement, the Authority shall, without prejudice to any other right or remedy that may be available to the Authority under this Agreement, be entitled to

(i) forfeit/invoke and appropriate the Performance Security;

(ii) In the event the access to and right of way in respect of the land parcels comprising the Project Site shall have been granted to the Concessionaire in terms hereof on or before such date of termination; then the Project Site shall immediately revert to the Authority, free and clear from any encumbrances and along with all associated easementary rights, irrespective of any outstanding mutual claims between the parties or any third-party claims;

(iii) Without prejudice to and notwithstanding anything to the contrary set out in the foregoing, the Parties may by mutual agreement, instead of terminating the Agreement, decide to extend the time for fulfilling the Conditions Precedent.

ARTICLE 5

5 PROJECT MONITORING CONSULTANT

5.1 Appointment

AUTHORITY shall appoint a project monitoring consultant (PMC).

The scope of work of PMC is bid process management, project monitoring during construction phase and project monitoring during O&M phase for a period of 10 Yrs.

5.2 Payments to Project Monitoring Consultant

All fees, costs, charges and expenses payable to the Project Monitoring Consultant shall be paid by AUTHORITY in accordance with the terms of its appointment within 15 days of receiving an invoice from PMC.

5.3 PROJECT MONITORING CONSULTANT - SCOPE OF WORK

5.3.1 The Project Monitoring Consultant is expected to play a positive and independent role in discharging its functions, thereby facilitating the smooth implementation and operation of the Project. Broadly, the role of the Project Monitoring Consultant shall encompass:

5.3.2 Verification and random checks of collection, Transportation work.

5.3.3 Verification and random checks of weighment and Testing of the MSW at the Processing and Landfill Site.

5.3.4 Independently review, monitor and where required by the Agreement, to approve the design, construction, operation and maintenance of the Project Facilities to ensure compliance by the bidder with the Operations Plan, Design Requirements, Construction Requirements and O&M Requirements,

5.3.5 Report to the Parties on the various physical, technical and financial aspects of the Project based on inspections, site visits and Tests,

5.3.6 Assist the Parties in arriving at an amicable settlement of disputes, should the need arise, and

5.3.7 Review matters related to safety and environment management measures adopted by the bidder for the Project.

5.4 Scope of Services of the Project Monitoring Consultant

The services to be provided by the Project Monitoring Consultant shall be in accordance with the applicable provisions of agreement made between AUTHORITY and PMC and also as per the general obligations of this Agreement are specified in this section.

5.5 Obligations during Implementation Period

The Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the progress in implementation of micro implementation Plan for Collection, MRF, Transfer and Transportation and ensure compliance with the

Operation & Maintenance Requirements. For this purpose, the Project Monitoring Consultant shall undertake, interalia, the following activities and where appropriate make suitable suggestions:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and check the route plan, vehicle deployment plan, scheduled maintenance plan, emergency maintenance protocol, manpower deployment plan, Plan for online monitoring of Door to Door collection and transportation;

(e) Review, approve or disapprove MOP and other plan/submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(f) Provide the services of a full-time resident project representative during the period commencing from 7 (seven) days from the date of appointment of the PE until the expiry of the PMC's appointment;

(g) Provide the services of experts to check the quality of materials and the workmanship during the procurement phase of C&T work, including the following:

(i) Waste transportation vehicles;

(ii) Litter bins

(h) Address issues relating to specific site conditions, design modifications, or Concessionaire disputes.

The PMC shall prepare and submit to AUTHORITY, Fortnightly Progress Reports including the following:

(a) Daily progress of works;

(b) Issues, if any, with regard to the works along with the details of the action taken for the resolution of the same;

(c) Photographic record of progress of works over the previous week.

The PMC shall provide all other services as normally provided by an engineer in charge.

5.6 Active Operations Period

During this period the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by the

Concessionaire so as to ensure compliance with the O&M Requirements. The specific activities to be undertaken would include the following:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and approve test results and materials and/or equipment used;

(e) Interpret the requirements of the contract and make decisions regarding performance of the Concessionaire. The PMC shall inform and advise the AUTHORITY, in a timely manner all matters relating to the execution, progress, and completeness of works;

(f) Reject work which fails to comply with the specifications and requirements of the Agreement. Whenever considered necessary or advisable to ensure correction of defective work, the PMC may require inspection or testing of such work, whether or not such work be then fabricated, installed, or completed;

(g) Review, approve or disapprove drawings, samples, and other submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(h) Provide the services of a full-time resident project representative during the period commencing from 7 seven days from the date of appointment of the PE until the expiry of the PMC's appointment;

(i) In addition to the daily responsibilities, conduct a general inspection of the Project Facilities at least once a month and as and when exigencies require to ascertain conformity with Construction Requirements and O&M Requirements;

(j) Provide the services of experts to check the quality of materials and the workmanship during the construction of the Landfill Facility

(k) Inspect the quality of compost being sold or otherwise disposed outside the Site

(l) Inspect and certify composition of the Residual Inert Matter

(m) Address issues relating to specific site conditions, design modifications, or Concessionaire disputes.

(n) Review the O&M Plans submitted by the Concessionaire from time to time and assist the Concessionaire in finalizing the same. The Project Monitoring

Consultant shall also consult AUTHORITY prior to finalization of the O&M Plans;

(o) Periodically review the O&M Manual for adequacy;

(p) Monitor Operation and Maintenance activities (including maintenance of Project Facilities and equipment, standards of service, safety and environmental issues) and the overall quality of O&M activities so as to ensure compliance by the Concessionaire with the O&M Requirements, O&M Plan and O&M Manual;

(q) Review and ascertain the cost variation arising as a result of Change in Law and determine the Additional Cost;

(r) Undertake a quarterly review of the various records and registers to be maintained by the Concessionaire and suggest suitable remedial measures/ procedures, where necessary.

5.6.1 The PMC shall attend regular meetings ("Project Review Meetings" or "PRMs") with the AUTHORITY and the Concessionaire, to be held at least once in every month during the Active Operations Period to report on progress and quality of work performed by the Concessionaire and to discuss problems or other pertinent matters relating to the work. The IC shall take notes at the meetings and provide a copy of the PRM minutes to each person who attended the meeting.

5.6.2 The PMC shall prepare and submit to AUTHORITY, Monthly Project Reports including the following:

(a) Report on Tests

(b) Report on notices issued

(c) Issues, if any, with regard to the works along with the details of the action taken for the resolution of the same;

(d) Photographic record of progress of works over the previous week.

5.6.3 Attend meetings with the AUTHORITY and the Concessionaire, to be held at intervals as mutually decided upon by the Parties, to discuss problems or other pertinent matters relating to the Project. The PMC shall take notes at the meetings and provide a copy of the minutes of such meetings to each person who attended the meeting.

a) Review of the Operations Plan submitted by the Concessionaire in accordance with of the Agreement.

b) Monitoring and reporting to AUTHORITY on whether the bidder has complied with the timelines for activities as specified in the Operations Plan in (a) above;

c) Verify and report to AUTHORITY whether (i) the New Project Facilities comply with the Design Requirements (ii) Existing Project Facilities comply with the Construction Requirements and (iii) the Project Facilities comply with all Applicable Laws including SWM Rules 2016.

d) Issue Provisional/Readiness Certificate in accordance with the of this Agreement;

e) The Project Monitoring Consultant shall undertake, interalia, the following activities and where appropriate:

(i) Require suspension of whole or any part of the Construction Works if in its reasonable opinion the same does not conform to the Construction Requirements;

(ii) Require clearing of any construction site of all construction equipment, surplus materials, debris and temporary installations as per applicable provisions of this Agreement.

(iii) Review the monthly progress report submitted by the bidder during the Implementation Period and its conformity with the Operations Plan, report on the same to the AUTHORITY and suggest corrective measures, if any.

(iv) If during the course or upon review / inspection undertaken by the PMC, it transpires that either of the Parties is in breach/ default of any of its obligations under the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/ default within time frame as may be felt suitable by the PMC.

5.7 Obligations during Operations Period

5.7.1 Monitoring of Collection & Transportation

The Project Monitoring Consultant's prime responsibility would be to monitor the operations at the weighbridge, MRF Cum TS/MTS/Standalone TS/ Door to Door collection & IEC activities at Zone-7. For this purpose, the Project Monitoring Consultant shall undertake, inter alia, the following activities:

a) Verification of Door-to-Door Collection and segregation of waste at source.

b) Verification of trips/household coverage and segregation at MRF.

c) Verification of User Charges Collection.

d) Verification of online monitoring system.

e) Verification of the records generated at the weighbridge.

f) Issue "Notice to Remedy" in event of observing non-compliance to O&M Requirements;

g) If during the course or upon review/inspection undertaken by the Project Monitoring Consultant or otherwise, it transpires that either of the Parties is in breach/default of any of its obligations under the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/default within such time and in such manner as the Project Monitoring Consultant may deem fit and, in each case, the same shall be recorded.

5.7.2 Conducting Random Inspections

The Project Monitoring Consultant shall conduct random inspections of the Project Facilities as well as the operations as follows:

a) The random inspections may be carried out by visual assessment with careful observation of the specific object/item for identification and for quantification of the deficiencies or damages of the Project Facilities and operation and maintenance of the Project Facilities. For this purpose, the Project Monitoring Consultant can use photographs with time and place record.

b) During the random inspections, the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by the Contractor so as to ensure compliance with the O&M Requirements;

c) Issue "Notice to Remedy" in the event of non-compliance to O&M Requirements and recording the same.

d) Record and report to the AUTHORITY on the incidents of Material Breach or Persistent Breach of O&M Requirements;

5.7.3 Random inspection of Project Facilities

The Project Monitoring Consultant shall undertake inspection of the Project Facilities**,** Facility Site and Workshop Site in such frequency and sample selection as mentioned in the table below:

Table 1: Random inspection of Project Facility

S. No	**Project Facilities**	**Frequency of inspection**	**Sample selection requirement**
1	Facility Site	Once a Month	_
2	Workshop Site	Once a Month	_
3	Collection and Cleaning Vehicles & Equipments	Once a Month	A minimum sample of 10 % of each category of vehicles deployed in the Concession Area. There should not be repetition of the same set of vehicles in the next round of inspection.

5.7.4 Hand back and Transfer of Project Facilities to AUTHORITY

At the time of hand back and transfer of the Project Facilities to AUTHORITY at the end of Concession Period, the Project Monitoring Consultant shall:

a) Monitor the compliance with the Hand back and Transfer Requirements as provided in Chapter 10 of this Agreement and

b) Issue a certificate of compliance on satisfactory completion of Hand back and Transfer Requirements by the bidder.

5.7.5 Maintenance of Records

a) The Project Monitoring Consultant would be required to participate in the Project review meetings held from time to time by the Parties, which are ordinarily expected to be held once a month during the Implementation Period and once every two months during the Operations Period as also to participate in emergency or extra-ordinary meetings of the Parties held to deal with any Emergency, Force Majeure Event or other exigencies.

5.7.5.1 The Project Monitoring Consultant shall maintain record of the activities undertaken by it in discharge of its functions and responsibilities. This would include records in respect of the following:

a. Manpower deployed and other organizational arrangements of the Project Monitoring Consultant;

b. Inspections undertaken and notices/instructions issued to the bidder;

c. Review compliance by the bidder with the Agreement;

d. Force Majeure Events;

e. Material and Persistent Breach of O&M Requirements and Events of Default by the Parties; and

f. Compliance by the bidder with Hand back and Transfer Requirements

5.7.5.2 The Project Monitoring Consultant would be required to verify/issue the following reports to the Parties:

Table 5-1 Reports issued by PMC

Period/Event	**Verification**	**Applicable report to be issued by the Project Monitoring Consultant**
1. Implementation Period	– Review monthly progress report submitted by the Contractor – Issue "Notice to Remedy" in event of non-compliance by the Contractor - Issue Provisional/ Readiness Certificate	–
2. Monitoring of Door-to-Door collection & Transportation	– Verify the attendance of concessionaire at door step – Monitoring of Transfer point	– Monthly Inspection Report
3. Random Inspections of Project facilities	– Advise AUTHORITY on penalties payable by the Contractor	Monthly Inspection Report

4. Force Majeure/ Material and Persistent Breach of O&M Requirements/Events of Default.	– Issue "Notice to Remedy" in event on non-compliance Record Events of Default, Material/Persistent Breach of O&M Requirements, Force Majeure Events	
5. Hand back and Transfer of Project Facilities	– Specify list of works/jobs to be carried out by the Contractor. – Specify list of items to be handed back and transferred back to AUTHORITY by the Contractor. – Verify compliance by the Contractor with Hand back and Transfer Requirements	– Issue of compliance certificate of Hand back and Transfer Requirements

5.7.6 Material and Persistent Breach of O&M Requirements

The Project Monitoring Consultant shall monitor the performance of the Contractor and report on incidence of material and persistent breach of O&M requirements with reference to the compliance and tolerance criteria as laid out in of the O&M Requirements:

5.8 Awareness Campaign

The Project Monitoring Consultant shall review the Awareness Campaign programme conducted by the bidder.

5.9 General Obligations

The Project Monitoring Consultant shall carry out such other functions as may be specifically assigned to it under the agreement including certification of adequacy of insurance and verification of termination payments.

ARTICLE 6

6 CONCESSIONAIRE'S OBLIGATIONS

In addition to and not in derogation or substitution of any of its other obligations under this Agreement, the Concessionaire shall have the following obligations:

6.1 Performance Security

(a) The Concessionaire shall, for due and punctual performance of its obligations hereunder relating to the Project under construction phase, deliver to AUTHORITY, simultaneously with the execution of this Agreement, a bank guarantee from a nationalised bank/scheduled bank acceptable to AUTHORITY, in the form as set out in **Schedule 4**, ("Performance Security") for a sum of Rs. Equivalent to 5% of yearly O&M fee amount of respective year

(b) The Performance Security shall be kept **valid for entire project period from the Appointed Date**.

Provided that if the Agreement is terminated due to any event other than a Concessionaire Event of Default, the Performance Security if subsisting as of the Termination Date shall, subject to AUTHORITY's right to receive amounts, if any, due from the Concessionaire under this Agreement, be duly discharged and released to the Concessionaire.

6.2 Financing Arrangement

Concessionaire shall procure shortfall of vehicle and equipment/assests for door-to-door collection & Mechanised Sweeping, MRF Cum TS, Drain Cleaning, Road Sweeping and Workshop on 100 % financing of LMC as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assests and ensure its registration in the name of LMC.

The Concessionaire shall at its cost; expenses and risk make financing arrangements of balance amount as would be necessary to implement the Project and to meet all of its obligations under this Agreement, in a timely manner.

AUTHORITY shall provide O&M fee as per the financial bid parameters as mentioned below;

TIPPING FEE (Amount in Rupees)

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User Charges Collection.				
1(a)	Residential Household	Per Household/ Day	78400		
1(b)	Commercial Unit	Per Commercial Unit/Day	2821		
1(c)	Bulk waste Generator Residential Apartments	Per Bulk waste Generator Residential/Day	490		
1(d)	Bulk waste Generator Commercial Units	Per Bulk waste Generator Commercial/Day	121		
2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	928		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	71		

(a) Preparation of DPR & Operation plan

(i) The Concessionaire shall prepare DPR and operation plan in accordance to the SWM Rule 2016, SBM-2 Guidelines and PIM as in Volume -2 of RFP. It must include plan for source segregation, GIS based Route plan for door-to-door collection, Manpower deployment plan, resource deployment plan, Scheduled and emergency Maintenance plan, Material recovery and its management Plan and any other plan as asked by Authority/PMC. DPR shall also include design, drawing and estimate of MRF cum Transfer facilities.

(ii) The DPR prepared by Concessionaire shall be subject to review by the Project Monitoring Consultant, AUTHORITY as hereinafter provided in clause (b).

(b) Review of DPR

(i) The Concessionaire shall promptly and in such sequence as is consistent with the Construction Requirements, submit three copies of DPR & DOP to the Project Monitoring Consultant and AUTHORITY.

(ii) By forwarding the DPR to the Project Monitoring Consultant and AUTHORITY pursuant to the preceding clause (i), the Concessionaire shall be deemed to have represented that it has verified and determined that the DPR, Designs, Drawings and all other content of DPR are in conformity with the Construction and O&M Requirements.

(iii) Within 15 days of receipt of the DPR, Project Monitoring Consultant shall review the same taking into account, inter alia, comments of AUTHORITY, if any, thereon, and convey its comments/observations to the Concessionaire on the conformity of DPR with Construction and O&M Requirements. If the comments/observations of the Project Monitoring Consultant indicate that the DPR is not in conformity with the Construction Requirements, the DPR shall be revised by the Concessionaire to the extent necessary and resubmitted to Project Monitoring Consultant for further review within 15 days. The Project Monitoring Consultant, AUTHORITY shall give its observations and comments, if any, within 15 (Fifteen) days of receipt of such revised DPR, which shall be taken into account by the Concessionaire while finalising the DPR.

(iv) If, within the period stipulated in the preceding clause (iii), the Project Monitoring Consultant does not respond to the DPR submitted to it by the Concessionaire the Concessionaire shall be entitled to proceed with the Project on the basis of such DPR submitted by it to the PMC, and intimate the same to AUTHORITY. The same should be highlighted in the periodic reporting by the Concessionaire.

(v) Notwithstanding any review or failure to review by or the comments / observations of the Project Monitoring Consultant or AUTHORITY, the Concessionaire shall be solely responsible for the adequacy of the DPR and their conformity with the Construction and O&M Requirements, and shall not be relieved or absolved in any manner whatsoever of any of its obligations hereunder.

(vi) The Concessionaire shall be responsible for delays in meeting the Construction Requirements caused by reason of any DPR not being in conformity with the Construction Requirements, and shall not be entitled to seek any relief in that regard from AUTHORITY.

(vii) The Concessionaire shall in consultation with the Project Monitoring Consultant finalize an implementation schedule for the Project in accordance with the Construction Requirements.

(viii) Within 90 (ninety) days of issue of Readiness Certificate or Provisional Readiness Certificate, as the case may be, the Concessionaire shall furnish to AUTHORITY three copies of “as built" Drawings of the Construction

Works which have been completed as on COD, in a manner as set out in Construction Requirements.

(c) Procurement and Supply of Vehicles

All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC. Concessionaire will be providing vehicles as per conditions detailed below

i. Demand of Vehicles to start Door to door collection of waste, Project Facility, Road Sweeping, Drain Cleaning and Workshop shall be procured by concessionaire on the basis of demand raised by his DOP & DPR and approved by authority.

ii. Demand of Vehicles after expiry of natural life of vehicles, replacement vehicle will be provided by Concessionaire on his own cost.

iii. Any additional requirement of vehicles in case of increase in project area or because of increase in population shall be provided by concessionaire.

In case of both point number (ii) and (iii), a committee comprising of members from Authority, PMC and concessionaire will take final decision upon number and type of replacement vehicles to be provided.

6.3 Project Implementation: Construction Works

(a) Concessionaire shall be responsible for construction/modification and installation of machineries for MRF cum transfer facilities.

(b) Unless otherwise permitted by AUTHORITY/Project Monitoring Consultant, no Construction Works shall begin.

(c) The scope of work covered in this tender shall be as per the Bill of Quantities, specifications provided in DPR prepared by concessionaire and approved by PMC, AUTHORITY and the specifications, drawings, instructions, orders issued to the concessionaire from time to time during the pendency of work. The contents of Project Information Memorandum provide broad idea about the work to be performed under the scope of this contract. However, the work shall be executed according to the DPR submitted by Concessionaire and approved by the Project Monitoring Consultant/ AUTHORITY and "GOOD FOR CONSTRUCTION Drawings" approved in DPR. It shall be the responsibility of the concessionaire to incorporate all the aspects of scope of work in his DPR.

(c) The Concessionaire shall adhere to the Construction Requirements and achieve COD on or before the Scheduled Project Completion Date.

(d) The Concessionaire may undertake Construction Works by itself or through a Contractor possessing requisite technical, financial and managerial expertise/capability; but in either case, the Concessionaire shall remain solely responsible to meet the Construction Requirements.

(e) The Concessionaire shall, before commencement of Construction Works;

(i)have requisite organization and designate and appoint suitable officers/ representatives as it may deem appropriate to supervise the Project, to deal with the Project Monitoring Consultant/AUTHORITY and to be responsible for all necessary exchange of information required pursuant to this Agreement;

(f) For the purposes of determining that Construction Works are being undertaken in accordance with the Construction Requirements and O&M Requirements, the Concessionaire shall with due diligence carry out all necessary and periodical Tests in accordance with the instructions and under the supervision of the Project Monitoring Consultant and the Construction Requirements and O&M Requirements. The Concessionaire shall maintain proper record of such Tests and the remedial measures taken to cure the defects or deficiencies, if any, indicated by the Test results.

(g) All Tests shall be conducted in accordance with Construction Requirements. If the Tests are successful and the Project Facilities can be safely and reliably opened for operation, the Project Monitoring Consultant shall issue Readiness Certificate.

Provided, notwithstanding that certain works or things forming part of Construction Works are not complete, if following Tests, the Project Monitoring Consultant determines that the Project Facilities can be safely and reliably opened for operations, the Project Monitoring Consultant may issue Provisional Readiness Certificate to the Concessionaire. The Provisional Readiness Certificate shall have appended thereto a list of outstanding items signed jointly by the Project Monitoring Consultant and the Concessionaire ("Punch List"). All Punch List items shall be completed by the Concessionaire within such time as may be determined by the PMC, not exceeding 30 (Thirty) days of the date of issue of the Provisional Readiness Certificate. Upon satisfactory completion of all Punch List items, the Project Monitoring Consultant shall promptly and in any case within 15 days thereof, issue Readiness Certificate.

(h) If the Concessionaire fails to complete the Punch List items within the said period of 30 days, AUTHORITY may, without prejudice to any other rights or remedy available to it under this Agreement, have such items completed at the risk and costs of the Concessionaire. The cost incurred by AUTHORITY in completing the Punch List items, as certified by the PMC, shall be reimbursed by the Concessionaire to AUTHORITY within 7 days

from the date of receipt of a claim in respect thereof from AUTHORITY. Thereupon, Project Monitoring Consultant may issue Readiness Certificate.

(i) The Project Monitoring Consultant, may, by written notice, require the Concessionaire to suspend forthwith the whole or any part of the Construction Works, if in its reasonable opinion the same is being carried on in a manner that is not in conformity with the Construction Requirements.

(j) The Project shall be deemed to be complete and ready to receive Municipal Solid Waste only when the Provisional Readiness Certificate or the Readiness Certificate is issued by the Project Monitoring Consultant in accordance with the provisions hereof.

Provided if COD is delayed beyond 60 days of the Scheduled Project Completion Date, AUTHORITY shall, subject to the provisions of **Article 8**, be entitled to terminate this Agreement and to appropriate the Performance Security.

6.4 Project Implementation: Operation and Maintenance

(a) The Concessionaire shall operate and maintain the Project Facilities in accordance with the O&M Requirements. Concessionaire shall prepare O&M plan before start of work in accordance with the scope of work as mentioned in RFP and minimum operation & Maintenance standards set out in schedule 2 of this concession agreement and thereafter before start of each financial year and get approval of Authority and PMC.

(b) The Concessionaire may undertake operations and maintenance of the Project Facilities by itself or through a Contractor possessing requisite technical, financial and managerial expertise / capability; but in either case, the Concessionaire shall remain solely responsible to meet the O&M Requirements.

(c) The Concessionaire shall, during the Active Operations Period;

(i) have requisite organisation and designate and appoint suitable officers/ representatives as it may deem appropriate to supervise the Project, to deal with the Project Monitoring Consultant/AUTHORITY and to be responsible for all necessary exchange of information required pursuant to this Agreement;

(ii) for the purposes of determining that the Construction Works and Project Facilities are being maintained in accordance with the Construction Requirements and O&M Requirements, the Concessionaire shall with due diligence carry out all necessary and periodical Tests in accordance with the instructions and under the supervision of the PMC. The Concessionaire shall maintain proper record of such Tests and the remedial measures taken to cure the defects or deficiencies, if any, indicated by the Test results.

(iii) Conduct all Tests to ascertain compliance with Construction Requirements and O&M Requirements.

(iv) suspend forthwith the whole or any part of the Construction Works upon receiving a written notice from the PMC, who may require the Concessionaire to suspend the activities in whole or part if in the reasonable opinion of the PMC, the operations are being carried on in a manner that is not in conformity with the O&M Requirements.

(d) In the event the Concessionaire has failed to operate and maintain the Project in accordance with the O&M Requirements, and such failure has not been remedied despite a notice to that effect issued by the Project Monitoring Consultant or AUTHORITY ("Notice to Remedy"), AUTHORITY may, without prejudice to any of its other rights/remedies under this Agreement, be entitled to operate and maintain the Project or cause to repair and maintain the Project Facilities at the risk and cost of the Concessionaire. The Concessionaire shall reimburse all costs incurred by AUTHORITY on account of such operation and maintenance or repair and maintenance within 7 days of receipt of AUTHORITY's claim therefore.

(e) The Concessionaire shall be deemed to be in material breach of O&M Requirements if the Project Monitoring Consultant acting reasonably and in accordance with the provisions of this Agreement, has determined that due to breach of its obligations by the Concessionaire:

(i) there has been failure/undue delay in carrying out scheduled/planned maintenance or the scheduled/planned maintenance has not been carried out in accordance with the O&M Requirements;

(ii) the maintenance of the Project Facilities or any part thereof has deteriorated to a level which is below the acceptance level prescribed by the O&M Requirements;

(iii) there has been a serious or persistent let up in adhering to the O&M Requirements and thereby the Project Facilities or any part thereof is not safe for operations;

(iv) There has been persistent breach of O&M Requirements. For avoidance of doubt, persistent breach shall mean:

a. any breach of O&M Requirements by the Concessionaire which has not been remedied by the Concessionaire despite a Notice to Remedy in respect thereof issued by the PMC/AUTHORITY;

b. recurrence of a breach by the Concessionaire, during the pendency of Notice to Remedy by the PMC/AUTHORITY requiring the Concessionaire to remedy a breach, and

c. repeated occurrence of a breach notwithstanding that earlier breaches have been remedied pursuant to Notice to Remedy or otherwise.

Upon occurrence of a material breach of O&M Requirements, AUTHORITY shall, without prejudice to and notwithstanding any other consequences provided therefore under this Agreement, be entitled to terminate this Agreement.

6.5 Awareness Campaign

i. Based on section of the Operation Plan, the Concessionaire shall design undertake Awareness Campaigns as specified in this section.

ii. The Concessionaire shall submit an annual program of Awareness Campaign to the Project Monitoring Consultant and AUTHORITY within the first month of each calendar year clearly notifying the components & expenditure under each head of expense.

iii. The concessionaire shall with the assistance of AUTHORITY educate the generators of MSW about the service that is being provided by the Concessionaire and shall provide and distribute information about the rights and responsibilities of the generators of MSW.

iv. The Concessionaire shall notify the generators of MSW in its Concession Area about the details of the new services (if any) to be provided in accordance with this Agreement.

v. The Concessionaire shall also instruct the generators of MSW from time to time about MSW placement and delivery requirements, including provisions for special collections.

vi. The Concessionaire shall duly inform the generators of MSW about the phone numbers of the Complaint Redressal Centre.

vii. The Concessionaire shall organize quarterly awareness drives for two bin system for Biodegradable substance and non-biodegradable substance for segregation of MSW at source.

viii. The Concessionaire shall organize quarterly awareness drive for segregation and proper disposal of Hazardous wastes & Recyclable substances.

6.6 Insurance

The Concessionaire shall as be specified in Article 10 of this agreement, at its cost and expense, purchase and maintain by due re-instatement or otherwise, during the Concession Period all insurances in respect of the Project Facilities in accordance with the Good Industry Practice. The Concessionaire shall maintain a register of entry in order of premiums paid towards the Project Facilities and proof of payments made shall be submitted to AUTHORITY whenever requested for.

6.7 Environmental Compliance

The Concessionaire shall, at all times, ensure that all aspects of the Project Facilities and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including

rules such as MSW Rules, policies and guidelines related thereto. The Concessionaire shall obtain and maintain from time to time all necessary clearances from the SPCB or any other similarly empowered Government Agency and for this purpose shall carry out the necessary environmental impact assessment studies and implement appropriate environment management plans in respect of the Project Facilities.

6.8 Land Use

The Concessionaire shall ensure optimum utilisation of the Site and shall not use the same for any purpose unconnected or which is not incidental to the Project or related activities.

6.9 Sale/Distribution of Recyclables

(a) The Concessionaire shall be free to sell or otherwise dispose of the recyclables, at such price and to such Persons and using such marketing and selling arrangements and strategies as it may deem appropriate subject to meeting the O&M Requirements.

6.10 General Obligations

The Concessionaire shall at its own cost and expense:

(a) investigate, study, design, construct/ renovate, operate and maintain the Project Facilities in accordance with the provisions hereof;

(b) obtain all Applicable Permits as required by or under the Applicable Law and be in compliance thereof at all times during the Concession Period;

(c) comply with Applicable Law governing the operations of project facilities, Collection of MSW & Transportation of MSW at all times during the Concession Period;

(d) ensure and procure that any contract relating to the Project, entered into by the Concessionaire for implementing the Project in accordance with this Agreement contains provisions that would entitle a nominee of AUTHORITY to step into such contract/s at AUTHORITY's discretion, in place and substitution of the Concessionaire, pursuant to the provisions of this Agreement

(e) endeavor to sell all recyclables in a manner which is not detrimental to the environment;

(f) endeavor to improve the ancillary conditions and infrastructure related to the Project including assistance to informal recycling workers,

(g) procure and maintain in full force and effect, as necessary, appropriate proprietary rights, licenses, agreements and permissions for materials, methods, processes and systems used in or incorporated into the Project;

(h) make efforts to maintain harmony and good industrial relations among the personnel employed in connection with the performance of its obligations under this Agreement and shall be solely responsible for compliance with all labour laws and solely liable for all possible claims and employment related liabilities of its staff employed in relation with the Project and hereby indemnifies AUTHORITY

against any claims, damages, expenses or losses in this regard and that in no case and shall for no purpose shall AUTHORITY be treated as employer in this regard;

(i) make its own arrangements for construction materials and observe and fulfill the environmental and other requirements under the Applicable Law and Applicable Permits;

(j) be responsible for all the health, security, environment and safety aspects of the Project at all times during the Concession Period.

(k) ensure that the Project Facilities remain free from all encroachments and take all steps necessary to remove encroachments, if any;

(l) upon receipt of a request thereof, afford access to the Project Facilities to the authorised representatives of AUTHORITY for the purpose of ascertaining compliance with the terms, covenants and conditions of this Agreement.

(m) pay all Taxes, duties and outgoings, including utility charges relating to the Project Facilities.

6.11 No Breach of Obligations

The Concessionaire shall not be considered to be in breach of its obligations under this Agreement nor shall it incur or suffer any liability if and to the extent performance of any of its obligations under this Agreement is affected by or on account of any of the following:

(a) Force Majeure Event, subject to Article 8.3;

(b) AUTHORITY Event of Default;

(c) Compliance with the instructions of the Project Monitoring Consultant/AUTHORITY or the directions of any Government Agency other than instructions issued as a consequence of a breach by the Concessionaire of any of its obligations hereunder;

(d) Closure of the Project Facilities or part thereof with the approval of the Project Monitoring Consultant / AUTHORITY.

6.12 Maintenance of Records

The Concessionaire shall maintain records of the quantum (measured in tonnes) of biodegradable substance, non-biodegradable, recyclable and green waste substance, duly countersigned by the Project Monitoring Consultant and provide monthly, quarterly and annual reports of the same to the Project Monitoring Consultant, AUTHORITY.

ARTICLE 7

7 AUTHORITY's OBLIGATIONS

7.1 AUTHORITY's OBLIGATIONS

In addition to and not in derogation or substitution of any of its other obligations under this Agreement, AUTHORITY shall have the following obligations:

7.2 Specific Obligations

a) AUTHORITY shall provide 100% financing of All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

b) AUTHORITY shall provide O&M Fee as per the provisions of this agreement.

c) AUTHORITY shall provide land for setting up MRF cum PCTS/ MTS/ Standalone TS.

d) The barest minimum Land in the Concession Area for vehicles maintenance work shop to the concessionaire, during the contract period.

e) AUTHORITY shall also provide premises for parking purpose within concession area. This area can be provided as small areas where in the concessionaire can park their vehicles.

f) The Concessionaire shall erect fencing, construct roads/ office and other infrastructure & services as required for effective implementation of the contract and install other services as necessary to safe and effective completion of the work. Such movable and immovable infrastructure shall be transferred to AUTHORITY as applicable in working conditions, on completion of the contract period or at the time of termination of contract.

g) The successful bidder will use these premises for organizing, inspecting, monitoring and controlling the work including receipt of the complaints directly from citizens to be redressed within 24 hours.

h) AUTHORITY shall not provide any additional infrastructure or services to the contractor on this account, such as printing, stationary, electricity, water supply, telephone. The contractor shall make their own arrangement and the charges for all such services will have to be borne by the contractor.

i) AUTHORITY shall grant in a timely manner all such approvals, permissions and authorizations which the Concessionaire may require or is obliged to seek from AUTHORITY under this Agreement, in connection with implementation of the Project and the performance of its obligations. Provided where authorization for availment of utilities such as power, water, sewerage, telecommunications or any other incidental services/utilities is required, within thirty days (30) days from receipt of request from the Concessionaire to make available such authorisation.

7.3 General Obligations

AUTHORITY shall:

(a) Where appropriate provide necessary assistance to the Concessionaire in securing Applicable Permits;

(b) Observe and comply with all its obligations set forth in this Agreement.

ARTICLE 8

8 PAYMENT OF O&M FEE

8.1 Payment of O&M Fee

(a) Subject to the provisions of this Agreement and in consideration of the Concessionaire accepting the Concession and undertaking to perform and discharge its obligations in accordance with the terms, conditions and covenants set forth in this Agreement, AUTHORITY agrees and undertakes to pay to Concessionaire, the O&M Fee/O&M Fee calculated in accordance with **Schedule 6**.

Cost of Operation & maintenance shall be recovered under two heads i) Revenue from sale of recyclables ii) revenue from O&M grant in the form of O&M Fee. All revenues generated from sale of recyclables will belong to concessionaire and will be transferred as it is from escrow account to concessionaire account. Concessionaire shall be responsible to generate the desired revenue from first heads whereas AUTHORITY will provide O&M Fee at the rate tendered and negotiated thereupon by concessionaire.

All the payments and revenues to concessionaire shall accrue to Escrow account only and can be appropriated only thereafter.

(b) PAYMENT & PENALTY CALCULATION MODULE

All the monthly payment bills will be linked with the real time-based reporting of deployed vehicles on VTS, attendance and working hours of deployed man power and other data fetched into the ICT system related to door-to-door collection. The Concessionaire will be required to put POI based vehicle Tracking System or other such technology-based application that may generate real time report of movement of deployed vehicles for every point to point (door to door collection) in real time. Thus, the Concessionaire is required to do following action for raising its' bill:

For every bulk waste generator, the data will be fetched in real-time by RFID /QR code/other suitable method installed at the source of collection.

For every non bulk waste generator (Household for door-to-door collection), the Concessionaire will be required to generate POI at center point of each lane and road and each such POI shall preferably serve at cluster of 15 units each on the routes defined for waste collection of the area. Thus, the VTS deployed by the Concessionaire in each vehicle will provide real time data while providing the collection service. Any missed scanned data will be considered as non-service to that cluster (number of units) and incur not only deduction for the same but also

penalty may be imposed for continued failure as per the provisions related to performance indicators in service level bench mark and incur penalty.

The payment to the contractor for Door-to-Door collection, Road Sweeping & Drain Cleaning work is based on the number of clients served as per key performance indicator. The contractor is required to provide the services as per the SLAs defined. This Payment module will be enabled to generate payment reports capturing performance of the contractor depending on various performance SLAs and KPIs like missed properties for collection, time schedule compliance, no. of trips, route compliance, etc. For the Door to Door Garbage Collection penalties are levied if the vehicles do not start and end the collection activity in time, if the vehicle/waste collector misses any society/building (missed POI), if the contractor has not deployed the number of vehicles/personnel as defined for a particular zone, etc.

The Concessionaire shall also prepare a statement of daily units covered for Door-to-Door Collection, Road Sweeping and Drain Cleaning and get it duly certified by the Project Monitoring Consultant in the manner as set out in the O&M Requirements. The Concessionaire shall, on the 5th day of every Month or in case the 5th day of a Month is a holiday then on the following working day of such Month, submit to AUTHORITY /PMC a statement ("O&M Fee & Work Statement") providing the following details, in the manner as set out in the O&M Requirements:

(i) Total number of individual HH, commercial units and Bulk generators covered under Door-to-Door collection for the previous Month

(ii) quantity of recovery of recyclables for the previous Month along with proof;

(iii) Amount of O&M Fee for all three heads ie. Door to Door collection, Road Sweeping & Drain Cleaning, for the previous Month calculated in accordance with **Schedule 6**.

(c) The Concessionaire shall receive O&M Fee only for the component for which service has been provided actually.

(d) The door-to-Door collection, Road Sweeping and Drain Cleaning shall be started immediately after 2 months of Date of signing the Agreement.

8.2 Mechanism of Payment

(a) In accordance to the performance indicator linked for payment for scope of services as per PART-A, PART-B, PART-C, the invoice raised will be considered only as per service level benchmark defined for the relevant package/part/component and deductions, penalty shall be imposed for failure to deliver the services as per S**chedule 6**

(b) The Authority shall make the payment to the Concessionaire for performing works and providing services as per scope of work and

performance indicators specified. The payment to the contractor shall be made on monthly basis. The contractor shall submit bills along with the daily performance measurement sheets based on the ICT module implemented for the project.

(c) The Contractor must submit the bills by 7th of every month along with previous month EPF & ESIC paid challans (ECR) with payment receipt of each worker. LMC will pay 70% of the amount within two week (14) working days upon submission of bills verified and supported by the ICT based reporting. The payment shall be released by 20th of each month. 25 % amount will be paid after complete verification and its payment will be released up to 7th of next month. The bills shall be paid after due scrutiny of records. "Record Keeping & Reporting Requirements". Each invoice shall indicate the number of units serviced and the unit price for each item. LMC shall withhold payment on any and all invoices until such time the Contractor has supplied the required monthly report in a satisfactory manner. Monthly reports shall include Verification from household and waste generation units, Reports of POI based Vehicle Tracking System and other reports in support of KPI as mention in Schedule 2. LMC shall make deduction and levy penalty for the Contractor's failure to perform and maintain Service Level Benchmarks and performance indicators.

(d) Deductions from the Payment will be made if available towards Income Tax, Service Tax and Royalties etc as per provisions of the statutory authorities, in force from time to time in the State of Uttar Pradesh. The Contractor is expected to include all such charges at the time of bidding submission. Any new taxes, increase in such tax's imposed/ applicable during the contract period shall be reimbursed by LMC as per actuals after submitting the proof of the same.

(i) Authority shall pay balance 5% of the total amounts payable to Concessionaire into a special account designated as "Sinking Fund Account", which shall be utilized for purchase of new vehicles if required.

(e) Any balance amounts in the Sinking Fund Account would be payable to the Concessionaire after successful completion of project. Authority shall be free to deduct any amount of encumbrances created by concessionaire, any penalty due, or any work not performed by concessionaire as per requirement of concession agreement and done by LMC at risk and cost of concessionaire.

(f) Any delay in making any payment in accordance with the O&M Fee Statement shall, without prejudice to any other consequences under this Agreement, entail payment of interest on the amount in default at prevailing annual prime lending rate of State Bank of India calculated for

the duration of delay. The period of delay shall be counted from 60 days after; the day of submission of the O&M Fee Statement.

(g) All payments to the Concessionaire shall be made in Escrow account by way of Cheque/electronic transfer. All payments to AUTHORITY if applicable shall be made by way of demand draft in favor of MUNICIPAL COMMISSIONER, LUCKNOW NAGAR NIGAM.

(h) Annual Price Adjustments will be made in accordance and as described in Schedule 10.

8.3 Sinking Fund Account

(a) Within 30 days from the Appointed Date, the Parties shall open a special account designated as Sinking Fund Account for making the payments as set out in **Article 8.3 (b)**.

(b) Subject to the Concessionaire meeting his obligations in respect to the in accordance with the O&M Requirements, any balance payments from the Sinking Fund Account shall be made to the Concessionaire after completion of project period.

8.4 User Charges

Subject to the provisions of this Agreement and in consideration of the Concessionaire accepting the Concession and undertaking to perform and discharge its obligations in accordance with the terms, conditions and covenants set forth in this Agreement, AUTHORITY agrees and allow concessionaire to collect user charges at the rates as fixed in Schedule 10. However, nothing in this clause makes AUTHORITY responsible for collection of user charges. It is sole responsibility of concessionaire to collect user charges.

AUTHORITY will be responsible to create suitable mechanism to issue penalty and challans to non-payee users for non-payment of user charges. List non-payees shall be provided by concessionaire with the proof of service provided in at least 26 days in a month.

All the revenues from user charges shall be deposited into Authority Escrow account only and which will be used by Authority for payment of Tipping Fee.

The target for collection of user charge as percentage in operation plan and revised every year shall be as under:

Year	Minimum Achievement Percentage
1st	50%
2nd	60%
3rd	65%
4th	70%

5th	75%
6th Onwards	80%

Collected amount will be deposited in Authority Escrow Account but any shortfall amount from targeted user charges as mentioned in table above will be directly deducted from monthly running bill of concessionaire

8.5 Sale of Recyclable

Concessionaire shall be allowed to remove the recyclable materials from the waste and make profit out of it. The Authority will not claim any share out of the income derived out of these activities by the concessionaire.

All the revenues to concessionaire from sale of recyclable shall accrue to Escrow account only and can be appropriated only thereafter.

8.6 Performance evaluation of collection, transfer and transportation of municipal solid waste (MSW) in the Concession Area

8.6.1 Daily Work Performance Evaluation Sheet for doorstep collection, transportation of Bio degradable, Non-biodegradable, Recyclable & Green waste, is as given below.

Table 8-1Daily Work Performance Evaluation Sheet- DTDC & Transportation

S. No.	ITEM	Marks assigned	Level achieved in %	Marks Obtained	Justification for award of marks
1	Door to Door collection of waste: **Tolerance Limit:** 0% **Marking Parameter:** 100% attendance at household, shop, commercial & Institutional establishments and other waste generation sources. **Monitoring Mechanism:** GPS/IOT Based Real time monitoring	25			
2	All vehicle and manpower reported and started operation at designed time. Tolerance Limit: 45 minutes Marking Parameter: on every 1% deviation late reporting beyond	4			

	tolerance limit, 1 mark shall be deducted **Monitoring Mechanism:** GPS and online attendance system.				
3	Material recovered at MRF Centre less than 15% of input Dry waste. Tolerance Limit: 0% Marking Parameter: on every 1% less recovery of recyclable, 1 mark shall be deducted. **Monitoring Mechanism:** Weighing reports.	4			
4	Cleanliness of surroundings at the MRF Cum transfer station, standalone transfer station and status of Disinfectant sprayed. Tolerance Limit: 0% Marking Parameter: % of such points found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
5	Cleanliness (washing) of Auto Tippers/transportation vehicles Tolerance Limit: 0% Marking Parameter: % of such Vehicles found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
6	Public awareness program-conducted as per schedule. Marking Parameter: % of awareness program- conducted as per schedule. **Monitoring Mechanism:** MIS report.	4			

7	Breakdown of vehicle more than 10% Tolerance Limit: 90% Marking Parameter: non-availability of the vehicle on every 1% in excess 1 mark shall be deducted **Monitoring Mechanism:** VTS and Random inspection report.	4			
8	All trip (primary) reported at MRF/TS/MTS/FCTS. Tolerance Limit: 0% Marking Parameter: % of trips actually reported at designated site. **Monitoring Mechanism:** VTS and Random inspection report.	4			
9	Less Deployment of Manpower Than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less attendance below tolerance Limit, 1 mark shall be deducted **Monitoring Mechanism:** Online attendance report.	4			
10	Less Deployment of Vehicles than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less vehicle deployment below tolerance Limit, 1 mark shall be deducted. **Monitoring Mechanism:** VTS and Random inspection report.	4			
11	Collection & deposition of Domestic Hazardous waste at Designated collection centre. Tolerance Limit: 0%	4			

	Marking Parameter: % of trips actually reported at designated site. **Monitoring Mechanism:** VTS and Random inspection report.				
12	All Roads Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	10			
13	All Drains Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	5			
14	Number of Complaints Received at CCC or in random inspection for and not cleared within 6 Hrs. of such complaint Marking Parameter: % of Complaints actually cleared within 6 Hrs.				
	i) Non-attendance for door-to-door collection Data Source: Complaint received at CCC	3			
	ii) Nonattendance of waste deposited in litter bins, open sites and road Data Source: Complaint received at CCC/ random inspection by PMC/Authority	2			
	iii) Filth and smell from transfer point	2			

	Data Source: Complaint received at CCC/ random inspection by PMC/Authority				
	iv) Vehicle found without Top cover and/or Spillage of waste during transportation Data Source: Complaint received with photograph/ random inspection by PMC/Authority	2			
	v) Illegal parking of collection & Transportation vehicles at public places Data Source: Through VTS/random inspection by PMC/Authority	2			
	vi) Designated staff not present at Secondary Collection Point/ FCTS and Vehicles etc. or not wearing uniform or not having ID. Data Source: random inspection by PMC/Authority	2			
	vii) Any soil/excavated earth/ water found in vehicle. Data Source: random inspection by PMC/Authority	2			
15	Non-maintenance of statutory compliances. Marking Parameter: 100% deduction for non-maintenance beyond 1 month				
	i. Vehicle Insurance & fitness Data Source: Random inspection	1			
	ii. PF/ESIC compliance Data Source: Random inspection	1			
	iii. Income Tax Data Source: Random inspection	1			
	iv. CTE/CTO Data Source: Random inspection	1			
	v. Workman compensation Data Source: Random inspection	1			

	Grand Total	100			

8.7 Performance based Payment

a) The net payment based on performance evaluation of doorstep collection, transportation of Bio degradable, Non-biodegradable, Recyclable & Green waste, etc. will be worked out = Total Amount of Monthly Tipping Fee x (Average Monthly points obtained / Average Monthly points assigned).

b) Usually, a regular payment shall be made to the bidder in accordance to the marks achieved. If the bidder fails to achieve at least 75% marks for seven consecutive days in a month, the AUTHORITY may initiate the proceedings for serving default notice and if the bidder fails to achieve at least 75% marks for more than 15 consecutive days in a month AUTHORITY may initiate cancelling the contract with the bidder.

8.8 Other Conditions

a) In case of inspection by Project Monitoring Consultant on particular day after the work is completed, if work is not found satisfactory on measurement through marks/points, the amount in accordance to the loss of points for that day, shall be deducted from the monthly running bills

b) In case of AUTHORITY's representative not available for the joint inspection with the PMC, the evaluation carried out by the Project Monitoring Consultant shall be taken for processing the payment.

ARTICLE 9

9 ESCROW ACCOUNT

9.1 Escrow Account

9.1.1 The Concessionaire shall, prior to the Appointed Date, open and establish an Escrow Account with a Bank (the "Escrow Bank") in accordance with this Agreement read with the Escrow Agreement.

9.1.2 The nature and scope of the Escrow Account shall be fully described in the agreement (the "Escrow Agreement") to be entered into amongst the Concessionaire, the Authority, the Escrow Bank.

9.2 Deposits into Escrow Account

9.2.1 The Concessionaire shall deposit or cause to be deposited the following inflows and receipts into the Escrow Account:

a. All funds received from AUTHORITY, if any

b. all funds constituting the Financial Package;

c. all and any other revenues from or in respect of the Project including User Charges, including the proceeds of any rentals, deposits, capital receipts or insurance claims; and

d. all payments by the Authority, after deduction of amounts specified for post closure activity

9.3 Withdrawals during Concession Period

9.3.1 The Concessionaire shall, at the time of opening the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

a. all taxes due and payable by the Concessionaire for and in respect of the Project;

b. O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;

c. O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of this Agreement, and certified by the Authority as due and payable to it;

d. License fees & revenue due and payable to the Authority;

e. monthly proportionate provision of Debt Service due in an Accounting Year;

f. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire, including repayment of Revenue Shortfall Loan;

g. monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;

h. any reserve requirements set forth in the Financing Agreements; and

i. balance, if any, in accordance with the instructions of the Concessionaire.

9.3.2 The Concessionaire shall not in any manner modify the order of payment specified in Clause 9.3.1, except with the prior written approval of the Authority.

9.4 Withdrawals upon Termination

9.4.1 Notwithstanding anything to the contrary contained in this Agreement, all amounts standing to the credit of the Escrow Account shall, upon Termination, be appropriated in the following order:

a. all taxes due and payable by the Concessionaire for and in respect of the Project;

b. 90% (ninety per cent) of Debt Due excluding Subordinated Debt;

c. outstanding License Fees;

d. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire, including repayment of Revenue Shortfall Loan [if any];

e. retention and payments relating to the liability for defects and deficiencies set forth in Article 29;

f. outstanding Debt Service including the balance of Debt Due;

g. outstanding Subordinated Debt;

h. incurred or accrued O&M Expenses;

i. any other payments required to be made under this Agreement; and

j. balance, if any, in accordance with the instructions of the Concessionaire:

Provided that no appropriations shall be made under Sub-clause (j) of this Clause 9.4.1 until a Vesting Certificate has been issued by the Authority.

9.4.2 The provisions of Clause 9.3 to Clause 9.4 and the instructions contained in the Escrow Agreement shall remain in full force and effect until the obligations set forth in Clause 9.4.1 have been discharged.

ARTICLE 10

10 Insurance

The Concessionaire shall at its cost and expense, purchase and maintain by due re-instatement or otherwise, during the Concession Period all insurances in respect of the Project Facilities in accordance with the Good Industry Practices. The Concessionaire shall also affect and maintain such insurances as may be necessary for mitigating the risks that may devolve on the Authority as a consequence of any act or omission of the Concessionaire during the Construction Period. The Concessionaire shall procure that in each insurance policy, the Authority shall be a co-insured and that the insurer shall pay the proceeds to insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by the Concessionaire after repayment of Senior Lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of Senior Lenders' dues.

10.1 Notice of the Authority

No later than 45 (forty-five) days prior to commencement of the Construction Period and the Operation Period, as the case may be, the Concessionaire shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to effect and maintain in accordance with this Clause 10. Within 30 (thirty) days of receipt of such notice, the Authority may require the Concessionaire to effect and maintain such other insurances as may be necessary pursuant hereto, and in the event of any difference or disagreement relating to any such insurance, the Dispute Resolution Procedure shall apply.

10.2 Evidence of Insurance Cover

All insurances obtained by the Concessionaire in accordance with this Article 10 shall be maintained with insurers on terms consistent with Good Industry Practice. Within 15 (fifteen) days of obtaining any insurance cover, the Concessionaire shall furnish to the Authority, notarized true copies of the certificate(s) of insurance, copies of insurance policies and premium payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty five) days after notice of such proposed cancellation, modification or non-renewal has been delivered by the Concessionaire to the Authority. The Concessionaire shall maintain a register of entry in order of premiums paid towards Insurance of the Project Facilities.

10.3 Remedy for failure to insure

If the Concessionaire shall fail to effect and keep in force all insurances for which it is responsible pursuant hereto, the Authority shall have the option to either keep in force any such insurances, and pay such premium and recover the costs thereof from the Concessionaire, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Concessionaire.

10.4 Waiver of Subrogation

All insurance policies in respect of the insurance obtained by the Concessionaire pursuant to this Article 10 shall include a waiver of any and all right of subrogation or recovery of the insurers thereunder against, inter alia, the Authority, and its assigns, successor, underrating and their subsidiaries, affiliates, employees, insurers and underwriters and of any right of the insurers of any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

10.5 Concessionaire's waiver

The Concessionaire hereby further releases, assigns and waives any and all rights of recovery against, inter alia, the Authority, and its assigns, undertaking, and their affiliates, subsidiaries, employees, successors, assigns, insurers and underwriters, which the Concessionaire may otherwise have or acquire in or from or in any way connected with any loss, liability or obligations covered by policies of insurance maintained or required to be maintained by the Concessionaire pursuant to this Agreement (other than Third Party liability insurance policies) or because of deductible Articles in or inadequacy of limits of any such policies of insurance.

10.6 Application of Insurance Proceeds

Subject to the provisions of the Financing Documents and unless otherwise provided herein, the proceeds of all insurance policies received shall be promptly applied by Concessionaire towards repair, renovation, restoration or re-instatement of the Project Facilities or any part thereof which may have been damaged or destroyed. The Concessionaire shall designate the Authority as the beneficiary for the assets under ownership of the Authority and may designate the Senior Lenders as the beneficiaries for the assets under the Concessionaire ownership or assign the insurance policies in their favour as security for the financial assistance provided by them to the Project. The Concessionaire shall carry such repair, renovation, restoration or re-instatement to the extent possible in such manner that the Project Facilities after such repair, renovation, restoration or re-instatement to the extent possible in the same condition as it were prior to such damage or destruction, normal wear and tear accepted.

10.7 No Breach of Insurance Obligation

If during the Concession Period, any risk which has been previously insured becomes un-insurable due to the fact that the insurers have ceased to insure such a risk and therefore insurance cannot be maintained / re-instated in respect of such risk, Concessionaire shall not be in breach of its obligations regarding insurance under this Agreement.

ARTICLE 11

11 Accounts & Audits

11.1 Audited accounts

11.1.1 The Concessionaire shall maintain books of accounts recording all its receipts (including all O&M Fee and other revenues derived/collected by it from or on account of the Project and/or its use), income, expenditure, payments (including payments from the Escrow Account), assets and liabilities, in accordance with this Agreement, Good Industry Practice, Applicable Laws and Applicable Permits. The Concessionaire shall provide 2 (two) copies of its Balance Sheet, Cash Flow Statement and Profit and Loss Account, along with a report thereon by its Statutory Auditors, within 90 (ninety) days of the close of the Accounting Year to which they pertain and such audited accounts, save and except where expressly provided to the contrary, shall form the basis of payments by either Party under this Agreement. The Authority shall have the right to inspect the records of the Concessionaire during office hours and require copies of relevant extracts of books of accounts, duly certified by the Statutory Auditors, to be provided to the Authority for verification of basis of payments, and in the event of any discrepancy or error being found, the same shall be rectified and such rectified account shall form the basis of payments by either Party under this Agreement.

11.1.2 The Concessionaire shall, within 30 (thirty) days of the close of each quarter of an Accounting Year, furnish to the Authority its unaudited financial results in respect of the preceding quarter, in the manner and form prescribed by the Securities and Exchange Board of India for publication of quarterly results by the companies listed on a stock exchange.

11.2 Appointment of auditors

11.2.1 The Concessionaire shall appoint, and have during the subsistence of this Agreement as its Statutory Auditors, a firm chosen by it from the mutually agreed list of 10 (ten) reputable firms of chartered accountants (the "Panel of Chartered Accountants"). All fees and expenses of the Statutory Auditors shall be borne by the Concessionaire.

11.2.2 The Concessionaire may terminate the appointment of its Statutory Auditors after a notice of 45 (forty-five) days to the Authority, subject to the replacement Statutory Auditors being appointed from the Panel of Chartered Accountants.

11.2.3 Notwithstanding anything to the contrary contained in this Agreement, the Authority shall have the right, but not the obligation, to appoint at its cost from time to time and at any time, another firm (the "Additional Auditors") from the Panel of Chartered Accountants to audit and verify all those matters, expenses, costs, realizations and things which the Statutory Auditors are required to do, undertake or certify pursuant to this Agreement.

11.3 Certification of claims by Statutory Auditors

Any claim or document provided by the Concessionaire to the Authority in connection with or relating to receipts, income, payments, costs, expenses, accounts or audit, and any matter incidental thereto shall be valid and effective only if certified by its Statutory Auditors.

11.4 Set-off

11.4.1 In the event any amount is due and payable by the Authority to the Concessionaire, it may set-off any sums payable to it by the Concessionaire and pay the balance remaining. Any exercise by the Authority of its rights under this Clause shall be without prejudice to any other rights or remedies available to it under this Agreement or otherwise.

11.5 Dispute resolution

11.5.1 In the event of there being any difference between the findings of the Additional Auditors and the Statutory Auditors, such Auditors shall meet to resolve the differences and if they are unable to resolve the same, such Dispute shall be resolved by the Authority by recourse to the Dispute Resolution Procedure.

ARTICLE 12

12 FORCE MAJEURE AND CHANGE IN LAW

12.1 Force Majeure Event

Any of the following events which is beyond the control of the Party claiming to be affected thereby ("Affected Party") and which the Affected Party has been unable to overcome or prevent despite exercise of due care and diligence, and results in Material Adverse Effect shall constitute Force Majeure Event:

(a) earthquake, flood, inundation and landslide

(b) Epidemic& Pandemic

(c) storm, tempest, hurricane, cyclone, lightning, thunder or other extreme atmospheric disturbances

(d) fire caused by reasons not attributable to the Concessionaire or any of the employees, Contractors or agents appointed by the Concessionaire for purposes of the Project;

(e) acts of terrorism;

(f) strikes, labour disruptions or any other industrial disturbances not arising on account of the acts or omissions of the Concessionaire or the Contractor

(g) action of a Government Agency having Material Adverse Effect including but not limited to

  (i) acts of expropriation, compulsory acquisition or takeover by any Government Agency of the Project/Project Facilities or any part thereof or of the Concessionaire's or the Contractor's rights in relation to the Project,

  (ii) any judgment or order of a court of competent jurisdiction or statutory authority in India made against the Concessionaire or the Contractor in any proceedings which is non-collusive and duly prosecuted by the Concessionaire, and

  (iii) any unlawful, unauthorised or without jurisdiction refusal to issue or to renew or the revocation of any Applicable Permits, in each case, for reasons other than Concessionaire's or the Contractor's breach or failure in complying with the Project Requirements, Applicable Laws, Applicable Permits, any judgment or order of a Governmental Agency or of any contract by which the Concessionaire or the Contractor as the case may be is bound.

(h) early termination of this Agreement by AUTHORITY for reasons of national emergency or national security.

(i) any failure or delay of a Contractor caused by any of the sub-clauses (f) and (g) hereinabove, for which no offsetting compensation is payable to the Concessionaire by or on behalf of the Contractor.

(j) War, hostilities (whether declared or not), invasion, act of foreign enemy, rebellion, riots, weapon conflict or military actions, civil war, ionising radiation, contamination by radioactivity from nuclear fuel, any nuclear waste, radioactive toxic explosion, volcanic eruptions, any failure or delay of a Contractor caused by the events mentioned in this sub-clause for which no offsetting compensation is payable to the Concessionaire by or on behalf of the Contractor

12.2 Notice of Force Majeure Event

(a) As soon as practicable and in any case within 7 days of the date of occurrence of a Force Majeure Event or the date of knowledge thereof, the Affected Party shall notify Project Monitoring Consultant and the other Party of the same setting out, inter alia, the following in reasonable detail:

(i) the nature and extent of the Force Majeure Event;

(ii) the estimated Force Majeure Period;

(iii) the nature of and the extent to which, performance of any of its obligations under this Agreement is affected by the Force Majeure Event;

(iv) the measures which the Affected Party has taken or proposes to take to alleviate/mitigate the impact of the Force Majeure Event and to resume performance of such of its obligations affected thereby; and

(v) any other relevant information concerning the Force Majeure Event, and /or the rights and obligations of the Parties under this Agreement.

(b) As soon as practicable and in any case within 5 days of notification by the Affected Party in accordance with the preceding clause (a), the Parties shall along with the PMC, meet, hold discussions in good faith and where necessary conduct physical inspection/survey of the Project Facilities in order to:

(i) assess the impact of the underlying Force Majeure Event,

(ii) to determine the likely duration of Force Majeure Period and,

(iii) to formulate damage mitigation measures and steps to be undertaken by the Parties for resumption of obligations, the performance of which shall have been affected by the underlying Force Majeure Event.

(c) The Affected Party shall during the Force Majeure Period provide to the other Party and the Project Monitoring Consultant regular (not less than weekly) reports concerning the matters set out in the preceding clause (b) as also any information, details or document, which the other Party may reasonably require.

12.3 Performance of Obligations

If the Affected Party is rendered wholly or partially unable to perform any of its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such obligations to the extent it is unable to perform the same on account of such Force Majeure Event provided that:

(a) due notice of the Force Majeure Event has been given as required by the preceding **Clause 12.2**;

(b) the excuse from performance shall be of no greater scope and of no longer duration than is necessitated by the Force Majeure Event;

(c) the Affected Party has taken all reasonable efforts to avoid, prevent, mitigate and limit damage, if any, caused or is likely to be caused to the Project Facilities as a result of the Force Majeure Event and to restore the Project Facilities, in accordance with the Good Industry Practice and its relative obligations under this Agreement;

(d) when the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party and the Project Monitoring Consultant written notice to that effect and shall promptly resume performance of its obligations hereunder, the non-issue of such notice being no excuse for any delay for resuming such performance;

(e) the Affected Party shall continue to perform such of its obligations which are not affected by the Force Majeure Event and which are capable of being performed in accordance with this Agreement; and

(f) any insurance proceeds received shall be, subject to the provisions of Financing Documents, entirely applied to repair, replace or restore the assets damaged on account of the Force Majeure Event, or in accordance with Good Industry Practice.

12.4 Termination due to Force Majeure Event

(a) Termination

(i) If a Force Majeure Event, excluding events described under **Clauses 12.1(f), 12.1(g) and 12.1(h)**, continues or is in the reasonable judgment of the Parties likely to continue beyond a period of 120 days, the Parties may mutually decide to terminate this Agreement or continue this Agreement on mutually agreed revised terms. If the Parties are unable to reach an agreement in this regard, the Affected Party shall after the expiry of the said period of 120 days, be entitled to terminate this Agreement.

Notwithstanding anything inconsistent contained in this Agreement, if a Force Majeure Event is an event described under **Clauses 12.1(f), or 12.1(h)**, and the same subsists for a period exceeding 365 days, then either Party shall be entitled to terminate this Agreement.

Provided that AUTHORITY may at its sole discretion have the option to terminate this Agreement any time after the occurrence of any event described under Clauses 12**.1(f) or 12.1(h)**.

(b) Termination Notice

If either Party, having become entitled to do so, decides to terminate this Agreement pursuant to the preceding clause (a), it shall issue Termination Notice setting out;

(i) in sufficient detail the underlying Force Majeure Event;

(ii) the Termination Date which shall be a date occurring not earlier than 60 days from the date of Termination Notice;

(iii) the estimated Termination Payment including the details of computation thereof and;

(iv) any other relevant information.

(c) Obligation of Parties

Following issue of Termination Notice by either Party, the Parties shall promptly take all such steps as may be necessary or required to ensure that;

(i) the Termination Payment, if any, payable by AUTHORITY in accordance with the following **clause (d)** is paid to the Concessionaire on the Termination Date and

(ii) the Project Facilities are handed back to AUTHORITY by the Concessionaire on the Termination Date free from all Encumbrance.

(d) Termination Payment

Upon Termination of this Agreement due to a Force Majeure Event, Termination Payment shall be made to the Concessionaire by AUTHORITY in accordance with the following:

(i) If Termination is due to a Force Majeure Event, described under **Clauses 12.1(a) to 12.1(e)**, no Termination Payment shall be made by AUTHORITY to the Concessionaire but, the Concessionaire shall be entitled to receive and appropriate

(a) the proceeds of any amounts under insurance policies and

(b) the amounts in the Sinking Fund Account

(ii) If Termination is due to the occurrence of any event described under **Clauses 12.1(f), 12.1(g) or 12.1(h)**, AUTHORITY shall pay to the Concessionaire Termination Payment equal to 100 % of the Book Value of total assets as on the Date of Termination Notice less the capital grants provided by AUTHORITY, adjusted on the basis of PLR of SBI at the time of

termination. The Concessionaire would also be allowed to appropriate the amounts in the Post Closure Performance Account.

(iii) If Termination is due to the occurrence of any event described under Clause **12.1(i)**, AUTHORITY shall subject to the certification of PMC, pay to the Concessionaire, Termination payment equal to 100 % of the Book Value of total assets as on the Date of Termination Notice less the capital grants provided by AUTHORITY, adjusted on the basis of PLR of SBI at the time of termination. The Concessionaire would also be allowed to appropriate the amounts in the Post Closure Performance Account.

Provided AUTHORITY shall be entitled to deduct from the Termination Payment any amount due and recoverable by AUTHORITY from the Concessionaire as on the Termination Date.

12.5 Liability for other losses, damages etc.

Save and except as expressly provided in this **Article 12**, neither Party hereto shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event.

12.6 Change in Law

(a) Change in Law shall mean the occurrence or coming into force of any of the following, after the Appointed Date:

(iv) The enactment of any new Indian law including laws related to environment;

(v) The repeal, modification or re-enactment of any existing Indian law

(vi) A change in the interpretation or application of any Indian law by a court of record.

Provided that Change in Law shall not include:

(iii) Coming into effect, after the Appointed Date, of any provision or statute which is already in place as of the Appointed Date,

(iv) Any new law or any change in the existing law under the active consideration of or in the contemplation of any government as of the Appointed Date which is a matter of public knowledge,

(b) Subject to Change in Law resulting in Material Adverse Effect and subject to the Concessionaire taking necessary measures to mitigate the impact or likely impact of Change in Law on the Project, if as a direct consequence of a Change in Law, the Concessionaire is obliged to incur Additional Costs, and AUTHORITY shall subsequently reimburse to the Concessionaire 100% of such Additional Costs.

(c) Upon occurrence of a Change in Law, the Concessionaire may, notify AUTHORITY and the Project Monitoring Consultant of the following:

(i) The nature and the impact of Change in Law on the Project

(ii) In sufficient detail, the estimate of the Additional Cost likely to be incurred by the Concessionaire on account of Change in Law

(iii) The measures, which the Concessionaire has taken or proposes to take to mitigate the impact of Change in Law, including in particular, minimizing the Additional Cost

(iv) The relief sought by the Concessionaire

(d) Upon receipt of the notice of Change in Law issued by the Concessionaire pursuant to preceding sub-clause, AUTHORITY and the Concessionaire shall along with the Project Monitoring Consultant hold discussions and take all such steps as may be necessary including determination/certification by the Project Monitoring Consultant of the quantum of the Additional Cost to be borne and paid by AUTHORITY.

(e) AUTHORITY shall within 30 days from the date of determination of quantum of Additional Cost, provide relief to the Concessionaire in the manner as mutually agreed upon by the Parties.

ARTICLE 13

13 EVENTS OF DEFAULT AND TERMINATION

13.1 Events of Default

Event of Default shall mean either Concessionaire Event of Default or AUTHORITY Event of Default or both as the context may admit or require.

(a) Concessionaire Event of Default

a) AUTHORITY at any time may terminate the contract by giving written notice to the bidder.

If the Bidder/ Contractor becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to AUTHORITY.

If the Bidder/ Contractor creates events of default of any of the terms and conditions governing the contract or any clause of the contract including those of operation clauses of house-to-house collection, deployment of right type of vehicles and compactors, transportation of waste, recovery of recyclables etc.

If it is proved that the Contractor is intentionally and deliberately violating the provisions of the contract.

b) AUTHORITY requires that the Bidders under this tender observe the highest standards of ethics during the procurement and execution of such Contracts. In pursuance of this policy, AUTHORITY defines for the purposes of this provision, the terms set forth as follows:

"Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and

"Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or execution of the contract to the detriment of AUTHORITY, and includes collusive practice among Bidders (prior to or after Tender submission) designed to establish Contract Prices at artificial non-competitive levels and to deprive AUTHORITY of the benefits of the free and open competition.

c) If the bidder indulges in Corrupt or Fraudulent Practices, it gets disqualified for tendering or AUTHORITY may at any point of time terminate the contract by giving written notice to the Bidder, even after the work is started, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the AUTHORITY.

d) In case of failure to clarify or improve the work to the utmost satisfaction of AUTHORITY, letter of termination will be sent to the bidder.

e) If the order /contract is cancelled / terminated after commencing the work, on account of the reasons and / or failure of the Contractor to perform up to the standard as evaluated, Contractor shall;

• Hand over the entire infrastructure, sheds, cabins built, services provided by the service provider, in the premises given by AUTHORITY to an authorized representative of AUTHORITY; without any compensation.

• Hand over vehicles, equipment, procured for use immediately again to an authorized representative of AUTHORITY; without any compensation.

AUTHORITY may/shall assign the entire work and its set up to the next willing bidder or any other company or individual for operations of the services along with infrastructure, places and all vehicles and equipment acquired from the Contractor, at the risk and cost of the bidder.

Any of the following events shall constitute an Event of Default by the Concessionaire ("Concessionaire Event of Default") unless such event has occurred as a result of one or more reasons set out in this agreement:

(i) The Concessionaire has failed to adhere to the Construction Requirements and such failure, in the reasonable estimation of the PMC, is likely to delay achievement of COD beyond 60 days of the Scheduled Project Completion Date;

(ii) The Concessionaire has failed to achieve COD within 60 days of the Scheduled Project Completion Date because of the reasons attributed to failure in functioning of concessionaire;

(iii) At any time during the Concession Period, the Concessionaire fails to adhere to the Construction Requirements or O&M Requirements or O&M standards as stated in approved DPR and this agreement and has failed to remedy the same within 30 days;

(iv) The Concessionaire has failed to make any payments due to AUTHORITY and more than 30 days have elapsed since such payment default;

(v) The Concessionaire is in Material Breach of any of its obligations under this Agreement and the same has not been remedied for more than 30 days;

(vi) Any representation made or warranty given by the Concessionaire under this Agreement is found to be false or misleading;

(vii) A resolution for voluntary winding up has been passed by the shareholders of the Concessionaire;

(viii) Any petition for winding up of the Concessionaire has been admitted and liquidator or provisional liquidator has been appointed or the Concessionaire has been ordered to be wound up by Court of competent jurisdiction, except for the purpose of amalgamation or reconstruction with the prior consent of AUTHORITY, provided that, as part of such amalgamation or reconstruction and the amalgamated or reconstructed

entity has unconditionally assumed all surviving obligations of the Concessionaire under this Agreement.

(ix) A default has occurred under any of the Financing Documents and any of the Lenders has recalled its financial assistance and demanded payment of the amounts outstanding under the Financing Documents or any of them as applicable;

(x) The Concessionaire has abandoned the Project Facilities;

(xi) The Concessionaire has unlawfully repudiated this Agreement or has otherwise expressed an intention not to be bound by this Agreement;

(xii) The Concessionaire has suffered an attachment levied on any of its assets which has caused or is likely to cause a Material Adverse Effect on the Project and such attachment has continued for a period exceeding 90 days.

(b) AUTHORITY Event of Default

a) The Contractor may at any times request for termination of the contract if desired on default on the part of AUTHORITY; such as non-payment of bills or resistance from citizens and it does not get resolved by AUTHORITY, by giving written communication to AUTHORITY, the Contractor may hand over the vehicles, equipment, bins, and fixed assets created by them to AUTHORITY.

b) In case of termination /cancellation of the contract after commencing the work when AUTHORITY asks to do so on account of AUTHORITY's inability to continue, all the infrastructure, vehicles, equipment, containers brought by the Contractor may be taken over by the AUTHORITY; if requested by the Contractor; at the mutually agreed rates.

Any of the following events shall constitute an event of default by AUTHORITY ("AUTHORITY Event of Default"), when not caused by a Concessionaire Event of Default or Force Majeure Event:

(i) AUTHORITY has failed to make any payments due to the Concessionaire and more than 180 days have elapsed since such default;

(ii) AUTHORITY is in Material Breach of any of its obligations under this Agreement and has failed to cure such breach within 90 (ninety) days of receipt of notice thereof issued by the Concessionaire;

(iii) AUTHORITY has unlawfully repudiated this Agreement or otherwise expressed its intention not to be bound by this Agreement;

(iv) AUTHORITY has unreasonably withheld or delayed grant of any approval or permission which the Concessionaire is obliged to seek under this Agreement, and thereby caused or likely to cause Material Adverse Effect;

(v) Any representation made or warranties given by the AUTHORITY under this Agreement has been found to be false or misleading.

13.2 Termination due to Event of Default

(a) Termination for Concessionaire Event of Default

(i) Without prejudice to any other right or remedy which AUTHORITY may have in respect thereof under this Agreement, upon the occurrence of a Concessionaire Event of Default, AUTHORITY shall, subject to the provisions of this Agreement, be entitled to terminate this Agreement in the manner as set out under this agreement.

Provided however that upon the occurrence of a Concessionaire Event of Default as specified under this agreement, AUTHORITY may terminate this Agreement by issue of Termination Notice in the manner set out under this agreement.

(ii) If AUTHORITY decides to terminate this Agreement pursuant to preceding **clause 13.2 (i)**, it shall in the first instance issue Preliminary Notice to the Concessionaire. Within thirty (30) days of receipt of the Preliminary Notice, the Concessionaire shall submit to AUTHORITY in sufficient detail, the manner in which it proposes to cure the underlying Event of Default (the "Concessionaire's Proposal to Rectify"). In case of non-submission of the Concessionaire's Proposal to Rectify within the said period of 30 days, AUTHORITY shall be entitled to terminate this Agreement by issuing Termination Notice, and to appropriate:

a. the Performance Security, if subsisting and

b. the amounts in the Sinking Fund Account

(iii) If the Concessionaire's Proposal to Rectify is submitted within the period stipulated therefore, the Concessionaire shall have further period of 30 days to remedy/ cure the underlying Event of Default. If, however the Concessionaire fails to remedy/cure the underlying Event of Default within such further period allowed, AUTHORITY shall be entitled to terminate this Agreement, by issue of Termination Notice and to appropriate

(a) the Performance Security, if subsisting and

(b) the amounts in the Sinking Fund Account

(b) Termination for AUTHORITY Event of Default

(i) Without prejudice to any other right or remedy which the Concessionaire may have in respect thereof under this Agreement, upon the occurrence of AUTHORITY Event of Default, the Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(ii) If the Concessionaire decides to terminate this Agreement pursuant to preceding clause (i) it shall in the first instance issue Preliminary Notice to AUTHORITY. Within 30 days of receipt of Preliminary Notice, AUTHORITY

shall forward to the Concessionaire its proposal to remedy/ cure the underlying Event of Default (the "AUTHORITY Proposal to Rectify"). In case of non-submission of AUTHORITY Proposal to rectify within the period stipulated therefore, Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(iii) If AUTHORITY Proposal to Rectify is forwarded to the Concessionaire within the period stipulated therefore, AUTHORITY shall have further period of 30 days to remedy/ cure the underlying Event of Default. If, however AUTHORITY fails to remedy/ cure the underlying Event of Default within such further period allowed, the Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(c) Termination Notice

If a Party is having become entitled to do so decide to terminate this Agreement pursuant to the preceding sub article (a) or (b), it shall issue Termination Notice setting out:

(i) in sufficient detail the underlying Event of Default;

(ii) the Termination Date which shall be a date occurring not earlier than 60 days from the date of Termination Notice;

(iii) the estimated termination payment including the details of computation thereof; and,

(iv) any other relevant information.

(d) Obligation of Parties

Following issue of Termination Notice by either Party, the Parties shall promptly take all such steps as may be necessary or required to ensure that;

(i) until Termination the Parties shall, to the fullest extent possible, discharge their respective obligations so as to maintain the continued operation of the Project Facilities;

(ii) the termination payment, if any, payable by AUTHORITY in accordance with the following **sub - article (f)** is paid to the Concessionaire on the Termination Date; and

(iii) the Project Facilities are handed back to AUTHORITY by the Concessionaire on the Termination Date free from any Encumbrance along with any payment that may be due by the Concessionaire to AUTHORITY.

(e) Withdrawal of Termination Notice

Notwithstanding anything inconsistent contained in this Agreement, if the Party who has been served with the Termination Notice cures the underlying Event of Default to the satisfaction of the other Party at any time before the Termination occurs, the Termination Notice shall be withdrawn by the Party which had issued the same.

Provided that the Party in breach shall compensate the other Party for any direct costs/consequences occasioned by the Event of Default which caused the issue of Termination Notice.

(f) Termination Payments

Upon Termination of this Agreement on account of AUTHORITY Event of Default, the Concessionaire shall be entitled to withdraw the Performance Security, if subsisting, and receive from AUTHORITY, termination payment equal to 120% of the Book Value of total assets of project as on Termination Date and amounts in the Post Closure Performance Account less the capital grants received by concessionaire adjusted on the basis of PLR of SBI at the time. Cost of valuator in such case shall be borne by AUTHORITY.

Upon Termination of this Agreement on account of Concessionaire Event of Default, Concessionaire shall be entitled to receive from AUTHORITY termination payment equal to 80% of the estimated project cost as approved by AUTHORITY less grants received by concessionaire and adjusted on the basis of PLR of SBI as on the Termination Date less the penalties imposed by AUTHORITY for event of default.

Here **Estimated Project Cost** shall mean project cost estimated in DPR prepared by Concessionaire and approved by AUTHORITY.

13.3 Rights of AUTHORITY on Termination

(a) Upon Termination of this Agreement for any reason whatsoever, AUTHORITY shall upon making the Termination Payment, if any, to the Concessionaire have the power and authority to:

(i) enter upon and take possession and control of the Project Facilities i/c vehicles, workshop etc. forthwith;

(ii) prohibit the Concessionaire and any person claiming through or under the Concessionaire from entering upon/ dealing with the Project Facilities;

(b) Notwithstanding anything contained in this Agreement, AUTHORITY shall not, as a consequence of Termination or otherwise, have any obligation whatsoever including but not limited to obligations as to compensation for loss of employment, continuance or regularisation of employment, absorption or re-employment on any ground, in relation to any person in the employment of or engaged by the Concessionaire in connection with the Project, and the hand back of the Project Facilities by the Concessionaire to AUTHORITY shall be free from any such obligation.

13.4 Accrued Rights of Parties

Notwithstanding anything to the contrary contained in this Agreement, Termination pursuant to any of the provisions of this Agreement shall be without prejudice to accrued rights of either Party including its right to claim and recover money damages and other rights and remedies which it may have in law or contract. The rights and obligations of either Party under this Agreement, including without limitation those relating to the

Termination Payment, shall survive the Termination but only to the extent such survival is necessary for giving effect to such rights and obligations.

ARTICLE 14

14 HANDBACK OF PROJECT FACILITIES

14.1 Ownership

Without prejudice and subject to the Concession, the ownership of the Project Facilities, including all improvements made therein by the Concessionaire, shall at all times remain that of AUTHORITY.

14.2 Concessionaire's Obligations

12.1.1 **Transfer of the movable and immovable assets by the bidder; after Completion of the Contract i.e., 10 Years after COD or as extended thereupon, to the ULB**

(a) The Contractor shall at the end of the Contract period hand back vacant and peaceful possession of the Project Facilities to ULB free of cost and in good operable condition.

(b) AUTHORITY may decide to extend the contract or announce completion; a letter to this effect shall be given by AUTHORITY. On acceptance of the extension a new contract agreement shall be signed and the work shall continue un-interruptedly with use of same vehicles, equipment and infrastructure etc.

(a) All Vehicles, Workshops, Offices, Communication arrangements etc. and immovable infrastructure/ facilities: On completion of the contract period, unless it is extended, the bidder will transfer All Vehicles, Workshop, Offices, Communication arrangements etc. and immovable infrastructure/ facilities to ULB, in working conditions, free of cost.

(c) The Concessionaire hereby acknowledges AUTHORITY's and ULB's rights specified in this agreement enforceable against it upon Termination and its corresponding obligations arising there from. The Concessionaire undertakes to comply with and discharge promptly all such obligations.

14.3 AUTHORITY's Obligations

AUTHORITY shall, subject to AUTHORITY's right to deduct amounts from the Performance Security towards;

(i) carrying out works/jobs listed under Scope of work, which have not been carried out by the Concessionaire,

(ii) purchase of items, which have not been handed back to ULB along with the Project Facilities which were part of approved DPR/Plan, and

(iii) any outstanding dues, which may have accrued in respect of the Project during the Concession Period, duly discharge and release to the Concessionaire the amounts in the Post Closure Performance Account in accordance with this agreement.

ARTICLE 15

15 DISPUTE RESOLUTION

15.1 Amicable Resolution

(a) Save where expressly stated to the contrary in this Agreement, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to this Agreement, including those arising with regard to acts, decision or opinion of the Project Monitoring Consultant (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set forth in **clause (b)** below.

(b) Either Party may require such Dispute to be referred to the MUNICIPAL COMMISSIONER (or the Person holding charge) and the Director of the Concessionaire for the time being, for amicable settlement. Upon such reference, the two shall meet at the earliest mutual convenience and in any event within 15 days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicably settled within 15 (fifteen) days of such meeting between the two, either Party may refer the Dispute to arbitration in accordance with the provisions of **Article 15.2** below.

15.2 Arbitration

(a) Procedure

Subject to the provisions of **Article 15.1**, any Dispute which is not resolved amicably shall be finally settled by binding arbitration under the Arbitration Act. The arbitration shall be by a panel of three arbitrators, one to be appointed by each Party and the third to be appointed by the two arbitrators appointed by the Parties. The Party requiring arbitration shall appoint an arbitrator in writing, inform the other Party about such appointment and call upon the other Party to appoint its arbitrator. If within 15 days of receipt of such intimation, the other Party fails to appoint its arbitrator, the Party seeking appointment of arbitrator may take further steps in accordance with Arbitration Act.

(b) Place of Arbitration

The place of arbitration shall be Lucknow, .

(c) English Language

The request for arbitration, the answer to the request, the terms of reference, any written submissions, any orders and awards shall be in English and, if oral hearings take place, English shall be the language to be used in the hearings.

(d) Enforcement of Award

The Parties agree that the decision or award resulting from arbitration shall be final and binding upon the Parties and shall be enforceable in accordance with the provisions of the Arbitration Act subject to the rights of the aggrieved parties to secure relief from any higher forum.

15.3 Performance during Dispute

Pending the submission of and/or decision on a Dispute and until the arbitral award is published, the Parties shall continue to perform their respective obligations under this Agreement without prejudice to a final adjustment in accordance with such award.

ARTICLE 16

16 REPRESENTATIONS AND WARRANTIES

16.1 Representations and Warranties of the Concessionaire

The Concessionaire represents and warrants to AUTHORITY that:

(a) it is duly organised, validly existing and in good standing under the laws of India;

(b) it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

(c) it has taken all necessary corporate and other action under Applicable Laws and its constitutional documents to authorise the execution, delivery and performance of this Agreement;

(d) it has the financial standing and capacity to undertake the Project;

(e) this Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(f) the execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of the Concessionaire's Memorandum and Articles of Association or any Applicable Laws or any covenant, agreement, understanding, decree or order to which it is a party or by which it or any of its properties or assets are bound or affected;

(g) there are no actions, suits, proceedings or investigations pending or to the Concessionaire's knowledge threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may constitute Concessionaire Event of Default or which individually or in the aggregate may result in Material Adverse Effect;

(h) it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Agency which may result in Material Adverse Effect;

(i) it has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect;

(j) subject to receipt by the Concessionaire from AUTHORITY of any amount due under any of the provisions of this Agreement, in the manner and to the extent provided for under the applicable provisions of this Agreement all rights and interests of the Concessionaire in and to the Project Facilities shall pass to and vest in AUTHORITY on the Termination Date free and clear of all Encumbrances without any further act or deed on the part of the Concessionaire or AUTHORITY;

(k) no representation or warranty by the Concessionaire contained herein or in any other document furnished by it to AUTHORITY or to any Government Agency in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;

(l) no bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Concessionaire to any person to procure the Concession.

(m) Without prejudice to any express provision contained in this Agreement, the Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has after a complete and careful examination made an independent evaluation of the Project Facilities, and the information provided by AUTHORITY, and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Concessionaire in the course of performance of its obligations hereunder.

(n) The Concessionaire also acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth above and hereby confirms that AUTHORITY shall not be liable for the same in any manner whatsoever to the Concessionaire.

16.2 Representations and Warranties of AUTHORITY

AUTHORITY represents and warrants to the Concessionaire that:

(a) AUTHORITY has full power and authority to grant the Concession;

(b) AUTHORITY has taken all necessary action to authorise the execution, delivery and performance of this Agreement;

(c) This Agreement constitutes AUTHORITY's legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(d) There are no suits or other legal proceedings pending or threatened against AUTHORITY in respect of the Project Facilities or the Project.

16.3 Obligation to Notify Change

In the event that any of the representations or warranties made/given by a Party cease to be true or stands changed, the Party who had made such representation or given such warranty shall promptly notify the other of the same.

ARTICLE 17

17 MISCELLANEOUS

17.1 Assignment and Charges

(a) The Concessionaire shall not assign in favour of any person this Agreement or the rights, benefits and obligations hereunder save and except with prior consent of AUTHORITY.

(b) The Concessionaire shall not create nor permit to subsist any Encumbrance over the Project Facilities except with prior consent in writing of AUTHORITY, which consent AUTHORITY shall be entitled to decline without assigning any reason whatsoever.

(c) Restraint set forth in clauses (a) and (b) above shall not apply to:

(i) liens/encumbrances arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Concessionaire:

(ii) Pledges/hypothecation of goods/ moveable assets, revenue and receivables as security for indebtedness, in favour of the Lenders and working capital providers for the Project;

(iii) Assignment of Concessionaire's rights and benefits under this Agreement to or in favour of the Lenders as security for financial assistance provided by them.

17.2 Interest and Right of Set Off

Any sum which becomes payable under any of the provisions of this Agreement by one Party to the other Party shall, if the same be not paid within the time allowed for payment thereof, shall be deemed to be a debt owed by the Party responsible for payment thereof to the Party entitled to receive the same. Such sum shall until payment thereof carry interest at prevailing prime lending rate of State Bank of India per annum from the due date for payment thereof until the same is paid to or otherwise realised by the Party entitled to the same. Without prejudice to any other right or remedy that may be available under this Agreement or otherwise under law, the Party entitled to receive such amount shall also have the right of set off.

Provided the stipulation regarding interest for delayed payments contained in this agreement shall neither be deemed nor construed to authorise any delay in payment of any amount due by a Party nor be deemed or construed to be a waiver of the underlying breach of payment obligations.

17.3 Governing Law and Jurisdiction

This Agreement shall be governed by the laws of India. The Courts at Lucknow shall have jurisdiction over all matters arising out of or relating to this Agreement.

17.4 Waiver

(a) Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:

(i) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under this Agreement;

(ii) shall not be effective unless it is in writing and executed by a duly authorised representative of such Party; and

(iii) shall not affect the validity or enforceability of this Agreement in any manner.

(b) Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation hereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver/breach of any terms, conditions or provisions of this Agreement.

17.5 Survival

Termination of this Agreement

(a) shall not relieve the Concessionaire or AUTHORITY of any obligations already incurred hereunder which expressly or by implication survives Termination hereof, and

(b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

17.6 Amendments

This Agreement and the Schedules together constitute a complete and exclusive understanding of the terms of the Agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

17.7 Notices

Unless otherwise stated, notices to be given under this Agreement including but not limited to a notice of waiver of any term, breach of any term of this Agreement and termination of this Agreement, shall be in writing and shall be given by hand delivery, recognized international courier, mail, telex or facsimile transmission and delivered or transmitted to the Parties at their respective addresses set forth below:

If to AUTHORITY:

Municipal Commissioner

LUCKNOW NAGAR NIGAM

And

Chief Executive Officer

Lucknow Smart City Limited

If to the **Concessionaire**:

The Managing Director,

----------,

----------,

Fax No. ----------

Or such address, telex number, or facsimile number as may be duly notified by the respective Parties from time to time, and shall be deemed to have been made or delivered

(i) in the case of any communication made by letter, when delivered by hand, by recognized international courier or by mail (registered, return receipt requested) at that address, and

(ii) in the case of any communication made by telex or facsimile, when transmitted properly addressed to such telex number or facsimile number.

17.8 Severability

If for any reason whatsoever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Agreement or otherwise.

17.9 No Partnership

Nothing contained in this Agreement shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any authority to bind the other in any manner whatsoever.

17.10 Language

All notices required to be given under this Agreement and all communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

17.11 Exclusion of Implied Warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties and any representation by any Party not contained in a binding legal agreement executed by the Parties.

17.12 Counterparts

This Agreement may be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement but shall together constitute one and only the Agreement.

IN WITNESS WHEREOF THE, PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED SEALED AND DELIVERED

For and on behalf of LUCKNOW NAGAR NIGAM by: (Signature) (Name) (Designation)	**For and on behalf of LUCKNOW SMART CITY LIMITED by:** (Signature) (Name) (Designation)	**For and on behalf of CONCESSIONAIRE by:** (Signature) (Name) (Designation)
In the presence of : 1)	2)	3)

SCHEDULE "1"

DETAILS OF PROJECT FACILITIES

SCHEDULE "2"

OPERATIONS AND MAINTENANCE REQUIREMENTS FOR COLLECTION, SEGREGATION, MATERIAL RECOVERY, TRANSFER & TRANSPORTATION

1 General

(a) The Concessionaire shall comply with the O&M Requirements set out in this Schedule. In doing so, the Concessionaire shall ensure that the work of collection & transportation is maintained to the standards and specifications as set out in the DPR of Solid waste management.

(b) In the planning and implementation of all works and functions associated with the operation and maintenance of the Door to door collection, MRF, Road Sweeping & Drain Cleaning, the Concessionaire shall take all such actions and do all such things (including without limitation, organising itself, adopting measures and standards, executing procedures including inspection procedures, and engaging contractors, if any, agents and employees) in such manner, as will:

(i) Ensure following all standards, Rules framed for waste Management by State / Central Government.

(ii) Ensure adherence to Scope of work and Detailed Operation Plan.

(iii) ensure the safety of personnel deployed;

(iv) keep the city free from garbage and all vehicles and facilities free from undue deterioration and wear;

(v) permit unimpaired performance of statutory duties and functions of any party in relation to the Project;

(c) During the Active Operations Period and till the date of hand back of project Facilities, the Concessionaire shall, in respect of the collection, MRF, Road Sweeping & Drain Cleaning work ensures that:

(i) applicable and adequate safety measures are taken;

(ii) the Project Facilities are kept free from undue deterioration and undue wear;

(iii) adverse effects on the environment is minimized and standards as mention SWM Rules 2016 if followed;

(iv) any situation which has arisen or likely to arise on account of any accident or other emergency is responded to as quickly as possible and its adverse effects controlled/minimized;

(v) data relating to the operation and maintenance of the collection, Transportation work is collected;

(vi) all materials used in the maintenance, repair and replacement of collection & Transportation vehicles shall meet the standard Requirements of servicing set by vehicle manufacturing company;

(vii) the personnel assigned by the Concessionaire have the requisite qualifications and experience and are given the training necessary to enable the Concessionaire meet the O&M Requirements.

1. Operations and Maintenance Manual and O&M Plans

(a) Prior to making application for the Readiness Certificate for the Project the Concessionaire shall finalise in consultation with the Project Monitoring Consultant:

(i) the O&M Manual (including the formats for the reports to be submitted during the Active Operations Period)

(ii) the O&M Plan for the first year of operations.

(b) Six weeks prior to the anniversary of COD each year, the Concessionaire shall submit to the Project Monitoring Consultant and AUTHORITY an annual O&M Plan for the next year of operations.

2. Daily work performance standards for doorstep collection, transportation

2.1 Performance standard for Door-to-Door collection and transportation

Door to Door collection shall be performed in all wards of project area. The door-to-door collection to include all household, government office complexes, non-government office complex, authorized colonies, unauthorized regularized colonies, all market/ commercial/ institutional places, slums and even from undesignated points by means of deployment of suitable vehicles. This shall also include by-lanes, lanes and streets. The concessionaire shall also be responsible for collection of waste from road side litterbins, horticulture waste etc.

Concessionaire shall also ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure disposal of such waste as per relevant Rules and standards.

The segregation should be in three categories i.e., Compostable or Green waste; Recyclables or Dry Waste; and Domestic Hazardous Waste. It is expected that the proposed approach for the collection of recyclables includes the management of materials in a manner that minimizes the cost to the Authority by establishing an efficient collection that minimizes contamination, maximizes diversion rates / recycling rate as well as revenues to the stakeholders.

All the vehicles and infrastructure required for project shall be procured and deployed by concessionaire.

2.2 Scope of work to be done by the successful bidder:

- Daily Primary (door to door) collection and transportation of MSW from houses (including slums), hotels and restaurants, all commercial establishments, institutions, offices etc using feasible methods in LMC "service area" as per SWM Rules 2016.
- The Concessionaire shall be responsible to collect pre-segregated and/or unsegregated waste (as per KPIs) from waste generators. The Concessionaire shall segregate the waste in three separate streams namely Bio-Degradable, Non-Biodegradable and Domestic Hazardous Waste and store separately in suitable bins (biodegradable waste in green colour bin, non-biodegradable waste in blue/white colour bin, domestic hazardous and sanitary waste in black box or bag).
- The Concessionaire shall create beat of each service area for undertaking activity. Each beat shall be assigned to one waste collector. Beat information shall be provided in tabular form as well as in GIS map duly verified/approved by PMC/Authority shall mention starting point, start time, waiting points, waiting time on route and end time of the specified Route. This shall be displayed on the Board at each street to display time- table of primary collection & transportation vehicles to allow residents avail the facility at prescribed time. This shall be also made accessible to general public on the web-based application and at the Authority's website or as agreed and accepted in Operation Plan.
- Operation & Maintenance of MRF cum Transfer station/ Standalone Transfer Station.
- Collection of waste generated during special events/festival seasons.
- Collection of Municipal waste from industrial establishments in service area.
- Operating and maintaining a dedicated collection and transportation mechanism for waste generated from various bulk waste generators and special category of waste generators like restaurants, hotels, marriage gardens, vegetable and fruit markets, temples, garden waste, slaughter houses, meat and fish markets' waste etc.
- It shall be the responsibility of concessionaire to clean and sweep at least 5.0-meter area around the garbage containers/bins.
- Operating and maintaining a collection mechanism for any other type of waste which is considered as MSW in Solid Waste (Management and Handling) Rules, 2016 and subsequent amendments thereof and CPHEEO manual guidelines shall be followed.
- The Successful Bidder shall inter alia deploy vehicles, own manpower (including driver), machinery and operate and manage the 'door to door' segregated collection, encourage 3 R principal of waste minimization at source and bear all cost of operation and management during the Contract Period by undertaking these key activities:

- The collection shall conform to the public notices issued by commissioner, LMC and Solid Waste (Management and Handling) Rules, 2016 and any amendments there upon.
- The successful bidder should/must collect Wet waste on daily basis and should put in place effective suitable mechanism for regular door to door collection of dry MSW and the frequency for collection of door to door dry waste may vary according to type and waste generators quantity of dry waste generated (commercial and bulk waste generator-daily, Household- thrice in a week or such other frequency including daily collection if Authority in its' opinion finds need for maintain proper hygiene and sanitation within the city area.
- The successful bidder should promote MSW Segregation at household level through providing their support to awareness campaigns and other suitable means organized by LMC.
- The successful bidder should collect waste from doorstep by following a fixed time schedule.
- Use of appropriate door to door collection vehicles like pushcarts/ and auto tipper/Goods autos in the appropriate ratio depending on the condition, dimension of the street for making the collection and shifting operation easy and efficient.
- Auto tipper/Goods autos should have an inbuilt mike system to announce about the door-to-door collection. Pushcarts shall have to carry appropriate bell ringing system of permissible decibels to draw attention of the community.
- Any non-co-operation of public in offering wastes/ littering garbage shall be brought to the notice of LMC/RWA's with sufficient evidence.
- The wet waste shall need to be transferred from Auto tipper/Goods autos/Pushcarts to the any available decentralized composting units and the dry waste shall need to be transferred to the nearby dry waste collection centres and MRF.
- For Wet waste in additional to the quantum of wet waste transferred to decentralized composting units, shall need to be transferred from Auto tipper/Goods autos/ Pushcarts into Portable compactors /Refuse Compactor vehicles located at MRF cum Transfer Station or standalone Transfer Station, so that waste can be transported more economically, efficiently over long distances to the processing facility on due weighment (Density/Volume basis). Similarly, if there is no MRF in particular ward, the dry waste shall need to be transferred from Auto tipper/Goods autos/ Pushcarts into Portable compactors /Refuse Compactor vehicles located at MRF cum Transfer Station or standalone Transfer Station, so that waste can be transported more economically, efficiently over long distances to the processing facility.
- Wet waste and dry waste shall not be mixed either at the time of collection or transferring the same to the secondary storage point.
- In no case waste once lifted should touch the ground. It is the responsibility of the bidder that he should ensure that no waste is accumulated in the secondary collection points at any point of time. The wet MSW so collected shall be transported immediately to designated locations.
- The waste from the Bulk waste generators, shop keepers, vendor and street hawkers shall be compulsorily collected in segregated form without allowing them to throw the waste at untimely hours near the secondary storage points.

- The personnel deployed for door-to-door collection of segregated waste shall need to be provided with appropriate protective gears like uniforms, gloves, masks etc.

2.3 Operation & Maintenance of MRF/Transfer station

Segregated Dry waste and Mixed waste shall be brought to Material Recovery facility for recovery of recyclable waste. Concessionaire shall deploy sufficient manpower for operation of manual sorting conveyors and other machineries. Proper record of waste received, material recovered and material transferred to processing site shall be maintained.

The personnel deployed at MRF and Transfer station shall need to be provided with appropriate protective gears like uniforms, gloves, masks etc.

2.4 Commercial, Bulk and other MSW collection and transportation

a) The Concessionaire shall be responsible for providing time table bound Primary SW collection service from Commercial Establishments (Vegetable Market, Fruit Market, Daily Market, Fish Market, Street Vendors etc.), Hotels, Restaurants, Banquet Hall, Institution, Other Commercial Establishments, Bulk Waste Generators (BWGs) and any other establishment as notified by the Authority. The Commercial and bulk waste generators waste etc., should be segregated primarily into:
   - Wet Waste and
   - Dry waste
   - Domestic Hazardous Waste

b) The Concessionaire shall provide route plan with Time Table for each primary collection vehicles. Route plan shall clearly mention Ward, Area/Locality and street etc. which shall be provided in tabular form as well as in GIS map duly verified/approved by PMC/Authority

c) Auto tippers/E-rickshwas with mechanical "Bin - Lifting" capability to lift 240 litter bin / 120 litre bin (AT 1.8 with Bin lifting Capability) shall collect the SW and transfer the wet waste directly to decentralized compost sites and dry waste to the designated Recycling Centers or to dedicated MTS or FCTS or any other site designated by Authority.

d) Concessionaire shall plan to collect SW from Markets, Hotels, Dhabas, Restaurants, Banquet Hall, Farm House, Schools, Colleges & other Commercial Establishments in coinciding with opening time of these establishments.

e) Auto tippers/E-rickshwas engaged in this service shall collect the waste only from Commercial establishments. Auto tippers/E-rickshwas shall not dump/lift the waste from any Dhalao /open site or any other location in any circumstances and shall

f) The bulk waste generated from such source to be collected in segregated form, the wet waste shall be transport to the designated location and dry waste shall be transport to dry waste collection centres.

g) The successful bidder should collect e-waste generated from the households and commercial establishments on the last day of every month and transport the same to the designated location notified by LMC. It is planned to keep one E-waste collection centre between a cluster of 2 to 3 wards.

2.5 Collection & Transportation of Horticulture and Garden Waste from colonies or public places

a) The Concessionaire shall be responsible for the collection and transportation of horticulture/garden waste generated from public places, specific colonies/localities using Auto tippers 1.75 Cum.

b) The Concessionaire shall deploy separate vehicles for collection and transportation of horticultural/garden waste.

c) The Concessionaire shall deposit green waste at designated green waste management centres (nurseries).

d) Concessionaire shall be responsible for increasing the collection as per directions given by the Authority during the seasonal variation

e) Waste collected using this service shall not (in any condition) be unloaded in Secondary Collection Points or any other sites/ points

f) Green waste shall not be mixed with any other kind of waste

2.6 Drain Cleaning: Clearing and uprooting rank vegetation, grass, bushes, shrubs, and disposal of unserviceable materials, including removal and disposal of silt and any kind of temporary, permanent, RCC, PCC and other solid obstruction from the drains. Excavation and removal of silt or silt mixed with sand in slushy condition from drain bed including lift and disposing off the same.

i. The drains must be cleaned and desilted by Manual/mechanical means or combination of both i.e. Excavator, JCB, Barge Mounted Poclain etc. without damaging to the above ground and underground utilities / properties etc. wherever possible. In case use of machinery is not possible, then only manual human based (with all safety gadgets) cleaning is done
ii. The agency should maintain the level of drains and water way according to the level as per original construction. The depth shall be maintained any time throughout the year.
iii. The desilted material shall be disposed with all lead and lift as instructed by the PMC. For avoidance of doubt ripper/dumper/carrier etc. should be leak

proof.

iv. Desilted material must not be dumped in road/ footpath side, it should be loaded directly in ripper/dumper/carrier etc .
v. Involvement of man power should be minimum in all the nala and machineries should be engaged as far as possible.
vi. Involvement of the drains along the narrow roads and Liquid state silt the desilted materials may be dumped by the side of the road temporarily which must be removed within 24 hours of dumping. Failing to remove the same within 24 hrs will attract a penalty of 0.01% of Package value per day.

2.7 Road Sweeping: The Operator shall ensure to conduct sweeping and cleaning of the Zone-1 including Main Roads, service roads, Arterial Roads (streets, narrow streets, gullies) footpaths, road berms, central verge, curb channels, curb stones gully etc., which means complete solution for RoW (right of way) by manual/mechanical means or combination of both. The objective is to keep the areas litter and dust free for 24x7. The type of work to be conducted is as under: All Roads of 7 mts and above to be mechanically swept. (Only sides of the roads are to be manually swept). For areas on these particular roads not covered by Machine/s, litter picking to be done daily.

i. All Mechanical sweeping machines to be equipped with GPS devices and both front and rear camera.
ii. It is the responsibility of the bidder to maintain a computerized central monitoring control room for the vehicles and provide monthly reports to the 3rd party / authority with actual GPS based vehicle movement report.
iii. The generated report should also include real time pictures (min no. 1 per Kms, per Pass) of the work undertaken through manual/mechanical sweeping (Vehicle mounted cameras (front and reverse both) can be used for this as well).
iv. The Operator has to share a detailed operations plan for each month (Schedule plan has to be shared by the operator at the beginning of each month), for all the areas. Mechanical, Manual Sweeping of Roads & Cleaning services in all Wards of Zone-1 Nagar Nigam Lucknow Uttar Pradesh.
v. Swept roads shall be kept litter and dust free during the next day operation hours, from entire wall-to-wall basis. Sweeping of Roads/ Streets/ Lanes would include Bitumen, Pakka, Footpath, Ramps and kuccha portions including sides – Corner to corner.
vi. The operator needs to ensure that where ever the mechanized sweeping of road in not possible, that particular stretch of the road area has to be manually swept to ensure cleanliness. Frequency of manual cleaning including litter picking to be worked out at 6 days/week.
vii. Fuel operated Air blower to be used ahead of sweeping machines to bring the litter / leaves and dust from the pavements / cycle tracks / all difficult to reach

areas on the path of the machine for easy collection by the sweeping machines.

viii. The operator would use Litter Picking machine in areas as assigned by the Authority on everyday basis.

ix. High Pressure washing of pavements, footpaths, dividers, medians, roundabout, bus stand, street furniture, signage & Monuments facia. once a week or as per need arise.

x. Wild grass and vegetation on the side berms, footpaths, medians of all roads shall be removed by the Operator once a month.

xi. Every cleaning worker to be equipped with Litter Picking stick for comfortable collection of bulk litter like polythene, paper etc.

xii. Clearance of upto 1 Mts open drains running along with the carriage way.

xiii. Bush and Grass Cutting at ground level and hand-held distance to be necessarily done mechanically with help of hand-held fuel operated brush cutters.

xiv. Necessary arrangements to be made for Tree Pruning and mechanical means would be preferred.

xv. Manual Sweeping:

The Operator shall ensure that the employees are in proper dress, and also ensure placement of safety devices and signages at Project Site during the working hours, as per the specification. Every Worker, Supervisor and Manager to be equipped at all times during working hours: Safety. Caps / Helmets, Nose Mask, Rain Coats, Gloves, Radium Jackets, Safety Boots. Ignoring the safety requirements as mentioned above by the Operator shall result in a fine of Rs 200/- per day per default per person.

2.8 Domestic Hazardous & Domestic bio-medical waste

a) Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure handover/disposal of such waste as per relevant Rules and standards.

b) Concessionaire shall be responsible for collecting segregated Domestic Hazardous Waste from the households on bi-weekly basis and transport it to the DHW Depositing Centre for its safe storage. The concessionaire shall notify the timing and schedule of receipt of DHW waste collection.

c) As per SWM Rules 2016, One DHW Depositing Centre shall be established for every 20 sq. km. of area. The Authority shall identify suitable location where the DHW depositing center can be established. Authority shall be responsible to provide fully developed DHW Deposition Centre to the Concessionaire.

Required no. of Domestic Hazardous Waste Depositing Centers (As per SWM Rules, 2016)

Particulars	Numbers
Area (Sq. km)	75
Nos. to be established as per rules	4
Area Requirement (sq. m)	10

d) The DHW Depositing Centres shall be maintained by Concessionaire during the Concession Period. The Concessionaire shall provide adequate manpower and infrastructure for the functioning of Deposition Centres as specified under KPIs.

e) The Authority shall make arrangements with UPPCB to ensure that DHW is collected from the DHW Depositing Centers and transported to the UPPCB designated disposal facility/ site as identified by UPPCB. The timings and frequency of clearance of waste in DHW Depositing Centers shall be decided by the Authority.

f) The Concessionaire shall safely keep the DHW at the DHW Depositing Centers and shall handover the DHW to the agency appointed by the UPPCB/Authority.

g) The Concessionaire shall run IEC activities for waste generators for separate storage of DHW and its safe disposal.

h) The DHW Depositing Centre shall comply with the below mentioned requirements

   i. Must be completely enclosed
   ii. Must have decontaminated area for personnel and equipment
   iii. The building units should be chemically compatible with the hazardous waste
   iv. Must have a leak detection system to indicate any failure in the integrity of floor
   v. It must be open form 8.00 am to 8.00 pm to receive the DHW

i) The above provides only indicative requirements of "Domestic Hazardous Waste Depositing Centres". The Authority in consultation with IE and UPPCB shall develop detailed guidelines for management of DHW Depositing Centres with detailed specifications of the each and every component

2.9 Procurement of Equipment / Machinery: Concessionaire shall procure shortfall of vehicle and equipment/assests for door-to-door collection & Mechanised Sweeping, MRF Cum TS, Drain Cleaning, Road Sweeping and Workshop on 100 %

financing of LMC as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assests and ensure its registration in the name of LMC.

2.10 Vehicle required for Door-to-Door Collection: Vehicle required for Door-to-Door Collection shall be procured by concessionaire on 100% financing of LMC. Concessionaire have liberty to propose different type and quantity of such vehicles as proposed and approved in concessionaire operation plan.

2.11 Support Infrastructure development including but not limited to workshops and development of adequate parking Spaces, is to be done by the Concessionaire. Land for construction of workshop and parking of vehicles will be provided by LMC. The bidder shall also arrange necessary infrastructure/ spare parts etc. and manpower for the purpose of regular maintenance of the vehicles, machinery & equipment etc.

2.12 Manpower: The Concessionaire shall be responsible for deployment of all manpower for waste collection, Street Sweeping, Drain Cleaning, transportation, user charges collection & recovery of recyclables of Waste including the key personnel for the management and supervision of all Project-related activities. (This would include the designation of suitably qualified personnel for areas such as contract administration and supervision, construction management, safety, environmental management, plant and equipment maintenance, procurement, materials management and quality control),

2.13 Co-ordination with LMC: The Concessionaire shall provide project related information at regular interval in the form and manner as prescribed by LMC. In case of any law & order problems, the Concessionaire shall inform promptly the LMC about the same and will act as per the direction of the LMC.

2.14 The Concessionaire shall be responsible for all other activities apart from activities as listed above towards successful implementation, operation, maintenance and management of the project in line with Solid Waste Management Rules, 2016 (hereinafter referred as the "SWM Rules 2016"), SBM-2 guidelines or as revised from time to time and Good Industry Practices.

2.15 Awareness Campaign: Concessionaire shall be responsible for undertaking awareness campaigns through various medium to spread awareness about the Project and promote segregation of MSW at the individual household level. Also, it has to undertake awareness campaign regarding non-usage of plastics. It may be clarified over here that LMC on its own will be free to devise booster campaigns on these same issues at its own discretion.

2.16 Time Schedules for implementation of daily work schedule

The Concessionaire shall adhere to the time schedule set out in operation plan and approved by LMC for implementation of the various Package/Parts of the Project. The successful bidders shall also ensure additional cleaning requirement on festival and other

contingency caused by rain and other natural disasters requiring appropriate garbage and other clearing.

2.17 Repairs and Maintenance

Concessionaire shall carry out regular repairing and maintenance of all equipment and vehicles being deployed at his own cost after handover of the vehicles by LMC.

2.18 Smart Solid Waste Collection & Management Systems {Information & Communication Technology (ICT):

a. The successful bidder shall compulsorily install Vehicle Tracking Management System (VTMS) on each vehicle used for collection & transportation of MSW, with the necessary web-based software which have desired functions to monitor Door to Door collection operation, accessible from web, personal computer/ laptops, network links with antivirus installed, printer, GPS / Sim Card / Dongle and shall connect the system with ICCC. Please note that for payment of collection and transportation fee, VTMS record is mandatory. Vehicle Tracking Management System (VTMS) shall be able to detect tempering, track and monitor the vehicles and hence efficiently plan the routing and resources for transportation system.

b. In addition to VTS, the GIS and Point of Interest (POI) based system shall be integrated with Management Information System (MIS)/VTS for collecting information at micro level. GIS based POI of center point of each Road/lane shall be generated and MIS shall be able to generate daily attendance of such POI by their designated vehicles. The MIS system shall be as per the requirement of Authority and if any updates and revision is required during tenure of project the Contractor shall carry such revisions at no extra cost.

c. VTMS shall be able to detect the speed of vehicles deployed for Door to Door collection. Average speed shall not exceed 7.5 Kms/Hour during door-to-door collection.

d. The total GPS/GIS system /mobile based APP for SWM monitoring is required to be integrated with ICCC, Lucknow Smart City Project.

e. ICT (Information and Communication Technology) based attendance system shall be undertaken by the operator for ensuring the timely presence and monitoring of work done by all its deployed manpower and such monitoring is to be based as real time reporting of time and duration spent by the employee for operation of the services. This would entail that each worker/employee deployed by the Operation for all Packages (Part A to Part C) must have a Phone with capability of smart applications to be able to communicate data and other features like photo/video in real time for reporting. Similarly all vehicles and usage of mechanical equipment by the operator must have VTS and other suitably enabled ICT mechanism to make real time reporting about the movement and usage of such vehicles and equipment deployed by the Operator.

f. Any bin if needed to be deployed, shall be sensors enabled smart bins with QR (Quick Response) code tags or screening system to monitor the collection efficiency.

g. Operator shall maintain database for manpower, vehicles, storage bins, lifting of waste, unnoticed waste, user charge collection, defaulter list, etc. as applicable. The operator shall design software compatible with mobile phone to track and monitor and report in real time on the various parameters.

h. Every deployed vehicle and personnel related to the execution of the project must be tracked in real time with suitable deployment of software/hardware ICT infrastructure for all project execution related work and this requires not only VTS for vehicles and suitable biometric/other IT application but also requires that the Concessionaire ensures all its deployed manpower has proper android based mobile phone with video camera recoding features that may be used for integration of smart ICT solutions envisaged by LMC to be integrated easily and it shall be absolutely mandatory for the Concessionaire to ensure that any monitoring software solution related to the project whenever is implemented by the Authority, the Concessionaire will be fully complying to it for all features in terms of recording of performance of man and resources in real time.

i. All the hardware such as GPS devices, RFID TAGs (Sticker Type), RFID TAG (Metal mount Type), RFID readers, Biometric Fingerprint devices, Necessary hardware for Software Application hosting at LMC Data Centre along with Software Application System and keeping 5% of devices as spare will be in scope of LMC whereas successful bidder shall operate and maintain them at their own cost.

2.19 Complaint Redressal System:

a. The Concessionaire shall set-up a 24 X 7 Complaint Redressal System for handling complaints and requests related to Project Operations. Concessionaire shall put a detailed Standard Operating Plan (SOP) in place to elaborate the System
b. Customer Care center shall be manned by concessionaire staff
c. The Concessionaire shall provide online platform for the logging and tracking the complaints and requests. The Concessionaire shall also enable the system to register the complaints and requests through SMS and provide the status through Automated SMS
d. The Concessionaire shall install a minimum of 10 (ten)dedicated phone lines with short code numbers and staff in the Control Room to receive complaint and requests from Public. The waiting time shall not be more than 2 minutes for any call. While the customer is waiting, a recorded voice message indicating that complains and requests can be logged by SMS or on web shall be played.
e. The Concessionaire shall maintain records of Complaints and requests

received that includes name, date, time, location, type of compliant/requests and the subsequent action taken to solve the complaint and requests. This record shall be verified by PMC and the Authority

f. All calls shall be recorded and shall be reviewed for the quality of interaction of their staff with the customers. This recording shall be made available to PMC and the Authority
g. Complaint redressal shall be done by the Concessionaire within 6 hours of receipt of any complaint/requests regarding daily operational activities. The Concessionaire shall redress any complaint related to infrastructure replacement within 24 hours of receipt of complaint.
h. Control Room shall be staffed adequately to receive and resolve the complaints on specified time. Control room shall be operational from 7 am till 10 pm on all working days

2.19.1 SMS to Receive Complain

a) Short code SMS service shall be deployed by Concessionaire to receive complains/requests in structured SMS form.
b) Similar Short code-based SMS service shall be deployed by Concessionaire to receive requests from the staff of Authority for on demand service.
c) User friendly web-based application shall be created to receive complains from the public and Authority

2.19.2 Workflow to Track Status

a) Each complaint request shall be assigned with unique ticket number.
b) Each complaint shall be forwarded via-SMS to the concerned operator with a copy to reporting supervisor.
c) Once ticket is closed, it shall be updated in the database. In case complaint is not addressed within specified time, reason for delay along with likely resolution time shall be updated in database.
d) Status of complaint if completed or not completed (along with reason and likely date of addressing) shall be provided to the customer on or before the specified date.
e) Similar system shall be in place for request/complaint ticket for the Authority's staff.
f) Status shall also be made online using ticket number and customer

phone number.

g) Current status of all open and closed complaints shall be visible online and user shall be able to view their status by date or/ and complain number etc.

h) On completion of work – SMS shall be sent back to the customer indicating completion of work. Systems shall have provision to take customer feedback based on the level of satisfaction for the service provided

i) Daily summary report of Zone Wise, Sub-Zone, Ward Wise shall be provided to designated staff of the Authority. These repots shall be auto-generated from the customer complaint database

2.20 Unique numbering System for Project Assets

As a precursor for automation, a unique numbering system shall be followed for marking all Secondary Collection Points/ Project Assets in such a manner so that all such points are uniquely identified across the project area. This numbering shall be referred in all time-table/customer complainant redressal systems and other communications.

Following are some examples for unique numbering:

a) For uniquely identify the bin number 120 in Zone-1, Ward 55: LMC/Z4/W55/B120

b) For uniquely identify the secondary storage point in Zone-1, Ward 55: LMC/Z4/W55/SSC120

The final numbering mechanism shall be approved by the PMC/Authority

2.21 GPS in All Vehicles

The Concessionaire shall install GPS system in all the vehicles with following device specification or better:

a) General Specifications**:**
   i. Dual band GPRS (900/1800 Mhz).
   ii. On-board Storage of at least 2 days of data.
   iii. Internal battery to sustain operation for at least 10 hours with a minimum recording at interval of 30s and reporting at intervals of minimum of 120s.

iv. A minimum reporting interval of 30s.
v. Alerts on external power disconnection.
vi. Internal antenna or antenna wire enclosed in metal sheath.
vii. IP 65 enclosure (i.e., Water proof for occasional sprays of water and dust proof).
viii. Device should be hidden – minimum of -161db gain for GPS antenna.
ix. Ability to work against sustained external voltage of up to 33v and handle transient of as high as non-spike 55v/6000 Joules spikes (To work in presence of hydraulics, falling battery).
x. Digital Input: 2 minimum. Changes to digital input must be communicated immediately – i.e., changes should not be missed because it falls in between recording interval. On the other hand, transients (< 1-2s) must be discarded.
xi. Analog Input: 1 minimum

b) Accessories:
i. Must be able to detect engagement of bin's raising/lowering.
ii. Must be able to detect raising/lowering of tipper's body

c) Protocol:
i. Commands for controlling devices via SMS and protocol/data format must be shared with PMC/Authority and vendor must warrant that the users can choose to use their software to work with devices without paying anything extra.
ii. Must be able to detect engagement of bins
iii. Over the air control of device – including server to which devices communicate with

d) GPS Running Requirement
i. 98% of installed GPS shall be operational all the time.
ii. Any non-operational GPS shall be replaced within 24 hours of time of non- functioning.
iii. If any GPS is not operational (within the above limits), driver shall be provided with android/Mobile Application enabled phone with location tracking capability and same shall be monitored by Concessionaire

e) **Vehicle Tracking Management System**
Vehicle tracking management system (VTMS) with GPS, GSM, RFID,

M2M, and/or LOT sensors (as per requirement) shall be installed along with innovative mobile and web-based applications to improve the ground-level mechanisms for waste collection and efficient processing and recycling of waste

i. Real time tracking of vehicles/fleet
ii. Complete audit trail of movement of vehicles
iii. Alerts-Over speed, excess stoppage time, excess fuel withdrawn
iv. Fleet Summary Report – Stoppage, Speed Violations, Idle Time, Fuel
v. Consumption
vi. Alerts for fuel thefts, tampering, geo-fencing violations
vii. Web enabled live map with history playback and route replay

2.22 Mobile Application for Reporting from site

i. The Concessionaire in consultation with PMC/Authority shall provide robust mobile applications to report the site conditions. Following are minimum requirements:
ii. Mobile application shall be able to send information to control room about the ground situation along with "Photo", "Geo-Tag (latitude-longitude) and Status update.
iii. Citizens connect by integration with Mobile App
iv. This mobile application shall work even when GPRS connectivity is not there and the moment GPRS connectivity is available, data shall be uploaded to the servers.
v. Data collected from this application shall not be alterable by the originator.
vi. Adequate encryption shall be supplied for the same
vii. Track cleanliness score and overall performance of various wards with the Authority
viii. Report incidents in form of tickets to Command Control Center
ix. This application shall be used for (but not limited to):
x. Report Arrival of Collection Vehicles at Secondary Collection Points by sending photograph of street (along with marked timetable on ground) about the arrival.
xi. Reporting after clearing Silt with photographs
xii. Reporting after clearing horticulture waste with photographs
xiii. Reporting after clearing road sweeping with photographs
xiv. Reporting after clearing of Secondary Collection Points
xv. Reporting of any other site condition with photographs

Concessionaire shall be responsible for providing Android phone, SIM with data connection to all its drivers, supervisors and any other staff who are

designated for reporting from ground with mobile based application. Non-reporting shall be automatically treated as no work completed. Concessionaire shall also train all their staff to use the application.

2.23 Bio-Metric Attendance

The Concessionaire shall deploy biometric attendance system for all the Ward/Division Offices under the Project Area, to report staff attendance. Following are minimum requirements:

i. Bio-Metric Attendance System that is fitted with GPRS/any other mechanism
ii. shall display each record instantaneously to the central server
iii. For staff who have missing finger prints (at times reported by few workers), alternate fool proof system shall be deployed.
iv. Bio-metric machines shall be deployed at all offices and attendance points (mobile-bio-metric devices for open points)
v. Only records received from bio-metric attendance shall be treated as valid records for staff reporting – in reports generated from servers

2.24 PAYMENT LINKED WITH ICT BASED REPORTING:

All the monthly payment bills will be linked with the real time based reporting of deployed vehicles on VTS, attendance and working hours of deployed man power and other data fetched into the ICT system related to door to door collection. The Concessionaire will be required to put POI based vehicle Tracking System or other such technology based application that may generate real time report of movement of deployed vehicles for every point to point (door to door collection) in real time. Thus the Concessionaire is required to do following action for raising its' bill:

For every bulk waste generator the data will be fetched in real-time by RFID /QR code/other suitable method installed at the source of collection.

For every non bulk waste generator (Household for door to door collection), the Concessionaire will be required to generate POI at center point of each lane and road and each such POI shall preferably serve at cluster of 15 units each on the routes defined for waste collection of the area. Thus, the VTS deployed by the Concessionaire in each vehicle will provide real time data while providing the collection service. Any missed scanned data will be considered as non-service to that cluster (number of units) and incur not only deduction for the same but also penalty may be imposed for continued failure as per the provisions related to performance indicators in service level bench mark and incur penalty.

2.25 REDRESSAL OF PUBLIC GRIEVANCES:

i. The Contractor shall develop and implement a Complaint Redressal system. Complaints relating to Collection and Transportation services of SWM, user charges (if applicable) shall be received at such office i.e. Consumer Grievances Redressal Cell on 18x7 basis and communicated immediately to the concerned staff of the Contractor/Agency for appropriated redressal. The

Cell should have adequate IT enabled infrastructure to receive call by citizens as well online registration of grievances. ICCC should be used for this purpose.

ii. Complaints shall be registered, numbered and immediately passed on to the concerned

iii. staff of the Contractor for redressal through tailor made software compatible with prevailing software of mobile and computer to be installed by the Contractor.

iv. For Redressal of Public Grievances related to SWM services, operator shall promote SBM official app "Swachhata – MoHUA" of Ministry of Housing and Urban Affairs (MoHUA), GOI.

2.26 SUPPORTING SERVICES:

a. In order to provide hygienic service periodic bin washing and its maintenance service shall be planned and implemented by the service provider for all the bins in the project area.

b. An appropriate bin washing arrangement shall be provided for.

c. All Litter Bin/ community bins (if any) on road provided shall be washed and disinfected at least once in 15 days.

d. The ground at the place where vehicles stop for loading shall be clean-swept, if there are any dropping of the refuse from the container while loading and it should be disinfected by an approved disinfectant liquid spray.

e. Disinfectant for spraying around refuse bins on roads and at the spots of collection of the bins should be Eco-friendly, nontoxic, non-acidic. Oil based deodorant and disinfectant shall be used for cleaning purpose.

f. All manpower required to fulfil the operator scope shall be provided by the operator.

g. Establishment of local office/offices for monitoring of the project shall be Successful bidder's responsibility at its own cost.

h. There will be no lease of land for the purpose of this project. LMC will provide right to use the land to Operator for this project only. However, ownership of the land provided will remain with LMC at all times.

i. The Contractor has to carry out their duty 365 days throughout the year. The usual working hours shall start from 6 a.m. on all the seven days of the week.

j. Obtaining of all necessary statutory consent and clearances required for implementation of the Project and maintaining thereon as per Applicable Laws;

k. Environment monitoring plans in line with the statutory norms – Air quality, water quality. As per requirement of UPPCB/CPCB.

l. Development/Implementation of Emergency Response Protocol for the operation of the Project. Removal of waste from the Project Area prior and/or after, in an emergency situation of the LMC such as any public meeting, Government functions and any other occasion/ festivals etc., or during the night hours on instructions from LMC within 2 (two) hours on receipt of instructions.

m. The Contractor shall carry out detailed survey (Micro Level Plan) of the project area street by street in the formats and prepare micro level plan after the survey of the entire project area within 30 days of the date of issue of letter of intent and accordingly submit his work plan & operation plan.

n. The project area of operation defined for the purpose of the Project is limited to the jurisdiction of the LMC at any given point of time during the period of contract.

o. The Bidder has to work out their own manpower requirement based on the scope and city requirement and it shall be included in the Technical Offer.

p. The equipment/vehicles shall be marked with ULB, Swachh Bharat Mission logo, 150th Anniversary of Mahatma Gandhi Logo, Lucknow Smart City Logo of at least 12 inches by 12 inches' size with prior approval from competent authority.

q. All vehicles Pollution under Control Certificate (PUCC) shall be properly displayed and all other document shall be properly maintained by the operator during the contract period.

ii. Although the vehicles required for the project shall be provided by the Authority and vehicles handed over by LMC to the successful bidder will have all document like fitness certificate, insurance, RC, pollution and road tax having proper validity, however it is made clear that Renewal of these documents and the maintenance of the vehicles shall be entirely contractor' responsibility and any liability incurred due to untoward event/accident caused during operation of the vehicle during project period shall be entirely and solely the responsibility of the contractor and the Authority shall be free to recover such liabilities from dues to be paid to the contractor.

a. Each vehicle shall carry first aid kit & fire extinguisher.

b. Name of the facility operator or the transporter, as the case may be, shall be displayed.

c. Emergency phone numbers shall be displayed properly.

d. Exposure of community to the odor, spillages & emissions from wastes shall be avoided during transportation.

e. The quantification of waste shall be done on daily basis and the report of the same shall be shared with the Authority. Vehicle wise daily, weekly, monthly,

quarterly, six monthly and annual data shall be maintained by the Concessionaire.

f. The Contractor shall submit the annual report to the Authority as per the Form-III of SWM rules 2016.

g. The Contractor shall provide all the inputs to the Authority as required for filling the form-IV as per SWM rules 2016.

h. The Contractor shall provide training to the worker before commencement of work and it should be part of continued and sustained in systematic manner over contract period to attain the objective of SWM Rules 2016.

3. Daily Work Performance Evaluation Sheet for doorstep collection, transportation of waste

3.1 Performance evaluation sheet

Parameter for Daily Work Performance Evaluation for doorstep collection, transportation of Bio degradable, Non-biodegradable, Recyclable & Green waste, Processing and Landfills etc.

Table 0-1Daily Work Performance Evaluation Sheet- DTDC & Transportation

S. No.	ITEM	Marks assigned	Level achieved in %	Marks Obtained	Justification for award of marks
1	Door to Door collection of waste: **Tolerance Limit:** 0% **Marking Parameter:** 100% attendance at household, shop, commercial & Institutional establishments and other waste generation sources. **Monitoring Mechanism:** GPS/IOT Based Real time monitoring	25			
2	All vehicle and manpower reported and started operation at designed time. Tolerance Limit: 45 minutes Marking Parameter: on every 1% deviation late reporting beyond tolerance limit, 1 mark shall be deducted **Monitoring Mechanism:** GPS and online attendance system.	4			

3	Material recovered at MRF Centre less than 15% of input Dry waste. Tolerance Limit: 0% Marking Parameter: on every 1% less recovery of recyclable, 1 mark shall be deducted. **Monitoring Mechanism:** Weighing reports.	4			
4	Cleanliness of surroundings at the MRF Cum transfer station, standalone transfer station and status of Disinfectant sprayed. Tolerance Limit: 0% Marking Parameter: % of such points found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
5	Cleanliness (washing) of Auto Tippers/transportation vehicles Tolerance Limit: 0% Marking Parameter: % of such Vehicles found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
6	Public awareness program-conducted as per schedule. Marking Parameter: % of awareness program- conducted as per schedule. **Monitoring Mechanism:** MIS report.	4			
7	Breakdown of vehicle more than 10% Tolerance Limit: 90% Marking Parameter: non-availability of the vehicle on every	4			

	1% in excess 1 mark shall be deducted **Monitoring Mechanism:** VTS and Random inspection report.				
8	All trip (primary) reported at MRF/TS/MTS/FCTS. Tolerance Limit: 0% Marking Parameter: % of trips actually reported at designated site. **Monitoring Mechanism:** VTS and Random inspection report.	4			
9	Less Deployment of Manpower Than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less attendance below tolerance Limit, 1 mark shall be deducted **Monitoring Mechanism:** Online attendance report.	4			
10	Less Deployment of Vehicles than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less vehicle deployment below tolerance Limit, 1 mark shall be deducted. **Monitoring Mechanism:** VTS and Random inspection report.	4			
11	Collection & deposition of Domestic Hazardous waste at Designated collection centre. Tolerance Limit: 0% Marking Parameter: % of trips actually reported at designated site. **Monitoring Mechanism:** VTS and Random inspection report.	4			

12	All Roads Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	10			
13	All Drains Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	5			
14	Number of Complaints Received at CCC or in random inspection for and not cleared within 6 Hrs. of such complaint Marking Parameter: % of Complaints actually cleared within 6 Hrs.				
	viii) Non-attendance for door-to-door collection Data Source: Complaint received at CCC	3			
	ix) Nonattendance of waste deposited in litter bins, open sites and road Data Source: Complaint received at CCC/ random inspection by PMC/Authority	2			
	x) Filth and smell from transfer point Data Source: Complaint received at CCC/ random inspection by PMC/Authority	2			
	xi) Vehicle found without Top cover and/or Spillage of waste during transportation	2			

	Data Source: Complaint received with photograph/ random inspection by PMC/Authority				
	xii) Illegal parking of collection & Transportation vehicles at public places Data Source: Through VTS/random inspection by PMC/Authority	2			
	xiii) Designated staff not present at Secondary Collection Point/ FCTS and Vehicles etc. or not wearing uniform or not having ID. Data Source: random inspection by PMC/Authority	2			
	xiv) Any soil/excavated earth/ water found in vehicle. Data Source: random inspection by PMC/Authority	2			
15	Non-maintenance of statutory compliances. Marking Parameter: 100% deduction for non-maintenance beyond 1 month				
	vi. Vehicle Insurance & fitness Data Source: Random inspection	1			
	vii. PF/ESIC compliance Data Source: Random inspection	1			
	viii. Income Tax Data Source: Random inspection	1			
	ix. CTE/CTO Data Source: Random inspection	1			
	x. Workman compensation Data Source: Random inspection	1			
	Grand Total	100			

4. Mandatory Facilities

During the Active Operations Period and until the hand back of the Collection, Transportation the Concessionaire shall, unless suitably modified with mutual

consent and duly documented in the O&M Plan and/or O&M Manual, operate and maintain the project Facilities as per **table 9**.

A. Common Facilities for C&T

Table 9

S. No.	Description of Mandatory Facility	Operation and Maintenance Standard
1	Waste Transportation Vehicles	▪ Regular preventive maintenance of vehicles ▪ Maximum period of non-operation: 5 days ▪ Data recording and reporting format to be decided in consultation with the Project Monitoring Consultant and to form part of the O&M Plan and/or O&M Manual.
2	MRF cum Transfer point	▪ Uninterrupted operation of waste transfer point ▪ No traffic jam around Transfer point ▪ No cracks/ruptures in the top RCC floor and shed structure
3	Litter bins	▪ Regular preventive maintenance of Litter bins and platform ▪ No cracks/ruptures in the top RCC layer

5. Routine Maintenance Standards

5.1 In order to ensure smooth and uninterrupted operations, routine maintenance of the Project Facilities shall include but not be limited to:

(a) Prompt repairs of vehicles & Bins;

(b) Replacement of scrap vehicles and other civil works which are part of the Project Facilities;

(c) Keeping the area around litter bin in a clean, tidy and orderly condition;

(d) Taking all reasonable measures for the safety of all the workmen, material, supplies and equipment, vehicle deployed for work.

5.2 The following standards in order of preference shall be adopted in consultation with the PMC, unless otherwise specified:

(a) MSW Rules

(b) Any other standards specified by statute and Applicable Laws

(c) Bureau of Indian Standards (BIS)

(d) Suitable specification/standard devised by the PMC

(e) Any other standard proposed by the Concessionaire and approved by the Project Monitoring Consultant

5.3 The Concessionaire, for the purpose of routine maintenance shall, in consultation with the Project Monitoring Consultant, set forth such criteria as to conform to good international standards and Good Industry Practice for sound maintenance of the Project Facilities.

5.4 The Concessionaire shall regularly carry out the necessary preventive maintenance activities for the Project Facilities to ensure adherence to the Construction Requirements/ specifications.

6. Emergency Maintenance

6.1 The Emergency Response Protocol ("ERP") shall be developed by the Concessionaire in consultation with the PMC. This shall be a part of the O&M Manual developed by the Concessionaire.

6.2 The ERP shall set out steps to be taken and measures to be adopted by the Concessionaire in responding to dealing with Emergency including those situations related to vehicle accidents involving personal injuries or fatalities, property damage and force majeure as follows:

(a) In the event of an Emergency, the Concessionaire shall immediately carry out an inspection of the area affected by the Emergency. The Concessionaire shall promptly adopt necessary measures to restore the work to standard condition of operations.

(b) The Concessionaire shall ensure that sufficient staff, equipment and materials, including without limitation medical assistance are available to respond to Emergency within reasonable period at all times during the Active Operations Period.

6.3 In case of Emergency, the Concessionaire shall

(a) Carry out such emergency maintenance and repairs as may be required to repair the damages, if any, in consultation with the Project Monitoring Consultant to ensure that the Project Facilities are returned to normal operating standards as quickly as possible

(b) Take all necessary measures to minimize pollution in accordance with the procedure specified in the O&M Plan/ Environmental Management Plan.

7. Reporting

a) The Concessionaire shall ensure that AUTHORITY and Project Monitoring Consultant is provided with adequate information and forewarned of any event or any other matter affecting the Project Facilities to enable them to control/minimize any adverse consequences.

b) Concessionaire shall ensure to submit the annual reports as per Form III & Form IV of Solid Waste Management Rule 2016.

c) The frequency and formats of other reports i.e., daily, weekly, Monthly, quarterly to be submitted shall be finalized in consultation with the Project Monitoring Consultant and form part of the O&M Plan and O&M Manual.

d) The Concessionaire shall furnish to AUTHORITY three copies of "as-built" Drawings of any construction undertaken after COD.

`

SCHEDULE "3"

PAYMENT OF TIPPING FEE

2.0 Tipping Fee

2.1 Tipping Fee for RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation

TIPPING FEE

(Amount in Rupees)

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User Charges Collection.				
1(a)	Residential Household	Per Household/Mo	78400		
1(b)	Commercial Unit	Per Commercial Unit/Month	2821		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/Mo	490		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/Month	121		
2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	928		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	71		

Note: Quantity may very +/- 20%

1. Tipping Fee for Door-to-Door Collection, Segregation at MRF and Transportation of MSW = TF*W*F
Where,

TF is the Tipping Fee Rate per MT of waste transported to Processing Plant

W is the actual Weight of waste Transported to Processing Site

F is **Multiplication Factor for performance-based payment equals to the ratio of** Total Marks obtained and Total Marks designated for 100% performance of work in Schedule 8 of this Concession Agreement.

SCHEDULE "4 "

Performance Security for Operation & Maintenance Requirements

The AUTHORITY

LUCKNOW NAGAR NIGAM

Lucknow, Uttar Pradesh

WHEREAS

1. …….. (The "Concessionaire") and the LUCKNOW NAGAR NIGAM (the "Authority") have entered into a Concession Agreement dated …….. (the "Agreement") whereby AUTHORITY has agreed to the Concessionaire undertaking the Door-to-Door Collection & Transportation of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation, subject to and in accordance with the provisions of the Agreement.
2. The Agreement requires the Concessionaire to furnish a Performance Security to AUTHORITY in a sum of Rs..... (Rupees ..... only) (The "Guarantee Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, towards Construction and Operation &Maintenance of the Project (as defined in the Agreement).
2. We ……through our Branch at……. (The "Bank") have agreed to furnish this Bank Guarantee by way of Performance Security.

NOW THEREFORE, The Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Concessionaire's obligations during the Operation & Maintenance Period, under and in accordance with the Agreement, and agrees and undertakes to pay to AUTHORITY, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the Guarantee Amount as AUTHORITY shall claim, without AUTHORITY being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from AUTHORITY, under the hand of the Additional AUTHORITY, stating that the Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the

Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that AUTHORITY shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Operation & Maintenance Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the Bank, notwithstanding any differences between AUTHORITY and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Concessionaire for any reason whatsoever.

3. In order to give effect to this Guarantee, AUTHORITY shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Concessionaire and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for AUTHORITY to proceed against the Concessionaire before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/ or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by AUTHORITY against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to AUTHORITY, and the Bank shall not be released from its liability and obligation under these presents by any exercise by AUTHORITY of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of AUTHORITY or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by AUTHORITY in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee will remain in force until compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee, no later than 6 (six)

months from the date of expiry of this Guarantee, all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.

8. The Performance Security will be valid for 12 months and shall be renewed before its expiry till the end of concession period.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of AUTHORITY in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred Branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of AUTHORITY that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months from the date hereof or until it is released earlier by AUTHORITY pursuant to the provisions of the Agreement.

Signed and sealed this ……. day of……., 20…… at ……..

SIGNED, SEALED AND DELIVERED

For and on behalf of the BANK by:

(Signature)

(Name)

(Designation)

(Address)

NOTES:

The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

SCHEDULE "5"

Date: _____

LETTER OF AUTHORISATION

To whomsoever it may Concern

This is to confirm that to pursuant to the Concession Agreement dated _____ entered into between the AUTHORITY and _____ ("the Concessionaire"), the Concessionaire has been authorised to **RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation** for the city of LUCKNOW and for that purpose, to apply for and obtain all approvals, licenses and permits required therein and to avail the utilities such as power, water, telecommunication and any other incidental utilities or services required in connection therewith.

Yours faithfully,

MUNICIPAL COMMISSIONER

LUCKNOW NAGAR NIGAM,

LUCKNOW

Schedule "6"

<u>घर - घर से प्रत्येक दिन अपशिष्ट संग्रहण के लिए निर्धारित सेवा शुल्क</u> (रुपया में)

Schedule "7"

APPLICABLE PERMITS

1. Applicable Permits

1.1 The Concessionaire shall obtain, as required under the Applicable Laws, the following Applicable Permits on or before the Appointed Date, save and except to the extent of a waiver granted by the Authority in accordance with Clause 4.2.1.

Sl No	Approval/ Clearances	Concerned Agencies	Responsibility
1	Site Authorization under MSW Rules	SPCB	Concessionaire
2	License in accordance with the rules and provisions of Labour (Regulation and Abolition) Act, 1970	MoLE	Concessionaire
3	Consent to establish under Air and Water Act	SPCB	Concessionaire
4	Consent to operate under Air and Water Act	SPCB	Concessionaire
6	NOC from Fire Services	Home Department	Concessionaire
7	Vehicle Registration	RTO	Concessionaire
8	Electricity Approval	Distribution Company	Concessionaire
9	All drawings and document approval	Authority	Concessionaire
10	Water Supply	Authority	Concessionaire

Where;

SPCB- State Pollution Control Board

MoLE-Ministry of Labour and Employment

MoEF- Ministry of Environment and Forest

RTO- Regional Transport Office

ERC- Electricity Regulatory Commission

DoI- Directorate of Industries

Schedule "8"

Safety requirements

1.1 Safety Requirements

Concessionaire is responsible for maintaining an incident/hazard free work environment. In compliance with these provisions, the Concessionaire shall comply with the latest edition of the Contractor Safety Requirements and perform the following:

a. Concessionaire is expected to pre-plan all work to minimize the potential for personal injury and property damage.
b. Develop the plan in a Project specific nature, which is designed to anticipate and identify hazards before work begins. Know in advance what measures will be taken to eliminate hazards or adequately control the anticipated risks for each scope of work. This information shall include, but is not limited to: scope of work, sequence of activities, site specific fall protection, high angle rescue procedures, safety control methods, training records, competent persons, lead abatement, asbestos abatement and excavations. The planning does not stop at the pre-planning stage, but is a continuous process of assessment and evaluation. When changes occur or new hazards are identified during the course of the Project, the work should be suspended while the plan is revised.
c. Ensure all subcontractors, suppliers and vendors are informed of their obligations with regard to safety and of the Contractor Safety Requirements.
d. Plan and execute all work to comply with the stated objectives and safety requirements contained in the Contractor Safety Requirements, contract provisions, federal, state, and local laws and regulations, and standards.
e. Concessionaire or their contractors/subcontractors with 25 or more employees on a single shift will establish a full-time position of a Contractor Safety Manager to perform safety in sections and training services. In addition, for every additional 100-job site employee added, an additional Safety Management Representative shall be required. In the event that the Contractor has less than 25 employees, the contractor shall appoint an onsite person who along with other concurrent duties shall serve as the Contractor's Safety Representative.
f. Concessionaire shall maintain its own orientation program for its employees that shall include as a minimum are view of(1) hazards present in the area in which they will be working and (2) the personal protective equipment and apparel the workers will be required to use or wear as

specified under Occupational Safety and Health Administration (OSHA).

g. Concessionaire shall provide and maintain a chemical and flammable material storage area as described in the Contractor Safety Requirements. Be responsible for the control, availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.
h. Take an active part in all supervisory safety meetings, including the discussion of observed unsafe work practices or conditions and a review of any incidents and corrective actions. Additionally, encourage, solicit and follow up on safety related suggestions from Concessionaire employees.
i. Report all injuries and incidents in a timely manner in accordance with federal and/or state laws and regulations and the Contractor Safety Requirements.
j. Analyse all incidents and implement immediate corrective action.
k. Provide job supervisors with appropriate training materials to conduct weekly safety meetings and attend said meetings to evaluate their effectiveness.
l. Review safety meeting reports submitted by job supervisors and take necessary action to ensure that the job supervisors hold meaningful weekly safety meetings.
m. Implement safety-training programs for Contractor supervisors and employees applicable to their specific responsibilities.
n. Maintain list on-site of personnel available for first aid and emergency treatment for injured Contractor employees.
o. Concessionaire will be responsible for providing a safety orientation training session for all workers before they are allowed to begin work. The orientation safety training will be conducted by the authorized representative as suggested by AUTHORITY and will include a summary of the Contractor Safety requirements/ Heads-Up Safety Training and awareness.
p. At a minimum Contractor representative to adequately train its employees according to applicable safety standards. This training may include but is not limited to: fall protection, fire watch, scaffolds, forklifts, excavation, ladders, confined space entry, respiratory protection, OSHA-PSM (Process Safety Management), grounding, shoring and traffic control etc.
q. In the event of a work-related incident resulting in a Contractor employee injury or near miss, Contractors shall notify their Appointed Representative immediately.
r. Contractors shall provide the appointed representative with an initial report of incident, in writing, within 24 hours of the accident. Hard copy or electronic formats are acceptable.
s. Contractors shall provide a completed accident investigation report within three (3) working days of the incident. In the event, their investigation

requires more time to investigate due to the complexity of the incident, Contractors shall communicate to the appointed Representative in writing including intimation to higher authorities of availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.

t. All first aid injuries shall be documented for record keeping purposes. In the event a first aid case develops into a Contractor employee injury, accident reporting and investigation procedure shall be initiated as outlined previously.

u. In order to maintain a safe and healthy work environment in emergency situations, Concessionaire has developed this emergency action plan to help safeguard Contractor employees while working on AUTHORITY Sites. All Contractor employees will be trained in the use of this plan and informed of their role in implementing it during their required safety orientation training. This policy is mandatory and must be strictly followed by all Contractors and their personnel while working on Sites.

v. When notified of an emergency evacuation (an audible alarm/verbal announcement will be used by Concessionaire to alert employees of an evacuation), Contractors must immediately. Evacuate their personnel from the Project Site, perform a head count and report missing personnel to concerned in-charge of the facility and take appropriate steps for investigation. When evacuating any building, structure or job site, employees should utilize the nearest exit to them. Personnel will remain at the designated site until an all-clear is announced or further evacuation steps are ordered.

w. Concessionaire shall comply with the latest revision Safety Rules & Procedures Permit. Contractors shall provide adequate fire protection equipment in each of their storage areas, offices and other temporary structures.

x. Concessionaire is responsible for orienting employees on the specific safety rules that must be followed by all persons working on Project Facilities. Other personal protective equipment (PPE) is also required in accordance with the appropriate safety standards and equipment as set by the manufacture's specifications. A list of the minimum personal protective requirements is as follows:

   i. The Concessionaire shall be responsible for providing and ensuring the use of required personal protective equipment for its employees.
   ii. Approved hard hats, shall be worn at all times while on the Site. It is required that each employee use an American National Standards Institute (ANSI) approved hardhat.
   iii. Safety glasses, which meet applicable ANSI standards, are required at all times while on the Site and should include approved side

shields. Only clear safety glasses are allowed to be used inside buildings or enclosed structures. Shaded goggles or hoods may be used while welding or cutting requires. Prescription safety glasses with self-tinting capabilities may be worn on-site.

iv. PPE shall be worn while travelling from the security gate, while travelling through the plants, working outside or otherwise engaged in work at each station, except in areas specifically designated as PPE not required.

v. Concessionaire's vendors and visitors will be required to meet these same standards.

y. Good housekeeping affects safety, quality and production. It is the responsibility of Concessionaire onsite to keep their work area clean. Concessionaire are responsible or trash and debris that is generated by their work. Trash and debris must be collected and placed in proper containers on a daily basis.

z. Trash shall not be randomly thrown off a floor or through openings in the floor. Trash chutes, trash boxes, or other approved means such as barricading and/or flagging shall be utilized.

aa. Safety requirement mentioned in the Environment and Social Impact Assessment (ESIA) Report shall be complied in accordance to Schedule XXI and Schedule XIV.

Schedule "9"

Reports

1. Door to Door/Street level Primary Solid Waste Collection Service

Table 1: Deployment of Waste Collection Vehicles

Route No.:			Route No.:		
Vehicle Type:			Vehicle Type:		
Ward:			Ward:		
Halt point	Time	Area to be serviced	Halt point	Time	Area to be serviced
Recycling Center		ID of Recycling Center	Recycling Center		ID of Recycling Center
End point		Compactor Location ID	End point		Compactor Location ID

Table 2: SCP's / Street Corner bins situated in areas covered in Door to Door/Street level collection system

ID: Ward/ Location	Capacity of Solid Waste (no. of bins)	Capacity of Silt (no. of bins)	Whether it receives waste from non-street level areas as well?	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 3: Recycling Centers situated in areas covered in Street level collection system

ID: Ward/ Location	No. of Staff to be deployed	Open Timings	Weigh-bridge capacity	Computerized (Y/N)	Nature of dry waste that is accepted

2. Collection of Solid Waste from Commercial Establishments/ Market Areas

Table 4: Deployment of Waste Collection Vehicles

Route No.:			Route No.:		
Vehicle type:			Vehicle Type:		
Ward:			Ward:		
Halt point	Time	Area to be serviced	Halt point	Time	Area to be serviced
Recycling Center		ID of Recycling Center:	Recycling Center		ID of Recycling Center:
End point		Compactor Location ID:	End point		Compactor Location ID:

Table 5: Compacting Servicing Stations for solid waste collection from

commercial establishments

ID: Ward/ Location	Mobile/ Fixed	Capacity	Whether it receives waste from non-commercial establishment	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 6: SCP's / Street Corner bins situated in commercial areas/ markets

ID: Ward/ Location	Capacity of Solid Waste (no. of bins)	Capacity of Silt (no. of bins)	Whether it receives waste from non-commercia l	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 7: SCP's / Street Corner bins specifically for drain silt

ID: Ward/ Location	Capacity of Silt (no. of bins)	Whether it receives waste from non-commercial Establishment	No. of times per week – to be cleared	Days of week when to be cleared	Scheduled clearing time(s)

3. Clearing Service of Recycling Centers

Table 8: Clearing Service of Recycling Centers

Rout No.:			Rout No.:		
Vehicle type:			Vehicle Type:		
Ward:			Ward:		
Waste type collected by vehicle:			Waste type collected by vehicle:		
Halt point	Time	Location ID to be serviced	Halt point	Time	Location ID to be serviced
End point		Disposal Location ID:	End point		Disposal Location ID:

4. Bin Washing Schedule

Table 9: Bin Washing Schedule

Location ID	No. of Bins at location	Date of proposed washing	Time of proposed washing

5. Vehicle Servicing Schedule

Table 10: Vehicle Servicing Schedule

Vehicle Registration	Type of Vehicle	Date of proposed washing	Date of proposed

6. Fleet Deployment for the Month

Table 11: Fleet Deployment for the Month

Reg. No. Make	Vehicle Type	Volume (cu m)	SW Capacity (MT)	Green waste capacity (MT)	Silt Capacity (MT)

7. Plan for deployment of manpower-

Table 12: On Vehicles (including secondary transportation vehicles, Hook Loaders etc.)

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Vehicle Reg No. on which deployed

Table 13: On Static Compactors

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Location ID on which deployed

Table 14: On Recycling Centers

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Location ID on which

Table 15: Supervisory Manpower

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Area of Supervision

8. Daily (Real Time) Reports

Following reports are generated daily on real time basis.

a) Report on Door-to-Door Collection from Households

Date_____

Colony/ Locality (covered under door to door) _____

Table 16: Household collection report

Waste Collector ID*	Service Area/Beat	No of Households	No of Households	Time period during which

* Waste Collector ID shall be designed in such a manner that it reflects the linkage with type of vehicle that waste collector is assigned to (Motorized tricycle/E-rickshaws, Auto Tipper etc.)

Table 17: Exception reports (Not serviced Areas)

Service Area/Beat No.	No of Households in beat	Whether serviced previous day?	Reason for non-service	Action taken for remedy

Table 18: Motorized Vehicles deployment for door-to-door collection (Report from GPS data - real-time)

Route No. Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time**	Scheduled end time Actual End time*	Drivers' report on waste collection	Quantity of Recyclable waste delivered at Recycling
				<Report sent Visa SMS at the end of route>	

* Excess/ Normal/ Short, **SMS shall be sent by driver at the start of route

Table 19: Exception Report on vehicle deployment (Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled start time	Likely start time	Reason for delay	Remedial action

Table 20: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes	Normal Weight Routes No.	Short Weight Route No

Table 11: Report of SCP's/ Street Corner bins servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 22: Exception Report of SCP (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID	Scheduled clearing	Likely clearing time	Reason for delay	Remedial action

Table 23: Report of Recycling Centers servicing the colony/ locality

Location ID	Schedule d clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste cleared	Whether non-confirming waste in the Center (Y/N)	Upload photo with date & time stamp

b) Collection and Transportation of SW from All Markets, Hotels, Dhabas, Restaurant, Banquet Hall, Institution, Farm House & Other Commercial Establishment

Date_____ Ward No. _____

Name of Market / Commercial or Institutional Area _____

Table 24: Deployment of Primary Collection &Transportation Vehicles for waste collection from such entities (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess /Normal/	Quantity of Recyclable waste delivered at Recycling

Table 25: Exception Report on deployment of Primary Collection & Transportation Vehicles
(Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled start time	Likely start time	Reason for delay	Remedial Action taken

Table 26: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes serviced	Normal Weight Routes No.	Short Weight Route No	Excess Weight Route No

Table 27: Report of SCP's/ Street Corner bins servicing the market/area

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF /disposal	Whether non-confirming waste in Dhalao?	Upload photo with date & time stamp

Table 28: Exception Report of SCP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID	Scheduled clearing time	Likely Clearing time	Reason for delay	Remedial action taken

Table 29: Report of Recycling Centers servicing the market etc.

Location ID	Scheduled clearing time	Actual Start time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste delivered at Recycling center	Whether non-confirming waste in the Center	Upload photo with date & time stamp

c) Report on Street Level Primary SW Collection System

Date_____ Ward _____

Table 30: Primary Collection &Transportation Vehicles deployment for street level collection (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess /Normal/ Short	Quantity of Recyclable waste delivered at Recycling center

Table 31: Exception Report on vehicle deployment (Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No.	Scheduled start time	Likely start time	Reason for delay	Remedial action taken

Table 32: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes serviced	Normal Weight Routes No.	Short Weight Route No	Excess Weight Route No

Table 33: Report of SCP's/ Street Corner bins servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 34: Exception Report of SCP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 35: Report of Recycling Centers servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste cleared	Whether non-confirming waste in the Center	Upload photo with date & time stamp

d) Report on Compactor Stations

Date_____

Ward No._____

Table 36: Report of Fixed Compactor Station

Compactor Location ID	Scheduled clearing time(s)	Actual clearing time(s)	Time of arrival at SLF / disposal site	Hook Loader Reg No Driver Name Driver Mobile

Table 37: Report on Mobile Transfer Stations

Location ID	Vehicle Reg. No Driver Name Driver Mobile	Scheduled clearing time	Actual Clearing time	Time of arrival at SLF / disposal site

Table 38: Exception Report of Compactor Clearance (Where compacting station/Point has not been cleared within 2 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action Taken

e) Report on Collection and Transportation of Horticulture Waste:

Date_____ Ward no. ___

Table 39: Primary Collection & Transportation vehicles deployment for street level collection of Horticulture Waste (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess

Table 40: Exception Report on Primary Collection & Transportation vehicles deployment
(Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 41: Overall performance self-assessment of Ward

Estimated quantity of Horticulture Waste expected from ward (MT)	(a)
Horticulture Waste Collected at Street level (MT)	(b)
Approximate quantity of Horticulture waste that could not be collected	(c=a-b)
Collection Efficiency	(d=b/a in %)

f) Report on Collection and Transportation of Street Sweeping Waste/ Clearing of Bins

Date_____ Ward No. ____

Table 42: Report of Dhalao/ Street Corner bins designated for sweeping silt

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 43: Exception Report of CSP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 44: Exception report where sweeping silt was found to be disposed in non-confirming manner (e.g. disposed in Dhalao meant for solid waste)

Location ID	Nature of Non-conformity	Approximate quantity of silt	Upload photo with date and time stamp	Remedial action taken

g) Report on collection and disposal of Drain Silt

Date_____ Ward No. _____

Table 45: Report of Clearing of Drain silt as requisitioned by LMC staff (Report from GPS data – real-time report)

Requisition ID Date and time of Requisition	Street ID and Name	Scheduled Clearing date and time	Actual Clearing date and time	Requisition - OPEN/ CLOSED	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF / Disposal

Table 46: Exception Report of Drain silt clearance (Where silt has not been cleared within 1 hour of scheduled time)

Requisition ID Date and time of Requisition	Street ID and Name	Scheduled clearing date & time	Likely clearing date & time	Reason for delay	Remedial action taken

Table 47: Exception report where Drain silt was found to be disposed in non-confirming manner (e.g. disposed in SCP meant for Solid Waste)

Location ID	Nature of Non-conformity	Approximate quantity of silt found	Upload photo with date and time stamp	Remedial action taken

h) Bin washing Report

Table 48: Bin washing undertaken during the day

Location ID	No of Bins at location	Washing Time	Mechanical Washer Reg. No	Driver Name Tel No

Table 49: Exception report of Bins not washed in last week (to be submitted once a week – Every Sunday for last week)

Location ID	No of Bins at location	Last washing date	Reason for default	Remedial action taken

i) Report of Complaints Redressal System (real-time)

Date_____ Ward No. _____

Table 50: Report of complaints and their closure

Complaint ID Time	Source- Phone/ email/ SMS	Nature of complain t	OPEN/CLOSED	If Closed, How addressed?	Date of redressal/ closure

9. Consolidated Report of Zone (Generated at the end of the day)

Table 51: Summary Report of Deployment of Vehicles/ Infrastructure

Main Activity	No of Routes/items to be serviced in the day	No of Routes/items actually serviced	No of Vehicles to be deployed in the day	No of vehicles actually deployed in	No of Manpower to be deployed	No of Manpower actually deployed
Door-to-door /street level						
Collection of SW etc. from Commercial etc.						
Collection of horticulture waste						
Collection of drain silt						
Collection of Sweeping Waste						
Clearing of Dhalao/ bins/ open sites						
Clearing of Fixed Compactor						
Collection of small dead animals						

Table 52: Summary Report of Support services

Main Activity	Expected/ received transactions /	Actual No of Transactions processed/	Unit (of transactions)	No of Manpower to be deployed for support	Actual no of manpower deployed
Workshop			Cleaning of vehicle Repair of vehicles		

Customer care (Redressal of complaints)			Complaint calls/ email/SMS Requisitions		
IT System			Receipt of Field reports: e.g- Vehicle deployment report Dhalao/bin clearing report Route servicing report Manpower deployment Fixed Compactor		

10. Inspection Report of SCP's, Open Sites, Street Corner Bins and other infrastructures. (Once a month)

Table 53: Conditions of SSC's

Location ID	Date of inspection	Physical Condition	Signboard	Paint	Flooring	Bins	Littering outside the Dhalao & Any Other	Washing date(s)

Table 54: Conditions of Fixed Compacting Stations

Location ID	Date of inspectio	Physical Condition	Signboard	Paint	Flooring	Bins	Any Other	Washing date(s)

Table 55: Conditions of Street Corner Bins

Location ID	Date of inspection	Physical Condition	Signboard	Paint	Flooring	Littering Around bins	Any Other	Washing date(s)

Table 56: Conditions of Mobile Transfer Stations (Refuge Collector cum Compactors)

The Dust/cloud formation during mechanical sweeping of roads due to non-working of water nozzle fitted In mechanical sweepers	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**
Non-cleaning of bell mouths and gully gratings						

Table 57: Conditions of Auto-tippers (4-Wheeler & 3-Wheeler)

Vehicle Registration No.	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**

Table 58: Conditions of Hook-loader vehicles

Vehicle Registration No.	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**

Note: The Monthly Action Plan of works for the next month shall be submitted on 28th of preceding month. This shall be submitted in soft form (the file shall be uploaded in MIS which shall generate reports automatically) as prescribed by PMC/Authority.

Schedule "10"

Annual Price Adjustment

1. Price Escalation/Adjustment formula

The contract price shall be adjusted for Increase or decrease in rates and price of labor, fuel and lubricants in accordance With the following principles and procedures as per formula given below. The amount certified in each payment certificate will be adjusted by applying respective price adjustment factor to the payment amounts due

Price adjustment shall be calculated only for the work earned out within the stipulated time or extension approved by the Authority

Price adjustment shall be calculated for the local components of the payment for the work done as per formula given below and expressions and meanings are assigned to the work done during each month:

Various Components are depicted as follows:

- 50% towards fuel components
- 50% towards labor cost

To the extent that full compensation for any rise or fall in the costs to new operator is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such rise or fall in costs.

2. Adjustment for fuel and lubricants

Price adjustment for increase or decrease in the cost of fuel and lubricants shall be paid in accordance with the following formula:

$Vf = 0.85 * Pf/100 * R * (Fi - Fo) / Fo$

Vf = increase or decrease in the cost of work during the year under consideration due to changes in the rates of fuels and lubricants.

Fo = The official retail price of non-branded Diesel at the existing consumer pumps of IOC at ULB, on the date of submission of Bids

Fi = The Average Annual official retail price of non-branded Diesel at the existing consumer pumps of IOC in ULB area, on the year previous to the one under consideration to which a particular interim payment certificate is related

Pf = Percentage of fuel and lubricants component of the work

shall be 50% R = Total value of work done in the month

3. Adjustment for Labor Component

Price adjustment for increase or decrease in the cost due to labor shall be paid in accordance with the following formula:

Vl = 0.85 * Pl/100 * R * (Li-Lo) / Lo
Vl = increase or decrease in the cost of work during the year under consideration.
Lo = the labor wages for unskilled adult male mazdoor notified by the ULB authority on the bid submission date.

Li = the labor wages for unskilled adult male mazdoor notified by the ULB authority on the last date of the year previous to the one under consideration to which a particular interim payment certificate is related.

Pl = Percentage of labor component of the work shall be 50% R= Total value of work done during the month

4. Final Price is sum total of Vf+Vl

5. Calculation of O&M Fee rate applicable for the year
The O&M Fee rate for a particular year would be calculated using the following formula:

Tn = To x (1+n*X%)

Where, Tn = O&M Fee rate applicable for the year 'n'
To = Base O&M Fee (as quoted by the Selected Bidder)
X% = Price escalation calculated as in point 4 of this schedule or 5% whichever is less.

NOTE:

- Price adjustment shall be applicable on all the monthly bills passed by the Official-in Charge for payment.
- Price adjustment shall be applicable at the start of every year post 365 days after COD date. COD here refer to date of start of commercial operation.
- The base price shall be the one on the date of bid submission
- Various cost components mentioned above are pre-decided and shall not be amended during entire contract period and no claim shall be entertained from the concessionaire in this regard.
- The adjustment may be positive or negative depending upon the rise or fall of Index/price/wages.

Taxes

GST is not applicable in this contract. In case in further, it GST is imposed that should be borne by Municipal corporation Lucknow Any other Taxes is extra as actual basis.

Schedule "11"

Project Milestones

Sl. No.	Indicative Milestone	Timeline (Days)
1	Issuance of LoA	0
2	Signing of Concession Agreement - Commencement Date	75
3	Appointment of PMC/ Equivalent Group of Officer	75
4	Submission of Draft OP	105
5	Review & Comments to be given by PMC (with approval of the Authority)	120
6	Submission of Revised OP (Version I)	127
7	Second Review & Comments to be given by PMC (with approval of the Authority)	134
8	Submission of Final OP and Approval by Authority	141
9	Achievement of Financial Closure	150
10	Completion of Handing Over of Zone to Concessionaire – Commercial Operation Date (COD)	180

Schedule "13"

Micro Implementation and Operation Plan

a) This schedule provides an indicative framework for preparation of MIOP. The Concessionaire shall prepare Draft Seasonal Action Plan (SAP) on the basis of MIOP. The Seasonal Action Plan shall be submitted by the Concessionaire before 15 working days prior to start of monsoon season. (SAP should be for three period's 1. Summer Period, 2. Monsoon Period, 3. Winter Period). PMC shall review and suggest modifications in the plan in consultation with Authority within seven working days, if any. Concessionaire has to submit final SAP within seven working days.

b) The Concessionaire has to formulate OP for the following activities, but not limited to:

1. Consent, Clearances and Approval

The Concessionaire shall prepare a list of consent and clearances required for the Project. The Concessionaire shall define the relevant body and timeline for each consent and clearance.

2. Labour Absorption

The Concessionaire may absorb the manpower of the existing Concessionaire for performing its operations to the extent possible.

3. Route Plan/Beat-wise Plan for Primary Collection

Concessionaire shall prepare micro level route /beat-wise plan for all the wards. The Plan shall specify location, dedicated timing, manpower, supervisory staff and infrastructure, allocated secondary collection points for waste storage for each route/beat. The Concessionaire shall also take into account extraordinary circumstances and make modifications in the plan accordingly.

4. Route Plan for Collection of DHW

Concessionaire shall be responsible for collecting segregated domestic hazardous waste from the households on bi-weekly basis and transport it to the Deposition Centre for its safe storage. Concessionaire shall prepare micro level route /beat-wise plan for bi-weekly collection of DHW which shall be accommodated in primary collection

5. Plan for Removal of horticultural waste

The Concessionaire shall prepare plan for removal of horticultural waste from colonies and road sides in the project area. The removal should be done with the help of designated vehicles. The concessionaire should also be prepared for emergency situations for removal of garden and horticultural waste

6. Asset Deployment Schedule

The Concessionaire shall prepare an Asset Deployment Schedule. The Schedule shall specify the asset deployed for all the activities as required for fulfilling the Project Scope.

7. Allocation of Priority Services Team

Concessionaire shall deploy a Priority Services team consisting of six workers and one vehicle for extraordinary circumstances. The Concessionaire shall nominate one nodal person under MIOP for each ward that shall be responsible for allocation of the Priority Services Team. Priority Services Team should be assembled within two hours.

8. Waste Diversion:

The Concessionaire shall fulfil the obligation of providing the required quantity of biodegradable and recyclable waste to the decentralized units. In this respect, the Concessionaire shall refer section 5.1under PIM, prepare a list of decentralized units and update the list, as the case may be. The Concessionaire shall define the capacity of decentralized plants, respective waste diversion quantities and the planned sources, from where the waste shall be diverted. The Concessionaire shall also prepare plan for setting up of ward wise recycling centres and other means to divert maximum waste at decentralized level

9. Operation and Maintenance Plan for DHW Deposition Centres

Concessionaire is also responsible for the operation and maintenance of DHW Deposition Centres. The Concessionaire shall deploy necessary manpower for the functioning of DHW Deposition Centres. The Plan shall include the no. of deposition centres, dedicated locations attached with the centre and the quantity of DHW. The Concessionaire shall indicate the schedule for the secondary transportation of DHW to Hazardous Waste Facility. The Authority shall be responsible to take note of the schedule, and organise secondary transportation of DHW.

10. Collection of User Charges

Concessionaire shall be responsible for the collection of user charges from households as well as commercial establishments for providing door to door collection services. The Concessionaire shall prepare the mechanism for user charges collection on monthly basis. The Concessionaire shall specify the coverage, mode of payment collection system and necessary manpower requirement for the collection of user charges.

11. Management Information System

The Concessionaire shall set-up a real-time monitoring system for tracking the daily Project Activities. The Concessionaire shall prepare MIS Formats for reporting the performance to IE and Authority on daily, weekly and monthly basis. The Concessionaire shall prepare a list of all moveable assets, bins and equipment's along with its RFID no. The Concessionaire shall also
specify space requirement for setting-up centralised Control Room in MIOP.

12. Complaint Redressal System

The Concessionaire shall set-up Complaint Redressal System for handling complaints related to Solid Waste. The Concessionaire shall prepare daily log of complaints received, action taken and complaints closed. The Concessionaire shall also display telephone nos. of concerned officials at public locations.

13. Financial Model

The Concessionaire shall submit a soft copy (excel format) of the Financial Model for this Project

14. Asset Maintenance Schedule (O&M plan)

The Concessionaire shall prepare a maintenance schedule for all the project assets. The Schedule shall be made for all the vehicles, equipment's, secondary storage points and bins. The Schedule shall contain the GPS no., date of purchase of asset, servicing schedule and servicing report. The Concessionaire shall also specify the replacement schedule for the project assets. The Schedule shall be align with the KPIs.

15. Garbage Free Vulnerable Points

The Authority shall identify the Garbage Vulnerable Points which needs to be cleared and maintained on daily basis as Garbage Free Vulnerable Points. Concessionaire shall prepare a maintenance schedule for maintaining the specified areas as Garbage Free

Vulnerable Points.

16. Disaster Management Plan

The Concessionaire shall prepare Disaster Management Plan as per the conditions given in Schedule 19.

17. IEC Plan

The Concessionaire shall prepare IEC Plan for creating awareness regarding solid waste management activities. Concessionaire shall specify frequency of IEC programmes, type of activity, date, location, population coverage and maintain records of activities including photographic evidences.

18. Carcass Disposal

The Concessionaire shall deploy one vehicle for collection and transportation of carcasses to the designated facility/ site as prescribed by the Authority during the preparation of MIOP

19. Night Conservancy works

The Concessionaire shall deploy required manpower and infrastructure to perform night conservancy which shall include a minimum of 50 (fifty) percent of mechanized street sweeping and clearance of SCP's.

Indicative Norms to be considered by the Concessionaire while preparing MIOP

S.no	Activity	Indicative Norms
1.	E-rickshaw	Once e- rickshaw for collection from 300 HH per trip (as per Authority recommendation)
2.	Auto Tippers of 1.8 cum Capacity	Once auto tipper for collection from 600 HH per trip (as per Authority recommendation)
3.	Deployment of Mechanical Sweeping Machines	Major Roads having width of 60 ft and above which includes PWD and National Highway. The speed of the vehicle shall be 5-8 km per hour
4.	Cleaning of desilted waste from drains	Cleaning of desilted waste of Storm Water Drains upto 4 feet as per the Authority recommendations.

5.	Secondary Collection bins	Green for wet waste, blue for dry waste, brown for street sweeping waste and black for DHW & Sanitary Waste. Bins should be placed on approval of the Authority and based on public needs.
6.	MTS and FCTS	The FCTS contains civil structure, detachable containers and hook loaders. The MTS is movable refuse compactors for direct transferring of waste from primary collection Vehicles. Both MTS & FCTS shall maintain a reciprocative balance but should not go below minimum number
7.	Back up	Minimum 10% backup on the vehicle infrastructure for C&T

1887

REQUEST FOR PROPOSAL

FOR

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation"

(RFP NO. D/389/EE/ 2023 Dated: 19/8/2023)

VOLUME-I

INSTRUCTION TO BIDDERS

Lucknow Municipal Corporation

SWM, Lucknow

1888

Disclaimer

The information contained in this **Request for Proposal** (hereinafter referred to as "RFP") document provided to the Bidders, by **Lucknow Municipal Corporation/ Lucknow Nagar Nigam, Uttar Pradesh** or any of their employees or advisors, is provided to the Bidder(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. The purpose of this RFP document is to provide the Bidder(s) with information to assist the formulation of their proposals. This RFP document does not purport to contain all the information each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for ULB, their employees or advisors to consider the business/ Investment objectives, financial situation and particular needs of each Bidder who reads or uses this RFP document. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and where necessary obtain independent advice from appropriate sources. ULB, their employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFP document. ULB may, in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

SWM PMU (RCUES) Lucknow

Table of Contents

1. Scope of Proposal 5
2. Eligible Bidders 6
3. Additional Requirements for submitting Proposal by a Consortium 7
4. Number of Proposals 8
5. Conflict of Interest 8
6. Validity of Proposal 9
7. Proposal Preparation Cost 9
8. Earnest Money Deposit (EMD) 9
9. Format and Signing of Proposal 9
10. Original Document to be submitted by the Bidder 11
11. Proposal Due Date 12
12. Bidder's Responsibility 12
13. Pre-Proposal Meeting 13
14. Opening of Proposals and Clarifications 13
15. Evaluation 14
16. Execution of Concession Agreement 16
17. Performance Security 16
18. Cost of RFP document 16

Appendix – A 19
Appendix – B 30
Appendix – C 31
Appendix D1 37
Appendix D2 39
Appendix – E 42
Appendix – E1 44
Appendix – F 46
Appendix – G 54
Appendix – H 55
Appendix – I 58
Appendix – J 60

i.) The Request for Proposal Document Contents

The RFP document includes following document

Volume-I	Instruction to Bidders
Volume- II	Project Information Memorandum
Volume-III	Draft Concession Agreement

ii.) Schedule of Bidding Process

Lucknow Nagar Nigam would Endeavour to adhere to the following schedule during the Bidding Process:

Sl. No.	EVENTS	DATE
1.	Issue of RFP	
2.	Site Visits	
3.	Last date for receiving queries	
4.	Pre-Bid meeting	
5.	Proposal due date	
6.	Hard Copy Submission	
7.	Opening of technical bid	

1891

Section – I

Instructions to Bidders

PMU (SWM) Lucknow

1. Scope of Proposal

1.1 The Solid Waste Management Rules, 2016 (herein after referred to as "SWM Rules") mandate that Urban Local Bodies (ULB) shall do door to door collection and Transportation of MSW. ULB shall also carry out treatment and disposal of Municipal Solid Waste (MSW in a scientific manner in waste processing and engineered sanitary landfill facilities. SWM Rules also mandate that MSW shall be treated and only inert / non-biodegradable material should be landfilled.

1.2 With an objective to improve the urban infrastructure and municipal service delivery levels as per service level benchmark, the Government of India, along with the states and ULBs is implementing Swachh Bharat Mission.

1.3 Solid waste management, including development of Door-to-Door collection, segregation, transportation, waste processing and development of engineered sanitary landfill facilities, is a key component under Swachh Bharat Mission.

1.4 In view of providing clean and environment friendly waste management services in city Lucknow Municipal Corporation (LMC) intends to invite bid under a **Design-Build - Operate - Transfer (DBOT)** Concession framework (hereinafter referred to as "the Project") for a Concession period of 10 years after Appointed Date and extendable to 5 years for following major works to be executed by the successful bidder in the city:

a) Door to Door Collection of MSW and its transportation to the MRF/designated site on daily basis.
b) Design, Develop and Operation & Maintenance of MRF cum Transfer station and recovery of recyclables.
c) Collection of user charges from households, commercial establishment, institutional establishment & BWG's.
d) Street Sweeping & Mechanized Road Sweeping from Zone-8 area of LMC.
e) Drain Cleaning from Zone-8 area of LMC.

1.5 The extension in contract period will be solely dependent upon concessionaire performance in First 10 years of contract period.

1.6 Concessionaire shall procure shortfall of vehicle and equipment/assests for door-to-door collection & Mechanised Sweeping, MRF Cum TS, Drain Cleaning, Road Sweeping on 100 % financing of LMC as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assests and ensure its registration in the name of LMC. Concessionaire shall be responsible for operation & maintenance of project component including supply of manpower, fuel, minor tools and tackles.

1.7 Deleted

1.8 The brief scope of work is set out in Appendix A and the detailed scope of work has been set out in the Project Information Memorandum.

1.9 The proposals would be evaluated on the basis of the evaluation criteria set out in this

RFP document as per Appendix D in order to identify the successful Bidder for the Project (hereinafter referred to as "Successful Bidder"). The Successful Bidder would then have to enter into a Concession Agreement with the ULBs and perform the obligations as stipulated therein, in respect of the Project.

1.10 Terms used in this RFP document, which have not been defined herein, shall have the meaning ascribed thereto in the Concession Agreement.

2. Eligible Bidders

2.1 Bidders who fulfil the pre-qualification criteria indicated in Appendix D are eligible to submit Technical and Financial Proposal in response to this RFP Document.

2.2 The Bidders eligible for participating in the qualification process shall be any one of the following two categories:

Category 1: A single Business Entity meeting the qualification criteria as set out in Proof of Qualification

Category 2: In case the Bidder, which is a Business Entity, (hereinafter referred to as "Lead Member") does not individually fulfil qualification criteria as set out in Proof of Qualification, the same may be procured from a suitably qualified operators, (hereinafter referred to as "Operators"), with whom a valid Memorandum of Understanding (hereinafter referred to as "MoU") formalizing such an arrangement should be in place. The Operator must also be a Business Entity. This joint entity shall hereinafter be referred to as "Consortium".

The term Bidder used hereinafter would therefore apply to both the above-mentioned categories.

2.3 Only those Bidders who's Technical Bids meet the Minimum Technical Capability and Minimum Financial Capability Criteria shall be further evaluated on the basis of Evaluation Criteria as set out under Appendix D of the RFP. Bidders who's Bid do not meet the aforesaid Minimum Technical Capability and Minimum Financial Capability Criteria shall be rejected.

2.4 Any entity, which has earlier been barred/backlisted by ULBs / Government of Uttar Pradesh from participating in any project being undertaken by ULB / Government of Uttar Pradesh (insert abbreviated name of state), would not be eligible to submit a Proposal, if such bar/blacklisting subsists as on the Proposal Due Date.

2.5 The Selected Bidder shall be required to incorporate a wholly owned SPV under the Companies Act, 2013 to act as the Concessionaire. Where the Bidder is a Consortium; it shall, in addition to forming an SPV as its wholly owned company (if it is the Selected Bidder), comply with the following additional requirements:

SNM, LUCKNOW

1894

3. Additional Requirements for submitting Proposal by a Consortium

3.1 Number of members in consortium shall not exceed 2 (two).

3.2 Wherever required, the Proposal shall contain the information required of each of the members of the Consortium.

3.3 The members of the Consortium shall furnish Power of Attorney duly signed by authorized representative(s) of the members.

3.4 The Application should include a brief description of the roles and responsibilities of individual members, particularly with reference to financial, technical and O&M obligations;

3.5 The Proposal shall be signed by the duly authorized signatory of the Lead Member and shall be legally binding on all the members of the Consortium.

3.6 The Consortium shall submit a MoU as part of its Proposal. The MoU shall, inter alia, include the following:

a) Convey the intent of the Lead Member to incorporate a wholly owned SPV under the Companies Act, 2013 to act as the Concessionaire, with the Operator/operators. In case the Project is awarded to the Consortium or joint venture Company, as the case may be, Concessionaire would enter into a Concession Agreement with the LMC and shall subsequently carry out all the responsibilities as Successful Bidder in terms of the Concession Agreement.

b) The Parties undertake that they shall collectively hold 100% shareholding of the paid up Equity of the SPV [as defined in Concession Agreement] share capital of the concessionaire commencing from the Execution Date of the concession agreement until expiry of five years thereafter, and shall hold at least 51% (fifty one per cent) shareholding of the subscribed and paid up equity of the Concessionaire at all times during the remaining Concession Period i.e. from expiry of aforesaid five years period until end of concession period. Further, in case of Consortium bidding entity, besides the foregoing shareholding requirement, the bidding Consortium shall ensure that the Lead Member thereof holds at least 51% shareholding in the paid up equity capital of the Concessionaire during Lock-in-Period, and the other members of consortium shall hold during Lock in Period minimum 10% (ten per cent) shareholding in the paid up equity capital of the Concessionaire; and after the expiry of Lock-in -Period, the Lead Member shall be required to hold at least 26% shareholding in the paid up equity capital of the Concessionaire commencing from the expiry of Lock-in-Period until expiry of concession period with the aggregate shareholding of the Consortium member in the Concessionaire shall not be less than 51%. No change in shareholding of the selected bidder [either single Bidding Entity/ Bidding] as set out herein and (as to be reiterated in the Joint Bidding Agreement) in the Concessionaire shall take place.

c) Clearly set out the roles and responsibilities of each Member of the Consortium for implementing the Project.

PMU (RCUES)

d) Include a statement to the effect that the members of the Consortium shall be jointly liable for the implementation of the Project in accordance with the terms of the Concession Agreement.

e) In naming the Lead Member and the Operator of the Consortium, it should include their successors and permitted assigns.

A copy of the MoU should be submitted as part of the Proposal. The MoU entered into between the Members of the Consortium should be specific for the Project and should contain the above requirements, failing which the Proposal would be liable to be considered as non-responsive.

4. Number of Proposals

Each Bidder can submit only one (1) Proposal for single work, in response to this RFP. Any Bidder who submits more than one Proposal, either individually or as a part of consortia, for the single town will be disqualified and cause the disqualification of such consortia.

5. Conflict of Interest

5.1. A Bidder shall not have a conflict of interest that may affect the Selection Process or the Work (the "Conflict of Interest"). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, the Authority shall forfeit and appropriate the Bid Security as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, the time, cost and effort of the Authority including consideration of such Bidder's Proposal, without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise.

5.2. The Authority requires that the Agency provides professional, objective, and impartial solution and at all times hold the Authority's interest's paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Agency shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of the Authority.

5.3. A Bidder eventually appointed for this Project shall be disqualified from subsequently providing goods or works or services related to the implementation of any other LMC Project and any breach of this obligation shall be construed as Conflict of Interest; provided that the restriction herein shall not apply after a period of 1 (one) year from the completion of this assignment.

Any Agency who has been awarded with the work of Door to Door Collection will not be awarded with the work of secondary transportation of work in LMC area or Vice Versa.

6. Validity of Proposal

The Proposal shall remain valid for a period not less than 180 days from the Proposal Date (hereinafter referred to as "Proposal Validity Period"). LMC reserves the right to reject any Proposal, which does not meet the requirements.

7. Proposal Preparation Cost

The Bidder shall be responsible for all the costs associated with the preparation of its Proposal and its participation in the bidding process. LMC will not be responsible or in any way be liable for such costs, regardless of the conduct or outcome of the Proposal.

8. Earnest Money Deposit (EMD)

8.1 Each Proposal shall be accompanied by **EMD of Rs. Rs 90,00,000 /- (Rupees Ninety Lacs Only)**, which shall be valid for a minimum period of 180 days (one hundred and eighty) from the bid due date, in the form of a demand draft/ bank guarantee (as per format attached at Appendix H) issued by a Scheduled Commercial Bank in India having a branch in Lucknow, in favour of **"Lucknow Municipal Corporation",** payable at Lucknow ("Bid Security") and refundable not later than 180 (one hundred and eighty) days from the Bid Due Date, except in the case of the Selected Bidder whose Bid Security shall be retained till it has provided a Performance Security in terms hereof.

8.2 The EMD shall be either in the form of a Bank Guarantee / banker's cheque/FDR drawn in favour of the **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**, on any Nationalized/scheduled bank and payable at Lucknow.

8.3 The EMD of every unsuccessful Bidder would be returned within a period of 2 weeks from the date of LMC announcement of the Successful Bidder. The EMD submitted by the Successful Bidder would be released upon furnishing of the Performance Security, by way of an irrevocable Bank Guarantee, issued by a scheduled bank/nationalised bank located in India in favour of **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION** for due and punctual performance of the obligations relating to the Project.

8.4 The EMD shall be forfeited in the following cases:

a) If the Bidder withdraws its Proposal during the interval between the Proposal Due Date and expiration of the Proposal Validity Period.

b) If the Successful Bidder fails to provide the Performance Security within the stipulated time or any extension thereof provided by LMC; and

c) If any information or document furnished by the Bidder turns out to be misleading or untrue in any material respect.

9. Format and Signing of Proposal

9.1 The Proposal and all related correspondence and documents should be written in

LMNWS * PMU (RCUES) Lucknow *

English. Supporting documents and printed literature furnished by the Bidder with the Proposal may be in any other language provided that they are accompanied by certified translations of the pertinent passages in English language. Supporting materials, which are not translated into English, may not be considered for the purpose of interpretation and evaluation of the Proposal, the English language translation shall prevail.

9.2 The currency for the purpose of the Proposal shall be the Indian Rupee (INR). If the Proposal is submitted in any other currency, LMC reserves the right to use suitable exchange rate for the purpose of uniformly evaluating all Proposals.

9.3 The Bidder would provide all the information as per this RFP. LMC would evaluate only those Proposals that are received in the required format and are complete in all respects.

9.4 The bidder shall upload the Technical Bid and Financial Bid in the respective links for the **"RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation"** in the website https://etender.up.nic.in

9.5 Each Proposal shall comprise the following:

A. Part I Submission

a. Covering letter in the format set out in Appendix B
b. Details of the Bidder in the format set out in Appendix C
c. Copy of the certificate of registration issued by the authority concerned (In case of a registered firm or society), Proof of qualification, Work Completion Certificates (for experience in Similar Projects), Financial Capability of the Bidder as set out in Appendix D.
d. Power of Attorney set out in Appendix E (Applicable both for Single Business Entity and Consortium). Power of Attorney set out in Appendix E1 (only in case of Consortium).
e. Memorandum of Understanding entered between Lead Member and Operator as set out in Clause 3.6 and format set out in Appendix F (only in case of Consortium)
f. Anti – Collusion Certificate as per Appendix G
g. Proof of Qualification in the format set out in Appendix D
h. Tender Fee in the form of demand draft for Rs. **25,000.00 (Rupees Twenty-Five Thousand only)** in favour of **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**, Payable at Lucknow
i. Technical Proposal as per format set out in Appendix I
j. Copy of Earnest Money Deposit as per Clause no. 7

B. Part II Submission

a. Financial Proposal in the format set out in Appendix J of this RFP

9.6 Aforesaid Technical Bid and Financial Bid shall be uploaded in the respective links for the

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation" in the website https://etender.up.nic.in

9.7 The Proposal, scanned and uploaded shall be typed or written in indelible ink and each page shall be initiated by an authorized signatory of the Bidder, as applicable. All the alterations, omissions, additions, or any other amendments made to the Proposal shall also be initiated by the person(s) signing the Proposal.

10. Original Document to be submitted by the Bidder

10.1 Original Document to be Submitted by the Bidder: The Bidder shall be required to submit the following documents in Original in sealed envelope after the Bid Due Date but prior to the date of Opening of the Technical Bid as specified in the Bid document, in the office of the **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**, on the address as mentioned in clause 9.2:

a) DD/ Pay Order towards Cost of Bid Document
b) Bid Security for an amount and in the form as specified in Clause no. 7
c) Power of Attorney authorizing the signatory of bid to commit the Bidder in accordance with Appendix E and Appendix E1
d) Litigation History in the format as specified in clause 6 of Appendix C
e) Memorandum of Understanding entered between Lead Member and Operator as set out in Clause 3.6 and format set out in Appendix F (only in case of Consortium)

10.2 The queries and Original Document as mentioned under Clause 9.1 must be submitted to the following address:

Kind attention: **Municipal Commissioner, Lucknow Municipal Corporation**
Address : Triloknath Marg, Lalbagh, Lucknow-226001

10.3 The envelope shall indicate the name and address of the Bidder

10.4 The envelope shall clearly bear the following identification

"**Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation"**

"Submitted by
Name,
Address
Contact Phone No. of the Applicant"

11. Proposal Due Date

11.1 Proposals should be submitted before 5.00 PM IST of Proposal Due Date, in the LMC and form as detailed in this RFP. Only e-tenders will be accepted. Proposals submitted through speed post, facsimile transmission or telex will not be accepted.

11.2 LMC may, in exceptional circumstances, and at its sole discretion, extend the above Proposal Due Date by issuing an Addendum. Any Addendum thus issued will be sent in writing to all those who have purchased the RFP document and would also be posted on the website. The same will also be communicated to those who have downloaded the RFP document from the website and have duly intimated this fact to LMC giving their particulars including address for communication by fax.

11.3 It is desirable that each Bidder submits its Proposal after visiting the Project Site for ascertaining the location, surroundings, or any other matter considered relevant.

11.4 Bidders would be granted permission by LMC for visit of the Project Site on receipt of a formal written request, reasonably in advance of the proposed date of visit as mentioned in the Schedule of Bidding Process.

11.5 At any time prior to the Proposal Due Date, LMC may, for any reason, whether at its own initiative or in response to clarifications requested by any Bidder, modify the RFP document by the issuance of Addenda. Any Addendum thus issued will be sent in writing to all those who have purchased the RFP document and would also be posted on the website. The same will also be communicated to those who have downloaded the RFP document from the website and have duly intimated this fact to LMC giving their particulars including address for communication by fax.

12. Bidder's Responsibility

12.1 The Bidder is expected to examine carefully the contents of all the documents provided. Failure to comply with the requirements of RFP shall be at the Bidder's own risk.

12.2 The Bidder is expected to examine carefully the current condition of solid waste management in Zone-8 Lucknow and tenderer shall make his own assessment of resources required to meet the service level benchmarks/scope of work defined in this tender.

12.3 It shall be deemed that prior to the submission of Proposal, the Bidder has:

a) made a complete and careful examination of terms & conditions/requirements, and other information set forth in this RFP document;
b) Have visited the city/site and have done his own assessment of existing situation of solid waste management.
c) have satisfied it-self with local conditions, topography of the land, drainage, accessibility, logistics, work environment etc. or any other condition affecting his price/rates before quoting their rates.
d) received all such relevant information as it has requested from LMC; and

e) made a complete and careful examination of the various aspects of the Project including but not limited to:
   i.) the Site and any other property relating to the Project;
   ii.) status of clearances
   iii.) existing facilities and structures;
   iv.) the conditions of the access roads and utilities in the vicinity of the Project Site;
   v.) all other matters that might affect the Bidder's performance under the terms of this RFP document.

12.4 LMC shall not be liable for any mistake or error or neglect by the Bidder in respect of the above.

13. Pre-Proposal Meeting

13.1 To clarify and discuss issues with respect to the Project and the RFP, LMC may hold Pre-Proposal meeting.

13.2 Prior to the Pre-Proposal meeting, the Bidders may submit a list of queries, if any, to the Project requirements and/or the Concession Agreement. Bidders must formulate their queries and forward the same to LMC prior to the meeting. LMC may, in its sole discretion or based on inputs provided by Bidders, amend the RFP.

13.3 Bidders may note that LMC will not entertain any deviations to the RFP at the time of submission of the Proposal or thereafter. The Proposal to be submitted by the Bidders would have to be unconditional and the Bidders would be deemed to have accepted the terms and conditions of the RFP with all its contents including the Concession Agreement. Any conditional Proposal shall be regarded as nonresponsive and would be liable for rejection.

13.4 LMC will endeavour to hold the Pre-Proposal meeting as per the schedule of bidding process. The details of the meeting will be separately communicated to the Bidders.

13.5 Attendance of the Bidders at the Pre-Proposal meeting is not mandatory.

13.6 All correspondence / enquiries should be submitted to the following in writing by fax/registered post / courier:

Kind attention: **Municipal Commissioner, Lucknow Municipal Corporation**
Address : Triloknath Marg, Lalbagh, lucknow-226001
E-mail : nnlko@nic.in
Phone No : 0522-2289782

14. Opening of Proposals and Clarifications

14.1 LMC would open the Proposals on any working day within 3 days of the Proposal Due Date for the purpose of evaluation.

14.2 LMC reserves the right to reject any Proposal not submitted on time and which does not contain the information/documents as set out in this RFP document.

14.3 To facilitate evaluation of Proposals, LMC may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Proposal. The request for such clarification or substantiation and the response shall be in writing or by facsimile. No material change in the substance of the Proposal would be permitted by way of such clarification/substantiation.

14.4 Information relating to the examination, clarification, evaluation, and recommendation of the Proposal shall not be disclosed to any person not officially concerned with the process. LMC will treat all information submitted as part of the Proposal in confidence and would require all those who have access to such material to treat the same in confidence. LMC will not divulge any such information unless it is ordered to do so by any authority pursuant to applicable law or order of a competent court or tribunal or any Government Authority that has the power under law to require its disclosure.

15. Evaluation

15.1 Proposal Evaluation: Part I Submission

15.1.1 The Part I Submission of the Proposal would first be checked for responsiveness with the requirements of the RFP. The Proposal would be considered as responsive if it meets the following conditions:

a) it is received / deemed to be received by the Proposal Due Date including any extension thereof.
b) it contains all the information and documents as requested in the RFP.
c) it contains information in formats specified in this RFP.
d) it mentions the Proposal Validity Period as set out in Clause 5.
e) it provides information in reasonable detail. ("Reasonable Detail" means that, but for minor deviations, the information can be reviewed and evaluated by LMC without communication with the Bidder). LMC reserves the right to determine whether the information has been provided in reasonable detail.
f) There are no inconsistencies between the Proposal and the supporting documents.

A Proposal that is substantially responsive is one that conforms to the preceding requirements without material deviation or reservation. A material deviation or reservation is one;

a) which affects in any substantial way, the scope, quality, or performance of the Project, or
b) which limits in any substantial way, inconsistent with the RFP, LMC's rights or the Bidder's obligations under the Concession Agreement, or
c) which would affect unfairly the competitive position of other Bidders presenting substantially responsive Proposals.

15.1.2 In case the Proposal is found to be responsive, Part I Submission would be evaluated in accordance with the criteria for qualification of Bidders set out in Appendix D, based on the Proof of Experience submitted by the Bidders and such Bidders would be Qualified Bidders.

15.1.3 The Technical Proposal of the Qualified Bidders would be evaluated for adequacy of design and operations so as to comply with the conditions set out in Concession Agreement.

15.1.4 As part of the evaluation of the Part I Submission, LMC may also request the Bidder to submit clarifications.

15.1.5 The evaluation of the Part II Submission would be taken up only after Part I Submission is found to meet the requirements of this RFP. LMC reserves the right to reject the Proposal of a Bidder without opening the Part II Submission if, in its opinion, Part I Submission is not substantially responsive with the requirements of this RFP.

15.2 Proposal Evaluation: Part II Submission

15.2.1 Part II Submission of all the Bidders whose Part I Submission meets the requirements of the RFP will be evaluated. The format for quoting the Financial Proposal is set out in Appendix J and Volume III of this RFP. The Bidders would be required to submit their proposal as per this format.

15.2.2 Selection Methodology

15.2.3 Scoring and bid evaluation will be done as per criteria set out in Appendix D2.

15.2.4 The Bidder ranked first in accordance with the above procedure would be declared as the Preferred Bidder.

15.2.5 In case there are two or more Bidders quoting the same best Financial Proposal, LMC may in such case call all such Bidders for negotiations and select the Preferred Bidder on the outcome of the negotiations. The selection in such cases shall be at the sole discretion of LMC.

15.3 LMC reserves the right to reject any Proposal, if:

a) at any time, a material misrepresentation is made or discovered; or

b) the Bidder does not respond promptly and diligently to requests for supplemental information required for the evaluation of the Proposal. Rejection of a Proposal by LMC as aforesaid would lead to the disqualification of the Bidder. If the Bidder is a Consortium, then the entire Consortium would be disqualified/ rejected. If such disqualification / rejection occur after the Proposals have been opened and the Preferred Bidder gets disqualified / rejected, then LMC reserves the right to:

   a. either select the next best Bidder, or
   b. take any such measure/s as may be deemed fit in the sole discretion of LMC, including Annulment of the bidding process.

15.4 In the event of acceptance of the Preferred Bidder with or without negotiations, LMC

shall declare the Preferred Bidder as the Successful Bidder. LMC will notify the Successful Bidder through a Letter of Acceptance (hereinafter referred to as "LoA") that its Proposal has been accepted.

16. Execution of Concession Agreement

16.1 The Successful Bidder shall execute the Concession Agreement within 4 weeks of the issue of LoA or within such further time as LMC may agree to in its sole discretion.

16.2 Failure of the Successful Bidder to comply with the requirements of Clause 7.3 or Clause 14 shall constitute sufficient grounds for the annulment of the LoA, and forfeiture of the EMD. In such an event, reserves the right to

a) either invite the next best Bidder for negotiations, or
b) take any such measures as may be deemed fit in the sole discretion of LMC, including annulment of the bidding process.

17. Performance Security

17.1 The Successful Bidder shall furnish Performance Security of amount **equivalent to 5%** of yearly contract value by way of an irrevocable Bank Guarantee issued by a scheduled /nationalized bank in favour of **MUNICIPAL COMMISSIONER**, **LUCKNOW NAGAR NIGAM,** as required under the Concession Agreement. If yearly contract value gets escalated in succeeding year of operation, concessionaire shall submit the PBG of extended value.

17.2 The Performance Security shall be in the form of an irrevocable Bank Guarantee in favour of **MUNICIPAL COMMISSIONER**, **LUCKNOW NAGAR NIGAM,** as per the format set out in the Draft Concession Agreement. The Performance Security shall be kept valid for a period of 24 months from the Appointed Date.

17.3 The Performance guarantee shall be forfeited and en-cashed in the following cases:

a) If the Successful Bidder withdraws from the project midway during the project term
b) If during the project term, there Successful Bidder is found to charge user fees which were not agreed.
c) Any other act or acts of the successful bidder which renders the project un-operational and **LUCKNOW MUNICIPAL CORPORATION**, establishes sufficient reasons to forfeit the Performance Guarantee.
d) If the bidder fails to meet the service levels as agreed.

18. Cost of RFP document

18.1 The RFP document can be downloaded from https://etender.up.nic.in. The cost of RFP document is **Rs. 25,000.00 (Rs. Twenty-Five Thousand Only).** The Proposals must accompany with cost of RFP document in the form of a bank draft in favour of

"**LUCKNOW MUNICIPAL CORPORATION**" of **Rs. 25,000.00 (Rs. Twenty-Five Thousand Only).** The Bidders may also obtain a hard copy of the RFP from the office of **MUNICIPAL COMMISSIONER, LUCKNOW MUNICIPAL CORPORATION**. The Bidders purchasing the hard copy of the RFP must attach the copy of Receipt along with the Proposal.

18.2 To assist in the examination, evaluation, and comparison of Proposals, LMC may utilize the services of consultant(s) or advisor(s)

18.3 Notwithstanding anything contained in this RFP, LMC reserves the right to accept or reject any Proposal, or to annul the bidding process or reject all Proposals, at any time without any liability or any obligation for such rejection or Annulment, without assigning any reasons thereof.

Section – II

Appendices

Appendix – A

Brief Scope of Work

The Brief Scope of Work for the Bidder is as set out below.

1. The contours of the Project include:
    a. Door to Door collection of municipal solid waste, its transfer to MRF/TS/designated site & recovery of recyclables.
    b. Collection storage & transfer of Domestic hazardous waste
    c. Development and operation of intermediate MRF cum Mini Transfer stations or standalone Mini Transfer stations as the case may be.
    d. Mechanized Sweeping of Roads / Streets, mechanized/manual cleaning of pavement / footpath / paved path /cycle track. Manual Sweeping, litter collection, Removal of garbage, litter, silt and blockages from street sides and transportation of sweeping waste up to transfer station/dustbins/secondary vehicles.
    e. Cleaning, Desilting, Removal of Obstruction and Maintenance of Storm Water Drains of depth up to 4 feet with a cleaning frequency of once in 15 days in Municipal area of Zone-8 & transportation of drain silt/waste up to TS/Dustbins/secondary vehicle provided by LMC.
    f. Collection of user charges from households, commercial establishment, institutional establishment & BWG's on behalf of Lucknow Municipal Corporation and deposit it into Escrow account of Lucknow Municipal Corporation.

    Work shall be done essentially as per guidelines of MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and guideline amended thereupon during concession period.

2. The scope of the Project includes the following:
    Preparation of Detailed Operation Plan: A Project Information Memorandum is enclosed with the RFP document as Volume II, and is **only being provided for the purpose of reference of the Bidders**. The Concessionaire shall within 1 months of the signing of Agreement provide with a Detailed Operation Plan to Authority ensuring compliance of the same with the proposed door to door collection, Street Sweeping, Drain Cleaning and MRF operation Plan, and detailing out the design, drawings, specifications and cost estimates of all the items. The Concessionaire shall have the liberty to suggest different equipment for collection, transportation of waste, provided however the DOP must adhere to the outcome as desired in MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and C&T Plan as detailed out

in the Project Information Memorandum (Volume II).

The bidder shall survey the project area (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) with digital mode only within one month from award of work. Survey data shall include address, ownership detail, communication details and geo tagged photograph of property. All such details shall be linked with GIS based platform against property/building polygon and shall be enabled with facility for public viewing and feedback mechanism. If any (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) find that their data is not linked with the application, they may be able to send their detail through such App

a. **Approvals for the Project:**
    i. Obtaining Environmental clearances from MoEF /SEIAA as the case may be.
    ii. AAI clearance if required.
    iii. Water allocation, construction power for project and any other clearances.
    iv. Renewal/ obtaining of all project related clearances required for the project.
    v. And all other clearances and permits as are required to be procured for the implementation of the Project in terms of the Concession Agreement
b. **Collection of Waste**: Door to door collection of waste from all the wards of Zone-8 under Lucknow Municipal Area. The door-to-door collection to include all government office complexes, non-government office complex, authorized colonies, unauthorized regularized colonies, all market/ commercial/ institutional places, slums and even from undesignated points by means of deployment of suitable vehicles. This shall also include by-lanes, lanes and streets.

    Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste as per relevant Rules and standards.
c. **Drain Cleaning:** Clearing and uprooting rank vegetation, grass, bushes, shrubs, and disposal of unserviceable materials, including removal and disposal of silt and any kind of temporary, permanent, RCC, PCC and other solid obstruction from the drains. Excavation and removal of silt or silt mixed with sand in slushy condition from drain bed including lift and disposing off the same.
    i. The drains must be cleaned and desilted by Manual/mechanical means or combination of both i.e., Excavator, JCB, Barge Mounted

Poclain etc. without damaging to the above ground and underground utilities / properties etc. wherever possible. In case use of machinery is not possible, then only manual human based (with all safety gadgets) cleaning is done

ii. The agency should maintain the level of drains and water way according to the level as per original construction. The depth shall be maintained any time throughout the year.

iii. Desilted material must not be dumped in road/ footpath side, it should be loaded directly in ripper/dumper/carrier etc and transfer to the site as directed by PMC.

iv. Involvement of man power should be minimum in all the nala and machineries should be engaged as far as possible.

v. Involvement of the drains along the narrow roads and Liquid state silt the desilted materials may be dumped by the side of the road temporarily which must be removed within 24 hours of dumping. Failing to remove the same within 24 hrs will attract a penalty of 0.01% of Package value per day.

d. **Road Sweeping:** The Operator shall ensure to conduct sweeping and cleaning of the Zone-8 including Main Roads, service roads, Arterial Roads (streets, narrow streets, gullies) footpaths, road berms, central verge, curb channels, curb stones gully etc., which means complete solution for RoW (right of way) by manual/mechanical means or combination of both. The objective is to keep the areas litter and dust free for 24x7. The type of work to be conducted is as under: All Roads of 7 mts and above to be mechanically swept. (Only sides of the roads are to be manually swept). For areas on these particular roads not covered by Machine/s, litter picking to be done daily.

i. All Mechanical sweeping machines to be equipped with GPS devices and both front and rear camera.

ii. It is the responsibility of the bidder to maintain a computerized central monitoring control room for the vehicles and provide monthly reports to the 3rd party / authority with actual GPS based vehicle movement report.

iii. The generated report should also include real time pictures (min no. 1 per Kms, per Pass) of the work undertaken through manual/mechanical sweeping (Vehicle mounted cameras (front and reverse both) can be used for this as well).

iv. The Operator has to share a detailed operations plan for each month (Schedule plan has to be shared by the operator at the beginning of each month), for all the areas. Mechanical, Manual Sweeping of Roads & Cleaning services in all Wards of Zone-8 Nagar Nigam Lucknow

Uttar Pradesh.

v. Swept roads shall be kept litter and dust free during the next day operation hours, from entire wall-to-wall basis. Sweeping of Roads/ Streets/ Lanes would include Bitumen, Pakka, Footpath, Ramps and kuccha portions including sides – Corner to corner.

vi. The operator needs to ensure that where ever the mechanized sweeping of road in not possible, that particular stretch of the road area has to be manually swept to ensure cleanliness. Frequency of manual cleaning including litter picking to be worked out at 7 days/week.

vii. Fuel operated Air blower to be used ahead of sweeping machines to bring the litter / leaves and dust from the pavements / cycle tracks / all difficult to reach areas on the path of the machine for easy collection by the sweeping machines.

viii. The operator would use Litter Picking machine in areas as assigned by the Authority on everyday basis.

ix. High Pressure washing of pavements, footpaths, dividers, medians, roundabout, bus stand, street furniture, signage & Monument's facia. once a week or as per need arise.

x. Wild grass and vegetation on the side berms, footpaths, medians of all roads shall be removed by the Operator once a month.

xi. Every cleaning worker to be equipped with Litter Picking stick for comfortable collection of bulk litter like polythene, paper etc.

xii. Clearance of up to 1 Mtrs open drains running along with the carriage way.

xiii. Bush and Grass Cutting at ground level and hand-held distance to be necessarily done mechanically with help of hand-held fuel operated brush cutters.

xiv. Necessary arrangements to be made for Tree Pruning and mechanical means would be preferred.

xv. Road Sweeping of Institutional Area, Market Area, Public Places, Monuments & VVIP area shall be at least two times on daily basis or as required.

xvi. Manual Sweeping:

The Operator shall ensure that the employees are in proper dress, and also ensure placement of safety devices and signages at Project Site during the working hours, as per the specification. Every Worker, Supervisor and Manager to be equipped at all times during working hours: Safety. Caps / Helmets, Nose Mask, Rain Coats, Gloves, Radium Jackets, Safety Boots. Ignoring the safety requirements as mentioned

above by the Operator shall result in a fine of Rs 200/- per day per default per person.

e. **Setting up of MRF cum Transfer point:** The concessionaire shall set up of intermediate MRF cum Transfer point to recovery of recyclables & transfer waste from small vehicles to secondary transport vehicles.

f. **Transportation of Waste to MRF/TS/MTS:**
   i. Collected waste shall be transferred to MRF cum PCTS/transfer stations/MTS/FCTS/dustbins site in closed vehicle.
   ii. The operator shall keep in reserve sufficient number of transport vehicles for any unforeseen eventuality/festival/fair /important events/ emergency conditions.

g. **Segregation of Waste:**
   i. Segregation of waste at source as well as at the MRF cum PCTS site.
   ii. Mixed waste containing recoverable resources shall follow the route of recycling

h. **Domestic Hazardous & Domestic bio-medical waste**
Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure handover/disposal of such waste as per relevant Rules and standards.

i. **Procurement of Equipment / Machinery:** All procurement for shortfall of equipment, vehicles and machinery required for door-to-door collection, Mechanised Sweeping vehicles, drain cleaning & Setting up MRF cum Transfer Station as per operation plan shall be provided by the LMC within the stipulated time period as per operation plan provided by concessionaire and approved by LMC and PMC. Regarding existing vehicles/equipment, a committee comprising of LMC official, PMC and concessionaire will be constituted to decide the vehicle/equipment fit for project.

j. **Vehicle required for Door-to-Door Collection:** Vehicle required for Door-to-Door Collection shall be provided by LMC. Procurement of vehicles shall be done as per DPR/operation plan prepared by concessionaire and approved by LMC. Regarding existing vehicles/equipment's, a committee comprising of LMC official, PMC and concessionaire will be constituted to decide the vehicle/equipment fit for project.

k. **Operation & maintenance:** The Concessionaire shall ascertain that at all times during the Operation Period, the Project conforms to the operation & maintenance requirements set forth in Schedules 2 of DCA of the RFP.

l. **Support Infrastructure development** including but not limited to workshops

and development of adequate parking Spaces, is to be done by the Concessionaire at his/her own cost. Land for workshop and parking of vehicles will be provided by LMC. The bidder shall also arrange necessary infrastructure/ spare parts etc. and manpower for the purpose of regular maintenance of the vehicles, machinery & equipment etc.

m. **Manpower:** The Concessionaire shall be responsible for deployment of all manpower for waste collection, Street Sweeping, Drain Cleaning, transportation, user charges collection & recovery of recyclables of Waste including the key personnel for the management and supervision of all Project-related activities. (This would include the designation of suitably qualified personnel for areas such as contract administration and supervision, construction management, safety, environmental management, plant and equipment maintenance, procurement, materials management and quality control),

n. **Co-ordination with LMC:** The Concessionaire shall provide project related information at regular interval in the form and manner as prescribed by LMC. In case of any law & order problems, the Concessionaire shall inform promptly the LMC about the same and will act as per the direction of the LMC.

o. The Concessionaire shall be responsible for all other activities apart from activities as listed above towards successful implementation, operation, maintenance and management of the project in line with Solid Waste Management Rules, 2016 (hereinafter referred as the "SWM Rules 2016"), SBM-2 guidelines or as revised from time to time and Good Industry Practices.

p. **Awareness Campaign:** Concessionaire shall be responsible for undertaking awareness campaigns through various medium to spread awareness about the Project and promote segregation of MSW at the individual household level. Also, it has to undertake awareness campaign regarding non-usage of plastics. It may be clarified over here that LMC on its own will be free to devise booster campaigns on these same issues at its own discretion.

q. **Smart Solid Waste Collection & Management systems {INFORMATION & COMMUNICATION TECHNOLOGY (ICT):**

Concessionaire shall be responsible to Deploy System in which all the collection, transportation and sweeping vehicles are fitted with GPS tags and Vehicle Tracking Management System (VTMS) to detect tempering, track and

monitor the vehicles and hence efficiently plan the routing and resources for transportation system.

In addition to VTS, the GIS and POI based system shall be integrated with Management Information System (MIS)/VTS for collecting information at micro level. GIS based POI of center point of each Road/lane shall be generated and MIS shall be able to generate daily attendance of such POI by their designated vehicles. The MIS system shall be as per the requirement of Authority and if any updates and revision is required during tenure of project the Contractor shall carry such revisions at no extra cost.

The total GPS/GIS system /mobile based APP for SWM monitoring is required to be integrated with ICCC, Lucknow Smart City Project.

The successful bidder shall compulsorily install Vehicle Tracking Management System (VTMS) on each vehicle used for collection & transportation of MSW, with the necessary web based software which have desired functions to monitor Door to Door collection operation, accessible from web, personal computer/ laptops, network links with antivirus installed, printer, GPS / Sim Card / Dongle and shall connect the system with ICCC. Please note that for payment of collection and transportation fee, VTMS record is mandatory.

ICT (Information and Communication Technology) based attendance system shall be undertaken by the operator for ensuring the timely presence and monitoring of work done by all its deployed manpower and such monitoring is to be based as real time reporting of time and duration spent by the employee for operation of the services. This would entail that each worker/employee deployed by the Operation for all Packages (Part A to Part C) must have a Phone with capability of smart applications to be able to communicate data and other features like photo/video in real time for reporting. Similarly, all vehicles and usage of mechanical equipment by the operator must have VTS and other suitably enabled ICT mechanism to make real time reporting about the movement and usage of such vehicles and equipment deployed by the Operator.

Authority may ask concessionaire to adopts sensors enabled smart bins with QR (Quick Response) code tags or screening system to monitor the collection efficiency, concessionaire shall implement such system and operate and maintain the system as decided by the Authority.

Concessionaire shall maintain database for manpower, vehicles, storage bins, lifting of waste, unnoticed waste, user charge collection, defaulter list, etc. as applicable. The Concessionaire shall design software compatible with mobile phone to track and monitor and report in real time on the various parameters.

Every deployed vehicle and personnel related to the execution of the project must be tracked in real time with suitable deployment of software/hardware ICT infrastructure for all project execution related work and this requires not only VTS for vehicles and suitable biometric/other IT application but also requires that the Concessionaire ensures all its deployed manpower has proper android based mobile phone with video camera recoding features that may be used for integration of smart ICT solutions envisaged by NNL to be integrated easily and it shall be absolutely mandatory for the Concessionaire to ensure that any monitoring software solution related to the project whenever is implemented by the Authority, the Concessionaire will be fully complying to it for all features in terms of recording of performance of man and resources in real time.

All the hardware such as GPS devices, RFID TAGs (Sticker Type), RFID TAG (Metal mount Type), RFID readers, Biometric Fingerprint devices, Necessary hardware for Software Application hosting at NNL Data Centre along with Software Application System and keeping 5% of devices as spare will be in scope of NNL whereas successful bidder shall operate and maintain them at their own cost.

The primary scope shall include End-to-End Solution to implement and to provide support services & maintenance which include the following:

i. Supply and Commissioning of online field data collection and real time transfer & display system for effective "Door to Door Collection Monitoring System"
ii. Designing, developing and integration of the application software for Vehicle Tracking with new Monitoring System (data feed access would be provided)
iii. Implementation of Workforce Management System through Biometric attendance/facial identification system.
iv. Supply of necessary hardware/ software and their installation, configuration Implementation of the IT solution.
v. Sizing of Hardware, Software and network devices required in the data Centers.
vi. Testing and Commissioning of the solution for necessary hardware.
vii. Monitoring of the usage, comprehensive maintenance for a period of 10 years post successful Go Live, the bidder shall maintain the sufficient spares to ensure 24 x 7 up time.
viii. Maintenance of all devices and after warranty period including the replacement of devices in cases of damage, new vehicle or any other changes as and when required.
ix. Maintenance of web-based application for Monitoring during and

after warranty period.

x. Imparting Training & Capacity Building Program/ Workshops for all staff regarding operation of new digital devices and its features for speedy actions in SWM processes.
xi. Development of Mobile Application for workforce and citizens in both language (Hindi & English) versions as per the requirements of LSCL.
xii. Responsibility of integrating this application with the Command and Control Centre through appropriate APIs (Application Programming Interfaces).
xiii. The bidder will be Responsible for providing distributed cloud server with multiple nodes till the Application is migrated to ICCC data center of Lucknow Smart City.
xiv. The bidder will be responsible for complete end to end implementation of the project. LSCL/LMC will only provide necessary space and electricity to setup monitoring control room.
xv. The bidder shall install and commission connectivity across all designated locations.
xvi. The bidder shall be be provided with the GIS layers present with the LMC and it will be responsible to integrate the existing GIS data with the proposed Intelligent SWM Solution.
xvii. The bidder shall provide the band-width required for operationalizing the project. The bandwidth requirement shall be analyzed and procured by the bidder at its own cost/ risk.
xviii. The bidder shall install and commission connectivity across all designated locations.
xix. The bidder shall establish high availability, reliability and redundancy of the network elements to meet the Service Level requirements.
xx. The bidder shall be responsible for planning and design of the access network architecture (access controllers, backhaul connectivity, routers, switches, etc.) to meet the technical, capacity and service requirements of the Project.
xxi. The Bidder shall be responsible for up-gradation, enhancement and provisioning additional supplies of network (including active/passive components), hardware, software, etc. as required by the LMC.
xxii. The bidder shall ensure that the infrastructure provided under the project shall not have an end of life within 24 months from the date of bidding.
xxiii. The bidder shall ensure compliance of all mandatory government regulations as amended from time to time.
xxiv. The Bidder shall ensure that all the peripherals, accessories, sub-

components required for the functionality and completeness of the solution, including but not limited to devices, equipment, accessories, patch cords (fiber), cables, software, licenses, tools, etc. are provided according to the requirements of the solution.

xxv. The bidder shall have to provision these & other similar things to meet the solution requirements at no additional cost and time implications to LSCL.

xxvi. All the software licenses that the bidder proposes shall be perpetual software licenses along with maintenance, upgrades and updates for the currency of the contract.

xxvii. The software licenses shall not be restricted based on location and Authority shall have the flexibility to use the software licenses for other requirements if required.

xxviii. The bidder shall ensure there is a 24x7 comprehensive onsite support for duration of the contract for respective components to meet SLA requirement.

xxix. Considering the criticality of the infrastructure, bidder is expected to design the solution considering the RFP requirement of no single point of failure with high level of redundancy and resilience to meet the network uptime requirements.

xxx. The bidder shall be responsible for periodic updates & upgrades of all equipment, cabling and connectivity provided at all locations during the contract period.

xxxi. The bidder shall be responsible for setting up / building / renovating the necessary physical infrastructure including provisioning for network, power, rack, etc. at all the locations.

r. **User Charges Collection:**

i. The selected bidder shall also undertake the user charge collection on behalf of Nagar Nigam Lucknow and ensure collection maximization. It is assumed that better service quality of the bidder shall improve the User Charge Collection.

ii. Any default in user charge collection shall be duly reported for action by Nagar Nigam.

iii. The selected bidder must ensure zero pilferage of user charge collection. Any pilferage will be considered an event of default by private partner and shall result in imposition of penalty or termination of agreement as the case maybe.

iv. User charge collection system should be computerized and well connected to Smart SWM system to ensure that waste collection, customer feedback, customer satisfaction, payment default issues

could be linked and analyzed.

v. Bidder has to deposit user charge collection amount on daily basis in escrow account of Nagar Nigam Account.
vi. Rates of user fees are as per Nagar Nigam Orders.
vii. All the collected user charges shall be deposited to Nagar Nigam Designated Account Only.

Such Collected User Charges shall be used for paying the tipping fee fully or partially as the case maybe.

s. **Financing:** All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

3. The Successful Bidder would design, procure, finance, construct, operate and maintain the Project during the Concession Period on a Design-Build – Operate – Transfer (DBOT) Concession basis. The Project would be transferred back in good running condition to the LMC at the end of the Concession Period.
4. The Successful bidder shall be provided Tipping Fee as per manner prescribed in Article 8 of Volume III i.e., Concession Agreement. The Successful Bidder shall at its cost, expenses and risk make remaining required financing arrangements, in a timely manner as would be necessary to implement the Project, and to meet all of its obligations under the Concession Agreement.
5. The Successful Bidder shall adhere to the Construction Requirements and achieve Commercial Operations Date (COD) on or before the Scheduled Project Completion Date, as specified in the Concession Agreement.
6. The Successful Bidder may undertake Construction Works by itself or through a Contractor possessing requisite technical, financial and managerial expertise /capability; but in either case, the Successful Bidder shall remain solely responsible to meet the Construction Requirements, as specified in the Concession Agreement.
7. The Successful Bidder shall operate and maintain the Project in accordance with the O&M Requirements as set out in the Concession Agreement.
8. The Successful Bidder shall, at all times, ensure that all aspects of the Project and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including rules such as SWM Rules, policies and guidelines related thereto.
9. Procurement of machine, equipment and vehicle should be done on approval of LMC and PMC.

Appendix – B

Covering Letter

(On the Letterhead of the Bidder or Lead Member in case of a Consortium)

Date:

To
MUNICIPAL COMMISSIONER
Lucknow Municipal Corporation
Lucknow, Uttar Pradesh.

Sub: **RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation**.

Dear Sir,

Being duly authorized to represent and act on behalf of ……. (Herein after referred to as "the Bidder"), and having reviewed and fully understood all of the Proposal requirements and information provided and collected, the undersigned hereby submits the Proposal on behalf of for the Project as specified in the RFP, with the details as per the requirements of the RFP, for your evaluation.

We confirm that our Proposal is valid for a period of --------- days from Proposal Due Date.

We also hereby agree and undertake as under:

Notwithstanding any qualifications or conditions, whether implied or otherwise, contained in our Proposal we hereby represent and confirm that our Proposal is unqualified and unconditional in all respects and we agree to the terms of the proposed Concession Agreement, a draft of which also forms a part of the RFP document provided to us.

Yours faithfully,

For and on behalf of (Name of Bidder)

Duly signed by the Authorised Signatory of the Bidder

(Name, Title and Address of the Authorised Signatory)

Appendix – C

Details of Bidder

(*On the Letter Head of the Bidder or Lead Member in case of a Consortium*)

1. Details of Bidder.
    a. Name of Bidder
    b. Address of the office(s)
    c. Date of incorporation and/or commencement of business

2. Brief description of the Bidder's main lines of business.

3. Details of individual(s) who will serve as the point of contact / communication for LMC with the Bidder:
    a. Name:
    b. Designation:
    c. Company/Firm:
    d. Address:
    e. Telephone number:
    f. E-mail address:
    g. Fax number:
    h. Mobile number:
4. Name, Designation, Address and Phone Numbers of Authorised Signatory of the Bidder:
    a. Name:
    b. Designation:
    c. Company/Firm:
    d. Address:
    e. Telephone number:
    f. E-mail address:
    g. Fax number:
    h. Mobile number:
5. In case of a Consortium:
    a. The information above (1-4) should be provided for all the members of the Consortium.
    b. A copy of the MOU, as envisaged in the RFP document should be attached to the Bid.
    c. Information regarding role of each member should be provided as per table below:

Sl. No.	Name of Member	Role*	Percentage of equity in the Consortium
1.			

2.			
3.			

* *The role of each member, as may be determined by the Bidder should be indicated.*

The following information shall also be provided for each member of the Consortium

Name of Bidder/ member of Consortium:

No.	Criteria	Yes	No
1.	Has the Bidder/ constituent of the Consortium been barred by the [Central/ State Government, or any entity controlled by them], from participating in any project[s] (DBOT or otherwise).		
2.	If the answer to 1 is yes, does the bar subsist as on the date of Bid.		
3.	Has the Bidder/ constituent of the Consortium paid liquidated damages of more than 5% of the contract value in a contract due to delay or has been penalized due to any other reason in relation to execution of a contract, in the last three years?		

6. A statement by the Bidder and each of the members of its consortium (where applicable) disclosing material non-performance or contractual non-compliance in past projects, contractual disputes and litigation/ arbitration in the recent past are given below (Attach extra sheets, if necessary)

Appendix D
Proof of Qualification

1. Minimum Qualification Criteria

The Bidder must satisfy following Qualification Criteria for experience in order to qualify for the Project.

a. Successfully operating and maintaining for at least one year i.e. one Municipal Solid Waste door to door collection & Transportation project of capacity 140 TPD or ii. Two Municipal Solid Waste door to door collection & Transportation project of capacity 95 TPD or iii. Three Municipal Solid Waste door to door collection & Transportation project of capacity 70 TPD of Municipal Solid Waste during last Five FY.

b. The bidder should have completed/ Ongoing for at least one year, project of Manual/Mechanized sweeping and/Drain Cleaning, at least i. one work of annual fee of INR 14 Crores, ii. Two works of annual fee of INR 9.5 Crores, iii. Three works of annual fee of INR 7 Crores, in the last 5 year till submission of tender document i.e., 2022-23, 2021-22, 2020-21, 2019-20 & 2018-19, for Government / Local bodies.

or

The bidder should have completed/ Ongoing project for at least one year of Manual/Mechanized sweeping for at least i. one work of Road sweeping 740 Km-Passes per day, ii. Two works of Road sweeping 490 Km-Passes per day, iii. Three works of Road sweeping 370 Km-Passes per day, in the last 5 year till submission of tender document i.e., 2022-23, 2021-22, 2020-21, 2019-20 & 2018-19, for Government / Local bodies.

or

The bidder should have completed/ Ongoing project for at least one year of Drain Cleaning for at least i. one work of Drain Cleaning 65 Km per day, ii. Two work of Drain sweeping 45 Km per day, iii. Three work of Road sweeping 35 Km per day, in the last 5 year till submission of tender document i.e., 2022-23, 2021-22, 2020-21, 2019-20 & 2018-19, for Government / Local bodies (i.e., Municipal Corporations / PSU's. /Railways / Metro / Private Townships.

2. Details of Experience

The Bidder should furnish the details of eligible experience as set out below:

S No.	Qualification Criteria for Experience	Project Name	Location	Year of Commissioning	Operational Since FY
1	Operating and maintaining Collection and transportation of MSW of (input waste handled in TPA)				
2	Sweeping and Cleaning				

	of Roads (input KM Per Day)				
3	Cleaning, Desilting, Removal of Obstruction and Maintenance of Drains (input KM Per Day)				

3. Supporting Documents

The following documents would need to be submitted to support the Bidder's claim of experience stated in the table above.

S. No	Qualification Criteria for Experience	Supporting Documents
1	Operating and maintaining Collection and transportation of MSW of (input waste handled in TPA)	Copy of agreement with Municipal Body or any other client for the relevant years which clearly mentions the quantum of waste being collected and transported, OR Certificate from the Municipal Body or Pollution Control Board or any other client, OR i) Certificate from an independent auditor
2	Sweeping and Cleaning of Roads (input KM Per Day)	Copy of contract agreement /work orders and successful completed performance certificate by competent Authority along with TDS Certificate
3	Cleaning, Desilting, Removal of Obstruction and Maintenance of Drains (input KM Per Day)	Copy of contract agreement /work orders and successful completed performance certificate by competent Authority.
4	Should have at least 500 number of employees on company roll.	Self-Certification by the bidder with Challan copies

Note:

1. The Bidder should provide the details mentioned above based on its own experience or its subsidiary (ies) or its parent company. Experience of the Bidder's associate company (ies) will also be considered for evaluation of the Experience of the Bidder.
2. The financial year would be the same as the one normally followed by the Bidder for its annual Report / annual financial statement.
3. In case of consortium separate sheets shall be used for each consortium member.

4. Financial Capability

4.1. Financial Capability of the Bidders would be evaluated on the basis of the following:

a. Net worth as at the end of the most recent financial year that is FY 2022-23
b. Average turnover for the last three completed financial years that is FY 2020-21, FY 2021-22 & FY 2022-2023. The Bidder should provide information regarding the above based on audited Annual accounts for the respective financial years. The financial year would be the same as the one normally followed by the Bidder for its Annual financial statement.

4.2. The Proposal must be accompanied by the audited Annual financial statements of the Bidder for the last three financial years.

4.3. In case the Annual accounts for the latest financial year are not audited and therefore the Bidder could not make it available, the Proposal shall give an undertaking to that effect and the statutory auditor shall certify the same. In such a case, the Bidder may provide the unaudited Annual Accounts (with Schedules) for the latest financial year. The Bidder would have to provide the Audited Annual Financial Statements for the two years preceding the latest financial year, which would be used for the purpose of evaluation of the Proposal. In case the Bidder fails to provide such Audited Annual Financial Statements and certificate from statutory auditor specified hereinabove, the Application will be rejected as non-responsive.

5. Evaluation Criteria for Financial Capability

5.1. For the purpose of Qualification, a Bidder would be required to satisfy the Financial Capability measured on the following criteria:

a) Net worth of the Bidder as at the end of FY 2022-23 shall be at least equal to Rs. 4.0 Crores (Rupees four Crores only), and

b) The Average Turnover of the Bidder for the last three financial years that is FY 2020-21, FY 2021-22 & FY 2022-2023 shall be at least equal to Rs. 13.3 Crores (Rupees Thirteen Crores Thirty Lacs only)

Here
Net Worth shall mean the sum of subscribed and paid- up equity and reserves from which shall be deducted the sum of revaluation reserves, miscellaneous expenditure not written off and reserves not available for distribution to equity shareholders)
Turnover shall mean gross sales or gross revenue, as defined by the Indian Accounting Standards published by the Institute of chartered Accountants of India (ICAI).

The Bidder must satisfy above-mentioned parameters for Financial Capability in order to qualify for the Project.

6. Special Conditions for Consortium

6.1. In case of Consortium the Lead member of the Consortium should meet Minimum the required project capacity of similar nature of work in proportion to the partnership in consortium but not less than 51% and other party should meet in

proportion to the partnership in consortium but not less than 26% of required project capacity related to similar nature of work in India during the last Five years.

6.2. In case of Consortium the Lead member should meet the required turnover in the 3 financial years (FY 2020-21, FY 2021-22 & FY 2022-2023) in proportion to the partnership in consortium but not less than 51 %. Other Member should meet the required turnover in the 3 financial years (FY 2020-21, FY 2021-22 & FY 2022-2023) in proportion to the partnership in consortium but not less than 26 %.

7. Other Conditions

7.1. The Bidder should provide the details mentioned above based on its own Financial and technical Capability. Financial and Technical Capability of the Bidder's parent company or associate company can be considered for computation of the Financial and technical Capability of the Bidder.

7.2. The financial year would be the same as the one normally followed by the Bidder for its Annual Report / Annual financial statement.

Appendix D1

Financial Capability of the Bidder

(In Rs. crore)

S. No.	Applicant Type	Net worth (Applicable for application through Option III)	Annual Turnover for preceding three Financial Years (Rs. In Cr)		
		31st March, 2023 (Rs. In Cr)	2022-23	2021-22	2020-21
1	Single Entity				
2	Consortium				
	Lead Member				
	Consortium Member 1				
Certificate from the Statutory Auditor This is to certify that .....(name of the Applicant) has Average Annual Turnover of Rs. …….. (Rupees……only) for the last three Financial Years / has a Net worth of Rs. ……...Crores as on 31st March, 2023 (Name and Signature of the Auditor/C. A along with registration number as applicable and Seal					

Instructions:

1. The Bidder shall attach copies of the balance sheets, financial statements and Annual Reports for 3 (three) years preceding the Bid Due Date. The financial statements shall:
   a. reflect the financial situation of the Bidder and its Associates where the Bidder is relying on its Associate's financials;
   b. be audited by a statutory auditor; Bidder to provide copy of the last 3 years

Audited Financial Statement

c. be complete, including all notes to the financial statements; and

d. Correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Appendix D2

PROCEDURE FOR BID EVALUATION

1. TECHNICAL EVALUATION CRITERIA:

Sl No		Criteria	Weightage (%)	Maximum Marks
(i)	**Firms General Experience**	**Firms General Experience & Experience in Similar Assignments.**	**50%**	**50**
a	Experience of Projects in similar eligible sector	Experience in **Door-to-Door Collection** of Municipal Solid Waste. *Subject to Maximum 25 Marks* Marks Obtained: - Xx15 marks; X= Project completed of 140 to 215 TPD Xx20 marks; X= Project completed of 215 to 290 TPD Xx25 marks; X= Project completed of 290 TPD & Above	25	25
b	Experience of Projects in similar eligible sector	Experience in **Mechanized sweeping** of Roads. *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Project completed of 740 KM/Day to 790 KM-passes/Per Day Xx7.5 marks; X= Project completed of 790 KM-passes /Day to 840 KM/Day Xx10 marks; X= Project completed of 840 KM-passes /Day & Above	10	10
c	Experience of Projects in similar eligible sector	Experience in **Cleaning and Maintenance** of Drains. *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Project completed of 65 KM/Day to 70 KM/Per Day Xx7.5 marks; X= Project completed of 70 KM/Day to 75 KM/Day Xx10 marks; X= Project completed of 75 KM/Day & Above	10	10

d	Experience of Projects in similar eligible sector	Experience in **O & M of MRF Centres** of Municipal Solid Waste. *Subject to Maximum 20 Marks* Marks Obtained: - Xx2 marks; X= Project completed of 55 to 80 TPD Xx3.5 marks; X= Project completed of 80 to 110 TPD Xx5 marks; X= Project completed of 110 TPD & Above	5	5
(ii)	**Approach & Methodology**	Approach & Methodology for proposed assignment	20%	20
		Understanding of Objectives	3	3
		Quality of Methodology	8	8
		Work Program	3	3
		Organization and Personnel	3	3
		Innovative Idea	3	3
(iii)	**Financial Strength**	**Financial strength**	**30%**	**30**
		Average Annual Turnover of last 3 consecutive years i.e., 2019-20, 2020-21 & 2021-22 (As per the bank / CA statement) *Subject to Maximum 20 Marks* Marks Obtained: - Xx10 marks; X= Turnover between Rs. 13.3 Cr. To Rs. 20.0 Cr. Xx15 marks; X= Turnover between More than Rs. 20.0 Cr. to Rs.26.6 Cr. Xx20 marks; X= Turnover More than Rs. 26.6 Cr.	20	20
		Net Worth for FY 2022-23(As per the bank / CA statement) *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Net-Worth between Rs. 4.0 Cr. To Rs. 6.0 Cr. Xx7.5 marks; X= Net-Worth between More than Rs. 6.0 Cr. To Rs. 8.0 Cr. Xx10 marks; X= Net-Worth More than Rs. 4.6 Cr.	10	10

2. Evaluations of Bids

A. Technical proposal of all the responsive bidders shall be evaluated based on the criteria set out in clause 1 of Appendix D2. Bidders scoring more than 75% marks shall qualify for financial bid evaluation.

B. In the financial bid, bidder should propose the Tipping fee as given in format for financial bid as given in table below.

TIPPING FEE (Amount in Rupees)

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User Charges Collection.				
1(a)	Residential Household	Per Household/day	75682		
1(b)	Commercial Unit	Per Commercial Unit/day	1645		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/day	473		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/day	71		
2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	1224		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	104		

Note: Quantity may very +/- 20%

C. The Technically qualified Bidder demanding the lowest Tipping Fee Rate from the LMC would be declared Successful.

D. After successful negotiation, the work shall be awarded to the firm, if the negotiation fails, the next high scorer firm shall be called for contract negotiations.

Appendix – E

FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL

(On Stamp paper of Rs.100.00 value)

POWER OF ATTORNEY

Know all men by these presents, We..... (name and address of the registered office) 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 on our behalf, all such acts, deeds and things necessary in connection with or incidental to "RFP for Door-to-Door Collection & Transportation of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation" (hereinafter referred to as "the Project"), on behalf of the LMC including signing and submission of all documents and providing information / responses to LMC in all matters in connection with our Proposal for the Project.

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

Dated this the Day of 20XX

For

(Name and designation of the person(s) signing on behalf of the Bidder / Lead Member in case of Consortium)

Accepted

Signature)

(Name, Title and Address of the Attorney)

Date: …….

Note:

1. To be executed by the Lead Member in case of a Consortium.
2. In case of Bidders who are not resident in India, the Power of Attorney may be submitted on plain paper attested by any authorised officer of the Embassy of India and duly stamped by the Department of Stamps & Registration, Government of---------- (name of state).

3. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
4. Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a resolution/power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
5. In case an authorized Director of the Bidder signs the Proposal, a certified copy of the appropriate resolution conveying such authority may be enclosed in lieu of the Power of Attorney.

Appendix – E1

FORMAT FOR POWER OF ATTORNEY FOR DESIGNATING LEAD MEMBER OF CONSORTIUM

(On a Stamp Paper of Rs 100.00 value)

POWER OF ATTORNEY

Whereas, **MUNICIPAL COMMISSIONER, Lucknow Municipal Corporation & Lucknow Nagar Nigam** (hereinafter referred to as "Authority") has invited proposals from Bidders for taking up "RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation" (here in after referred to as "the Project").
Whereas, the Consortium being one of the Bidders is interested in bidding for the Project and implementing the Project in accordance with the terms and conditions of this Document, and

Whereas, it is necessary under this Document for the members of the Consortium to designate the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's Proposal for the Project or in the alternative to appoint one of them as the Lead Member who, would have all necessary power and authority to do all acts, deeds and things on behalf of the Consortium, as may be necessary in connection with the Consortium's Proposal for the Project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT;

We, M/s and M/s (the names and address of the registered offices),do hereby designate M/s being one of the members of the Consortium, as the Lead Member of the Consortium, to do on behalf of the Consortium, all or any of the acts, deeds or things necessary or incidental to the Consortium's Proposal for the Project, including submission of Proposal, participating in conferences, responding to queries, submission of information/ documents and generally to represent the Consortium in all its dealings with LMC, any other Government Agency or any person, in connection with the Project until culmination of the process of bidding and thereafter till the Concession Agreement is entered into with LMC.

We hereby agree to ratify all acts, deeds and things lawfully done by the Lead Member and our said attorney pursuant to this Power of Attorney and that all acts' deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us/Consortium.

Dated this the .....Day of 20XX

.....

(Executants)

(TO BE EXECUTED BY BOTH MEMBERS OF THE CONSORTIUM)

i.) Note: The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure (for a body corporate).

Appendix – F

MEMORANDUM OF UNDERSTANDING

Between

[First Member]

And

[Second Member]

THIS MEMORANDUM OF UNDERSTANDING (hereinafter called "MOU") made and entered into this ……. day of the month of …… 2022, by and among:

[Name & complete address of First/Leading Member] (hereinafter called "[short name/acronym]"), which expression shall include its successors, legal representatives and permitted assigns;

[Name and complete address of Second Member] (hereinafter called the "[short name/acronym]"), which expression shall include its successors, legal representatives and permitted assigns;

[Name and complete address of Third Member] (hereinafter called the "[short name/acronym]"), which expression shall include its successors, legal representatives and permitted assigns;

(All of the above for the purpose of this MOU shall hereinafter individually called the "Member" and collectively called the "Members")

WHEREAS,

a) **MUNICIPAL COMMISSIONER, Lucknow Municipal Corporation & Lucknow Nagar Nigam** (hereinafter referred to as "Authority") has invited proposals from Bidders for taking up "RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation" (hereinafter referred to as "the Project").

b) the Members hereby intend to join hands to form an unincorporated association for the sole purpose of, preparation and submission of joint proposal as required to be submitted to the Client for carrying out the Services for the Project. In case of acceptance of proposal by the Client, the members shall perform the Services as

shall be agreed through Joint Venture/ Consortium [Use which is appropriate] Agreement and the contract to be entered between the Client and the Joint Venture/Consortium.

NOW, THEREFORE, the Members confirm their understanding (hereinafter called the "Association") as follows:

8. DEFINITIONS AND INTERPRETATION

8.1 Definitions

The following words and expressions shall have the meanings assigned to them, except where the context otherwise requires:

8.1.1 **"Association"** means the understanding formed between the Members in accordance with this MOU;

8.1.2 "**Client"** means the person, firm, company or body named as client in the Joint Venture/Consortium Agreement and none other, except its legal successors and permitted assigns;

8.1.3 **"Contract"** means the Contract between the Client and the Joint Venture/Consortium for the provisions of professional services for the Project;

8.1.4 **"Country"** means [State the name of the "India"] where the Project is located;

8.1.5 **"Consortium"** means the consortium to be formed between the Members for the Project;

8.1.6 **"Consortium Agreement"** means the formal agreement to be entered between the Consortium Members, upon acceptance of proposal for the Project;

8.1.7 **"Proposal"** means the proposal to be prepared and submitted by the Members in response to the Invitation, by the Client;

8.1.8 **"Services"** means all the services to be performed by the Members in accordance with the Proposal or Contract, as the case may be;

8.1.9 **"Representative"** means the person nominated by the Members(s) of the Joint Venture/Consortium through Power of Attorney to sign the Proposal and the Contract on behalf of and in the name of that Member. The signature of Representative shall bind each Member in respect of all obligations and liabilities it assumes under the Joint Venture/ Consortium Agreement.

8.1.10 **"Leading Member"** means the Member which will take the lead in the management of the Association"s affairs under this MOU and which will provide the Association"s Representative for liaison with the Client and, unless otherwise agreed by the Members, the Services Manager for direction of the conduct of the Services;

8.1.11 **"Day"** means the period between any one midnight and the next, and "month" means a period of one month according to the Gregorian calendar commencing with any day in the month; and

8.1.12 **"Document"** means written, drawn, typed, printed, magnetized or photographic material which is capable of being copied.

8.2 Interpretation

8.2.1 Words importing the singular also include the plural and the masculine includes the feminine and vice-versa where the context requires.

8.2.2 The headings in this MOU shall not be taken into consideration in its interpretation.

8.2.3 Unless otherwise stated, all references to clauses/sub-clauses are references to clauses/sub-clauses numbered in the Conditions and Terms of this MOU and not to those in any other document attached or incorporated by them.

9. ASSOCIATION/UNDERSTANDING

9.1 The Members hereby intend to join hands to form an unincorporated association for the purpose of:

- ✓ preparing and submitting the Proposal to the Client;
- ✓ providing any further information, the Client may require or negotiating with the Client on any matters requiring negotiation in connection with the Proposal;
- ✓ Entering into a formal Joint Venture/Consortium Agreement, stipulating in detail the relations between the Members on the basis of this MOU and in accordance with the Concession Agreement with the Client, if the Proposal is accepted; the Services shall be rendered jointly by the Members in accordance with a Joint Venture/Consortium Agreement to be signed by the Members. The Joint Venture/Consortium Agreement shall be signed prior to commencing the Work and shall be based upon the terms of the Contract signed between the Joint Venture/Consortium and the Client; and
- ✓ performing all the Work to be undertaken for the project by the Joint Venture/Consortium under the Concession Agreement.

9.2 The Members hereby appoint the Leading Member and, pursuant to Clause 3.6, the representative of the Association.

9.3 The Parties agree that the proportion of shareholding among the Parties in the Concession shall be as follows:

First Party:

Second Party:

9.4 The Parties undertake that they shall collectively hold 100% shareholding of the paid-up Equity [as defined in Concession Agreement] share capital of the concessionaire

commencing from the Execution Date of the concession agreement until expiry of five years thereafter, and shall hold at least 51% (fifty-one per cent) shareholding of the subscribed and paid-up equity of the Concessionaire at all times during the remaining Concession Period i.e. from expiry of aforesaid five years period until end of concession period. Further, in case of Consortium bidding entity, besides the foregoing shareholding requirement, the bidding Consortium shall ensure that the Lead Member thereof holds at least 51% shareholding in the paid up equity capital of the Concessionaire during Lock-in-Period, and the other members of consortium shall hold during Lock in Period minimum 10% (ten per cent) shareholding in the paid up equity capital of the Concessionaire; and after the expiry of Lock-in -Period, the Lead Member shall be required to hold at least 26% shareholding in the paid up equity capital of the Concessionaire commencing from the expiry of Lock-in-Period until expiry of concession period with the aggregate shareholding of the Consortium member in the Concessionaire shall not be less than 51%. No change in shareholding of the selected bidder [either single Bidding Entity/ Bidding] as set out herein and (as to be reiterated in the Joint Bidding Agreement) in the Concessionaire shall take place.

9.5 Unless otherwise agreed in writing by the Members, this MOU shall not terminate if a Member changes its name or is taken over by, or merged with, another company or partnership provided that such successor name, company or partnership is an independent professional firm acceptable to the Client.

10. PROPOSAL SUBMISSION

10.1 The Members shall make all reasonable endeavors to obtain from the Client the award of the Services Agreement in accordance with the conditions of the Invitation.

10.2 The preparation and submission of the Proposal shall be undertaken jointly by the Members. The Members shall be required to provide their respective information and document on the required format to the Leading Member. The Leading Member shall co-ordinate and finalize the preparation of the Proposal and its submission to the Client. The Members shall cooperate with the Leading Member. The Members shall perform with all reasonable skill, care and diligence their respective functions, as agreed between the Members, allotted by the Policy Committee until the award of the Services Agreement to the Joint Venture/Consortium or until the provisions of Sub-Clause 16.1 have been satisfied.

10.3 Once the Proposal has been submitted to the Client, no changes may be made or additional information or explanations given without the consent of all the Members until the Service Agreement is signed and have become effective.

10.4 The Members shall enter into a formal Joint Venture/Consortium Agreement, stipulating in detail the relations between the Members on the basis of this MOU and enter into the Contract, if it is awarded in accordance with the Proposal, or the Proposal as amended, subsequent to its submission, by agreement between the Client and the Joint Venture/Consortium.

10.5 Upon the execution of this MOU, each of the Members shall grant a Power of Attorney in favour of a person nominated by it as its Representative. Under the Power of Attorney granted to him, the Representative of a Member shall thereby have authority to sign the Proposal and the Concession Agreement on behalf of and in the name of that Member. The signature of its Representative shall bind each Member in respect of all obligations and liabilities it assumes under this MOU.

10.6 The Representative of the Leading Member shall be the representative of the Association for the purpose of correspondence and discussion with the Client on matters involving the interpretation of the Proposal and alterations to it and to the Services to be performed.

11. PERFORMANCE OF THE SERVICES

11.1 The Services shall be carried out by each Member in accordance with the terms and conditions as set out in the MOU and the Concession Agreement. In the event of any inconsistency between the terms of this MOU and the Concession Agreement regarding performance of the Work, the terms of Concession Agreement shall prevail.

11.2 Each Member shall be responsible for fulfilling the obligations in accordance with the terms of Concession Agreement.

11.3 The apportionment between the Members of MOU shall be recorded and amended in the Joint Venture/Consortium Agreement.

11.4 Any alterations or additions to be carried out under the Concession Agreement shall be made only with the instruction or consent of the Client. Responsibilities for carrying out additional obligations shall be agreed between the Members, subject to the consent of the Client, if required by the Concession Agreement.

12. LANGUAGE AND LAW

12.1 This MOU shall be written and interpreted in English Language and the law which is to be applied to this MOU shall be the law of India.

13. EXCLUSIVITY

13.1 Unless otherwise agreed by the Members, no Member shall engage in any activity related to the Services, unless otherwise agreed by the Members, other than as a Member of this Understanding and in accordance with the terms and conditions of this MOU. Each Member warrants that its subsidiaries and other firms or individuals over which it has control will comply with this requirement.

14. EXECUTIVE AUTHORITY

14.1 No Member shall have authority to bind or to make any commitment on behalf of any other Member unless such authority is expressed in writing by the Members jointly, or by a Member individually in regard to the (other) Member.

14.2 From the date of this MOU until the award of the Concession Agreement or until this MOU shall terminate in accordance with its terms, whichever is the earlier, the following matters shall require the unanimous consent of the Members:

a) for the purpose of submitting the Proposal, the respective responsibilities and obligations to be undertaken by the Members, subject to the conditions of the Invitation or TOR;

b) for the purpose of submitting the Proposal, the prices and terms and conditions of payment comprised in the Proposal as applicable to the Members, subject to the conditions of the Invitation; and

c) any communication to, or response to communication from, the Client either written or oral and any commitment of any kind to the Client or any other party in connection with the Proposal.

15. DOCUMENTS

15.1 All documents and/or information forwarded by either Member to the other for the preparation of Proposal shall remain sole and exclusive property of the Member which provided the same including the intellectual property rights.

15.2 Upon expiration/termination of MOU, each Member shall:

a) return to the other, all such documents and/or materials including computer diskettes and all copies thereof that are jointly prepared by the MOU Members; and

b) certify that all such documents and information and all copies have been returned to such receiving Member.

16. PERSONNEL

16.1 Each Member shall be obliged to depute as much of their personnel as are needed in timely accomplishment of the proposal for a specific project and subsequently carrying out of the project. Unless specifically agreed otherwise, under the arrangement of MOU, no employee shall be considered on its strength.

17. ASSIGNMENT AND THIRD PARTY

17.1 No Member shall assign, sell, transfer or in any way encumber its interest under this MOU, or its interests in any sums payable by the Client, without first obtaining the consent in writing of other Member.

18. SEVERABILITY

18.1 If any part of the provisions of this MOU is found in any way to be void or not applicable, such part of the provisions shall be deemed to be deleted and remainder provisions of MOU shall continue in force and effect.

19. MEMBER IN DEFAULT

19.1 In the event of insolvency of a Member, the other Member hereby irrevocably constituted and appointed attorney-in-fact for such insolvent Member to act for it in all matters affecting performance of the Service Agreement to be entered with the Client.

20. DURATION OF THE UNDERSTANDING

20.1 This MOU shall come into force and effect on the date of signing of this MOU by the Members.

20.2 Unless otherwise terminated earlier, this MOU shall expire on the date when;

a) the Proposal is not accepted by the Client; or

b) the Members entered into Joint Venture/Consortium Agreement, following acceptance of Proposal by the Client.

21. LIABILITY

21.1 Each of the Members warrants that it will indemnify and keep indemnified the other Member against all legal liabilities arising out of or in connection with the performance, or otherwise, of its obligations under this MOU.

21.2 In the event of it being alleged by one Member in writing that any legal liability is attributable to the other Member or to the Members, the Members shall use reasonable endeavors to reach agreement on the liabilities to be borne by each of the Members, and in the event of the Members failing to so agree, a proper apportionment shall be determined by resolution in accordance with Clause 19.

22. PROMOTIONAL AND PROJECT COSTS, PROFITS/ LOSSES AND REMUNERATION

22.1 Each Member shall bear and pay all of its costs and expenses incurred in connection with this MOU and all other activities concerning job acquirement prior to the signing of Joint Venture/Consortium Agreement except as otherwise agreed upon in writing.

23. FINANCIAL ADMINISTRATION AND ACCOUNTING

23.1Each Member shall be responsible for keeping its own account in respect of payments due to it and for its own financial affairs generally. Each Member shall be responsible for dealing with its own income tax affairs, and its own social security affair: where relevant, and for accounting accordingly to the relevant authorities.

24. Dispute Resolution

24.1 Any dispute arising in connection with this MOU which cannot be resolved by the Parties in accordance with the terms of this MOU shall be settled amicably through negotiations, failing which the matter shall be referred to LMC for seeking their advice.

25. NOTICES

25.1 Notices under the MOU shall be in writing and will take effect from receipt at the address stated of the each of Member. Delivery can be by hand or facsimile message against a written confirmation of receipt or by registered letter or courier.

26. SOLE AGREEMENT AND VARIATION

26.1 This MOU is the sole understanding between the Members and supersedes any previous understandings between them relating to the matters referred to herein. Variations and addenda may be made to this MOU, including the admission of new Member (s) to the Association, by written instrument which shall be effective upon being signed by all Members (or on their behalf by their Representatives), provided that if a Member is considered by the other Member to be in default pursuant to Clause 12 of this agreement and signature is not required.

IN WITNESS WHEREOF the Members hereto have executed this MOU in [State name of place] on the day, month and year first above written.

1. Signed for and on behalf of

   [Name of the Leading Member]

   Signature _____

   Name: _____

   Designation: _____

   Date: _____

   Seal

2. Signed for and on behalf of

[Name of the Member]

   Signature _____

   Name: _____

   Designation: _____

   Date: _____

Appendix – G

Format for Anti-Collusion Certificate

Anti-Collusion Certificate

We hereby certify and confirm that in the preparation and submission of our Proposal, we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing which is or could be regarded as anti-competitive.

We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or agency in connection with the instant Proposal.

Dated this .....Day of ....., 20XX

.....

(Name of the Bidder)

.....

(Signature of the Authorised Person)

.....

(Name of the Authorised Person)

Note:

1. On the Letter head of the Bidder

2. To be executed by both members in case of Consortium

Appendix – H

Format for Bank Guarantee for Bid Security

(Refer Clauses 7.1)

B.G. No. Dated:

1. In consideration of you, Lucknow Nagar Nigam, having its office at ……, (hereinafter referred to as LMC, which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of _____ [insert the name of the Bidder/Name of Consortium with name of Lead Member] and having its office at _____ [and acting on behalf of its Consortium, if applicable] (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors administrators, successors and assigns), for the Project of "RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation" (hereinafter referred to as "the Project") pursuant to the RFP Document dated ***** issued in respect of the Project and other related documents (hereinafter collectively referred to as "Bidding Documents"), we [Name of the Bank] having our registered office at _____ and one of its branches at _____ (hereinafter referred to as the "Bank"), at the request of the Bidder, do hereby in terms of Clause 7.1 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfillment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to LMC an amount of **Rs. _____ (_____ Only)** as bid security (hereinafter referred to as the "Bid Security") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder if the Bidder shall fail to fulfill or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by LMC stating that the Bidder is in default of the due and faithful fulfillment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Bank.

3. We, the Bank, do hereby unconditionally undertake to pay the amounts due and payable under this Guarantee without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of LMC is disputed by the Bidder or not, merely on the first demand from LMC stating that the amount claimed is due to LMC by reason of

1943

failure of the Bidder to fulfill and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding **Rs. _____/- (Rupees _____ Lacs Only).**

4. This Guarantee shall be irrevocable and remain in full force for a period of 180 (one hundred eighty) days from the Bid Due Date inclusive of a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between LMC and the Bidder, and agreed to by the Bank, and shall continue to be enforceable till all amounts under this Guarantee have been paid.

5. We, the Bank, further agree that LMC shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfillment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of LMC that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between LMC and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Guarantee shall not be affected by any change in the constitution or winding up of the Bidder or the Bank or any absorption, merger or amalgamation of the Bidder or the Bank with any other person.

7. In order to give full effect to this Guarantee, LMC shall be entitled to treat the Bank as the principal debtor. LMC shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Intent by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to LMC, and the Bank shall not be released from its liability under these presents by any exercise by LMC of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of LMC or any indulgence by LMC to the said Bidder or by any change in the constitution of LMC or its absorption, merger or amalgamation with any other person or any other matter

1944

or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Bank from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Bank and sent by courier or by registered mail to the Bank at the address set forth herein.
9. We undertake to make the payment on receipt of your notice of claim on us addressed to [name of Bank along with branch address] and delivered at our above branch who shall be deemed to have been duly authorised to receive the said notice of claim.
10. It shall not be necessary for LMC to proceed against the said Bidder before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank, notwithstanding any other security which LMC may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Bank hereunder, be outstanding or un realised.
11. We, the Bank, further undertake not to revoke this Guarantee during its currency except with the previous express consent of LMC in writing.
12. The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Guarantee for and on behalf of the Bank.

Signed and delivered by _____ Bank

By the hand of Mr./Ms _____, its _____ and authorised official.

(Signature of the Authorised Signatory)

(Official Seal)

Appendix – I

Guidelines and Format for Technical Proposal

The Bidder shall submit a Technical Proposal setting out the approach to the Project. The Technical Proposal shall comply with the Construction Requirements and O&M Requirements as set out in Schedules of the Concession Agreement. The design and approach for implementing the Project shall also be in compliance with the Applicable Law, including the SWM Rules.

The Technical Proposal shall set out the following components:

a) Methodology Statement
b) Process Flow Chart and Material Balance Statement
c) Resource Utilization Statement
d) Area Allocation Statement
e) Operations & Maintenance Scheme
f) Project Schedule
g) Environment, Health & Safety Policy and Practice

a) Methodology Statement

The Bidder shall provide a methodology statement, which broadly sets out the approach to the Project. The methodology statement shall include the Bidder's appreciation of the Project, the sequencing of activities to be performed, the facilities to be provided, design standards and basis for calculations of the Material Recovery Facility/ TS /MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning. The methodology statement should address aspects relating to all the activities of weighment and Recovery of recyclables.

The methodology statement should clearly demonstrate the compliance of the approach to be adopted by the Bidder for the implementation of the Project to the minimum specifications set out in the Concession Agreement.

b) Process Flow Chart and Material Balance Statement

The Bidder shall provide a process flow chart and a material balance statement setting out the activities and the outputs at each stage. The components, which shall

be addressed. The Bidder should indicate supporting calculations and assumptions, if any.

c) Resource Utilisation Statement

A statement indicating the procurement, deployment and utilisation of the resources shall be provided. The statement shall include proposed organizational structure, employee deployment, equipment procurement and utilisation, contracting activities, utilisation of office and other facilities.

d) Area Allocation Statement

The Bidder shall set out the area utilisation plan for the Project Facilities including Workshop, MRF/TS, other facilities and common areas etc.

e) Operations and Maintenance Scheme

The Bidder shall separately set out the operations and maintenance scheme for Door-to-Door Collection and Transportation of Municipal Solid Waste Services and Other Services (Drain Cleaning, Street Sweeping and Mechanical Road Sweeping) indicating the operational practices during the Active Operations Period. The maintenance (regular and emergency) schedules and mechanism should also be indicated over the Concession Period.

f) Time Schedule

The Bidder shall indicate an activity schedule over the Concession Period including the Construction Activities and O&M Activities.

g) Environment, Health & Safety Policy and Practice

The Bidder shall indicate the environment, health and safety policy and practices, which are proposed to be adopted during the Concession Period. The aspects relating to employee and worker safety, control mechanisms of litter, pest, odour, fire, surface runoffs etc. needs to be elaborated.

Appendix – J

FORMAT FOR FINANCIAL PROPOSAL

(On the Letterhead of the Bidder or Lead Member in case of a Consortium)

Date:

To

MUNICIPAL COMMISSIONER,
Lucknow Municipal Corporation
Lucknow.

"RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation".

Dear Sir,

We are pleased to submit our Financial Proposal for Door-to-Door Collection and Transportation of Municipal Solid Waste Services and Other Services (Drain Cleaning, Manual and Mechanical Road Sweeping) in Zone-8 of Lucknow Municipal Corporation.

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User Charges Collection.				
1(a)	Residential Household	Per Household/day	75682		
1(b)	Commercial Unit	Per Commercial Unit/day	1645		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/day	473		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/day	71		

2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	1224		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	104		

Note: Quantity may very +/- 20%

We have reviewed all the terms and conditions of the Request for Proposal (RFP) Document and will undertake to abide by all the terms and conditions contained therein. We hereby declare that there are, and shall be, no deviations from the stated terms in the RFP Document.

Yours faithfully,

For and on behalf of (Name of Bidder)

Duly signed by the Authorized Signatory of the Bidder

(Name, Title and Address of the Authorized Signatory)

REQUEST FOR PROPOSAL
FOR

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation"

(RFP NO. _____2022-23 Dated: __/__/2022)

VOLUME – II
PROJECT INFORMATION MEMORANDUM

Lucknow Municipal Corporation

Table of Contents

1 Project Overview 5
1.1 Project Financing 5
2 Project Coverage Area & its detail 6
2.1 Basic Information of Lucknow 6
2.1.1 Location Map 6
2.2 Demographic Profile 6
2.3 Decadal population growth trend 7
2.4 Ward Wise Population Distribution of Zone 8 of Lucknow 7
2.5 Basic Information of Zone 8 of Lucknow 8
2.5.1 Zonal Map of Zone 8 8
2.6 Present population and growth trend 8
2.7 Sources of Waste generations 9
2.8 Present Scenario of Solid waste management 9
2.9 Solid Waste Management 9
3 Project Components 10
4 Scope of the Project 10
5 Preparation of Detailed Project Report: 11
6 General recommendation and Guidelines for Waste Collection, Transportation, ... 13
6.1 Storage of Segregated waste 15
6.2 Segregation of Recyclable/ Non-Biodegradable Waste: 15
6.3 Primary collection & Transportation of waste 16
6.4 Transportation of Waste 16
6.5 Work shop for maintenance 17
6.6 Command Control & Response Mechanism 17
6.6.1 Minimum Technical Specifications 17
6.6.2 Equipment / Facilities at Customer Handling Cells 17
6.6.3 Staffing Pattern at Customer Handling Cells 18
6.6.4 Complaint Resolution Mechanism 18
Annexure – I Detail of Existing Infrastructure & Required infrastructure 18
Annexure – II Equipment and Machinery - Monitoring and Tracking of C&T Operation 19
Annexure – III Manpower Required for Primary Collection 20

1951

Annexure – IV Manpower Required for Material Recovery Facility 20

Annexure – V Manpower Required for Green waste & Debris 20

Annexure – VI Manpower Required for Manual Road Sweeping and Drain Cleaning 21

Annexure – VII Manpower Required for Mechanised Road Sweeping 21

Annexure – VIII Existing Transfer Station Details 21

Annexure – IX Details of Existing MRF Centre 21

Annexure – X List of existing PCTS 21

Annexure – XI List of existing Open Dumping Points 22

1 Project Overview

The existing Solid Waste Management system lacks adequate infrastructure facilities to meet the norms stipulated in the Solid Waste Management Rules 2016. Lucknow Nagar Nigam immediately needs augmentation of its Solid Waste management systems to comply with SWM Rules 2016. Lucknow Nagar Nigam proposes to set up an integrated solid waste management system by way of awareness campaign, segregation, collection, transportation, storage, treatment and land fill of municipal waste.

This project information Memorandum is prepared to guide the bidder to prepare the bid as per existing condition. Bidder may propose his own methodology, type of vehicles, process and equipment's for processing and disposal of waste however the methodology, proposed out come and service level to be achieved shall adhere to the principals of MSW Rule 2016, Guideline of SBM-2 and CPHEEO Manual.

1.1 Project Financing

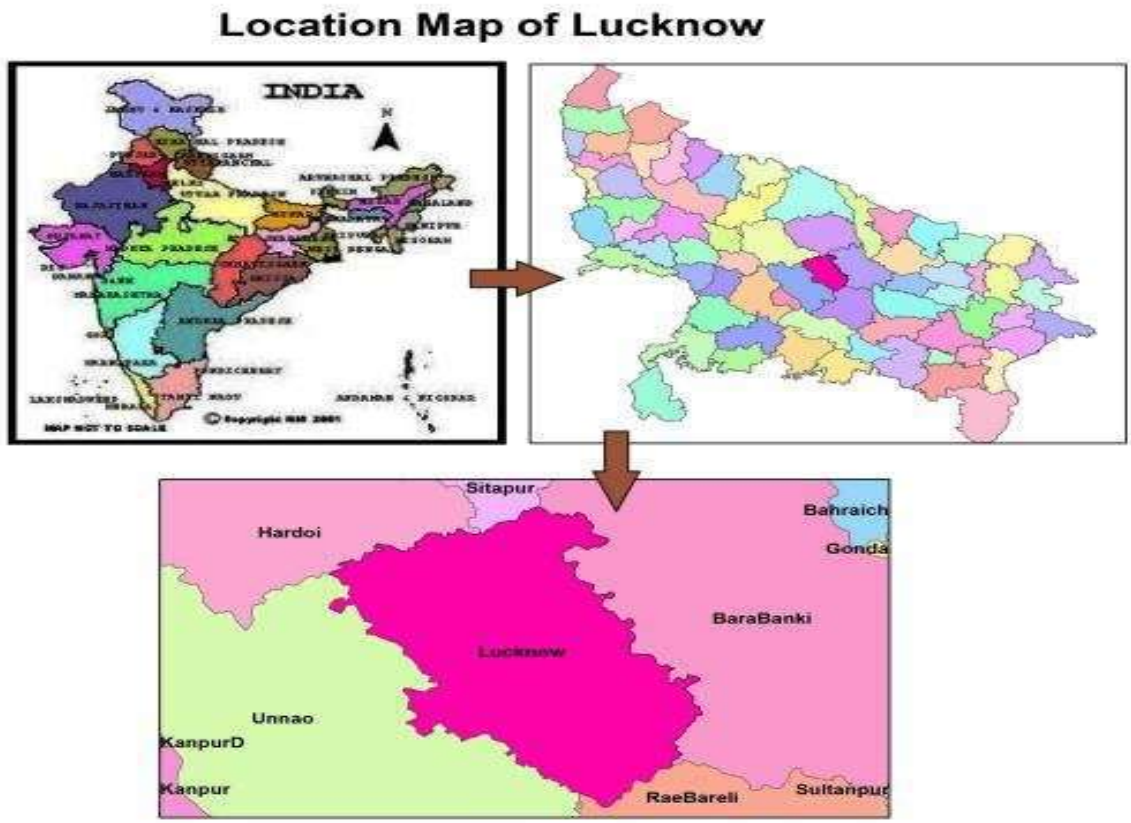
All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

The part of Operations & Maintenance cost would be recovered from sale of Recyclable recovered at MRF to ensure project sustainability. The shortfall in O&M cost shall be provided in the form of **"Tipping Fee"** as quoted by successful bidder.

2 Project Coverage Area & its detail

2.1 Basic Information of Lucknow

2.1.1 Location Map



The city is spread into total municipal area of the 350 sq.km. The whole city is divided into 8 Zones which are sub-divided into 110 wards. As per reports, population of Lucknow in 2021 is 2.8 Million ; of which male and female are 52% and 48% respectively. The average density is 8048 persons per sq. km..

Lucknow is located at the coordinate's 26°51′N 80°57′E. It has an elevation of approximately 123 metres (404 feet). Bounded on the east by Barabanki, on the west by Unnao, on the south by Raebareli and in the north by Sitapur and Hardoi, Lucknow sits on the northwestern shore of the Gomti River.

Lucknow is served by several railway stations in different parts of the city. The main long-distance railway station is Lucknow Railway Station located at Charbagh. It has an imposing structure built in 1923 and acts as the divisional headquarters of the Northern Railway division.

2.2 Demographic Profile

According to the provisional report of 2011 Census of India, Lucknow city had a

population of 2,815,601, of which 1,470,133 were men and 1,345,468 women. The sex ratio in Lucknow city stood at 915 females per 1000 males in 2011, compared to the 2001 census figure of 888. The average national sex ratio in India is 940 according to the Census 2011 Directorate. The city has a total literacy level in 2011 of 84.72% compared to 67.68% for Uttar Pradesh as a whole. In 2001 these same figures stood at 75.98% and 56.27%. In Lucknow city, the total literate population totalled 2,147,564 people of which 1,161,250 were male and 986,314 were female. Despite the fact that the overall work-participation rate in the district (32.24%) is higher than the state average (23.7%), the rate among females in Lucknow is very low at only 5.6% and shows a decline from the 1991 figure of 5.9%.

The Scheduled Caste population of the state represented 21.3% of the total population, a figure higher than the state average of 21.15% At present there are 7,62,601 households in Lucknow. The city lies in the cultural region of Awadh.

2.3 Decadal population growth trend

Table 2-1 Decadal Growth

Year	Population 2011	Decadal growth rate
2001	2,245,509	
2011	2,902,601	29.3%

Source census of India 2001, 2011

2.4 Ward Wise Population Distribution of Zone 8 of Lucknow

S No	Zone Name	Ward No	Ward Name	HH	Ward wise Population
1	Zone-8	1	Shradheye Atal Bihari Vajpei	5987	31516
2	Zone-8	2	Sharda Nagar 2	5507	28990
3	Zone-8	3	Ibrahimpur 2	5890	31004
4	Zone-8	4	Ibrahimpur 1	5408	28465
5	Zone-8	5	Raja Bijli Pasi 2	5976	31455
6	Zone-8	6	Raja Bijli Pasi 1	5598	29465
7	Zone-8	19	Sharda Nagar 1	5405	28451
8	Zone-8	29	Kharika 2	5367	28252
9	Zone-8	30	Kharika 1	6064	31918
10	Zone-8	35	Hind Nagar	5291	27854
11	Zone-8	56	Vidyawati 2	5160	27164
12	Zone-8	60	Vidyawati 3	5565	29293
13	Zone-8	64	Vidyawati 1	5514	29023
TOTAL				72732	382850

Permanent migration has reduced over the years as most of the people are migrated to big cities these days due to development of transportation linkages. Presently

temporary migration is happening whereby approximate 300 to 400 people daily come to Lucknow for employment. These people are generally engaged in proving informal services to the city people such as labour, masons, carpenters, rickshaw pullers, shopkeepers, auto driver etc.

2.5 Basic Information of Zone 8 of Lucknow

2.5.1 Zonal Map of Zone 8



2.6 Present population and growth trend

Estimated current Population of Zone 8 of Lucknow as per Census growth is Approx. 5 Lacs. Whereas an all-season floating population is approximately 5%. Ward wise population as per survey reports and the projected population in 2031, 2041 and 2051 are shown in table below.

Ward No	Current HH	Estimated population 2021	Estimated population 2031	Estimated population 2041	Estimated population 2051
1	7788	38765	47681	58647	72136
2	7163	35658	43859	53947	66354
3	7661	38135	46906	57694	70964

4	7034	35012	43065	52970	65153
5	7772	38690	47588	58534	71996
6	7281	36242	44578	54830	67441
19	7030	34995	43044	52944	65121
29	6981	34750	42742	52573	64665
30	7887	39259	48289	59395	73056
35	6883	34260	42140	51833	63754
56	6712	33412	41096	50549	62175
60	7238	36030	44317	54510	67048
64	7172	35698	43909	54008	66430
TOTAL	**94602**	**470906**	**579214**	**712433**	**876293**

2.7 Sources of Waste generations

Sources of waste generation are on the basis of survey conducted in year 2023.

A	**General Information**		
	Total Population	4.0 Mil.	Nos
	Number of Zones	8	Nos
	Number of Ward	110	Nos
	Total House Hold	7,62,601	Nos
	Mix (Household + Commercial)	7,96,897	Nos
	Commercial, institutional & other units	34,296	Nos

2.8 Present Scenario of Solid waste management

The present scenario of Solid Waste Management in the city of Lucknow is not up to the mark and need substantial improvement.

Year		**2022**
Population		5 lacs. (Aprx)
Waste generation other than C&D waste	Dom.	189
	Comm.	22
	Silt + inert	21
	Total	262
C&D waste		31
Total waste inc. C&D		293
Household		95000(Aprx)

2.9 Solid Waste Management

As per Lucknow Nagar Nigam officials, total waste generated in the city is approximately 245 MT with per capita waste generation of approximately 550.0 grams (Ref. Operational Guidelines Oct 2021 Ch. 6 Pg. 43). Waste generated in the city include waste from residential, commercial, institutional, industrial, construction and demolition waste and street sweeping waste. The town does not have a Solid waste

management system in place. Door to door waste collection is absolutely absent from the city. Waste generated in the city is partly collected through wheel barrows and hand carts. Waste collected from streets and bins is kept in open areas from where waste is transported to dumping yard by tractor. For waste storage no transfer station is available in the city.

The Waste from residential area is collected from the dustbin provided by the Lucknow Nagar Nigam on the road side. Waste from commercial area/ market place and institutions are dumped in open places. The Construction and demolition waste are either used for refilling the roads or left unattended on the roads.

3 Project Components

The various components of proposed project of Integrated Solid Waste Management system are based on the assessment of the existing deficiencies and mandatory requirement as per MSW Rules 2016.

a. Door to Door collection of municipal solid waste, its transfer to MRF/TS/designated site & recovery of recyclables.
b. Collection storage & transfer of Domestic hazardous waste
c. Development and operation of intermediate MRF cum Mini Transfer stations or standalone Mini Transfer stations as the case may be.
d. Mechanized Sweeping of Roads / Streets, mechanized/manual cleaning of pavement / footpath / paved path /cycle track. Manual Sweeping, litter collection, Removal of garbage, litter, silt and blockages from street sides and transportation of sweeping waste up to transfer station/dustbins/secondary vehicles.
e. Cleaning, Desilting, Removal of Obstruction and Maintenance of Storm Water Drains of depth up to 4 feet with a cleaning frequency of once in 15 days in Municipal area of Zone-2 & transportation of drain silt/waste up to TS/Dustbins/secondary vehicle provided by LMC.
f. Collection of user charges from households, commercial establishment, institutional establishment & BWG's on behalf of Lucknow Municipal Corporation and deposit it into Escrow account of Lucknow Municipal Corporation.
g. Build, Operate & Maintain workshop for maintenance of vehicle/equipment.

4 Scope of the Project

The scope of the Project includes the following:

The Successful Bidder would design, procure, finance, construct, operate and maintain

the Project during the Concession Period on a Design- Build – Operate – Transfer (DBOT) Concession basis. The Project would be transferred back to the ULBs at the end of the Concession Period.

5 Preparation of Detailed Project Report:

The Project Information Memorandum is only being provided for the purpose of reference of the Bidders. The Concessionaire shall within 1 months of the signing of Agreement provide LNN with a Detailed Project Report ensuring compliance of the same with the proposed Plan, and detailing out the design, drawings, specifications and cost estimates of all the items. The Concessionaire shall have the liberty to suggest different equipment for collection of waste, Road Sweeping & Drain Cleaning provided however the DPR must adhere to the Plan as detailed out in the Project Information Memorandum.

The bidder shall survey the project area (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) with digital mode only within one month from award of work. Survey data shall include address, ownership detail, communication details and geo tagged photograph of property. All such details shall be linked with GIS based platform against property/building polygon and shall be enabled with facility for public viewing and feedback mechanism. If any (every household, commercial establishment, bulk waste generator residential & bulk waste generator commercial unit) find that their data is not linked with the application, they may be able to send their detail through such App.

a) Approvals for the Project:

i. Obtaining Environmental clearances from MoEF/SEIAA as the case may be.
ii. AAI clearance if required.
iii. Water allocation, construction power for project and any other clearances, tie-up required for setting up waste processing cum disposal facility.
iv. Renewal/ obtaining of all project related clearances required for the project.
v. And all other clearances and permits as are required to be procured for the implementation of the Project in terms of the Concession Agreement

b) Collection of Waste: Door to door collection of waste from all the wards under Zone-8 of Lucknow Nagar Nigam areas. The door to door collection to include all government office complexes, non-government office complex, authorized colonies, unauthorized regularized colonies, all market/ commercial/ institutional places, slums and even from undesignated points by means of deployment of suitable vehicles. This shall also include by-lanes,

lanes and streets. All the collection vehicles shall be fitted with GPS devices and shall be conned with central server established at command & control center for their monitoring. All the household, shop, establishments shall be provided with RFID tags and one RFID reader with each collection vehicle to record attendance. System shall automatically record and transfer data to central server.

Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste as per relevant Rules and standards.

c) Transportation of Waste:

MSW collected from Door to Door shall be transported to MRF cum PCTS/TS/MTS/FCTS. All the Transportation vehicles shall be fitted with GPS devices and shall be conned with central server established at command & control center for their monitoring.

The operator shall keep in reserve sufficient number of transport vehicles for any unforeseen eventuality/festival/fair /important events/ emergency conditions.

d) Setting up of Transfer point: The Concessionaire shall be responsible for setting up of Transfer point. during the tenure of the Concession Agreement, the Authority shall, at the request of the Concessionaire, make available an alternative site for the development of the MRF and Waste transfer facility, in accordance with the terms of the Concession Agreement (provided however, that the Concessionaire is in due compliance with its obligations with respect to handling of waste in terms of the Concession Agreement).;

e) Drain Cleaning: Clearing and uprooting rank vegetation, grass, bushes, shrubs, saplings and trees, removal of stumps of trees cut if any and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil and any kind of temporary, permanent, RCC, PCC and other solid obstruction from the drains. Excavation and removal of silt or silt mixed with sand in slushy condition from drain bed including lift and disposing off the same.

f) Road Sweeping: The Operator shall ensure to conduct sweeping and cleaning of the Zone-8 including Main Roads, service roads, Arterial Roads (streets, narrow streets, gullies) footpaths, road berms, central verge, curb channels, curb stones gully etc., which means complete solution for RoW (right of way), the objective is to keep the areas litter and dust free for 24x7. The type of work to be conducted is as under: All Roads of 7 mtrs and above to be mechanically swept. (Only sides of the roads are to be manually swept). For areas on these particular roads not covered by Machine/s, litter picking to be done daily.

g) Segregation and Processing of Waste:

a) Segregation of waste at source as well as at the MRF cum transfer station.

b) Recovery of recyclable materials at MRF centres

h) Domestic Hazardous & Domestic bio-medical waste

Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure disposal of such waste as per relevant Rules and standards.

i) Transportation of waste generated from Road Sweeping and Drain Cleaning Activity:

The Concessionaire shall be responsible for Transportation of waste generated from sweeping of roads and cleaning of drains falling within Zone-8 area to MRF cum PCTS/TS/MTS/FCTS/dustbins only. Secondary transportation of waste shall not be the part of concessionaire. Sweeping of roads and Cleaning of drains is part of scope of work.

j) Procurement of Equipment/ Machinery: All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

4.2 The Successful Bidder shall operate and maintain the Project in accordance with the O&M Requirements as set out in the Concession Agreement.

4.3 The Successful Bidder shall, at all times, ensure that all aspects of the Project and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including rules such as MSW Rules, policies and guidelines related thereto.

6 General recommendation and Guidelines for Waste Collection, Transportation,

The successful bidder shall design detailed plan/DPR for collection, drain cleaning & road sweeping activity. Concessionaire shall prepare fleet deployment schedule and route chart however type of vehicles shall match to the requirements of DPR.

The activities covered under proposed collection & Transportation system are as given below

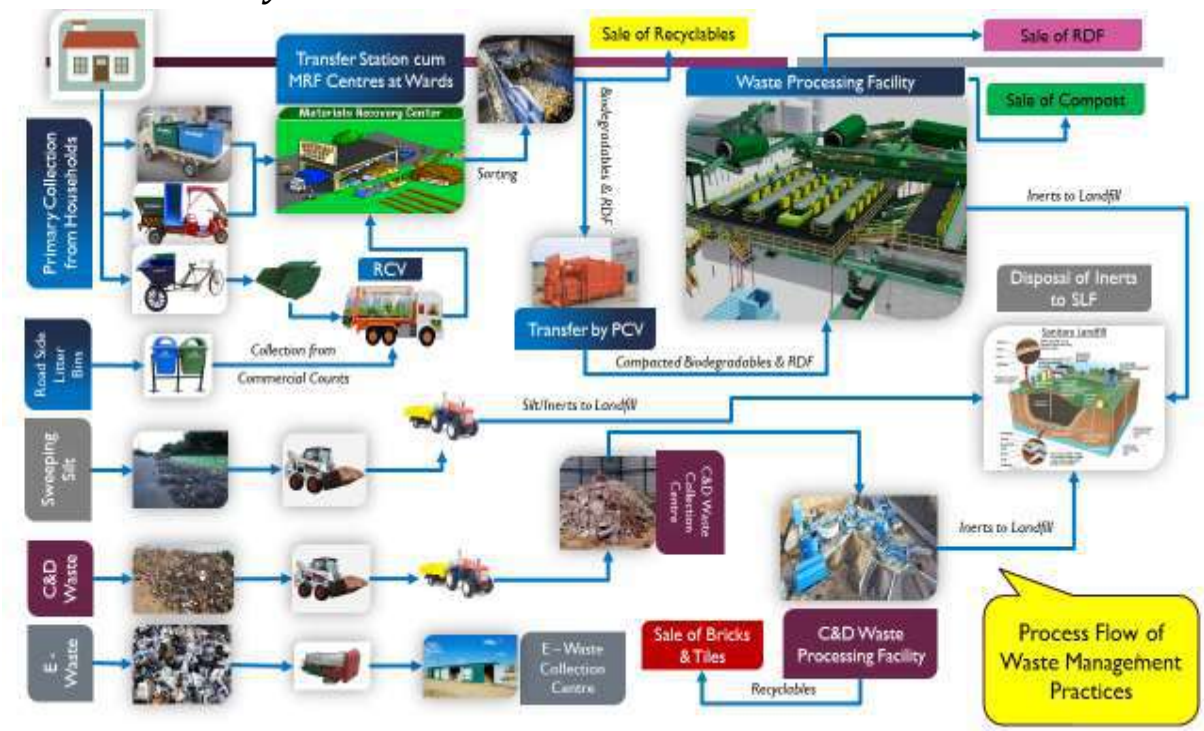
1. Storage of Segregated waste

2. Segregation of Other waste
3. Primary Collection of waste including Domestic Hazardous & Domestic Bio-medical waste
4. Drain cleaning
5. Manual & Mechanised Road Sweeping

Concessionaire shall prepare his own detailed plan for door to door collection, drain cleaning & road sweeping including route plan, vehicle deployment plan, schedule of work, scheduled maintenance plan and work plan in case of emergency.

On the basis of waste carrying capacity of vehicles, concessionaire shall assign fixed area for door to door collection of waste, drain cleaning & road sweeping that is Vehicle Traverse Area (VTA) to each vehicle. Proposed system shall be based on 100% door to door collection. Litter bins shall be proposed on main roads and market for storage of litter.

Process flow & work plan to be adopted for proper implementation of SWM scheme in the Lucknow City



6.1 Storage of Segregated waste

It is desirable that no waste should be allowed to be thrown on the streets, footpaths, open spaces, drains or water bodies, nallas, etc.

Waste should be stored at source of waste generation in three bins/ bags, one for food waste/ bio-degradable waste and another for recyclable waste such as papers, plastic, metal, glass, rags etc. and a bin/bag for domestic hazardous waste.

Domestic Hazardous Waste such as used batteries, containers for chemicals plastics pesticides, discarded medicines and other toxic or hazardous household waste, if and when produced, should be kept separately from the above two streams of waste and will be transported on call basis.

6.2 Segregation of Recyclable/ Non-Biodegradable Waste:

A quarterly program of conducting awareness campaign in various wards of the city utilizing the ward committees, local NGOs and resident welfare association shall be planned. Simple literature may be developed for bringing in the awareness, which may be publicized through media using cable network, and group meetings in different areas through NGOs. The sanitation supervisors may also create awareness during their field visits.

As soon as the awareness campaign picks up, the local body/concessionaire may direct households, shops and establishments not to mix recyclable waste with domestic food/bio-degradable waste and instead store recyclable/non-bio degradable wastes in a separate bin or bag at the source of waste generation.

6.3 Primary collection & Transportation of waste

- For primary collection of waste two types of vehicles are proposed. For door to door collection 2.2 cum separate mounted bin for biodegradable and non-biodegradable has been proposed. Auto tripper would be used to collect waste from household near major roads.

- The waste collected from the Household will be transferred to designated transfer station. Two types of road side containers are proposed: -

  - 1100 litre CP bins – These bins will cater the requirement of commercial as well as domestic waste of household along major road and dual carriage and RCV will collect these waste directly.
  - 2 x100 litre twin Bins- The bins will be used to avoid littering along the road of project area. The waste from these bins shall be transferred to RCV directly.

Mode of Operation: Each auto tipper will collect the waste from door step and will transfer the waste to transfer point. The road side containers shall be lifted directly to RCV and it will be directly going to Material Recovery Facility.

It is proposed that each Auto tipper and E-Rickshaw will have two sweepers to collect the waste from houses and put it into vehicles. Concessionaire is free to devise his own plan for labour and fleet deployment based on his own assessment of labour efficiency. Each sweeper shall be given a fixed area for sweeping plus a fixed number of houses on that particular beat from where to collect the domestic waste.

Proposed timing of entire operation can be summarized as under: -

Door to Door collection from houses : 6.00 Am to 11.00 AM

Collection of non-domestic waste and Litter bins : 11:00 AM to 2:00 PM

Collection of waste from 1.1 cum community bins : 6:00 AM to 2:00 PM

6.4 Transportation of Waste

Waste collected from Households, Shops, offices, Commercial areas, restaurant, sabzi market, fruit/vegetable shop and meat/fish shop shall be collected in 1.8 cum/2.5 cum Auto Tipper and it would be directly transfer to transfer station. Biodegradable waste

from restaurant, sabzi market, fruit/vegetable shop and meat/fish shop shall be transferred separately in segregated manner to transfer station which will be directly sent to compost plant.

The tentative route length to be covered by Auto Tipper are as below:

Ward No	Ward Name	Area (Km)	Route Length
1	Shradheye Atal Bihari Vajpei	30.8001	123.413
2	Sharda Nagar 2	19.8848	70.79
3	Ibrahimpur 2	18.4691	55.904
4	Ibrahimpur 1	7.7206	220.471
5	Raja Bijli Pasi 2	25.6625	95.09
6	Raja Bijli Pasi 1	14.6186	112.195
19	Sharda Nagar 1	3.50543	84.359
29	Kharika 2	3.60604	77.155
30	Kharika 1	2.40175	52.414
35	Hind Nagar	1.94156	56.113
56	Vidyawati 2	1.48805	90.471
60	Vidyawati 3	2.58995	132.421
64	Vidyawati 1	2.76058	132.421
TOTAL		**135.449**	**1303.217**

6.5 Work shop for maintenance

The PPP partner would set up a workshop for maintenance of vehicles and equipment.

Sl. No.	NAME	AREA
1.	South city	1 acres

6.6 Command Control & Response Mechanism

6.6.1 Minimum Technical Specifications

The approximate area of the complaint handling cell shall be about 100 -200 Sq. ft., where one customer care executive can sit with 4-5 customers at a given point of time.

6.6.2 Equipment / Facilities at Customer Handling Cells

The equipment / facilities to be provided at each Customer Handling Cell are proposed as follows:

S. No.	Equipment / Implement	Number

	Computer with in-built modem & fax software	1
	Printer	1
	Telephone (land line)	1
	Wireless/ Mobile phone	1
	Complaint log book	1
	Table	1
	Chairs	4-5
	Office Stationery	As Required

6.6.3 Staffing Pattern at Customer Handling Cells

The staffing pattern to be provided at each Customer Handling Cell is as follows:

S. No.	Staffing Aspect	Details
	Total Number	1 –2 Operating staff
	Type of staff	1 Customer support executive, supervised by all department heads Graduate with good communication skills and with prior experience in customer services; With working knowledge of computers

6.6.4 Complaint Resolution Mechanism

The proposed Complaint Resolution mechanism is as follows:

- Every complaint (whether written / telephonically) will be given a reference number and will be communicated to the complainant.
- Each complaint will then be directed to the pertinent department head. All department heads will make effort.
- To resolve all complaints within 24 hours of registration.
- Complaints when resolved, the message will be sent to the complaint cell executive with a copy to the complainant.
- All complaints and their status will be available in the computerized database, which could be accessed by all department heads at their office. All records of complaints in the database will be maintained for a period as desired by municipal authority. Each record in the database will carry the complaint number, description, time of complaint registration and time of complaint redressal, pertinent official (who resolved the complaint).

Annexure – I Detail of Existing Infrastructure & Required infrastructure

Existing Infrastructures at Lucknow Nagar Nigam

ABSTRACT COST OF VEHICLE & EQUIPMENT REQUIRED FOR PRIMARY COLLECTION, STORAGE AND TRANSPORTATION

Sl. No.	Description	Qty to be Procured	Unit	Existing Vehicle at Zone-8	Total Gap
1	**3**	**4**	**5**		
A	**Vehicles Required for Door to Door Collection/ Primary Collection to designated MTS in Lucknow Municipal Corporation.**				
1	Diesal/CNG Auto Tippers of capacity 2500 liter with suitable twin compartments including fabrication hydraulic lifting and unloading arrangement.	130	Nos.	21	109
2	Tricycle with 8*40 liter bin with suitable twin compartments including fabrication hydraulic lifting and unloading arrangement.	62	Nos.	62	0
3	Sweeping tools (Metal tray and metal plate, Long handled brooms, shovels and protective gears).	349	Nos	0	349
4	Carcass Lifting Vehicles	1	Nos	0	1
5	Online Monitoring System				
6	IEC Activities				
	Material Recovery Facility				
1	Cost of MRF Civil Work	3	Nos	2	1
2	Cost of MRF Machinaries & Equipments	3	Nos	0	3
3	Portable Compactor Bins	11	Nos.	10	1
4	Front End Loader with Tractor Attachement	3	Nos	3	0
5	Leachate Suction Machine for Leachate Collection from MRF Centres	2	Nos	0	2
C	**Drain Cleaning**				
1	50 HP Tractor with Trolley for Collection of Silts	9	Nos	9	0
2	Robo for Cleaning of Waste from Drain	2	Nos	2	0
3	Super Sucker Machines for Cleaning of Drains	2	Nos	0	2
D	**Collection & Transportation of Green Waste**				
1	35 HP Tractor with Trolley for Collection of Green Waste	2	Nos	2	0
D	**Collection & Transportation of C&D Waste**				
1	50 HP Tractor with Trolley for Collection of C&D Waste	5	Nos		5
2	Collection Centre for C&D Waste	1	Nos		1
3	JCB 3DX for Lifting of C&D Waste	1	Nos		1
E	**Road Sweeping**				
1	Mechanised Road Sweeping	3	Nos	0	3

Annexure – II Equipment and Machinery - Monitoring and Tracking of C&T Operation

S.No.	Qt.	Particulars	Nos	Unit
1	**2**	**3**	**4**	**5**
1	NS	RFID Tag with Survey & Installation	No	94603
2	NS	RFID Machine	No	130
3	NS	GPS with Installation of any Make	No	130
4	NS	Biometric attendance machine (4 Nos at MRF	No	4

5	NS	Software for One Years for Operation and Maintenance	No	1
6	NS	Computer and Peripherals for Monitoring System with UPS	No	6
7	NS	CCTV Camera with DVR Facility	Lot	1
8	NS	Printer	No	1
9	NS	Tables & Chairs	Lot	1
10	NS	Stationary Items (Pen, Register) Fan Lights Paper weight Dustbin & etc	Lot	1

Annexure – III Manpower Required for Primary Collection

	Particulars	**No of Man power**
	Labour Door to Door Collection	349
	Driver Auto Tipper	138
	Sanitary Supervisor	24
	Sanitary sub Inspector	6
	Sanitary Inspector	2
	Project Manager	1
	Project Head	1

Annexure – IV Manpower Required for Material Recovery Facility

	Particulars	**No of MRF**	**Manpower / MRF**	**Shift**
	Driver for Mini Loader	3	1	2
	Labour	3	7	2
	Supervisor cum operator	3	1	2
	Security	3	3	2

Annexure – V Manpower Required for Green waste & Debris

	Particulars	**No of Man power**
	Helper for Collection of Debris	19.00
	Driver for Collection of Debris	21.00
	Sanitary Supervisor	2.00
	Sanitry Inspector	1.00
	Project Manager	1.00

Annexure – VI Manpower Required for Manual Road Sweeping and Drain Cleaning

	Labour Street sweeping, Drain cleaning	1252.00
	Sanitary Supervisor	63.00
	Sanitary sub Inspector	3.00
	Sanitary Inspector	1.00

Annexure – VII Manpower Required for Mechanised Road Sweeping

A)	Manpower	Nos with reliving
	Driver	4
	Helper	4
	Field Supervisor	4
	Washing helper	4
	Mechanic Helper	1
	MTS supervisor	1
	Project Head	1
	Control Room	1
	Watchman	1

Annexure – VIII Existing Transfer Station Details

Sl. No.	NAME	AREA
1.	Dayal Chauraha	1.1 acres

Annexure – IX Details of Existing MRF Centre

Sl. No.	Name	Longitude	Latitude	Area	Capacity
1.	South city	80.9420	26.7677	378.0 Sqm	15 TPD
2.	Sabhagar	80.9066	26.7899	378 Sqm	15 TPD

Annexure – X List of existing PCTS

Sl no.	WARD	LOCATION	NO. OF PCTS
1	SHARDA NAGAR 2	SOUTH CITY	4
2	HIND NAGAR	SHUBHAM PALACE	1
3	Ibrahimpur 1	Vrindavan sector 8 A	1
4	VIDYAWATI1	SABHAGAR	2
5	VIDYAWATI 2,3	Madari Kheda	2

6	Ibrahimpur 1	Vrindavan Sector 8c, Amity School	1

Annexure – XI List of existing Open Dumping Points

Sl No.	Zone	Ward Name	Open Dumping Points
1	8	Kharika Ist	Mohari Bag
2	8	Kharika 2nd	Kanshiram maidan
3	8	Ibrahimpur Ist	Durgapuri
4	8	ibrahimpur 2nd	Panchamkhera
5	8	vidyawati 3rd	Behind the Bulet
6	8	Sharada nagar ist	Dangal Maidan
7	8	Raja Pasi Bijli Lika Ist	Burger points near Nala
8	8	Raja pasi Bijli Lika 2nd	Tahsheel wala maidan
9	8	vidyawati 3rd	Baudh vihar shanti upvan
10	8	Hind nagar	SKD HOSPITAL
11	8	Hind nagar	Mata ji ki Bagiya
12	8	Ibrahimpur 2nd	Behind DPS
13	8	Sharada nagar 2nd	South city
14	8	Vidyawati Ist	Kila ganw
15	8	Vrindavan	Vrindavan-Sec 06
16	8	Vrindavan	Vrindavan-Sec 02
17	8	Vrindavan	Vrindavan-Sec 07
18	8	Kharika Ist	Shani mandir Teli bag
19	8	Vidyawati Ist	Ram leela Maidan

(Volume-III)

DRAFT CONCESSION AGREEMENT

Between

Lucknow Municipal Corporation

acting through

Its authorised Officer on this behalf

AND

_____

(Concessionaire)

For

"Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8of Lucknow Municipal Corporation"

(RFP NO. _____2023-24 Dated: __/__/2023)

Issued on: --------- 2023

Table of Contents

ARTICLE 1 9
1 DEFINITIONS AND INTERPRETATION 9
1.1 Definitions 9
1.2 The Standards 16
1.3 Interpretation 17
1.4 Inclusions of Agreement 18
ARTICLE 2 18
2 CONCESSION 18
2.1 Grant of Concession 18
2.2 Concession Period 18
2.3 Extension in Concession Period 18
2.4 Acceptance of Concession 19
ARTICLE 3 20
3 PROJECT FACILITIES & SITE 20
3.1 Handover of Project facilities & Site 20
3.2 Rights, Title and Use of the project facilities & Site 20
3.3 Peaceful Possession 21
3.4 Applicable Permits 21
ARTICLE 4 22
4 Conditions Precedents 22
4.1 Authority's Conditions Precedent 22
4.2 Concessionaire / Selected bidder's Conditions Precedent 22
4.3 Damages for delay by the Authority 24
4.4 Damages for delay by the Concessionaire 24
ARTICLE 5 26
5 PROJECT MONITORING CONSULTANT 26
5.1 Appointment 26
5.2 Payments to Project Monitoring Consultant 26
5.3 PROJECT MONITORING CONSULTANT - SCOPE OF WORK 26
5.4 Scope of Services of the Project Monitoring Consultant 26
5.5 Obligations during Implementation Period 26
5.6 Active Operations Period 27
5.7 Obligations during Operations Period 30

5.8 Awareness Campaign 33
5.9 General Obligations 33
ARTICLE 6 34
6 CONCESSIONAIRE'S OBLIGATIONS 34
6.1 Performance Security 34
6.2 Financing Arrangement 34
6.3 Project Implementation: Construction Works 37
6.4 Project Implementation: Operation and Maintenance 39
6.5 Awareness Campaign 41
6.6 Insurance 41
6.7 Environmental Compliance 41
6.8 Land Use 42
6.9 Sale/Distribution of Recyclables 42
6.10 General Obligations 42
6.11 No Breach of Obligations 43
6.12 Maintenance of Records 43
ARTICLE 7 44
7 AUTHORITY's OBLIGATIONS 44
7.1 AUTHORITY's OBLIGATIONS 44
7.2 Specific Obligations 44
7.3 General Obligations 45
ARTICLE 8 46
8 PAYMENT OF O&M FEE 46
8.1 Payment of O&M Fee 46
8.2 Mechanism of Payment 47
8.3 Sinking Fund Account 49
8.4 User Charges 49
8.5 Sale of Recyclable 50
8.6 Performance evaluation of collection, transfer and transportation of municipal solid waste (MSW) in the Concession Area 50
8.7 Performance based Payment 55
8.8 Other Conditions 55
ARTICLE 9 56
9 ESCROW ACCOUNT 56
9.1 Escrow Account 56

9.2 Deposits into Escrow Account....56
9.3 Withdrawals during Concession Period....56
9.4 Withdrawals upon Termination....57
ARTICLE 10....58
10 Insurance....58
10.1 Notice of the Authority....58
10.2 Evidence of Insurance Cover....58
10.3 Remedy for failure to insure....58
10.4 Waiver of Subrogation....59
10.5 Concessionaire's waiver....59
10.6 Application of Insurance Proceeds....59
10.7 No Breach of Insurance Obligation....59
ARTICLE 11....60
11 Accounts & Audits....60
11.1 Audited accounts....60
11.2 Appointment of auditors....60
11.3 Certification of claims by Statutory Auditors....61
11.4 Set-off....61
11.5 Dispute resolution....61
ARTICLE 12....62
12 FORCE MAJEURE AND CHANGE IN LAW....62
12.1 Force Majeure Event....62
12.2 Notice of Force Majeure Event....63
12.3 Performance of Obligations....64
12.4 Termination due to Force Majeure Event....64
12.5 Liability for other losses, damages etc....66
12.6 Change in Law....66
ARTICLE 13....68
13 EVENTS OF DEFAULT AND TERMINATION....68
13.1 Events of Default....68
13.2 Termination due to Event of Default....71
13.3 Rights of AUTHORITY on Termination....73
13.4 Accrued Rights of Parties....74
ARTICLE 14....75

14 HANDBACK OF PROJECT FACILITIES 75
14.1 Ownership 75
14.2 Concessionaire's Obligations 75
14.3 AUTHORITY's Obligations 75
15 DISPUTE RESOLUTION 76
15.1 Amicable Resolution 76
15.2 Arbitration 76
15.3 Performance during Dispute 77
ARTICLE 16 78
16 REPRESENTATIONS AND WARRANTIES 78
16.1 Representations and Warranties of the Concessionaire 78
16.2 Representations and Warranties of AUTHORITY 79
16.3 Obligation to Notify Change 79
ARTICLE 17 80
17 MISCELLANEOUS 80
17.1 Assignment and Charges 80
17.2 Interest and Right of Set Off 80
17.3 Governing Law and Jurisdiction 80
17.4 Waiver 81
17.5 Survival 81
17.6 Amendments 81
17.7 Notices 81
17.8 Severability 82
17.9 No Partnership 82
17.10 Language 83
17.11 Exclusion of Implied Warranties etc 83
17.12 Counterparts 83
SCHEDULE "1" 84
SCHEDULE "2" 85
SCHEDULE "3" 112
SCHEDULE "4 " 114
SCHEDULE "5" 117
Schedule "6" 118
Schedule "7" 119

Schedule “8” 120
Schedule “9” 124
Schedule “10” 135
Schedule “11” 137
Schedule “13” 138

(To be printed on a Non-Judicial Stamp Paper of Rs.100/-)

THIS AGREEMENT is made on this ……. day of……., 20….. at Lucknow, Uttar Pradesh, India.

BETWEEN

Lucknow Nagar Nigam, a body constituted under the Municipal Act, having its office at Lucknow acting through its **Municipal Commissioner** (hereinafter referred "the Concessioning Authority" which expression shall unless excluded by or repugnant to the context, be deemed to include its successors and assigns); **OF THE FIRST PART termed as Authority**

AND

…….. [Name of the SPV incorporated by the selected bidder/ bidders in case of consortium], a company incorporated in India under the Companies Act of 2013 and having its registered office at..... [address] duly represented through its Authorized

Person Mr./Ms. _____,(---------- Designation, if applicable) by a Board Resolution dated---------- or by a Power of Attorney dated----------executed in his favour, (hereinafter referred to as the "Concessionaire"), which expression shall, unless repugnant to the context or meaning thereof, mean and include its successors and assigns) of the SECOND PART;

AND

M/s _____, a company incorporated under the provisions of Companies Act, 2013, having its Registered Office at _____, duly represented through its Authorized Person Mr./Ms. _____,(---------- Designation, if applicable) by a Board Resolution dated---------- or by a Power of Attorney dated----------executed in his favor, in its capacity as the Confirming Party to this Agreement (Hereinafter referred to as the 'Preferred Bidder' which expression shall, unless the context otherwise requires, include its successors, and administrators) of the THIRD PART.

OR

The Consortium of (i) M/s _____ _____having its registered Office at _____, (ii) M/s _____ having its registered office at _____,(iii) M/s _____ having its registered office at _____, in their capacity as the confirming party to this Agreement (hereinafter referred to as the 'Selected bidder' which expression shall, unless the context otherwise requires, include its successors) duly represented through M/s _____, the Lead Member of the consortium, through its Authorized signatory Mr./Ms. _____, _____ of the FOURTH PART

MUNICIPAL COMMISSIONER, Lucknow Nagar Nigam, Concessionaire and the Confirming Party are hereinafter referred to individually as the "Party" and collectively as the "Parties"

WHEREAS,

A. Urban Local Body (hereinafter referred to as **"ULB"**) of Lucknow is responsible for providing municipal and civic services, which includes the collection, transportation and disposal of Municipal Solid Waste generated in the city and road sweeping and drain cleaning in municipal area.

B. The Ministry of Environment and Forests (MoEF), Government of India (GoI), has formulated the Solid Wastes Management Rules 2016 ("MSW Rules 2016"), which makes it mandatory for every municipal authority to implement a scientific solid waste management system wherein the Municipal Solid Waste is collected, transported, duly processed and the residual inert/non-biodegradable solid wastes disposed in an Engineered Sanitary Landfill (as hereinafter defined).

C. **AUTHORITY** desires to establish a system of **Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8of Lucknow Municipal Corporation** as per SWM Rules 2016, at Lucknow Nagar Nigam in Uttar Pradesh, on a long-term Design, Build, Operate and Transfer (DBOT) basis.

D. **AUTHORITY** carried out extensive project development work in connection with the Project (as hereinafter defined).

E. **AUTHORITY** had invited competitive proposals from eligible Bidders for implementing the Project and in response thereto AUTHORITY received proposals from several persons including the Concessionaire for implementing the Project.

F. **AUTHORITY**, after evaluating the aforesaid Proposals accepted the Proposal submitted by the Concessionaire and issued Letter of Acceptance No. _____ dated _____ to the Concessionaire for developing the Project.

G. The Parties hereto are required to enter into the Concession Agreement being these presents to record the terms, conditions and covenants of the Concession.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS: -

ARTICLE 1

1 DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively ascribed to them hereunder:

Act and Rules: The term "said Act" and "said Rules" shall mean and include the Municipal Act 2000 amended upto date and Rules framed there under from time to time, the Solid Waste Management Rules 2016 and all those/labour laws/ relevant laws and rules mentioned above/applicable to the contract.

Action against bidder: AUTHORITY shall take action against the bidder, if any worker of the bidder or any his/her employee mixes segregated waste at any point of collection, or fails to pick up waste as per the specified time schedule.

"Additional Cost" shall mean the additional capital expenditure and/or the additional operating costs or both as the case may be, which the Concessionaire would be required to incur as a result of Change in Law OR Change in Scope of work or delay on an account of non-fulfillment of obligations either during Construction period or during O&M period contained in this agreement in time by **AUTHORITY**

"Agreement" shall mean this Agreement, and include any amendments hereto made in accordance with the provisions hereof.

"Agreement Date" shall mean the date of this Agreement.

"Applicable Law" shall mean all laws in force and effect, including MSW Rules, as of the date hereof and which may be promulgated or brought into force and effect hereinafter in India including judgments, decrees, injunctions, writs or orders of any court of record, as may be in force and effect during the subsistence of this Agreement and applicable to the Project/the Concessionaire.

"Applicable Permits" shall mean all clearances, permits, authorisations, consents and approvals required to be obtained or maintained by the Concessionaire under Applicable Law, in connection with the construction, operation and maintenance of the Project during the subsistence of this Agreement.

"Appointed Date" shall mean the date on which all condition precedents are mat or the date of start of Door-to-Door collection & Transportation work whichever is earlier.

"Arbitration Act" shall mean the Arbitration and Conciliation Act, 1996 and shall include any amendment to or any re-enactment thereof as in force from time to time.

"Bank" means a nationalized/scheduled bank incorporated in India

"Bank Rate" means the rate of interest specified by the Reserve Bank of India from time to time in pursuance of section 49 of the Reserve Bank of India Act, 1934 or any replacement of such Bank Rate for the time being in effect

"Bio-degradable waste" means the waste of plant and animal origin e.g. kitchen waste, food & flower waste, leaf litter, kitchen-garden waste, animal dung, fish/meat waste and any other material that gets decomposed by the action of living organism, as defined in SWM Rules 2016.

"Bio-medical Waste" shall have the meaning ascribed to it under the Biomedical Wastes (Management & Handling) Rules, 1998.

"Book Value" shall mean the cost of the fixed assets incurred by the Concessionaire for the Project, net of accumulated depreciation computed on straight line basis in accordance with the rates specified in Companies Act, 1956 and as determined by an independent firm of chartered accountants mutually agreed upon and appointed by the Parties.

Bulk generator means the owner, occupier or any other person representing owners and occupiers of housing society / housing complexes, restaurants; hotels, markets, industrial estates, parks, garden, traffic islands etc. and shopping complexes / malls and includes any government or public office building, or other users such as clubs, gymkhanas, marriage halls, recreation/ entertainment complexes hospitals, educational institutions, commercial establishments or other establishment sources / premises etc.

"Change in Law" means the occurrence of any of the following after the date of Bid:

(i) The enactment of any new Indian law including laws related to environment;

(ii) The repeal, modification or re-enactment of any existing Indian law

(iii) A change in the interpretation or application of any Indian law by a court of record.

Provided that Change in Law shall not include:

(i) Coming into effect, after the Appointed Date, of any provision or statute which is already in place as of the Appointed Date,

(ii) Any new law or any change in the existing law under the active consideration of or in the contemplation of any government as of the Appointed Date which is a matter of public knowledge,

"Change in Ownership" means a transfer of the direct and/or indirect legal or beneficial ownership of any shares, or securities convertible into shares, that causes the aggregate holding of the Selected Bidder, in the total Equity to decline below 100% until expiry of five years from date of execution of the concession agreement, and below 51% (fifty one per cent) thereof at any time during the remaining Concession Period, provided that any material variation (as compared to the representations made by the Concessionaire during the bidding process for the purposes of meeting the minimum conditions of eligibility or for evaluation of its application or Bid, as the case may be,) in the proportion of the equity holding of selected bidder or any member thereof to the total Equity, if it occurs prior to completion of the Concession Period, shall constitute Change in Ownership;

"COD" shall mean the commercial operations date of the Project which shall be the date on which the Project Monitoring Consultant has issued the Provisional Readiness Certificate or the Readiness Certificate in accordance with the provisions of this agreement.

"Collection" means lifting and removal of municipal solid waste (MSW) from designated collection points or any other location.

"Collection at Source" means the collection of municipal solid waste by the bidder directly from the premises of any building, bulk generators or common premises of a group of buildings etc.

"Construction Requirements" shall mean collectively the MRF cum Transfer station.

"Construction Works" shall mean all works and things required to be constructed by the Concessionaire, pursuant to the Construction Requirements and O&M Requirements.

Contract: The term "Contract" shall mean and include (i) NIT (ii) Terms and conditions of Contract (iii) Tender Form (iv) Form of acceptance (v) Form of agreement vi) Additional or modified clauses added on account of the pre-bid meeting (vii) Mutually accepted conditions in writing signed by both the parties; AUTHORITY and Contractor. Thus, the Contract means the agreement between the successful Bidder (The Bidder to whom the work order is given) and AUTHORITY as recorded in the article of agreement signed by the successful Bidder and AUTHORITY, including all appendices, attachment and documents mentioned their in. The successful Bidder then becomes the Concessionaire/ service provider of the project/work.

"Contractor" shall mean any Person with whom the Concessionaire has entered into/may enter into any material contract in relation with the Construction Works and O&M Requirements.

"Contract Amount": The term "Contract Amount" shall mean the sum quoted by the Contractor in his offer and accepted by the Company.

"Concessionaire": concessionaire shall mean the "the name of the SPV formed by Bidder/Consortium……."and includes its successors and permitted assigns expressly approved by ULB

"Conditions Precedent" shall have the meaning set forth in Clause 4.1.1

"Door Step Collection" shall mean collection of MSW from residential units, slums, vegetable/ fruit markets, slaughter house, fish/ chicken/ mutton shops, commercial and institutional areas, Marriage gardens/Hall, Thela/Khomcha, industrial area, public places and streets and any other areas, within the Lucknow Municipal Area, not excluded elsewhere in this document.

"Drawings" shall mean all of the drawings, designs, calculations and documents pertaining to the Project in accordance with the Construction Requirements and O&M Requirements.

"Emergency" shall mean a condition or situation that is likely to endanger the safety of the individuals on or about the Project Facilities or which poses an immediate threat of material damage to any of the Project Facilities.

"Encumbrance" shall mean any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, physical encumbrances, claims for any amounts due on account of taxes, cesses, electricity, water and other utility charges and encroachments on the Project Facilities.

"Engineered Sanitary Landfill" shall mean the area within the Waste Processing and Landfill Facility, designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blown litter, bad odor, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion, and utilitised for disposal of inert/non processable residue coming out of Waste processing plant.

"Environment and Social Impact Assessment Plan" shall have the meaning set forth in Schedule 15

"Excluded Waste" waste material of the nature that the Project Facilities are not designed or authorized to receive, manage, process and dispose which includes C&D Waste, Hazardous Waste, Bio-medical Waste, Treated Bio-medical waste.

"Escrow Account" means an account opened with a nationalized bank, prior to start of work, in which all inflows and outflows of cash on account of capital and revenue receipts and expenditure shall be credited and debited, as the case may be, in accordance with the provisions of this Agreement.

"Estimated Project Cost" shall mean project cost estimated in DPR prepared by Concessionaire and approved by AUTHORITY as per provisions of concession agreement.

"Expiry Date" shall mean the date on which Post Closure Period ends.

"Financial Close" means the fulfillment of all conditions precedent to the initial availability of funds under the Financing Agreements

"Financing Documents" shall mean collectively the documents evidencing Lenders' commitment to finance the Project.

"Financial Year" shall mean the period commencing from April 1 of any given year to March 31 of the succeeding year.

"Force Majeure" or **"Force Majeure Event"** shall mean an act, event, condition or occurrence as specified in Article 12.

"GoI" shall mean the Government of India.

"GoUP" shall mean the Government of Uttar Pradesh.

Good Industry Practice: The term shall mean exercise of that degree of skill, diligence prudence & foresight in compliance with the undertakings and obligations as under the agreement which would reasonably and ordinarily are expected of a skilled & experienced persons engaged in the implementation, operations and maintenance or supervision or monitoring thereof of any of them of a project similar to this project

"Government Agency" shall mean GoI, GoUP, AUTHORITY or any state government or governmental department, commission, board, body, bureau, agency, authority, instrumentality, court or other judicial or administrative body, central, state, or local, having jurisdiction over the Concessionaire, the Site/Project Facilities or any portion thereof, or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement.

"Hazardous Waste" shall have the meaning as defined under the Hazardous Wastes (Management and Handling) Rules, 1989 and as amended thereto.

Inert Solid Waste means any solid waste or remnant of processing whose physical, chemical and biological properties make it suitable for sanitary land filling.

"Implementation Period" shall mean the period from the Agreement Date to COD.

"Project Monitoring Consultant" shall mean the Project Monitoring Consultant appointed by AUTHORITY and shall have the meaning ascribed thereto in Article 5

"Lenders" shall mean financial institutions, banks, funds and trustees for bond holders or debenture holders, who have provided funds to the Concessionaire for financing any part of the Project.

"Material Adverse Effect" shall mean a material adverse effect on (a) the ability of the Concessionaire to exercise any of its rights to perform/discharge any of its duties/obligations under and in accordance with the provisions of this Agreement and/or (b) the legality, validity, binding nature or enforceability of this Agreement.

"Material Breach" shall mean a breach by either Party of any of its obligations under this Agreement which has or is likely to have a Material Adverse Effect on the Project and which such Party shall have failed to cure.

Municipal Solid Waste: Municipal Solid Waste includes commercial, residential and other waste generated within the limits of AUTHORITY either in solid or semi-solid form excluding industrial hazardous waste but including treated bio-medical waste. The term Solid Waste shall further mean the Municipal Solid Waste as described under the SWM Rules 2016 notified by MoEF, Govt. of India, notified on 8 April, 2016, generated in the Concession area by all generators which includes domestic/residential, commercial, institutional, green waste generated in the work area inclusive of private markets, recreation centers, public places and from the places of occasional accumulation of such solid waste.

"Monthly Reports" shall constitute the reports to be submitted monthly as defined in the Schedule 9

"O&M" means the operation and maintenance of the Project and includes all matters connected with or incidental to such operation and maintenance and provision of services and facilities in accordance with the provisions of this Agreement

"O&M Requirements" shall mean the requirements as to operation and maintenance of the MRF cum TS set forth in **Schedule 2**.

Party or Parties mean Lucknow Nagar Nigam and the Contractor/ Service provider who has been assigned the work. **"Parties"** shall mean the parties to this Agreement and "**Party"** shall mean either of them, as the context may admit or require.

"Performance Security" shall mean the guarantee for performance of its obligations to be procured by the Concessionaire in accordance with this agreement.

"Person" shall mean (unless otherwise specified or required by the context), any individual, company, corporation, partnership, joint venture, trust, unincorporated organisation, government or government body or any other legal entity.

"Preliminary Notice" shall mean the notice of intended Termination by the Party entitled to terminate this Agreement to the other Party setting out, inter alia, the underlying Event of Default.

"Project" shall mean design, financing, construction, operation and maintenance of the Project Facilities such as MRF cum TS in accordance with the provisions of this Agreement.

"Project Assets" means all physical and other assets relating to and forming part of the Site including (a) rights over the Site, Right of Way or otherwise; (b) tangible assets such as civil works and equipment/ vehicles including foundations, roads and pavements, drainage works, electrical systems, communication systems and administrative offices, transport vehicles; (c) Project Facilities situated on the Site; (d) all rights of the Concessionaire under the Project Agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) Applicable Permits and authorisations relating to or in respect of the Project

"**Project Monitoring Consultant**" shall mean a reputed Person being a firm, company or a body corporate appointed in accordance with this agreement for supervision and monitoring of compliance by the Concessionaire with the Construction Requirements and O&M Requirements, more particularly to undertake, perform and carry out the duties, responsibilities, services and activities set forth in this agreement which can also be termed as project Management Consultant that is **"PMC"**

"Project Facilities" shall mean all the amenities and facilities, including transportation vehicles and (a) Transfer Points, (b) MRF, (c) The machinery and equipment procured, installed and operated and (f) all other project related physical assets (g) and any other offsite facilities created for the Project.

Public place includes any road, arch road, viaduct, lane, footway, alley or passage, highway, causeway, bridge, square alley or passage whether a thoroughfare or not over which the public have a right of passage, and such places to which the public has access such as parks, gardens, recreation grounds, playgrounds, beaches, water bodies, water

courses, public plazas and promenades, government and municipal buildings, public hospitals, markets, slaughter houses, courts, etc.

"Readiness Certificate" shall mean the certificate issued by Project Monitoring Consultant certifying, inter alia, that:

(i) The Concessionaire has procured/constructed all the facilities for door to door collection, MRF, Transfer and transportation of MSW.
(ii) The Concessionaire has obtained all approvals necessary for door to door collection, MRF, Transfer and transportation of MSW.

"Remuneration" shall mean all fees, costs, charges and expenses payable to the Project Monitoring Consultant in accordance with the terms of his appointment.

"Rupees" or "Rs." refers to the lawful currency of the Republic of India.

The Services means all activities direct or ancillary to the work like guarding, up keeping, operating and maintaining the vehicles, equipment, systems and related infrastructure required performing the Work assigned to the successful bidder / Contractor in a specified manner for a specified period for fulfilling the desired performance. The services will include for door to door collection, operation of MRF, Transfer and transportation of MSW as per SWM Rules 2016, on a long-term Design, Build, Operate and Transfer (DBOT) basis; for Municipal Solid Waste.

SPV means Special Purpose Vehicle Company.

"Specifications and Standards" means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project, and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Concessionaire to, and expressly approved by, the Authority

"SWM Rules" shall mean the Solid Wastes Management Rules, 2016 and includes any amendments thereto.

"SPCB" State Pollution Control Board: specifically, State Pollution Control Board.

"Tax" shall mean and includes all taxes, fees, cess, levies that may be payable by the Concessionaire under Applicable Law.

Technical offer: The term shall mean the details of the technical and financial eligibility of the bidder; acceptance of the terms and condition of the project / work and undertakings regarding the same; project plan and operational details including identification of activities, resources requirement and details of type, capability, quality and quantity; methodology of work; plan of resources deployment; implementation plan and evaluation of the results. This will be contained in a separate cover.

"Termination" shall mean early termination of this Agreement pursuant to Termination Notice or otherwise in accordance with the provisions of this Agreement but shall not, unless the context otherwise requires, include expiry of this Agreement due to efflux of time in the normal course.

"Termination Date" shall mean the date specified in the Termination Notice as the date on which Termination occurs.

"Termination Notice" shall mean the notice of Termination by either Party to the other Party, in accordance with the applicable provisions of this Agreement.

"Termination Payment" means the amount payable by the Authority to the Concessionaire upon Termination in accordance with the provisions of this Agreement.

"Tests" shall mean the tests to be carried out in accordance with the Construction Requirements or the O&M Requirements.

"O&M Fee/O&M Fee" shall mean the amounts payable by AUTHORITY to Concessionaire in accordance with **Article 8**.

"O&M Fee Statement/O&M Fee statement" shall have the meaning as ascribed thereto in **Article 8**.

"O&M Fee/O&M fee Rate" shall mean the amounts payable per tonne of Municipal Solid Waste entering at waste processing site as set out in **Schedule 6**.

Transportation means conveyance of Municipal Solid Waste from place to place hygienically through specially designed transport system, so as to prevent foul odour, littering, spillage unsightly condition and accessibility to vectors.

"UPSPCB" shall mean Uttar Pradesh State Pollution Control Board.

"Waste generators" all residential, commercial establishments, institutions and other sources/ generators of MSW, located within the service area of AUTHORITY and generating MSW as defined in SWM Rules, 2016.

OTHER DEFINITIONS of TERMS: As defined in the SWM Rules 2016 of MoEF, Govt. of India.

1.2 The Standards

The Goods, vehicles, equipment, systems and services provided under the Tender/Contract shall conform to the standard as specified in the technical specifications;

In specific, Vehicles should conform to Euro IV standards of emission and above - up graded from time to time as per statutory requirement

Where no standards are specified for particular goods, vehicles, equipment, services, they should conform to the latest minimum Bureau of Indian Standards specifications if prescribed for the product, machinery, equipment, services required in the tender, if not prescribed under BIS they should conform to the latest ISO standard.

Or the authoritative latest standards used in the country of origin, appropriate to the specified goods, vehicles, equipment systems, and services.

A declaration will be submitted by the bidder / contractor for the above with the certification of the authorized agency of the origin

1.3 Interpretation

In this Agreement, unless the context otherwise requires,

(a) any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modification or re-enactment or consolidation applies to, or is capable of being applied to any transactions entered into hereunder;

(b) references to Applicable Law shall include the laws, acts, ordinances, rules, regulations, notifications, guidelines or bylaws which have the force of law;

(c) the words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organisations or other entities (whether or not having a separate legal entity);

(d) the headings are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;

(e) the words "include" and "including" are to be construed without limitation;

(f) any reference to day, month or year shall mean a reference to a calendar day, calendar month or calendar year respectively;

(g) the Schedules to this Agreement form an integral part of this Agreement as though they were expressly set out in the body of this Agreement;

(h) any reference at any time to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference;

(i) references to recitals, Articles, sub-articles, clauses, or Schedules in this Agreement shall, except where the context otherwise requires, be deemed to be references to recitals, Articles, sub-articles, clauses and Schedules of or to this Agreement;

(j) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or by Project Monitoring Consultant shall be valid and effectual only if it is in writing under the hands of duly authorized representative of such Party or Project Monitoring Consultant in this behalf and not otherwise;

(k) any reference to any period commencing “from” a specified day or date and “till” or “until” a specified day or date shall include both such days or dates;

1.4 Inclusions of Agreement

Following documents will be part of this Agreement, and all other agreements forming part of this document.

i. This concession agreement

ii. The LOI

iii. The Bid submitted by Bidder

iv. The RFP

ARTICLE 2

2 CONCESSION

2.1 Grant of Concession

Subject to and in accordance with the terms and conditions set forth in this Agreement, the Concessioning Authority hereby grants and authorizes the Concessionaire to investigate, study, design, engineer, procure, finance, construct, operate and maintain the Project Facilities and to exercise and / or enjoy the rights, powers, benefits, privileges, authorizations and entitlements as set forth in this Agreement ("the Concession").

2.2 Concession Period

The Concession is hereby granted for a period of 10 years of active operation period commencing from the Appointed Date and ending on the Expiry Date ("the Concession Period") during which the Concessionaire is authorised to design, finance, construct, operate and maintain the Project Facilities in accordance with the provisions hereof. Provided that in the event of Termination, the Concession Period shall mean and be limited to the period commencing from the Appointed Date and ending with the Termination Date. The word "Design" is limited to electromechanical design of waste processing unit, Design of Door-to-Door Collection system, decentralized Material recovery facilities, Transfer stations, Transportation facilities, any modification in route plan for collection transportation or any other modification proposed by concessionaire but only after duly approved and accepted by PMC/ **AUTHORITY**.

2.3 Extension in Concession Period

Contract period can be extended for a period of 5 years after successful completion of initial 10 years contract period. The extension in contract period will be solely dependent upon concessionaire performance in First 10 years of contract period and subsequent mutual consent of all parties. For further clarification, the concessionaire would be eligible for extension if he receives more than 80% marks in performance

evaluation criteria as set out in clause 8.7 in minimum 80% contract months in initial 10 years contract period.

2.4 Acceptance of Concession

In consideration of the rights, privileges and benefits conferred upon the Concessionaire, and other good and valuable consideration expressed herein, the Concessionaire hereby accepts the Concession and agrees and undertakes to perform / discharge all of its obligations in accordance with the provisions hereof.

ARTICLE 3

3 PROJECT FACILITIES & SITE

3.1 Handover of Project facilities & Site

a. **AUTHORITY** shall, within 15 days from the Agreement Date, handover to the Concessionaire on as-is-where-is basis, vacant and peaceful physical possession of the project facilities and Site, for the purpose of implementing the Project.

b. The efforts will be made by the **AUTHORITY** to handover the project facilities and Site to the Concessionaire free of encumbrances. However, in case of any delay in handing over of the site to the Concessionaire, the **AUTHORITY** shall only consider suitable extension of time for the execution of the work. It should be clearly understood that the **AUTHORITY** shall not consider any revision in contract price or any other compensation whatsoever viz. towards idleness of Contractor's labour, equipment etc.

c. If **AUTHORITY** fails to handover existing sites or existing sites are not sufficient, Authority will handover additional patch of lands.

d. The information about the public utilities (whether over ground or underground) like electrical/ telephone/ water supply lines, OFC Cables, open drain etc. is the responsibility of contractor to ascertain the utilities that are to be affected by the works through the site investigation and collection of information from the concerned utility owners.

e. The **AUTHORITY** shall be responsible to obtain necessary approval from the respective authorities for shifting/ re-alignment of existing public utilities. However, the concessionaire shall assist the **AUTHORITY** for liaising in obtaining the approval from the concerned authorities.

3.2 Rights, Title and Use of the project facilities & Site

a) The Concessionaire shall have the right to the use of the Project facilities & Site in accordance with the provisions of this Agreement and for this purpose, it may regulate the entry into and use of the same by third parties.
b) The Project site and Project Facilities shall be and continue to be the property of **AUTHORITY**.
c) The Concessionaire shall not part with or create any Encumbrance on the whole or any part of the Project Facilities, including the Site save and except as set forth and permitted under this Agreement.

d) The Concessionaire shall not, without the prior written approval of AUTHORITY, use the Project Facilities for any purpose other than for the purpose of the Project and purposes incidental or ancillary thereto.

3.3 Peaceful Possession

AUTHORITY hereby warrants that:

a) The Site together with the necessary right of way/way-leaves
   i. has been acquired through the due process of law
   ii. belongs to, or has been leased to AUTHORITY and is vested in AUTHORITY and that AUTHORITY has full powers to hold, dispose of and deal with the same consistent, inter alia, with the provisions of this Agreement and that the Concessionaire shall, in respect of the Site, have no liability regarding any compensation payment on account of land acquisition or rehabilitation/resettlement of any Persons affected thereby.

- The Concessionaire shall, subject to complying with the terms and conditions of this Agreement, remain in peaceful possession and enjoyment of the Project Facilities & Project Site during the Active Operations Period, and

In the event the Concessionaire is obstructed by any Person claiming any right, title or interest in or over the Site or any part thereof or in the event of any enforcement action including any attachment, distrait, appointment of receiver or liquidator being initiated by any Person claiming to have any interest in/charge on the Site or any part thereof, AUTHORITY shall, if called upon by the Concessionaire, defend such claims and proceedings and also keep the Concessionaire indemnified against any consequential loss or damages which the Concessionaire may suffer, on account of any such right, title, interest or charge.

3.4 Applicable Permits

The Concessionaire shall obtain and maintain the Applicable Permits in such sequence as is consistent with the requirements of the Project. The Concessionaire shall be responsible and shall be in compliance with the terms and conditions subject to which Applicable Permits have been issued.

The Concessionaire shall be responsible to obtain necessary approvals at its own cost.

ARTICLE 4

4 Conditions Precedents

Save and except as expressly provided in Articles 4, 6, 9, 12 and 13 or unless the context otherwise requires, the respective rights and obligations of the Parties under this Agreement shall be subject to the satisfaction in full of the condition's precedent specified in this Clause 4 (the "Conditions Precedent").

4.1 Authority's Conditions Precedent

4.1.1 The Conditions Precedent required to be satisfied by the Authority shall be deemed to have been fulfilled when:

a. The Authority shall have handed over the Project Site & Project Facility as per Schedule 1 of this draft Concession Agreement to the Concessionaire for the development of the Project; **The Project Site shall be provided on an "as-is-where-is basis" condition for use during the Concession Period for the purpose of the Project free of any charges.**

b. The Authority shall have provided land for MRF cum PCTS/MTS & Workshop.

c. The Authority shall have appointed a Project Monitoring Consultant/ in accordance with Article 5.

d. Copies of the council resolution authorizing the Authority to execute the Agreement.

4.2 Concessionaire / Selected bidder's Conditions Precedent

4.2.1 The Conditions Precedent required to be satisfied by the Concessionaire prior to the Appointed Date shall be deemed to have been fulfilled when the Concessionaire shall have:

a. prepare operation plan within 1 months of the signing of Agreement based on the SBM-2 Guidelines, SWM Rule 2016 and Project Information Memorandum. The Concessionaire may suggest different equipment for collection, recovery of recyclables, provided the DPR must adhere to the outcome as desired in MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and C&T Plan as detailed out in the Project Information Memorandum (Volume II).

b. obtained approval from the Project Monitoring Consultant on the following:

i. detailed project report covering the adopted MRF cum PCTS/ MTS technology, detailed construction drawings & plans, and Construction Milestones as per provisions of the Agreement.;

c. obtained approval from the Authority for the following:

i. on the detailed Construction Plan comprising of details delineating the Site

for construction of Project Facilities and ensuring continued use of the Site for managing MSW by AUTHORITY till COD;

d. procured all the Applicable Permits specified in Schedule 11 unconditionally and if subject to conditions, the all such conditions required to be fulfilled by the date specified therein shall have been satisfied in full and such Applicable Permits are in full force and effect;

e. Obtain all other requisite approvals required for the Project from various Statutory Authorities;

f. executed and procured execution of the Escrow Agreement;

g. delivered to the Authority a confirmation from the Selected Bidder / each of the Consortium member, in original, of the correctness of their representations and Warranties set forth in Clause 16.1.

h. Undertake the Additional Works in accordance with terms hereof, to the satisfaction of the Authority

i. Prepare Operation Plan and procure approval of Authority thereon, and upon approval of Authority thereon, commence the MSW works in the municipal area of AUTHORITY.

j. Repair & modify if required, install mercenaries and make operational the existing MRF cum Transfer.

4.2.1 Each Party shall make all reasonable endeavours to satisfy the Conditions Precedent within maximum120 days including all extensions in respect thereof and shall provide the other Party with such reasonable cooperation as may be required to assist that Party in satisfying the Conditions Precedent for which that Party is responsible

Provided that upon request in writing by the Concessionaire, the Authority may, in its discretion, waive or further extend the time limit of any of the Conditions Precedent set forth in this Clause 4.2 provided the required waiver/ extension is not because of concessionaire event of default. For the avoidance of doubt, the Authority may, in its sole discretion, grant any waiver hereunder with such conditions as it may deem fit.

a. The Parties shall notify each other in writing at least once a month on the progress made in satisfying the Conditions Precedent. Each Party shall promptly inform the other Party when any Condition Precedent for which it is responsible has been satisfied.

b. Provided however that neither Party shall be entitled to terminate this Agreement if non-fulfillment of condition precedent by either party is result and/or consequence of Force Majeure event

4.3 Damages for delay by the Authority

In the event that (i) the Authority does not procure fulfilment of any or all of the Conditions Precedent set forth in Clause 4.1.1 within the period specified in respect thereof, and (ii) the delay has not occurred as a result of breach of this Agreement by the Concessionaire or due to Force Majeure, the Authority shall pay to the Concessionaire Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the Performance Security for each day's delay until the fulfilment of such Conditions Precedent, subject to a maximum of 20% (twenty percent) of the Performance Security.

Any delay by the Authority in the fulfilment of any or all of the Conditions Precedent set forth in Clause 4.1.1, save and except for reasons attributable in whole or parts to the Selected Bidder/Concessionaire or Force Majeure; beyond a period of 220 (two hundred twenty) days from the date of this Agreement or such later date as mutually agreed between the Parties, would entitle the Concessionaire to terminate this Agreement ;provided the Concessionaire has issued a written notice to Authority allowing 60 days remedy period for curing such default/delay, and the default remains un-remedied upon the expiry of such cure period.

In such an event of termination, the Authority shall

(i) release the Performance Security, subject to any outstanding dues payable to the Authority by the Concessionaire in terms hereof; provided however that in the event the Authority's failure to fulfill its Conditions Precedent is attributable to the Concessionaire's default, the Authority shall forfeit the Performance Security as damages; and

(ii) In the event the access to and right of way in respect of the land parcels comprising the Project Site shall have been granted to the Concessionaire in terms hereof on or before such date of termination; then the Project Site shall immediately revert to the Authority, free and clear from any encumbrances and along with all associated easementary rights, irrespective of any outstanding mutual claims between the parties or any third-party claims;

4.4 Damages for delay by the Concessionaire

a) In the event that (i) the Concessionaire does not procure fulfillment of any or all of the Conditions Precedent set forth in Clause 4.2.1 within a period specified in respect thereof, and (ii) the delay has not occurred as a result of failure to fulfill the obligations under Clause 4.2.1 or other breach of this Agreement by the Authority, or due to Force Majeure, the Concessionaire shall pay to the Authority Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the Performance Security for each day's delay until the fulfillment of such Conditions Precedent, subject to a maximum of 20% (twenty percent) of the Performance Security.

b) Notwithstanding anything to the contrary in the event delay referred to in aforesaid clause 4.3 (a) above, exceeds a period of 220 (two hundred twenty) days from the date of this Agreement or goes beyond such later date as may be mutually agreed between the Parties for fulfilment of condition precedent, then the Authority would be entitled to terminate this Agreement in accordance with the provisions hereto.

In such an event, notwithstanding anything to the contrary contained in the Agreement, the Authority shall, without prejudice to any other right or remedy that may be available to the Authority under this Agreement, be entitled to

(i) forfeit/invoke and appropriate the Performance Security;

(ii) In the event the access to and right of way in respect of the land parcels comprising the Project Site shall have been granted to the Concessionaire in terms hereof on or before such date of termination; then the Project Site shall immediately revert to the Authority, free and clear from any encumbrances and along with all associated easementary rights, irrespective of any outstanding mutual claims between the parties or any third-party claims;

(iii) Without prejudice to and notwithstanding anything to the contrary set out in the foregoing, the Parties may by mutual agreement, instead of terminating the Agreement, decide to extend the time for fulfilling the Conditions Precedent.

ARTICLE 5

5 PROJECT MONITORING CONSULTANT

5.1 Appointment

AUTHORITY shall appoint a project monitoring consultant (PMC).

The scope of work of PMC is bid process management, project monitoring during construction phase and project monitoring during O&M phase for a period of 10 Yrs.

5.2 Payments to Project Monitoring Consultant

All fees, costs, charges and expenses payable to the Project Monitoring Consultant shall be paid by AUTHORITY in accordance with the terms of its appointment within 15 days of receiving an invoice from PMC.

5.3 PROJECT MONITORING CONSULTANT - SCOPE OF WORK

5.3.1 The Project Monitoring Consultant is expected to play a positive and independent role in discharging its functions, thereby facilitating the smooth implementation and operation of the Project. Broadly, the role of the Project Monitoring Consultant shall encompass:

5.3.2 Verification and random checks of collection, Transportation work.

5.3.3 Verification and random checks of weighment and Testing of the MSW at the Processing and Landfill Site.

5.3.4 Independently review, monitor and where required by the Agreement, to approve the design, construction, operation and maintenance of the Project Facilities to ensure compliance by the bidder with the Operations Plan, Design Requirements, Construction Requirements and O&M Requirements,

5.3.5 Report to the Parties on the various physical, technical and financial aspects of the Project based on inspections, site visits and Tests,

5.3.6 Assist the Parties in arriving at an amicable settlement of disputes, should the need arise, and

5.3.7 Review matters related to safety and environment management measures adopted by the bidder for the Project.

5.4 Scope of Services of the Project Monitoring Consultant

The services to be provided by the Project Monitoring Consultant shall be in accordance with the applicable provisions of agreement made between AUTHORITY and PMC and also as per the general obligations of this Agreement are specified in this section.

5.5 Obligations during Implementation Period

The Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the progress in implementation of micro implementation Plan for Collection, MRF, Transfer and Transportation and ensure compliance with the

Operation & Maintenance Requirements. For this purpose, the Project Monitoring Consultant shall undertake, interalia, the following activities and where appropriate make suitable suggestions:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and check the route plan, vehicle deployment plan, scheduled maintenance plan, emergency maintenance protocol, manpower deployment plan, Plan for online monitoring of Door to Door collection and transportation;

(e) Review, approve or disapprove MOP and other plan/submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(f) Provide the services of a full-time resident project representative during the period commencing from 7 (seven) days from the date of appointment of the PE until the expiry of the PMC's appointment;

(g) Provide the services of experts to check the quality of materials and the workmanship during the procurement phase of C&T work, including the following:

(i) Waste transportation vehicles;

(ii) Litter bins

(h) Address issues relating to specific site conditions, design modifications, or Concessionaire disputes.

The PMC shall prepare and submit to AUTHORITY, Fortnightly Progress Reports including the following:

(a) Daily progress of works;

(b) Issues, if any, with regard to the works along with the details of the action taken for the resolution of the same;

(c) Photographic record of progress of works over the previous week.

The PMC shall provide all other services as normally provided by an engineer in charge.

5.6 Active Operations Period

During this period the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by

the Concessionaire so as to ensure compliance with the O&M Requirements. The specific activities to be undertaken would include the following:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and approve test results and materials and/or equipment used;

(e) Interpret the requirements of the contract and make decisions regarding performance of the Concessionaire. The PMC shall inform and advise the AUTHORITY, in a timely manner all matters relating to the execution, progress, and completeness of works;

(f) Reject work which fails to comply with the specifications and requirements of the Agreement. Whenever considered necessary or advisable to ensure correction of defective work, the PMC may require inspection or testing of such work, whether or not such work be then fabricated, installed, or completed;

(g) Review, approve or disapprove drawings, samples, and other submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(h) Provide the services of a full-time resident project representative during the period commencing from 7 seven days from the date of appointment of the PE until the expiry of the PMC's appointment;

(i) In addition to the daily responsibilities, conduct a general inspection of the Project Facilities at least once a month and as and when exigencies require to ascertain conformity with Construction Requirements and O&M Requirements;

(j) Provide the services of experts to check the quality of materials and the workmanship during the construction of the Landfill Facility

(k) Inspect the quality of compost being sold or otherwise disposed outside the Site

(l) Inspect and certify composition of the Residual Inert Matter

(m) Address issues relating to specific site conditions, design modifications, or Concessionaire disputes.

(n) Review the O&M Plans submitted by the Concessionaire from time to time and assist the Concessionaire in finalising the same. The Project

Monitoring Consultant shall also consult AUTHORITY prior to finalisation of the O&M Plans;

(o) Periodically review the O&M Manual for adequacy;

(p) Monitor Operation and Maintenance activities (including maintenance of Project Facilities and equipment, standards of service, safety and environmental issues) and the overall quality of O&M activities so as to ensure compliance by the Concessionaire with the O&M Requirements, O&M Plan and O&M Manual;

(q) Review and ascertain the cost variation arising as a result of Change in Law and determine the Additional Cost;

(r) Undertake a quarterly review of the various records and registers to be maintained by the Concessionaire and suggest suitable remedial measures/ procedures, where necessary.

5.6.1 The PMC shall attend regular meetings ("Project Review Meetings" or "PRMs") with the AUTHORITY and the Concessionaire, to be held at least once in every month during the Active Operations Period to report on progress and quality of work performed by the Concessionaire and to discuss problems or other pertinent matters relating to the work. The IC shall take notes at the meetings and provide a copy of the PRM minutes to each person who attended the meeting.

5.6.2 The PMC shall prepare and submit to AUTHORITY, Monthly Project Reports including the following:

(a) Report on Tests

(b) Report on notices issued

(c) Issues, if any, with regard to the works along with the details of the action taken for the resolution of the same;

(d) Photographic record of progress of works over the previous week.

5.6.3 Attend meetings with the AUTHORITY and the Concessionaire, to be held at intervals as mutually decided upon by the Parties, to discuss problems or other pertinent matters relating to the Project. The PMC shall take notes at the meetings and provide a copy of the minutes of such meetings to each person who attended the meeting.

a) Review of the Operations Plan submitted by the Concessionaire in accordance with of the Agreement.

b) Monitoring and reporting to AUTHORITY on whether the bidder has complied with the timelines for activities as specified in the Operations Plan in (a) above;

c) Verify and report to AUTHORITY whether (i) the New Project Facilities comply with the Design Requirements (ii) Existing Project Facilities comply with the

Construction Requirements and (iii) the Project Facilities comply with all Applicable Laws including SWM Rules 2016.

d) Issue Provisional/Readiness Certificate in accordance with the of this Agreement;

e) The Project Monitoring Consultant shall undertake, interalia, the following activities and where appropriate:

(i) Require suspension of whole or any part of the Construction Works if in its reasonable opinion the same does not conform to the Construction Requirements;

(ii) Require clearing of any construction site of all construction equipment, surplus materials, debris and temporary installations as per applicable provisions of this Agreement.

(iii) Review the monthly progress report submitted by the bidder during the Implementation Period and its conformity with the Operations Plan, report on the same to the AUTHORITY and suggest corrective measures, if any.

(iv) If during the course or upon review / inspection undertaken by the PMC, it transpires that either of the Parties is in breach/ default of any of its obligations under the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/ default within time frame as may be felt suitable by the PMC.

5.7 Obligations during Operations Period

5.7.1 Monitoring of Collection & Transportation

The Project Monitoring Consultant's prime responsibility would be to monitor the operations at the weighbridge, MRF Cum TS/MTS/Standalone TS/ Door to Door collection & IEC activities at Zone-1. For this purpose, the Project Monitoring Consultant shall undertake, inter alia, the following activities:

a) Verification of Door-to-Door Collection and segregation of waste at source.

b) Verification of trips/household coverage and segregation at MRF.

c) Verification of User Charges Collection.

d) Verification of online monitoring system.

e) Verification of the records generated at the weighbridge.

f) Issue "Notice to Remedy" in event of observing non-compliance to O&M Requirements;

g) If during the course or upon review/inspection undertaken by the Project Monitoring Consultant or otherwise, it transpires that either of the Parties is in breach/default of any of its obligations under the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/default within such time and in such

manner as the Project Monitoring Consultant may deem fit and, in each case, the same shall be recorded.

5.7.2 Conducting Random Inspections

The Project Monitoring Consultant shall conduct random inspections of the Project Facilities as well as the operations as follows:

a) The random inspections may be carried out by visual assessment with careful observation of the specific object/item for identification and for quantification of the deficiencies or damages of the Project Facilities and operation and maintenance of the Project Facilities. For this purpose, the Project Monitoring Consultant can use photographs with time and place record.

b) During the random inspections, the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by the Contractor so as to ensure compliance with the O&M Requirements;

c) Issue "Notice to Remedy" in the event of non-compliance to O&M Requirements and recording the same.

d) Record and report to the AUTHORITY on the incidents of Material Breach or Persistent Breach of O&M Requirements;

5.7.3 Random inspection of Project Facilities

The Project Monitoring Consultant shall undertake inspection of the Project Facilities**,** Facility Site and Workshop Site in such frequency and sample selection as mentioned in the table below:

Table 1: Random inspection of Project Facility

S. No	**Project Facilities**	**Frequency of inspection**	**Sample selection requirement**
1	Facility Site	Once a Month	_
2	Workshop Site	Once a Month	_
3	Collection and Cleaning Vehicles & Equipments	Once a Month	A minimum sample of 10 % of each category of vehicles deployed in the Concession Area. There should not be repetition of the same set of vehicles in the next round of inspection.

5.7.4 Hand back and Transfer of Project Facilities to AUTHORITY

At the time of hand back and transfer of the Project Facilities to AUTHORITY at the end of Concession Period, the Project Monitoring Consultant shall:

a) Monitor the compliance with the Hand back and Transfer Requirements as provided in Chapter 10 of this Agreement and

b) Issue a certificate of compliance on satisfactory completion of Hand back and Transfer Requirements by the bidder.

5.7.5 Maintenance of Records

a) The Project Monitoring Consultant would be required to participate in the Project review meetings held from time to time by the Parties, which are ordinarily expected to be held once a month during the Implementation Period and once every two months during the Operations Period as also to participate in emergency or extra-ordinary meetings of the Parties held to deal with any Emergency, Force Majeure Event or other exigencies.

5.7.5.1 The Project Monitoring Consultant shall maintain record of the activities undertaken by it in discharge of its functions and responsibilities. This would include records in respect of the following:

a. Manpower deployed and other organizational arrangements of the Project Monitoring Consultant;

b. Inspections undertaken and notices/instructions issued to the bidder;

c. Review compliance by the bidder with the Agreement;

d. Force Majeure Events;

e. Material and Persistent Breach of O&M Requirements and Events of Default by the Parties; and

f. Compliance by the bidder with Hand back and Transfer Requirements

5.7.5.2 The Project Monitoring Consultant would be required to verify/issue the following reports to the Parties:

Table 5-1 Reports issued by PMC

Period/Event	**Verification**	**Applicable report to be issued by the Project Monitoring Consultant**
1. Implementation Period	– Review monthly progress report submitted by the Contractor – Issue "Notice to Remedy" in event of non-compliance by the Contractor - Issue Provisional/ Readiness Certificate	–
2. Monitoring of Door-to-Door collection & Transportation	– Verify the attendance of concessionaire at door step – Monitoring of Transfer point	– Monthly Inspection Report

3. Random Inspections of Project facilities	– Advise AUTHORITY on penalties payable by the Contractor	Monthly Inspection Report
4. Force Majeure/ Material and Persistent Breach of O&M Requirements/Events of Default.	– Issue "Notice to Remedy" in event on non-compliance Record Events of Default, Material/Persistent Breach of O&M Requirements, Force Majeure Events	
5. Hand back and Transfer of Project Facilities	– Specify list of works/jobs to be carried out by the Contractor. – Specify list of items to be handed back and transferred back to AUTHORITY by the Contractor. – Verify compliance by the Contractor with Hand back and Transfer Requirements	– Issue of compliance certificate of Hand back and Transfer Requirements

5.7.6 Material and Persistent Breach of O&M Requirements

The Project Monitoring Consultant shall monitor the performance of the Contractor and report on incidence of material and persistent breach of O&M requirements with reference to the compliance and tolerance criteria as laid out in of the O&M Requirements:

5.8 Awareness Campaign

The Project Monitoring Consultant shall review the Awareness Campaign programme conducted by the bidder.

5.9 General Obligations

The Project Monitoring Consultant shall carry out such other functions as may be specifically assigned to it under the agreement including certification of adequacy of insurance and verification of termination payments.

ARTICLE 6

6 CONCESSIONAIRE'S OBLIGATIONS

In addition to and not in derogation or substitution of any of its other obligations under this Agreement, the Concessionaire shall have the following obligations:

6.1 Performance Security

(a) The Concessionaire shall, for due and punctual performance of its obligations hereunder relating to the Project under construction phase, deliver to AUTHORITY, simultaneously with the execution of this Agreement, a bank guarantee from a nationalised bank/scheduled bank acceptable to AUTHORITY, in the form as set out in **Schedule 4**, ("Performance Security") for a sum of Rs. Equivalent to 5% of yearly O&M fee amount of respective year

(b) The Performance Security shall be kept **valid for entire project period from the Appointed Date**.

Provided that if the Agreement is terminated due to any event other than a Concessionaire Event of Default, the Performance Security if subsisting as of the Termination Date shall, subject to AUTHORITY's right to receive amounts, if any, due from the Concessionaire under this Agreement, be duly discharged and released to the Concessionaire.

6.2 Financing Arrangement

Concessionaire shall procure shortfall of vehicle and equipment/assests for door-to-door collection & Mechanised Sweeping, MRF Cum TS, Drain Cleaning, Road Sweeping and Workshop on 100 % financing of LMC as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assests and ensure its registration in the name of LMC.

The Concessionaire shall at its cost; expenses and risk make financing arrangements of balance amount as would be necessary to implement the Project and to meet all of its obligations under this Agreement, in a timely manner.

AUTHORITY shall provide O&M fee as per the financial bid parameters as mentioned below;

TIPPING FEE (Amount in Rupees)

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User Charges Collection.				
1(a)	Residential Household	Per Household/Mont	75682		
1(b)	Commercial Unit	Per Commercial Unit/day	1645		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/day	473		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/day th	71		
2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	1224		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	104		

(a) Preparation of DPR & Operation plan

(i) The Concessionaire shall prepare DPR and operation plan in accordance to the SWM Rule 2016, SBM-2 Guidelines and PIM as in Volume -2 of RFP. It must include plan for source segregation, GIS based Route plan for door-to-door collection, Manpower deployment plan, resource deployment plan, Scheduled and emergency Maintenance plan, Material recovery and its management Plan and any other plan as asked by Authority/PMC. DPR shall also include design, drawing and estimate of MRF cum Transfer facilities.

(ii) The DPR prepared by Concessionaire shall be subject to review by the Project Monitoring Consultant, AUTHORITY as hereinafter provided in clause (b).

(b) Review of DPR

(i) The Concessionaire shall promptly and in such sequence as is consistent with the Construction Requirements, submit three copies of DPR & DOP to the Project Monitoring Consultant and AUTHORITY.

(ii) By forwarding the DPR to the Project Monitoring Consultant and AUTHORITY pursuant to the preceding clause (i), the Concessionaire shall be deemed to have represented that it has verified and determined that the DPR, Designs, Drawings and all other content of DPR are in conformity with the Construction and O&M Requirements.

(iii) Within 15 days of receipt of the DPR, Project Monitoring Consultant shall review the same taking into account, inter alia, comments of AUTHORITY, if any, thereon, and convey its comments/observations to the Concessionaire on the conformity of DPR with Construction and O&M Requirements. If the comments/observations of the Project Monitoring Consultant indicate that the DPR is not in conformity with the Construction Requirements, the DPR shall be revised by the Concessionaire to the extent necessary and resubmitted to Project Monitoring Consultant for further review within 15 days. The Project Monitoring Consultant, AUTHORITY shall give its observations and comments, if any, within 15 (Fifteen) days of receipt of such revised DPR, which shall be taken into account by the Concessionaire while finalising the DPR.

(iv) If, within the period stipulated in the preceding clause (iii), the Project Monitoring Consultant does not respond to the DPR submitted to it by the Concessionaire the Concessionaire shall be entitled to proceed with the Project on the basis of such DPR submitted by it to the PMC, and intimate the same to AUTHORITY. The same should be highlighted in the periodic reporting by the Concessionaire.

(v) Notwithstanding any review or failure to review by or the comments / observations of the Project Monitoring Consultant or AUTHORITY, the Concessionaire shall be solely responsible for the adequacy of the DPR and their conformity with the Construction and O&M Requirements, and shall not be relieved or absolved in any manner whatsoever of any of its obligations hereunder.

(vi) The Concessionaire shall be responsible for delays in meeting the Construction Requirements caused by reason of any DPR not being in conformity with the Construction Requirements, and shall not be entitled to seek any relief in that regard from AUTHORITY.

(vii) The Concessionaire shall in consultation with the Project Monitoring Consultant finalize an implementation schedule for the Project in accordance with the Construction Requirements.

(viii) Within 90 (ninety) days of issue of Readiness Certificate or Provisional Readiness Certificate, as the case may be, the Concessionaire shall furnish to AUTHORITY three copies of "as built" Drawings of the Construction Works which have been completed as on COD, in a manner as set out in Construction Requirements.

(c) Procurement and Supply of Vehicles

All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors shall be on 100 % financing of LMC whereas all other expenditure like development of monitoring system, MRF, Workshop, Parking shall be developed by concessionaire on his own cost as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC. Concessionaire will be providing vehicles as per conditions detailed below

i. Demand of Vehicles to start Door to door collection of waste, Project Facility, Road Sweeping, Drain Cleaning and Workshop shall be procured by concessionaire on the basis of demand raised by his DOP & DPR and approved by authority.

ii. Demand of Vehicles after expiry of natural life of vehicles, replacement vehicle will be provided by Concessionaire on his own cost.

iii. Any additional requirement of vehicles in case of increase in project area or because of increase in population shall be provided by concessionaire.

In case of both point number (ii) and (iii), a committee comprising of members from Authority, PMC and concessionaire will take final decision upon number and type of replacement vehicles to be provided.

6.3 Project Implementation: Construction Works

(a) Concessionaire shall be responsible for construction/modification and installation of machineries for MRF cum transfer facilities.

(b) Unless otherwise permitted by AUTHORITY/Project Monitoring Consultant, no Construction Works shall begin.

(c) The scope of work covered in this tender shall be as per the Bill of Quantities, specifications provided in DPR prepared by concessionaire and approved by PMC, AUTHORITY and the specifications, drawings, instructions, orders issued to the concessionaire from time to time during the pendency of work. The contents of Project Information Memorandum provide broad idea about the work to be performed under the scope of this contract. However, the work shall be executed according to the DPR submitted by Concessionaire and approved by the Project Monitoring Consultant/ AUTHORITY and "GOOD FOR CONSTRUCTION Drawings" approved in DPR. It shall be the responsibility of the concessionaire to incorporate all the aspects of scope of work in his DPR.

(c) The Concessionaire shall adhere to the Construction Requirements and achieve COD on or before the Scheduled Project Completion Date.

(d) The Concessionaire may undertake Construction Works by itself or through a Contractor possessing requisite technical, financial and managerial expertise/capability; but in either case, the Concessionaire shall remain solely responsible to meet the Construction Requirements.

(e) The Concessionaire shall, before commencement of Construction Works;

(i)have requisite organization and designate and appoint suitable officers/ representatives as it may deem appropriate to supervise the Project, to deal with the Project Monitoring Consultant/AUTHORITY and to be responsible for all necessary exchange of information required pursuant to this Agreement;

(f) For the purposes of determining that Construction Works are being undertaken in accordance with the Construction Requirements and O&M Requirements, the Concessionaire shall with due diligence carry out all necessary and periodical Tests in accordance with the instructions and under the supervision of the Project Monitoring Consultant and the Construction Requirements and O&M Requirements. The Concessionaire shall maintain proper record of such Tests and the remedial measures taken to cure the defects or deficiencies, if any, indicated by the Test results.

(g) All Tests shall be conducted in accordance with Construction Requirements. If the Tests are successful and the Project Facilities can be safely and reliably opened for operation, the Project Monitoring Consultant shall issue Readiness Certificate.

Provided, notwithstanding that certain works or things forming part of Construction Works are not complete, if following Tests, the Project Monitoring Consultant determines that the Project Facilities can be safely and reliably opened for operations, the Project Monitoring Consultant may issue Provisional Readiness Certificate to the Concessionaire. The Provisional Readiness Certificate shall have appended thereto a list of outstanding items signed jointly by the Project Monitoring Consultant and the Concessionaire ("Punch List"). All Punch List items shall be completed by the Concessionaire within such time as may be determined by the PMC, not exceeding 30 (Thirty) days of the date of issue of the Provisional Readiness Certificate. Upon satisfactory completion of all Punch List items, the Project Monitoring Consultant shall promptly and in any case within 15 days thereof, issue Readiness Certificate.

(h) If the Concessionaire fails to complete the Punch List items within the said period of 30 days, AUTHORITY may, without prejudice to any other rights or remedy available to it under this Agreement, have such items completed at the risk and costs of the Concessionaire. The cost incurred

by AUTHORITY in completing the Punch List items, as certified by the PMC, shall be reimbursed by the Concessionaire to AUTHORITY within 7 days from the date of receipt of a claim in respect thereof from AUTHORITY. Thereupon, Project Monitoring Consultant may issue Readiness Certificate.

(i) The Project Monitoring Consultant, may, by written notice, require the Concessionaire to suspend forthwith the whole or any part of the Construction Works, if in its reasonable opinion the same is being carried on in a manner that is not in conformity with the Construction Requirements.

(j) The Project shall be deemed to be complete and ready to receive Municipal Solid Waste only when the Provisional Readiness Certificate or the Readiness Certificate is issued by the Project Monitoring Consultant in accordance with the provisions hereof.

Provided if COD is delayed beyond 60 days of the Scheduled Project Completion Date, AUTHORITY shall, subject to the provisions of **Article 8**, be entitled to terminate this Agreement and to appropriate the Performance Security.

6.4 Project Implementation: Operation and Maintenance

(a) The Concessionaire shall operate and maintain the Project Facilities in accordance with the O&M Requirements. Concessionaire shall prepare O&M plan before start of work in accordance with the scope of work as mentioned in RFP and minimum operation & Maintenance standards set out in schedule 2 of this concession agreement and thereafter before start of each financial year and get approval of Authority and PMC.

(b) The Concessionaire may undertake operations and maintenance of the Project Facilities by itself or through a Contractor possessing requisite technical, financial and managerial expertise / capability; but in either case, the Concessionaire shall remain solely responsible to meet the O&M Requirements.

(c) The Concessionaire shall, during the Active Operations Period;

(i) have requisite organisation and designate and appoint suitable officers/ representatives as it may deem appropriate to supervise the Project, to deal with the Project Monitoring Consultant/AUTHORITY and to be responsible for all necessary exchange of information required pursuant to this Agreement;

(ii) for the purposes of determining that the Construction Works and Project Facilities are being maintained in accordance with the Construction Requirements and O&M Requirements, the Concessionaire shall with due diligence carry out all necessary and periodical Tests in accordance with the instructions and under the supervision of the PMC. The Concessionaire shall maintain proper record of such Tests and the

remedial measures taken to cure the defects or deficiencies, if any, indicated by the Test results.

(iii) Conduct all Tests to ascertain compliance with Construction Requirements and O&M Requirements.

(iv) suspend forthwith the whole or any part of the Construction Works upon receiving a written notice from the PMC, who may require the Concessionaire to suspend the activities in whole or part if in the reasonable opinion of the PMC, the operations are being carried on in a manner that is not in conformity with the O&M Requirements.

(d) In the event the Concessionaire has failed to operate and maintain the Project in accordance with the O&M Requirements, and such failure has not been remedied despite a notice to that effect issued by the Project Monitoring Consultant or AUTHORITY ("Notice to Remedy"), AUTHORITY may, without prejudice to any of its other rights/remedies under this Agreement, be entitled to operate and maintain the Project or cause to repair and maintain the Project Facilities at the risk and cost of the Concessionaire. The Concessionaire shall reimburse all costs incurred by AUTHORITY on account of such operation and maintenance or repair and maintenance within 7 days of receipt of AUTHORITY's claim therefore.

(e) The Concessionaire shall be deemed to be in material breach of O&M Requirements if the Project Monitoring Consultant acting reasonably and in accordance with the provisions of this Agreement, has determined that due to breach of its obligations by the Concessionaire:

(i) there has been failure/undue delay in carrying out scheduled/planned maintenance or the scheduled/planned maintenance has not been carried out in accordance with the O&M Requirements;

(ii) the maintenance of the Project Facilities or any part thereof has deteriorated to a level which is below the acceptance level prescribed by the O&M Requirements;

(iii) there has been a serious or persistent let up in adhering to the O&M Requirements and thereby the Project Facilities or any part thereof is not safe for operations;

(iv) There has been persistent breach of O&M Requirements. For avoidance of doubt, persistent breach shall mean:

a. any breach of O&M Requirements by the Concessionaire which has not been remedied by the Concessionaire despite a Notice to Remedy in respect thereof issued by the PMC/AUTHORITY;

b. recurrence of a breach by the Concessionaire, during the pendency of Notice to Remedy by the PMC/AUTHORITY requiring the Concessionaire to remedy a breach, and

c. repeated occurrence of a breach notwithstanding that earlier breaches have been remedied pursuant to Notice to Remedy or otherwise.

Upon occurrence of a material breach of O&M Requirements, AUTHORITY shall, without prejudice to and notwithstanding any other consequences provided therefore under this Agreement, be entitled to terminate this Agreement.

6.5 Awareness Campaign

i. Based on section of the Operation Plan, the Concessionaire shall design undertake Awareness Campaigns as specified in this section.

ii. The Concessionaire shall submit an annual program of Awareness Campaign to the Project Monitoring Consultant and AUTHORITY within the first month of each calendar year clearly notifying the components & expenditure under each head of expense.

iii. The concessionaire shall with the assistance of AUTHORITY educate the generators of MSW about the service that is being provided by the Concessionaire and shall provide and distribute information about the rights and responsibilities of the generators of MSW.

iv. The Concessionaire shall notify the generators of MSW in its Concession Area about the details of the new services (if any) to be provided in accordance with this Agreement.

v. The Concessionaire shall also instruct the generators of MSW from time to time about MSW placement and delivery requirements, including provisions for special collections.

vi. The Concessionaire shall duly inform the generators of MSW about the phone numbers of the Complaint Redressal Centre.

vii. The Concessionaire shall organize quarterly awareness drives for two bin system for Biodegradable substance and non-biodegradable substance for segregation of MSW at source.

viii. The Concessionaire shall organize quarterly awareness drive for segregation and proper disposal of Hazardous wastes & Recyclable substances.

6.6 Insurance

The Concessionaire shall as be specified in Article 10 of this agreement, at its cost and expense, purchase and maintain by due re-instatement or otherwise, during the Concession Period all insurances in respect of the Project Facilities in accordance with the Good Industry Practice. The Concessionaire shall maintain a register of entry in order of premiums paid towards the Project Facilities and proof of payments made shall be submitted to AUTHORITY whenever requested for.

6.7 Environmental Compliance

The Concessionaire shall, at all times, ensure that all aspects of the Project Facilities and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including

rules such as MSW Rules, policies and guidelines related thereto. The Concessionaire shall obtain and maintain from time to time all necessary clearances from the SPCB or any other similarly empowered Government Agency and for this purpose shall carry out the necessary environmental impact assessment studies and implement appropriate environment management plans in respect of the Project Facilities.

6.8 Land Use

The Concessionaire shall ensure optimum utilisation of the Site and shall not use the same for any purpose unconnected or which is not incidental to the Project or related activities.

6.9 Sale/Distribution of Recyclables

(a) The Concessionaire shall be free to sell or otherwise dispose of the recyclables, at such price and to such Persons and using such marketing and selling arrangements and strategies as it may deem appropriate subject to meeting the O&M Requirements.

6.10 General Obligations

The Concessionaire shall at its own cost and expense:

(a) investigate, study, design, construct/ renovate, operate and maintain the Project Facilities in accordance with the provisions hereof;

(b) obtain all Applicable Permits as required by or under the Applicable Law and be in compliance thereof at all times during the Concession Period;

(c) comply with Applicable Law governing the operations of project facilities, Collection of MSW & Transportation of MSW at all times during the Concession Period;

(d) ensure and procure that any contract relating to the Project, entered into by the Concessionaire for implementing the Project in accordance with this Agreement contains provisions that would entitle a nominee of AUTHORITY to step into such contract/s at AUTHORITY's discretion, in place and substitution of the Concessionaire, pursuant to the provisions of this Agreement

(e) endeavor to sell all recyclables in a manner which is not detrimental to the environment;

(f) endeavor to improve the ancillary conditions and infrastructure related to the Project including assistance to informal recycling workers,

(g) procure and maintain in full force and effect, as necessary, appropriate proprietary rights, licenses, agreements and permissions for materials, methods, processes and systems used in or incorporated into the Project;

(h) make efforts to maintain harmony and good industrial relations among the personnel employed in connection with the performance of its obligations under this Agreement and shall be solely responsible for compliance with all labour laws and solely liable for all possible claims and employment related liabilities of

its staff employed in relation with the Project and hereby indemnifies AUTHORITY against any claims, damages, expenses or losses in this regard and that in no case and shall for no purpose shall AUTHORITY be treated as employer in this regard;

(i) make its own arrangements for construction materials and observe and fulfill the environmental and other requirements under the Applicable Law and Applicable Permits;

(j) be responsible for all the health, security, environment and safety aspects of the Project at all times during the Concession Period.

(k) ensure that the Project Facilities remain free from all encroachments and take all steps necessary to remove encroachments, if any;

(l) upon receipt of a request thereof, afford access to the Project Facilities to the authorised representatives of AUTHORITY for the purpose of ascertaining compliance with the terms, covenants and conditions of this Agreement.

(m) pay all Taxes, duties and outgoings, including utility charges relating to the Project Facilities.

6.11 No Breach of Obligations

The Concessionaire shall not be considered to be in breach of its obligations under this Agreement nor shall it incur or suffer any liability if and to the extent performance of any of its obligations under this Agreement is affected by or on account of any of the following:

(a) Force Majeure Event, subject to Article 8.3;

(b) AUTHORITY Event of Default;

(c) Compliance with the instructions of the Project Monitoring Consultant/AUTHORITY or the directions of any Government Agency other than instructions issued as a consequence of a breach by the Concessionaire of any of its obligations hereunder;

(d) Closure of the Project Facilities or part thereof with the approval of the Project Monitoring Consultant / AUTHORITY.

6.12 Maintenance of Records

The Concessionaire shall maintain records of the quantum (measured in tonnes) of biodegradable substance, non-biodegradable, recyclable and green waste substance, duly countersigned by the Project Monitoring Consultant and provide monthly, quarterly and annual reports of the same to the Project Monitoring Consultant, AUTHORITY.

ARTICLE 7

7 AUTHORITY's OBLIGATIONS

7.1 AUTHORITY's OBLIGATIONS

In addition to and not in derogation or substitution of any of its other obligations under this Agreement, AUTHORITY shall have the following obligations:

7.2 Specific Obligations

a) AUTHORITY shall provide 100% financing of All the vehicles & Mobile equipment like auto tippers, loaders, Mechanised Sweeping, Portable drain cleaning & tractors. Concessionaire shall ensure transfer of vehicle & assets and ensure its registration in the name of LMC.

b) AUTHORITY shall provide O&M Fee as per the provisions of this agreement.

c) AUTHORITY shall provide land for setting up MRF cum PCTS/ MTS/ Standalone TS.

d) The barest minimum Land in the Concession Area for vehicles maintenance work shop to the concessionaire, during the contract period.

e) AUTHORITY shall also provide premises for parking purpose within concession area. This area can be provided as small areas where in the concessionaire can park their vehicles.

f) The Concessionaire shall erect fencing, construct roads/ office and other infrastructure & services as required for effective implementation of the contract and install other services as necessary to safe and effective completion of the work. Such movable and immovable infrastructure shall be transferred to AUTHORITY as applicable in working conditions, on completion of the contract period or at the time of termination of contract.

g) The successful bidder will use these premises for organizing, inspecting, monitoring and controlling the work including receipt of the complaints directly from citizens to be redressed within 24 hours.

h) AUTHORITY shall not provide any additional infrastructure or services to the contractor on this account, such as printing, stationary, electricity, water supply, telephone. The contractor shall make their own arrangement and the charges for all such services will have to be borne by the contractor.

i) AUTHORITY shall grant in a timely manner all such approvals, permissions and authorizations which the Concessionaire may require or is obliged to seek from AUTHORITY under this Agreement, in connection with implementation of the Project and the performance of its obligations. Provided where authorization for availment of utilities such as power, water, sewerage, telecommunications or any other incidental services/utilities is required, within thirty days (30) days from receipt of request from the Concessionaire to make available such authorisation.

7.3 General Obligations

AUTHORITY shall:

(a) Where appropriate provide necessary assistance to the Concessionaire in securing Applicable Permits;

(b) Observe and comply with all its obligations set forth in this Agreement.

ARTICLE 8

8 PAYMENT OF O&M FEE

8.1 Payment of O&M Fee

(a) Subject to the provisions of this Agreement and in consideration of the Concessionaire accepting the Concession and undertaking to perform and discharge its obligations in accordance with the terms, conditions and covenants set forth in this Agreement, AUTHORITY agrees and undertakes to pay to Concessionaire, the O&M Fee/O&M Fee calculated in accordance with **Schedule 6**.

Cost of Operation & maintenance shall be recovered under two heads i) Revenue from sale of recyclables ii) revenue from O&M grant in the form of O&M Fee. All revenues generated from sale of recyclables will belong to concessionaire and will be transferred as it is from escrow account to concessionaire account. Concessionaire shall be responsible to generate the desired revenue from first heads whereas AUTHORITY will provide O&M Fee at the rate tendered and negotiated thereupon by concessionaire.

All the payments and revenues to concessionaire shall accrue to Escrow account only and can be appropriated only thereafter.

(b) PAYMENT & PENALTY CALCULATION MODULE

All the monthly payment bills will be linked with the real time-based reporting of deployed vehicles on VTS, attendance and working hours of deployed man power and other data fetched into the ICT system related to door-to-door collection. The Concessionaire will be required to put POI based vehicle Tracking System or other such technology-based application that may generate real time report of movement of deployed vehicles for every point to point (door to door collection) in real time. Thus, the Concessionaire is required to do following action for raising its' bill:

For every bulk waste generator, the data will be fetched in real-time by RFID /QR code/other suitable method installed at the source of collection.

For every non bulk waste generator (Household for door-to-door collection), the Concessionaire will be required to generate POI at center point of each lane and road and each such POI shall preferably serve at cluster of 15 units each on the routes defined for waste collection of the area. Thus, the VTS deployed by the Concessionaire in each vehicle will provide real time data while providing the collection service. Any missed scanned data will be considered as non-service to that cluster (number of units) and incur not only deduction for the same but also

penalty may be imposed for continued failure as per the provisions related to performance indicators in service level bench mark and incur penalty.

The payment to the contractor for Door-to-Door collection, Road Sweeping & Drain Cleaning work is based on the number of clients served as per key performance indicator. The contractor is required to provide the services as per the SLAs defined. This Payment module will be enabled to generate payment reports capturing performance of the contractor depending on various performance SLAs and KPIs like missed properties for collection, time schedule compliance, no. of trips, route compliance, etc. For the Door to Door Garbage Collection penalties are levied if the vehicles do not start and end the collection activity in time, if the vehicle/waste collector misses any society/building (missed POI), if the contractor has not deployed the number of vehicles/personnel as defined for a particular zone, etc.

The Concessionaire shall also prepare a statement of daily units covered for Door-to-Door Collection, Road Sweeping and Drain Cleaning and get it duly certified by the Project Monitoring Consultant in the manner as set out in the O&M Requirements. The Concessionaire shall, on the 5th day of every Month or in case the 5th day of a Month is a holiday then on the following working day of such Month, submit to AUTHORITY /PMC a statement ("O&M Fee & Work Statement") providing the following details, in the manner as set out in the O&M Requirements:

(i) Total number of individual HH, commercial units and Bulk generators covered under Door-to-Door collection for the previous Month

(ii) quantity of recovery of recyclables for the previous Month along with proof;

(iii) Amount of O&M Fee for all three heads ie. Door to Door collection, Road Sweeping & Drain Cleaning, for the previous Month calculated in accordance with **Schedule 6**.

(c) The Concessionaire shall receive O&M Fee only for the component for which service has been provided actually.

(d) The door-to-Door collection, Road Sweeping and Drain Cleaning shall be started immediately after 2 months of Date of signing the Agreement.

8.2 Mechanism of Payment

(a) In accordance to the performance indicator linked for payment for scope of services as per PART-A, PART-B, PART-C, the invoice raised will be considered only as per service level benchmark defined for the relevant package/part/component and deductions, penalty shall be imposed for failure to deliver the services as per S**chedule 6**

(b) The Authority shall make the payment to the Concessionaire for performing works and providing services as per scope of work and performance indicators specified. The payment to the contractor shall be made on monthly basis. The contractor shall submit bills along with the daily performance measurement sheets based on the ICT module implemented for the project.

(c) The Contractor must submit the bills by 7th of every month along with previous month EPF & ESIC paid challans (ECR) with payment receipt of each worker. LMC will pay 70% of the amount within two week (14) working days upon submission of bills verified and supported by the ICT based reporting. The payment shall be released by 20th of each month. 25 % amount will be paid after complete verification and its payment will be released up to 7th of next month. The bills shall be paid after due scrutiny of records. "Record Keeping & Reporting Requirements". Each invoice shall indicate the number of units serviced and the unit price for each item. LMC shall withhold payment on any and all invoices until such time the Contractor has supplied the required monthly report in a satisfactory manner. Monthly reports shall include Verification from household and waste generation units, Reports of POI based Vehicle Tracking System and other reports in support of KPI as mention in Schedule 2. LMC shall make deduction and levy penalty for the Contractor's failure to perform and maintain Service Level Benchmarks and performance indicators.

(d) Deductions from the Payment will be made if available towards Income Tax, Service Tax and Royalties etc as per provisions of the statutory authorities, in force from time to time in the State of Uttar Pradesh. The Contractor is expected to include all such charges at the time of bidding submission. Any new taxes, increase in such tax's imposed/ applicable during the contract period shall be reimbursed by LMC as per actuals after submitting the proof of the same.

(i) Authority shall pay balance 5% of the total amounts payable to Concessionaire into a special account designated as "Sinking Fund Account", which shall be utilized for purchase of new vehicles if required.

(e) Any balance amounts in the Sinking Fund Account would be payable to the Concessionaire after successful completion of project. Authority shall be free to deduct any amount of encumbrances created by concessionaire, any penalty due, or any work not performed by concessionaire as per requirement of concession agreement and done by LMC at risk and cost of concessionaire.

(f) Any delay in making any payment in accordance with the O&M Fee Statement shall, without prejudice to any other consequences under this Agreement, entail payment of interest on the amount in default at

prevailing annual prime lending rate of State Bank of India calculated for the duration of delay. The period of delay shall be counted from 60 days after; the day of submission of the O&M Fee Statement.

(g) All payments to the Concessionaire shall be made in Escrow account by way of Cheque/electronic transfer. All payments to AUTHORITY if applicable shall be made by way of demand draft in favor of MUNICIPAL COMMISSIONER, LUCKNOW NAGAR NIGAM.

(h) Annual Price Adjustments will be made in accordance and as described in Schedule 10.

8.3 Sinking Fund Account

(a) Within 30 days from the Appointed Date, the Parties shall open a special account designated as Sinking Fund Account for making the payments as set out in **Article 8.3 (b)**.

(b) Subject to the Concessionaire meeting his obligations in respect to the in accordance with the O&M Requirements, any balance payments from the Sinking Fund Account shall be made to the Concessionaire after completion of project period.

8.4 User Charges

Subject to the provisions of this Agreement and in consideration of the Concessionaire accepting the Concession and undertaking to perform and discharge its obligations in accordance with the terms, conditions and covenants set forth in this Agreement, AUTHORITY agrees and allow concessionaire to collect user charges at the rates as fixed in Schedule 10. However, nothing in this clause makes AUTHORITY responsible for collection of user charges. It is sole responsibility of concessionaire to collect user charges.

AUTHORITY will be responsible to create suitable mechanism to issue penalty and challans to non-payee users for non-payment of user charges. List non-payees shall be provided by concessionaire with the proof of service provided in at least 26 days in a month.

All the revenues from user charges shall be deposited into Authority Escrow account only and which will be used by Authority for payment of Tipping Fee.

The target for collection of user charge as percentage in operation plan and revised every year shall be as under:

Year	Minimum Achievement Percentage
1st	50%
2nd	60%
3rd	65%

4th	70%
5th	75%
6th Onwards	80%

Collected amount will be deposited in Authority Escrow Account but any shortfall amount from targeted user charges as mentioned in table above will be directly deducted from monthly running bill of concessionaire

8.5 Sale of Recyclable

Concessionaire shall be allowed to remove the recyclable materials from the waste and make profit out of it. The Authority will not claim any share out of the income derived out of these activities by the concessionaire.

All the revenues to concessionaire from sale of recyclable shall accrue to Escrow account only and can be appropriated only thereafter.

8.6 Performance evaluation of collection, transfer and transportation of municipal solid waste (MSW) in the Concession Area

8.6.1 Daily Work Performance Evaluation Sheet for doorstep collection, transportation of Bio degradable, Non-biodegradable, Recyclable & Green waste, is as given below.

Table 8-1Daily Work Performance Evaluation Sheet- DTDC & Transportation

S. No.	ITEM	Marks assigned	Level achieved in %	Marks Obtained	Justification for award of marks
1	Door to Door collection of waste: **Tolerance Limit:** 0% **Marking Parameter:** 100% attendance at household, shop, commercial & Institutional establishments and other waste generation sources. **Monitoring Mechanism:** GPS/IOT Based Real time monitoring	25			
2	All vehicle and manpower reported and started operation at designed time. Tolerance Limit: 45 minutes Marking Parameter: on every 1%	4			

	deviation late reporting beyond tolerance limit, 1 mark shall be deducted **Monitoring Mechanism:** GPS and online attendance system.				
3	Material recovered at MRF Centre less than 15% of input Dry waste. Tolerance Limit: 0% Marking Parameter: on every 1% less recovery of recyclable, 1 mark shall be deducted. **Monitoring Mechanism:** Weighing reports.	4			
4	Cleanliness of surroundings at the MRF Cum transfer station, standalone transfer station and status of Disinfectant sprayed. Tolerance Limit: 0% Marking Parameter: % of such points found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
5	Cleanliness (washing) of Auto Tippers/transportation vehicles Tolerance Limit: 0% Marking Parameter: % of such Vehicles found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
6	Public awareness program-conducted as per schedule. Marking Parameter: % of awareness program- conducted as per schedule. **Monitoring Mechanism:** MIS report.	4			

7	Breakdown of vehicle more than 10% Tolerance Limit: 90% Marking Parameter: non-availability of the vehicle on every 1% in excess 1 mark shall be deducted **Monitoring Mechanism:** VTS and Random inspection report.	4			
8	All trip (primary) reported at MRF/TS/MTS/FCTS. Tolerance Limit: 0% Marking Parameter: % of trips actually reported at designated site. **Monitoring Mechanism:** VTS and Random inspection report.	4			
9	Less Deployment of Manpower Than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less attendance below tolerance Limit, 1 mark shall be deducted **Monitoring Mechanism:** Online attendance report.	4			
10	Less Deployment of Vehicles than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less vehicle deployment below tolerance Limit, 1 mark shall be deducted. **Monitoring Mechanism:** VTS and Random inspection report.	4			
11	Collection & deposition of Domestic Hazardous waste at Designated collection centre. Tolerance Limit: 0% Marking Parameter: % of trips actually reported at designated	4			

	site. **Monitoring Mechanism:** VTS and Random inspection report.				
12	All Roads Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	10			
13	All Drains Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	5			
14	Number of Complaints Received at CCC or in random inspection for and not cleared within 6 Hrs. of such complaint Marking Parameter: % of Complaints actually cleared within 6 Hrs.				
	i) Non-attendance for door-to-door collection Data Source: Complaint received at CCC	3			
	ii) Nonattendance of waste deposited in litter bins, open sites and road Data Source: Complaint received at CCC/ random inspection by PMC/Authority	2			
	iii) Filth and smell from transfer point Data Source: Complaint received at CCC/ random inspection by PMC/Authority	2			

	iv) Vehicle found without Top cover and/or Spillage of waste during transportation Data Source: Complaint received with photograph/ random inspection by PMC/Authority	2			
	v) Illegal parking of collection & Transportation vehicles at public places Data Source: Through VTS/random inspection by PMC/Authority	2			
	vi) Designated staff not present at Secondary Collection Point/ FCTS and Vehicles etc. or not wearing uniform or not having ID. Data Source: random inspection by PMC/Authority	2			
	vii) Any soil/excavated earth/ water found in vehicle. Data Source: random inspection by PMC/Authority	2			
15	Non-maintenance of statutory compliances. Marking Parameter: 100% deduction for non-maintenance beyond 1 month				
	i. Vehicle Insurance & fitness Data Source: Random inspection	1			
	ii. PF/ESIC compliance Data Source: Random inspection	1			
	iii. Income Tax Data Source: Random inspection	1			
	iv. CTE/CTO Data Source: Random inspection	1			
	v. Workman compensation Data Source: Random inspection	1			
	Grand Total	100			

8.7 Performance based Payment

a) The net payment based on performance evaluation of doorstep collection, transportation of Bio degradable, Non-biodegradable, Recyclable & Green waste, etc. will be worked out = Total Amount of Monthly Tipping Fee x (Average Monthly points obtained / Average Monthly points assigned).

b) Usually, a regular payment shall be made to the bidder in accordance to the marks achieved. If the bidder fails to achieve at least 75% marks for seven consecutive days in a month, the AUTHORITY may initiate the proceedings for serving default notice and if the bidder fails to achieve at least 75% marks for more than 15 consecutive days in a month AUTHORITY may initiate cancelling the contract with the bidder.

8.8 Other Conditions

a) In case of inspection by Project Monitoring Consultant on particular day after the work is completed, if work is not found satisfactory on measurement through marks/points, the amount in accordance to the loss of points for that day, shall be deducted from the monthly running bills

b) In case of AUTHORITY's representative not available for the joint inspection with the PMC, the evaluation carried out by the Project Monitoring Consultant shall be taken for processing the payment.

ARTICLE 9

9 ESCROW ACCOUNT

9.1 Escrow Account

9.1.1 The Concessionaire shall, prior to the Appointed Date, open and establish an Escrow Account with a Bank (the "Escrow Bank") in accordance with this Agreement read with the Escrow Agreement.

9.1.2 The nature and scope of the Escrow Account shall be fully described in the agreement (the "Escrow Agreement") to be entered into amongst the Concessionaire, the Authority, the Escrow Bank.

9.2 Deposits into Escrow Account

9.2.1 The Concessionaire shall deposit or cause to be deposited the following inflows and receipts into the Escrow Account:

a. All funds received from AUTHORITY, if any

b. all funds constituting the Financial Package;

c. all and any other revenues from or in respect of the Project including User Charges, including the proceeds of any rentals, deposits, capital receipts or insurance claims; and

d. all payments by the Authority, after deduction of amounts specified for post closure activity

9.3 Withdrawals during Concession Period

9.3.1 The Concessionaire shall, at the time of opening the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

a. all taxes due and payable by the Concessionaire for and in respect of the Project;

b. O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;

c. O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of this Agreement, and certified by the Authority as due and payable to it;

d. License fees & revenue due and payable to the Authority;

e. monthly proportionate provision of Debt Service due in an Accounting Year;

f. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire, including repayment of Revenue Shortfall Loan;

g. monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;

h. any reserve requirements set forth in the Financing Agreements; and

i. balance, if any, in accordance with the instructions of the Concessionaire.

9.3.2 The Concessionaire shall not in any manner modify the order of payment specified in Clause 9.3.1, except with the prior written approval of the Authority.

9.4 Withdrawals upon Termination

9.4.1 Notwithstanding anything to the contrary contained in this Agreement, all amounts standing to the credit of the Escrow Account shall, upon Termination, be appropriated in the following order:

a. all taxes due and payable by the Concessionaire for and in respect of the Project;

b. 90% (ninety per cent) of Debt Due excluding Subordinated Debt;

c. outstanding License Fees;

d. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire, including repayment of Revenue Shortfall Loan [if any];

e. retention and payments relating to the liability for defects and deficiencies set forth in Article 29;

f. outstanding Debt Service including the balance of Debt Due;

g. outstanding Subordinated Debt;

h. incurred or accrued O&M Expenses;

i. any other payments required to be made under this Agreement; and

j. balance, if any, in accordance with the instructions of the Concessionaire:

Provided that no appropriations shall be made under Sub-clause (j) of this Clause 9.4.1 until a Vesting Certificate has been issued by the Authority.

9.4.2 The provisions of Clause 9.3 to Clause 9.4 and the instructions contained in the Escrow Agreement shall remain in full force and effect until the obligations set forth in Clause 9.4.1 have been discharged.

ARTICLE 10

10 Insurance

The Concessionaire shall at its cost and expense, purchase and maintain by due re-instatement or otherwise, during the Concession Period all insurances in respect of the Project Facilities in accordance with the Good Industry Practices. The Concessionaire shall also affect and maintain such insurances as may be necessary for mitigating the risks that may devolve on the Authority as a consequence of any act or omission of the Concessionaire during the Construction Period. The Concessionaire shall procure that in each insurance policy, the Authority shall be a co-insured and that the insurer shall pay the proceeds to insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by the Concessionaire after repayment of Senior Lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of Senior Lenders' dues.

10.1 Notice of the Authority

No later than 45 (forty-five) days prior to commencement of the Construction Period and the Operation Period, as the case may be, the Concessionaire shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to effect and maintain in accordance with this Clause 10. Within 30 (thirty) days of receipt of such notice, the Authority may require the Concessionaire to effect and maintain such other insurances as may be necessary pursuant hereto, and in the event of any difference or disagreement relating to any such insurance, the Dispute Resolution Procedure shall apply.

10.2 Evidence of Insurance Cover

All insurances obtained by the Concessionaire in accordance with this Article 10 shall be maintained with insurers on terms consistent with Good Industry Practice. Within 15 (fifteen) days of obtaining any insurance cover, the Concessionaire shall furnish to the Authority, notarized true copies of the certificate(s) of insurance, copies of insurance policies and premium payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty five) days after notice of such proposed cancellation, modification or non-renewal has been delivered by the Concessionaire to the Authority. The Concessionaire shall maintain a register of entry in order of premiums paid towards Insurance of the Project Facilities.

10.3 Remedy for failure to insure

If the Concessionaire shall fail to effect and keep in force all insurances for which it is responsible pursuant hereto, the Authority shall have the option to either keep in force any such insurances, and pay such premium and recover the costs thereof from the Concessionaire, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Concessionaire.

10.4 Waiver of Subrogation

All insurance policies in respect of the insurance obtained by the Concessionaire pursuant to this Article 10 shall include a waiver of any and all right of subrogation or recovery of the insurers thereunder against, inter alia, the Authority, and its assigns, successor, underrating and their subsidiaries, affiliates, employees, insurers and underwriters and of any right of the insurers of any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

10.5 Concessionaire's waiver

The Concessionaire hereby further releases, assigns and waives any and all rights of recovery against, inter alia, the Authority, and its assigns, undertaking, and their affiliates, subsidiaries, employees, successors, assigns, insurers and underwriters, which the Concessionaire may otherwise have or acquire in or from or in any way connected with any loss, liability or obligations covered by policies of insurance maintained or required to be maintained by the Concessionaire pursuant to this Agreement (other than Third Party liability insurance policies) or because of deductible Articles in or inadequacy of limits of any such policies of insurance.

10.6 Application of Insurance Proceeds

Subject to the provisions of the Financing Documents and unless otherwise provided herein, the proceeds of all insurance policies received shall be promptly applied by Concessionaire towards repair, renovation, restoration or re-instatement of the Project Facilities or any part thereof which may have been damaged or destroyed. The Concessionaire shall designate the Authority as the beneficiary for the assets under ownership of the Authority and may designate the Senior Lenders as the beneficiaries for the assets under the Concessionaire ownership or assign the insurance policies in their favour as security for the financial assistance provided by them to the Project. The Concessionaire shall carry such repair, renovation, restoration or re-instatement to the extent possible in such manner that the Project Facilities after such repair, renovation, restoration or re-instatement to the extent possible in the same condition as it were prior to such damage or destruction, normal wear and tear accepted.

10.7 No Breach of Insurance Obligation

If during the Concession Period, any risk which has been previously insured becomes un-insurable due to the fact that the insurers have ceased to insure such a risk and therefore insurance cannot be maintained / re-instated in respect of such risk, Concessionaire shall not be in breach of its obligations regarding insurance under this Agreement.

ARTICLE 11

11 Accounts & Audits

11.1 Audited accounts

11.1.1 The Concessionaire shall maintain books of accounts recording all its receipts (including all O&M Fee and other revenues derived/collected by it from or on account of the Project and/or its use), income, expenditure, payments (including payments from the Escrow Account), assets and liabilities, in accordance with this Agreement, Good Industry Practice, Applicable Laws and Applicable Permits. The Concessionaire shall provide 2 (two) copies of its Balance Sheet, Cash Flow Statement and Profit and Loss Account, along with a report thereon by its Statutory Auditors, within 90 (ninety) days of the close of the Accounting Year to which they pertain and such audited accounts, save and except where expressly provided to the contrary, shall form the basis of payments by either Party under this Agreement. The Authority shall have the right to inspect the records of the Concessionaire during office hours and require copies of relevant extracts of books of accounts, duly certified by the Statutory Auditors, to be provided to the Authority for verification of basis of payments, and in the event of any discrepancy or error being found, the same shall be rectified and such rectified account shall form the basis of payments by either Party under this Agreement.

11.1.2 The Concessionaire shall, within 30 (thirty) days of the close of each quarter of an Accounting Year, furnish to the Authority its unaudited financial results in respect of the preceding quarter, in the manner and form prescribed by the Securities and Exchange Board of India for publication of quarterly results by the companies listed on a stock exchange.

11.2 Appointment of auditors

11.2.1 The Concessionaire shall appoint, and have during the subsistence of this Agreement as its Statutory Auditors, a firm chosen by it from the mutually agreed list of 10 (ten) reputable firms of chartered accountants (the "Panel of Chartered Accountants"). All fees and expenses of the Statutory Auditors shall be borne by the Concessionaire.

11.2.2 The Concessionaire may terminate the appointment of its Statutory Auditors after a notice of 45 (forty-five) days to the Authority, subject to the replacement Statutory Auditors being appointed from the Panel of Chartered Accountants.

11.2.3 Notwithstanding anything to the contrary contained in this Agreement, the Authority shall have the right, but not the obligation, to appoint at its cost from time to time and at any time, another firm (the "Additional Auditors") from the Panel of Chartered Accountants to audit and verify all those matters, expenses, costs, realizations and things which the Statutory Auditors are required to do, undertake or certify pursuant to this Agreement.

11.3 Certification of claims by Statutory Auditors

Any claim or document provided by the Concessionaire to the Authority in connection with or relating to receipts, income, payments, costs, expenses, accounts or audit, and any matter incidental thereto shall be valid and effective only if certified by its Statutory Auditors.

11.4 Set-off

11.4.1 In the event any amount is due and payable by the Authority to the Concessionaire, it may set-off any sums payable to it by the Concessionaire and pay the balance remaining. Any exercise by the Authority of its rights under this Clause shall be without prejudice to any other rights or remedies available to it under this Agreement or otherwise.

11.5 Dispute resolution

11.5.1 In the event of there being any difference between the findings of the Additional Auditors and the Statutory Auditors, such Auditors shall meet to resolve the differences and if they are unable to resolve the same, such Dispute shall be resolved by the Authority by recourse to the Dispute Resolution Procedure.

ARTICLE 12

12 FORCE MAJEURE AND CHANGE IN LAW

12.1 Force Majeure Event

Any of the following events which is beyond the control of the Party claiming to be affected thereby ("Affected Party") and which the Affected Party has been unable to overcome or prevent despite exercise of due care and diligence, and results in Material Adverse Effect shall constitute Force Majeure Event:

(a) earthquake, flood, inundation and landslide

(b) Epidemic& Pandemic

(c) storm, tempest, hurricane, cyclone, lightning, thunder or other extreme atmospheric disturbances

(d) fire caused by reasons not attributable to the Concessionaire or any of the employees, Contractors or agents appointed by the Concessionaire for purposes of the Project;

(e) acts of terrorism;

(f) strikes, labour disruptions or any other industrial disturbances not arising on account of the acts or omissions of the Concessionaire or the Contractor

(g) action of a Government Agency having Material Adverse Effect including but not limited to

  (i) acts of expropriation, compulsory acquisition or takeover by any Government Agency of the Project/Project Facilities or any part thereof or of the Concessionaire's or the Contractor's rights in relation to the Project,

  (ii) any judgment or order of a court of competent jurisdiction or statutory authority in India made against the Concessionaire or the Contractor in any proceedings which is non-collusive and duly prosecuted by the Concessionaire, and

  (iii) any unlawful, unauthorised or without jurisdiction refusal to issue or to renew or the revocation of any Applicable Permits, in each case, for reasons other than Concessionaire's or the Contractor's breach or failure in complying with the Project Requirements, Applicable Laws, Applicable Permits, any judgment or order of a Governmental Agency or of any contract by which the Concessionaire or the Contractor as the case may be is bound.

(h) early termination of this Agreement by AUTHORITY for reasons of national emergency or national security.

(i) any failure or delay of a Contractor caused by any of the sub-clauses (f) and (g) hereinabove, for which no offsetting compensation is payable to the Concessionaire by or on behalf of the Contractor.

(j) War, hostilities (whether declared or not), invasion, act of foreign enemy, rebellion, riots, weapon conflict or military actions, civil war, ionising radiation, contamination by radioactivity from nuclear fuel, any nuclear waste, radioactive toxic explosion, volcanic eruptions, any failure or delay of a Contractor caused by the events mentioned in this sub-clause for which no offsetting compensation is payable to the Concessionaire by or on behalf of the Contractor

12.2 Notice of Force Majeure Event

(a) As soon as practicable and in any case within 7 days of the date of occurrence of a Force Majeure Event or the date of knowledge thereof, the Affected Party shall notify Project Monitoring Consultant and the other Party of the same setting out, inter alia, the following in reasonable detail:

(i) the nature and extent of the Force Majeure Event;

(ii) the estimated Force Majeure Period;

(iii) the nature of and the extent to which, performance of any of its obligations under this Agreement is affected by the Force Majeure Event;

(iv) the measures which the Affected Party has taken or proposes to take to alleviate/mitigate the impact of the Force Majeure Event and to resume performance of such of its obligations affected thereby; and

(v) any other relevant information concerning the Force Majeure Event, and /or the rights and obligations of the Parties under this Agreement.

(b) As soon as practicable and in any case within 5 days of notification by the Affected Party in accordance with the preceding clause (a), the Parties shall along with the PMC, meet, hold discussions in good faith and where necessary conduct physical inspection/survey of the Project Facilities in order to:

(i) assess the impact of the underlying Force Majeure Event,

(ii) to determine the likely duration of Force Majeure Period and,

(iii) to formulate damage mitigation measures and steps to be undertaken by the Parties for resumption of obligations, the performance of which shall have been affected by the underlying Force Majeure Event.

(c) The Affected Party shall during the Force Majeure Period provide to the other Party and the Project Monitoring Consultant regular (not less than weekly) reports concerning the matters set out in the preceding clause (b) as also any information, details or document, which the other Party may reasonably require.

12.3 Performance of Obligations

If the Affected Party is rendered wholly or partially unable to perform any of its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such obligations to the extent it is unable to perform the same on account of such Force Majeure Event provided that:

(a) due notice of the Force Majeure Event has been given as required by the preceding **Clause 12.2**;

(b) the excuse from performance shall be of no greater scope and of no longer duration than is necessitated by the Force Majeure Event;

(c) the Affected Party has taken all reasonable efforts to avoid, prevent, mitigate and limit damage, if any, caused or is likely to be caused to the Project Facilities as a result of the Force Majeure Event and to restore the Project Facilities, in accordance with the Good Industry Practice and its relative obligations under this Agreement;

(d) when the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party and the Project Monitoring Consultant written notice to that effect and shall promptly resume performance of its obligations hereunder, the non-issue of such notice being no excuse for any delay for resuming such performance;

(e) the Affected Party shall continue to perform such of its obligations which are not affected by the Force Majeure Event and which are capable of being performed in accordance with this Agreement; and

(f) any insurance proceeds received shall be, subject to the provisions of Financing Documents, entirely applied to repair, replace or restore the assets damaged on account of the Force Majeure Event, or in accordance with Good Industry Practice.

12.4 Termination due to Force Majeure Event

(a) Termination

(i) If a Force Majeure Event, excluding events described under **Clauses 12.1(f), 12.1(g) and 12.1(h)**, continues or is in the reasonable judgment of the Parties likely to continue beyond a period of 120 days, the Parties may mutually decide to terminate this Agreement or continue this Agreement on mutually agreed revised terms. If the Parties are unable to reach an agreement in this regard, the Affected Party shall after the expiry of the said period of 120 days, be entitled to terminate this Agreement.

Notwithstanding anything inconsistent contained in this Agreement, if a Force Majeure Event is an event described under **Clauses 12.1(f), or 12.1(h)**, and the same subsists for a period exceeding 365 days, then either Party shall be entitled to terminate this Agreement.

Provided that AUTHORITY may at its sole discretion have the option to terminate this Agreement any time after the occurrence of any event described under Clauses 12**.1(f) or 12.1(h)**.

(b) Termination Notice

If either Party, having become entitled to do so, decides to terminate this Agreement pursuant to the preceding clause (a), it shall issue Termination Notice setting out;

(i) in sufficient detail the underlying Force Majeure Event;

(ii) the Termination Date which shall be a date occurring not earlier than 60 days from the date of Termination Notice;

(iii) the estimated Termination Payment including the details of computation thereof and;

(iv) any other relevant information.

(c) Obligation of Parties

Following issue of Termination Notice by either Party, the Parties shall promptly take all such steps as may be necessary or required to ensure that;

(i) the Termination Payment, if any, payable by AUTHORITY in accordance with the following **clause (d)** is paid to the Concessionaire on the Termination Date and

(ii) the Project Facilities are handed back to AUTHORITY by the Concessionaire on the Termination Date free from all Encumbrance.

(d) Termination Payment

Upon Termination of this Agreement due to a Force Majeure Event, Termination Payment shall be made to the Concessionaire by AUTHORITY in accordance with the following:

(i) If Termination is due to a Force Majeure Event, described under **Clauses 12.1(a) to 12.1(e)**, no Termination Payment shall be made by AUTHORITY to the Concessionaire but, the Concessionaire shall be entitled to receive and appropriate

(a) the proceeds of any amounts under insurance policies and

(b) the amounts in the Sinking Fund Account

(ii) If Termination is due to the occurrence of any event described under **Clauses 12.1(f), 12.1(g) or 12.1(h)**, AUTHORITY shall pay to the Concessionaire Termination Payment equal to 100 % of the Book Value of total assets as on the Date of Termination Notice less the capital grants provided by AUTHORITY, adjusted on the basis of PLR of SBI at the time

of termination. The Concessionaire would also be allowed to appropriate the amounts in the Post Closure Performance Account.

(iii) If Termination is due to the occurrence of any event described under Clause **12.1(i)**, AUTHORITY shall subject to the certification of PMC, pay to the Concessionaire, Termination payment equal to 100 % of the Book Value of total assets as on the Date of Termination Notice less the capital grants provided by AUTHORITY, adjusted on the basis of PLR of SBI at the time of termination. The Concessionaire would also be allowed to appropriate the amounts in the Post Closure Performance Account.

Provided AUTHORITY shall be entitled to deduct from the Termination Payment any amount due and recoverable by AUTHORITY from the Concessionaire as on the Termination Date.

12.5 Liability for other losses, damages etc.

Save and except as expressly provided in this **Article 12**, neither Party hereto shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event.

12.6 Change in Law

(a) Change in Law shall mean the occurrence or coming into force of any of the following, after the Appointed Date:

(iv) The enactment of any new Indian law including laws related to environment;

(v) The repeal, modification or re-enactment of any existing Indian law

(vi) A change in the interpretation or application of any Indian law by a court of record.

Provided that Change in Law shall not include:

(iii) Coming into effect, after the Appointed Date, of any provision or statute which is already in place as of the Appointed Date,

(iv) Any new law or any change in the existing law under the active consideration of or in the contemplation of any government as of the Appointed Date which is a matter of public knowledge,

(b) Subject to Change in Law resulting in Material Adverse Effect and subject to the Concessionaire taking necessary measures to mitigate the impact or likely impact of Change in Law on the Project, if as a direct consequence of a Change in Law, the Concessionaire is obliged to incur Additional Costs, and AUTHORITY shall subsequently reimburse to the Concessionaire 100% of such Additional Costs.

(c) Upon occurrence of a Change in Law, the Concessionaire may, notify AUTHORITY and the Project Monitoring Consultant of the following:

(i) The nature and the impact of Change in Law on the Project

(ii) In sufficient detail, the estimate of the Additional Cost likely to be incurred by the Concessionaire on account of Change in Law

(iii) The measures, which the Concessionaire has taken or proposes to take to mitigate the impact of Change in Law, including in particular, minimizing the Additional Cost

(iv) The relief sought by the Concessionaire

(d) Upon receipt of the notice of Change in Law issued by the Concessionaire pursuant to preceding sub-clause, AUTHORITY and the Concessionaire shall along with the Project Monitoring Consultant hold discussions and take all such steps as may be necessary including determination/certification by the Project Monitoring Consultant of the quantum of the Additional Cost to be borne and paid by AUTHORITY.

(e) AUTHORITY shall within 30 days from the date of determination of quantum of Additional Cost, provide relief to the Concessionaire in the manner as mutually agreed upon by the Parties.

ARTICLE 13

13 EVENTS OF DEFAULT AND TERMINATION

13.1 Events of Default

Event of Default shall mean either Concessionaire Event of Default or AUTHORITY Event of Default or both as the context may admit or require.

(a) Concessionaire Event of Default

a) AUTHORITY at any time may terminate the contract by giving written notice to the bidder.

If the Bidder/ Contractor becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to AUTHORITY.

If the Bidder/ Contractor creates events of default of any of the terms and conditions governing the contract or any clause of the contract including those of operation clauses of house-to-house collection, deployment of right type of vehicles and compactors, transportation of waste, recovery of recyclables etc.

If it is proved that the Contractor is intentionally and deliberately violating the provisions of the contract.

b) AUTHORITY requires that the Bidders under this tender observe the highest standards of ethics during the procurement and execution of such Contracts. In pursuance of this policy, AUTHORITY defines for the purposes of this provision, the terms set forth as follows:

"Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and

"Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or execution of the contract to the detriment of AUTHORITY, and includes collusive practice among Bidders (prior to or after Tender submission) designed to establish Contract Prices at artificial non-competitive levels and to deprive AUTHORITY of the benefits of the free and open competition.

c) If the bidder indulges in Corrupt or Fraudulent Practices, it gets disqualified for tendering or AUTHORITY may at any point of time terminate the contract by giving written notice to the Bidder, even after the work is started, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the AUTHORITY.

d) In case of failure to clarify or improve the work to the utmost satisfaction of AUTHORITY, letter of termination will be sent to the bidder.

e) If the order /contract is cancelled / terminated after commencing the work, on account of the reasons and / or failure of the Contractor to perform up to the standard as evaluated, Contractor shall;

• Hand over the entire infrastructure, sheds, cabins built, services provided by the service provider, in the premises given by AUTHORITY to an authorized representative of AUTHORITY; without any compensation.

• Hand over vehicles, equipment, procured for use immediately again to an authorized representative of AUTHORITY; without any compensation.

AUTHORITY may/shall assign the entire work and its set up to the next willing bidder or any other company or individual for operations of the services along with infrastructure, places and all vehicles and equipment acquired from the Contractor, at the risk and cost of the bidder.

Any of the following events shall constitute an Event of Default by the Concessionaire ("Concessionaire Event of Default") unless such event has occurred as a result of one or more reasons set out in this agreement:

(i) The Concessionaire has failed to adhere to the Construction Requirements and such failure, in the reasonable estimation of the PMC, is likely to delay achievement of COD beyond 60 days of the Scheduled Project Completion Date;

(ii) The Concessionaire has failed to achieve COD within 60 days of the Scheduled Project Completion Date because of the reasons attributed to failure in functioning of concessionaire;

(iii) At any time during the Concession Period, the Concessionaire fails to adhere to the Construction Requirements or O&M Requirements or O&M standards as stated in approved DPR and this agreement and has failed to remedy the same within 30 days;

(iv) The Concessionaire has failed to make any payments due to AUTHORITY and more than 30 days have elapsed since such payment default;

(v) The Concessionaire is in Material Breach of any of its obligations under this Agreement and the same has not been remedied for more than 30 days;

(vi) Any representation made or warranty given by the Concessionaire under this Agreement is found to be false or misleading;

(vii) A resolution for voluntary winding up has been passed by the shareholders of the Concessionaire;

(viii) Any petition for winding up of the Concessionaire has been admitted and liquidator or provisional liquidator has been appointed or the Concessionaire has been ordered to be wound up by Court of competent jurisdiction, except for the purpose of amalgamation or reconstruction with the prior consent of AUTHORITY, provided that, as part of such

amalgamation or reconstruction and the amalgamated or reconstructed entity has unconditionally assumed all surviving obligations of the Concessionaire under this Agreement.

(ix) A default has occurred under any of the Financing Documents and any of the Lenders has recalled its financial assistance and demanded payment of the amounts outstanding under the Financing Documents or any of them as applicable;

(x) The Concessionaire has abandoned the Project Facilities;

(xi) The Concessionaire has unlawfully repudiated this Agreement or has otherwise expressed an intention not to be bound by this Agreement;

(xii) The Concessionaire has suffered an attachment levied on any of its assets which has caused or is likely to cause a Material Adverse Effect on the Project and such attachment has continued for a period exceeding 90 days.

(b) AUTHORITY Event of Default

a) The Contractor may at any times request for termination of the contract if desired on default on the part of AUTHORITY; such as non-payment of bills or resistance from citizens and it does not get resolved by AUTHORITY, by giving written communication to AUTHORITY, the Contractor may hand over the vehicles, equipment, bins, and fixed assets created by them to AUTHORITY.

b) In case of termination /cancellation of the contract after commencing the work when AUTHORITY asks to do so on account of AUTHORITY's inability to continue, all the infrastructure, vehicles, equipment, containers brought by the Contractor may be taken over by the AUTHORITY; if requested by the Contractor; at the mutually agreed rates.

Any of the following events shall constitute an event of default by AUTHORITY ("AUTHORITY Event of Default"), when not caused by a Concessionaire Event of Default or Force Majeure Event:

(i) AUTHORITY has failed to make any payments due to the Concessionaire and more than 180 days have elapsed since such default;

(ii) AUTHORITY is in Material Breach of any of its obligations under this Agreement and has failed to cure such breach within 90 (ninety) days of receipt of notice thereof issued by the Concessionaire;

(iii) AUTHORITY has unlawfully repudiated this Agreement or otherwise expressed its intention not to be bound by this Agreement;

(iv) AUTHORITY has unreasonably withheld or delayed grant of any approval or permission which the Concessionaire is obliged to seek under this Agreement, and thereby caused or likely to cause Material Adverse Effect;

(v) Any representation made or warranties given by the AUTHORITY under this Agreement has been found to be false or misleading.

13.2 Termination due to Event of Default

(a) Termination for Concessionaire Event of Default

(i) Without prejudice to any other right or remedy which AUTHORITY may have in respect thereof under this Agreement, upon the occurrence of a Concessionaire Event of Default, AUTHORITY shall, subject to the provisions of this Agreement, be entitled to terminate this Agreement in the manner as set out under this agreement.

Provided however that upon the occurrence of a Concessionaire Event of Default as specified under this agreement, AUTHORITY may terminate this Agreement by issue of Termination Notice in the manner set out under this agreement.

(ii) If AUTHORITY decides to terminate this Agreement pursuant to preceding **clause 13.2 (i)**, it shall in the first instance issue Preliminary Notice to the Concessionaire. Within thirty (30) days of receipt of the Preliminary Notice, the Concessionaire shall submit to AUTHORITY in sufficient detail, the manner in which it proposes to cure the underlying Event of Default (the "Concessionaire's Proposal to Rectify"). In case of non-submission of the Concessionaire's Proposal to Rectify within the said period of 30 days, AUTHORITY shall be entitled to terminate this Agreement by issuing Termination Notice, and to appropriate:

a. the Performance Security, if subsisting and

b. the amounts in the Sinking Fund Account

(iii) If the Concessionaire's Proposal to Rectify is submitted within the period stipulated therefore, the Concessionaire shall have further period of 30 days to remedy/ cure the underlying Event of Default. If, however the Concessionaire fails to remedy/cure the underlying Event of Default within such further period allowed, AUTHORITY shall be entitled to terminate this Agreement, by issue of Termination Notice and to appropriate

(a) the Performance Security, if subsisting and

(b) the amounts in the Sinking Fund Account

(b) Termination for AUTHORITY Event of Default

(i) Without prejudice to any other right or remedy which the Concessionaire may have in respect thereof under this Agreement, upon the occurrence of AUTHORITY Event of Default, the Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(ii) If the Concessionaire decides to terminate this Agreement pursuant to preceding clause (i) it shall in the first instance issue Preliminary Notice to AUTHORITY. Within 30 days of receipt of Preliminary Notice, AUTHORITY shall forward to the Concessionaire its proposal to remedy/ cure the underlying Event of Default (the "AUTHORITY Proposal to Rectify"). In case of non-submission of AUTHORITY Proposal to rectify within the period stipulated therefore, Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(iii) If AUTHORITY Proposal to Rectify is forwarded to the Concessionaire within the period stipulated therefore, AUTHORITY shall have further period of 30 days to remedy/ cure the underlying Event of Default. If, however AUTHORITY fails to remedy/ cure the underlying Event of Default within such further period allowed, the Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(c) Termination Notice

If a Party is having become entitled to do so decide to terminate this Agreement pursuant to the preceding sub article (a) or (b), it shall issue Termination Notice setting out:

(i) in sufficient detail the underlying Event of Default;

(ii) the Termination Date which shall be a date occurring not earlier than 60 days from the date of Termination Notice;

(iii) the estimated termination payment including the details of computation thereof; and,

(iv) any other relevant information.

(d) Obligation of Parties

Following issue of Termination Notice by either Party, the Parties shall promptly take all such steps as may be necessary or required to ensure that;

(i) until Termination the Parties shall, to the fullest extent possible, discharge their respective obligations so as to maintain the continued operation of the Project Facilities;

(ii) the termination payment, if any, payable by AUTHORITY in accordance with the following **sub - article (f)** is paid to the Concessionaire on the Termination Date; and

(iii) the Project Facilities are handed back to AUTHORITY by the Concessionaire on the Termination Date free from any Encumbrance along with any payment that may be due by the Concessionaire to AUTHORITY.

(e) Withdrawal of Termination Notice

Notwithstanding anything inconsistent contained in this Agreement, if the Party who has been served with the Termination Notice cures the underlying Event of Default to the satisfaction of the other Party at any time before the Termination occurs, the Termination Notice shall be withdrawn by the Party which had issued the same.

Provided that the Party in breach shall compensate the other Party for any direct costs/consequences occasioned by the Event of Default which caused the issue of Termination Notice.

(f) Termination Payments

Upon Termination of this Agreement on account of AUTHORITY Event of Default, the Concessionaire shall be entitled to withdraw the Performance Security, if subsisting, and receive from AUTHORITY, termination payment equal to 120% of the Book Value of total assets of project as on Termination Date and amounts in the Post Closure Performance Account less the capital grants received by concessionaire adjusted on the basis of PLR of SBI at the time. Cost of valuator in such case shall be borne by AUTHORITY.

Upon Termination of this Agreement on account of Concessionaire Event of Default, Concessionaire shall be entitled to receive from AUTHORITY termination payment equal to 80% of the estimated project cost as approved by AUTHORITY less grants received by concessionaire and adjusted on the basis of PLR of SBI as on the Termination Date less the penalties imposed by AUTHORITY for event of default.

Here **Estimated Project Cost** shall mean project cost estimated in DPR prepared by Concessionaire and approved by AUTHORITY.

13.3 Rights of AUTHORITY on Termination

(a) Upon Termination of this Agreement for any reason whatsoever, AUTHORITY shall upon making the Termination Payment, if any, to the Concessionaire have the power and authority to:

(i) enter upon and take possession and control of the Project Facilities i/c vehicles, workshop etc. forthwith;

(ii) prohibit the Concessionaire and any person claiming through or under the Concessionaire from entering upon/ dealing with the Project Facilities;

(b) Notwithstanding anything contained in this Agreement, AUTHORITY shall not, as a consequence of Termination or otherwise, have any obligation whatsoever including but not limited to obligations as to compensation for loss of employment, continuance or regularisation of employment, absorption or re-employment on any ground, in relation to any person in the employment of or engaged by the Concessionaire in connection with the Project, and the hand back of the Project Facilities by the Concessionaire to AUTHORITY shall be free from any such obligation.

13.4 Accrued Rights of Parties

Notwithstanding anything to the contrary contained in this Agreement, Termination pursuant to any of the provisions of this Agreement shall be without prejudice to accrued rights of either Party including its right to claim and recover money damages and other rights and remedies which it may have in law or contract. The rights and obligations of either Party under this Agreement, including without limitation those relating to the Termination Payment, shall survive the Termination but only to the extent such survival is necessary for giving effect to such rights and obligations.

ARTICLE 14

14 HANDBACK OF PROJECT FACILITIES

14.1 Ownership

Without prejudice and subject to the Concession, the ownership of the Project Facilities, including all improvements made therein by the Concessionaire, shall at all times remain that of AUTHORITY.

14.2 Concessionaire's Obligations

12.1.1 **Transfer of the movable and immovable assets by the bidder; after Completion of the Contract i.e., 10 Years after COD or as extended thereupon, to the ULB**

(a) The Contractor shall at the end of the Contract period hand back vacant and peaceful possession of the Project Facilities to ULB free of cost and in good operable condition.

(b) AUTHORITY may decide to extend the contract or announce completion; a letter to this effect shall be given by AUTHORITY. On acceptance of the extension a new contract agreement shall be signed and the work shall continue un-interruptedly with use of same vehicles, equipment and infrastructure etc.

(a) All Vehicles, Workshops, Offices, Communication arrangements etc. and immovable infrastructure/ facilities: On completion of the contract period, unless it is extended, the bidder will transfer All Vehicles, Workshop, Offices, Communication arrangements etc. and immovable infrastructure/ facilities to ULB, in working conditions, free of cost.

(c) The Concessionaire hereby acknowledges AUTHORITY's and ULB's rights specified in this agreement enforceable against it upon Termination and its corresponding obligations arising there from. The Concessionaire undertakes to comply with and discharge promptly all such obligations.

14.3 AUTHORITY's Obligations

AUTHORITY shall, subject to AUTHORITY's right to deduct amounts from the Performance Security towards;

(i) carrying out works/jobs listed under Scope of work, which have not been carried out by the Concessionaire,

(ii) purchase of items, which have not been handed back to ULB along with the Project Facilities which were part of approved DPR/Plan, and

(iii) any outstanding dues, which may have accrued in respect of the Project during the Concession Period, duly discharge and release to the Concessionaire the amounts in the Post Closure Performance Account in accordance with this agreement.

ARTICLE 15

15 DISPUTE RESOLUTION

15.1 Amicable Resolution

(a) Save where expressly stated to the contrary in this Agreement, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to this Agreement, including those arising with regard to acts, decision or opinion of the Project Monitoring Consultant (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set forth in **clause (b)** below.

(b) Either Party may require such Dispute to be referred to the MUNICIPAL COMMISSIONER (or the Person holding charge) and the Director of the Concessionaire for the time being, for amicable settlement. Upon such reference, the two shall meet at the earliest mutual convenience and in any event within 15 days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicably settled within 15 (fifteen) days of such meeting between the two, either Party may refer the Dispute to arbitration in accordance with the provisions of **Article 15.2** below.

15.2 Arbitration

(a) Procedure

Subject to the provisions of **Article 15.1**, any Dispute which is not resolved amicably shall be finally settled by binding arbitration under the Arbitration Act. The arbitration shall be by a panel of three arbitrators, one to be appointed by each Party and the third to be appointed by the two arbitrators appointed by the Parties. The Party requiring arbitration shall appoint an arbitrator in writing, inform the other Party about such appointment and call upon the other Party to appoint its arbitrator. If within 15 days of receipt of such intimation, the other Party fails to appoint its arbitrator, the Party seeking appointment of arbitrator may take further steps in accordance with Arbitration Act.

(b) Place of Arbitration

The place of arbitration shall be Lucknow, .

(c) English Language

The request for arbitration, the answer to the request, the terms of reference, any written submissions, any orders and awards shall be in English and, if oral hearings take place, English shall be the language to be used in the hearings.

(d) Enforcement of Award

The Parties agree that the decision or award resulting from arbitration shall be final and binding upon the Parties and shall be enforceable in accordance with the provisions of the Arbitration Act subject to the rights of the aggrieved parties to secure relief from any higher forum.

15.3 Performance during Dispute

Pending the submission of and/or decision on a Dispute and until the arbitral award is published, the Parties shall continue to perform their respective obligations under this Agreement without prejudice to a final adjustment in accordance with such award.

ARTICLE 16

16 REPRESENTATIONS AND WARRANTIES

16.1 Representations and Warranties of the Concessionaire

The Concessionaire represents and warrants to AUTHORITY that:

(a) it is duly organised, validly existing and in good standing under the laws of India;

(b) it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

(c) it has taken all necessary corporate and other action under Applicable Laws and its constitutional documents to authorise the execution, delivery and performance of this Agreement;

(d) it has the financial standing and capacity to undertake the Project;

(e) this Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(f) the execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of the Concessionaire's Memorandum and Articles of Association or any Applicable Laws or any covenant, agreement, understanding, decree or order to which it is a party or by which it or any of its properties or assets are bound or affected;

(g) there are no actions, suits, proceedings or investigations pending or to the Concessionaire's knowledge threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may constitute Concessionaire Event of Default or which individually or in the aggregate may result in Material Adverse Effect;

(h) it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Agency which may result in Material Adverse Effect;

(i) it has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect;

(j) subject to receipt by the Concessionaire from AUTHORITY of any amount due under any of the provisions of this Agreement, in the manner and to the extent provided for under the applicable provisions of this Agreement all rights and interests of the Concessionaire in and to the Project Facilities shall pass to and vest in AUTHORITY on the Termination Date free and clear of all Encumbrances without any further act or deed on the part of the Concessionaire or AUTHORITY;

(k) no representation or warranty by the Concessionaire contained herein or in any other document furnished by it to AUTHORITY or to any Government Agency in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;

(l) no bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Concessionaire to any person to procure the Concession.

(m) Without prejudice to any express provision contained in this Agreement, the Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has after a complete and careful examination made an independent evaluation of the Project Facilities, and the information provided by AUTHORITY, and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Concessionaire in the course of performance of its obligations hereunder.

(n) The Concessionaire also acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth above and hereby confirms that AUTHORITY shall not be liable for the same in any manner whatsoever to the Concessionaire.

16.2 Representations and Warranties of AUTHORITY

AUTHORITY represents and warrants to the Concessionaire that:

(a) AUTHORITY has full power and authority to grant the Concession;

(b) AUTHORITY has taken all necessary action to authorise the execution, delivery and performance of this Agreement;

(c) This Agreement constitutes AUTHORITY's legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(d) There are no suits or other legal proceedings pending or threatened against AUTHORITY in respect of the Project Facilities or the Project.

16.3 Obligation to Notify Change

In the event that any of the representations or warranties made/given by a Party cease to be true or stands changed, the Party who had made such representation or given such warranty shall promptly notify the other of the same.

ARTICLE 17

17 MISCELLANEOUS

17.1 Assignment and Charges

(a) The Concessionaire shall not assign in favour of any person this Agreement or the rights, benefits and obligations hereunder save and except with prior consent of AUTHORITY.

(b) The Concessionaire shall not create nor permit to subsist any Encumbrance over the Project Facilities except with prior consent in writing of AUTHORITY, which consent AUTHORITY shall be entitled to decline without assigning any reason whatsoever.

(c) Restraint set forth in clauses (a) and (b) above shall not apply to:

(i) liens/encumbrances arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Concessionaire:

(ii) Pledges/hypothecation of goods/ moveable assets, revenue and receivables as security for indebtedness, in favour of the Lenders and working capital providers for the Project;

(iii) Assignment of Concessionaire's rights and benefits under this Agreement to or in favour of the Lenders as security for financial assistance provided by them.

17.2 Interest and Right of Set Off

Any sum which becomes payable under any of the provisions of this Agreement by one Party to the other Party shall, if the same be not paid within the time allowed for payment thereof, shall be deemed to be a debt owed by the Party responsible for payment thereof to the Party entitled to receive the same. Such sum shall until payment thereof carry interest at prevailing prime lending rate of State Bank of India per annum from the due date for payment thereof until the same is paid to or otherwise realised by the Party entitled to the same. Without prejudice to any other right or remedy that may be available under this Agreement or otherwise under law, the Party entitled to receive such amount shall also have the right of set off.

Provided the stipulation regarding interest for delayed payments contained in this agreement shall neither be deemed nor construed to authorise any delay in payment of any amount due by a Party nor be deemed or construed to be a waiver of the underlying breach of payment obligations.

17.3 Governing Law and Jurisdiction

This Agreement shall be governed by the laws of India. The Courts at Lucknow shall have jurisdiction over all matters arising out of or relating to this Agreement.

17.4 Waiver

(a) Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:

(i) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under this Agreement;

(ii) shall not be effective unless it is in writing and executed by a duly authorised representative of such Party; and

(iii) shall not affect the validity or enforceability of this Agreement in any manner.

(b) Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation hereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver/breach of any terms, conditions or provisions of this Agreement.

17.5 Survival

Termination of this Agreement

(a) shall not relieve the Concessionaire or AUTHORITY of any obligations already incurred hereunder which expressly or by implication survives Termination hereof, and

(b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

17.6 Amendments

This Agreement and the Schedules together constitute a complete and exclusive understanding of the terms of the Agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

17.7 Notices

Unless otherwise stated, notices to be given under this Agreement including but not limited to a notice of waiver of any term, breach of any term of this Agreement and termination of this Agreement, shall be in writing and shall be given by hand delivery, recognized international courier, mail, telex or facsimile transmission and delivered or transmitted to the Parties at their respective addresses set forth below:

If to AUTHORITY:

Municipal Commissioner

LUCKNOW NAGAR NIGAM

And

Chief Executive Officer

Lucknow Smart City Limited

If to the **Concessionaire**:

The Managing Director,

----------,

----------,

Fax No. ----------

Or such address, telex number, or facsimile number as may be duly notified by the respective Parties from time to time, and shall be deemed to have been made or delivered

(i) in the case of any communication made by letter, when delivered by hand, by recognized international courier or by mail (registered, return receipt requested) at that address, and

(ii) in the case of any communication made by telex or facsimile, when transmitted properly addressed to such telex number or facsimile number.

17.8 Severability

If for any reason whatsoever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Agreement or otherwise.

17.9 No Partnership

Nothing contained in this Agreement shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any authority to bind the other in any manner whatsoever.

17.10 Language

All notices required to be given under this Agreement and all communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

17.11 Exclusion of Implied Warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties and any representation by any Party not contained in a binding legal agreement executed by the Parties.

17.12 Counterparts

This Agreement may be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement but shall together constitute one and only the Agreement.

IN WITNESS WHEREOF THE, PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED SEALED AND DELIVERED

For and on behalf of LUCKNOW NAGAR NIGAM by: (Signature) (Name) (Designation)	**For and on behalf of LUCKNOW SMART CITY LIMITED by:** (Signature) (Name) (Designation)	**For and on behalf of CONCESSIONAIRE by:** (Signature) (Name) (Designation)
In the presence of : 1)	2)	3)

SCHEDULE "1"

DETAILS OF PROJECT FACILITIES

SCHEDULE "2"

OPERATIONS AND MAINTENANCE REQUIREMENTS FOR COLLECTION, SEGREGATION, MATERIAL RECOVERY, TRANSFER & TRANSPORTATION

1 General

(a) The Concessionaire shall comply with the O&M Requirements set out in this Schedule. In doing so, the Concessionaire shall ensure that the work of collection & transportation is maintained to the standards and specifications as set out in the DPR of Solid waste management.

(b) In the planning and implementation of all works and functions associated with the operation and maintenance of the Door to door collection, MRF, Road Sweeping & Drain Cleaning, the Concessionaire shall take all such actions and do all such things (including without limitation, organising itself, adopting measures and standards, executing procedures including inspection procedures, and engaging contractors, if any, agents and employees) in such manner, as will:

(i) Ensure following all standards, Rules framed for waste Management by State / Central Government.

(ii) Ensure adherence to Scope of work and Detailed Operation Plan.

(iii) ensure the safety of personnel deployed;

(iv) keep the city free from garbage and all vehicles and facilities free from undue deterioration and wear;

(v) permit unimpaired performance of statutory duties and functions of any party in relation to the Project;

(c) During the Active Operations Period and till the date of hand back of project Facilities, the Concessionaire shall, in respect of the collection, MRF, Road Sweeping & Drain Cleaning work ensures that:

(i) applicable and adequate safety measures are taken;

(ii) the Project Facilities are kept free from undue deterioration and undue wear;

(iii) adverse effects on the environment is minimized and standards as mention SWM Rules 2016 if followed;

(iv) any situation which has arisen or likely to arise on account of any accident or other emergency is responded to as quickly as possible and its adverse effects controlled/minimized;

(v) data relating to the operation and maintenance of the collection, Transportation work is collected;

(vi) all materials used in the maintenance, repair and replacement of collection & Transportation vehicles shall meet the standard Requirements of servicing set by vehicle manufacturing company;

(vii) the personnel assigned by the Concessionaire have the requisite qualifications and experience and are given the training necessary to enable the Concessionaire meet the O&M Requirements.

1. Operations and Maintenance Manual and O&M Plans

(a) Prior to making application for the Readiness Certificate for the Project the Concessionaire shall finalise in consultation with the Project Monitoring Consultant:

(i) the O&M Manual (including the formats for the reports to be submitted during the Active Operations Period)

(ii) the O&M Plan for the first year of operations.

(b) Six weeks prior to the anniversary of COD each year, the Concessionaire shall submit to the Project Monitoring Consultant and AUTHORITY an annual O&M Plan for the next year of operations.

2. Daily work performance standards for doorstep collection, transportation

2.1 Performance standard for Door-to-Door collection and transportation

Door to Door collection shall be performed in all wards of project area. The door-to-door collection to include all household, government office complexes, non-government office complex, authorized colonies, unauthorized regularized colonies, all market/ commercial/ institutional places, slums and even from undesignated points by means of deployment of suitable vehicles. This shall also include by-lanes, lanes and streets. The concessionaire shall also be responsible for collection of waste from road side litterbins, horticulture waste etc.

Concessionaire shall also ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure disposal of such waste as per relevant Rules and standards.

The segregation should be in three categories i.e., Compostable or Green waste; Recyclables or Dry Waste; and Domestic Hazardous Waste. It is expected that the proposed approach for the collection of recyclables includes the management of materials in a manner that minimizes the cost to the Authority by establishing an efficient collection that minimizes contamination, maximizes diversion rates / recycling rate as well as revenues to the stakeholders.

All the vehicles and infrastructure required for project shall be procured and deployed by concessionaire.

2.2 Scope of work to be done by the successful bidder:

- Daily Primary (door to door) collection and transportation of MSW from houses (including slums), hotels and restaurants, all commercial establishments, institutions, offices etc using feasible methods in LMC "service area" as per SWM Rules 2016.
- The Concessionaire shall be responsible to collect pre-segregated and/or unsegregated waste (as per KPIs) from waste generators. The Concessionaire shall segregate the waste in three separate streams namely Bio-Degradable, Non-Biodegradable and Domestic Hazardous Waste and store separately in suitable bins (biodegradable waste in green colour bin, non-biodegradable waste in blue/white colour bin, domestic hazardous and sanitary waste in black box or bag).
- The Concessionaire shall create beat of each service area for undertaking activity. Each beat shall be assigned to one waste collector. Beat information shall be provided in tabular form as well as in GIS map duly verified/approved by PMC/Authority shall mention starting point, start time, waiting points, waiting time on route and end time of the specified Route. This shall be displayed on the Board at each street to display time-table of primary collection & transportation vehicles to allow residents avail the facility at prescribed time. This shall be also made accessible to general public on the web-based application and at the Authority's website or as agreed and accepted in Operation Plan.
- Operation & Maintenance of MRF cum Transfer station/ Standalone Transfer Station.
- Collection of waste generated during special events/festival seasons.
- Collection of Municipal waste from industrial establishments in service area.
- Operating and maintaining a dedicated collection and transportation mechanism for waste generated from various bulk waste generators and special category of waste generators like restaurants, hotels, marriage gardens, vegetable and fruit markets, temples, garden waste, slaughter houses, meat and fish markets' waste etc.
- It shall be the responsibility of concessionaire to clean and sweep at least 5.0-meter area around the garbage containers/bins.
- Operating and maintaining a collection mechanism for any other type of waste which is considered as MSW in Solid Waste (Management and Handling) Rules, 2016 and subsequent amendments thereof and CPHEEO manual guidelines shall be followed.
- The Successful Bidder shall inter alia deploy vehicles, own manpower (including driver), machinery and operate and manage the 'door to door' segregated collection, encourage 3 R principal of waste minimization at source and bear all cost of operation and management during the Contract Period by undertaking these key activities:

- The collection shall conform to the public notices issued by commissioner, LMC and Solid Waste (Management and Handling) Rules, 2016 and any amendments there upon.
- The successful bidder should/must collect Wet waste on daily basis and should put in place effective suitable mechanism for regular door to door collection of dry MSW and the frequency for collection of door to door dry waste may vary according to type and waste generators quantity of dry waste generated (commercial and bulk waste generator-daily, Household- thrice in a week or such other frequency including daily collection if Authority in its' opinion finds need for maintain proper hygiene and sanitation within the city area.
- The successful bidder should promote MSW Segregation at household level through providing their support to awareness campaigns and other suitable means organized by LMC.
- The successful bidder should collect waste from doorstep by following a fixed time schedule.
- Use of appropriate door to door collection vehicles like pushcarts/ and auto tipper/Goods autos in the appropriate ratio depending on the condition, dimension of the street for making the collection and shifting operation easy and efficient.
- Auto tipper/Goods autos should have an inbuilt mike system to announce about the door-to-door collection. Pushcarts shall have to carry appropriate bell ringing system of permissible decibels to draw attention of the community.
- Any non-co-operation of public in offering wastes/ littering garbage shall be brought to the notice of LMC/RWA's with sufficient evidence.
- The wet waste shall need to be transferred from Auto tipper/Goods autos/Pushcarts to the any available decentralized composting units and the dry waste shall need to be transferred to the nearby dry waste collection centres and MRF.
- For Wet waste in additional to the quantum of wet waste transferred to decentralized composting units, shall need to be transferred from Auto tipper/Goods autos/ Pushcarts into Portable compactors /Refuse Compactor vehicles located at MRF cum Transfer Station or standalone Transfer Station, so that waste can be transported more economically, efficiently over long distances to the processing facility on due weighment (Density/Volume basis). Similarly, if there is no MRF in particular ward, the dry waste shall need to be transferred from Auto tipper/Goods autos/ Pushcarts into Portable compactors /Refuse Compactor vehicles located at MRF cum Transfer Station or standalone Transfer Station, so that waste can be transported more economically, efficiently over long distances to the processing facility.
- Wet waste and dry waste shall not be mixed either at the time of collection or transferring the same to the secondary storage point.
- In no case waste once lifted should touch the ground. It is the responsibility of the bidder that he should ensure that no waste is accumulated in the secondary collection points at any point of time. The wet MSW so collected shall be transported immediately to designated locations.
- The waste from the Bulk waste generators, shop keepers, vendor and street hawkers shall be compulsorily collected in segregated form without allowing them to throw the waste at untimely hours near the secondary storage points.

- The personnel deployed for door-to-door collection of segregated waste shall need to be provided with appropriate protective gears like uniforms, gloves, masks etc.

2.3 Operation & Maintenance of MRF/Transfer station

Segregated Dry waste and Mixed waste shall be brought to Material Recovery facility for recovery of recyclable waste. Concessionaire shall deploy sufficient manpower for operation of manual sorting conveyors and other machineries. Proper record of waste received, material recovered and material transferred to processing site shall be maintained.

The personnel deployed at MRF and Transfer station shall need to be provided with appropriate protective gears like uniforms, gloves, masks etc.

2.4 Commercial, Bulk and other MSW collection and transportation

a) The Concessionaire shall be responsible for providing time table bound Primary SW collection service from Commercial Establishments (Vegetable Market, Fruit Market, Daily Market, Fish Market, Street Vendors etc.), Hotels, Restaurants, Banquet Hall, Institution, Other Commercial Establishments, Bulk Waste Generators (BWGs) and any other establishment as notified by the Authority. The Commercial and bulk waste generators waste etc., should be segregated primarily into:
   - Wet Waste and
   - Dry waste
   - Domestic Hazardous Waste

b) The Concessionaire shall provide route plan with Time Table for each primary collection vehicles. Route plan shall clearly mention Ward, Area/Locality and street etc. which shall be provided in tabular form as well as in GIS map duly verified/approved by PMC/Authority

c) Auto tippers/E-rickshwas with mechanical "Bin - Lifting" capability to lift 240 litter bin / 120 litre bin (AT 1.8 with Bin lifting Capability) shall collect the SW and transfer the wet waste directly to decentralized compost sites and dry waste to the designated Recycling Centers or to dedicated MTS or FCTS or any other site designated by Authority.

d) Concessionaire shall plan to collect SW from Markets, Hotels, Dhabas, Restaurants, Banquet Hall, Farm House, Schools, Colleges & other Commercial Establishments in coinciding with opening time of these establishments.

e) Auto tippers/E-rickshwas engaged in this service shall collect the waste only from Commercial establishments. Auto tippers/E-rickshwas shall not dump/lift the waste from any Dhalao /open site or any other location in any circumstances and shall

f) The bulk waste generated from such source to be collected in segregated form, the wet waste shall be transport to the designated location and dry waste shall be transport to dry waste collection centres.

g) The successful bidder should collect e-waste generated from the households and commercial establishments on the last day of every month and transport the same to the designated location notified by LMC. It is planned to keep one E-waste collection centre between a cluster of 2 to 3 wards.

2.5 Collection & Transportation of Horticulture and Garden Waste from colonies or public places

a) The Concessionaire shall be responsible for the collection and transportation of horticulture/garden waste generated from public places, specific colonies/localities using Auto tippers 1.75 Cum.

b) The Concessionaire shall deploy separate vehicles for collection and transportation of horticultural/garden waste.

c) The Concessionaire shall deposit green waste at designated green waste management centres (nurseries).

d) Concessionaire shall be responsible for increasing the collection as per directions given by the Authority during the seasonal variation

e) Waste collected using this service shall not (in any condition) be unloaded in Secondary Collection Points or any other sites/ points

f) Green waste shall not be mixed with any other kind of waste

2.6 Drain Cleaning: Clearing and uprooting rank vegetation, grass, bushes, shrubs, and disposal of unserviceable materials, including removal and disposal of silt and any kind of temporary, permanent, RCC, PCC and other solid obstruction from the drains. Excavation and removal of silt or silt mixed with sand in slushy condition from drain bed including lift and disposing off the same.

i. The drains must be cleaned and desilted by Manual/mechanical means or combination of both i.e. Excavator, JCB, Barge Mounted Poclain etc. without damaging to the above ground and underground utilities / properties etc. wherever possible. In case use of machinery is not possible, then only manual human based (with all safety gadgets) cleaning is done
ii. The agency should maintain the level of drains and water way according to the level as per original construction. The depth shall be maintained any time throughout the year.
iii. The desilted material shall be disposed with all lead and lift as instructed by the PMC. For avoidance of doubt ripper/dumper/carrier etc. should be leak

proof.

iv. Desilted material must not be dumped in road/ footpath side, it should be loaded directly in ripper/dumper/carrier etc .
v. Involvement of man power should be minimum in all the nala and machineries should be engaged as far as possible.
vi. Involvement of the drains along the narrow roads and Liquid state silt the desilted materials may be dumped by the side of the road temporarily which must be removed within 24 hours of dumping. Failing to remove the same within 24 hrs will attract a penalty of 0.01% of Package value per day.

2.7 Road Sweeping: The Operator shall ensure to conduct sweeping and cleaning of the Zone-8including Main Roads, service roads, Arterial Roads (streets, narrow streets, gullies) footpaths, road berms, central verge, curb channels, curb stones gully etc., which means complete solution for RoW (right of way) by manual/mechanical means or combination of both. The objective is to keep the areas litter and dust free for 24x7. The type of work to be conducted is as under: All Roads of 7 mts and above to be mechanically swept. (Only sides of the roads are to be manually swept). For areas on these particular roads not covered by Machine/s, litter picking to be done daily.

i. All Mechanical sweeping machines to be equipped with GPS devices and both front and rear camera.
ii. It is the responsibility of the bidder to maintain a computerized central monitoring control room for the vehicles and provide monthly reports to the 3rd party / authority with actual GPS based vehicle movement report.
iii. The generated report should also include real time pictures (min no. 1 per Kms, per Pass) of the work undertaken through manual/mechanical sweeping (Vehicle mounted cameras (front and reverse both) can be used for this as well).
iv. The Operator has to share a detailed operations plan for each month (Schedule plan has to be shared by the operator at the beginning of each month), for all the areas. Mechanical, Manual Sweeping of Roads & Cleaning services in all Wards of Zone-8Nagar Nigam Lucknow Uttar Pradesh.
v. Swept roads shall be kept litter and dust free during the next day operation hours, from entire wall-to-wall basis. Sweeping of Roads/ Streets/ Lanes would include Bitumen, Pakka, Footpath, Ramps and kuccha portions including sides – Corner to corner.
vi. The operator needs to ensure that where ever the mechanized sweeping of road in not possible, that particular stretch of the road area has to be manually swept to ensure cleanliness. Frequency of manual cleaning including litter picking to be worked out at 6 days/week.
vii. Fuel operated Air blower to be used ahead of sweeping machines to bring the litter / leaves and dust from the pavements / cycle tracks / all difficult to

reach areas on the path of the machine for easy collection by the sweeping machines.

viii. The operator would use Litter Picking machine in areas as assigned by the Authority on everyday basis.

ix. High Pressure washing of pavements, footpaths, dividers, medians, roundabout, bus stand, street furniture, signage & Monuments facia. once a week or as per need arise.

x. Wild grass and vegetation on the side berms, footpaths, medians of all roads shall be removed by the Operator once a month.

xi. Every cleaning worker to be equipped with Litter Picking stick for comfortable collection of bulk litter like polythene, paper etc.

xii. Clearance of upto 1 Mts open drains running along with the carriage way.

xiii. Bush and Grass Cutting at ground level and hand-held distance to be necessarily done mechanically with help of hand-held fuel operated brush cutters.

xiv. Necessary arrangements to be made for Tree Pruning and mechanical means would be preferred.

xv. Manual Sweeping:

The Operator shall ensure that the employees are in proper dress, and also ensure placement of safety devices and signages at Project Site during the working hours, as per the specification. Every Worker, Supervisor and Manager to be equipped at all times during working hours: Safety. Caps / Helmets, Nose Mask, Rain Coats, Gloves, Radium Jackets, Safety Boots. Ignoring the safety requirements as mentioned above by the Operator shall result in a fine of Rs 200/- per day per default per person.

2.8 Domestic Hazardous & Domestic bio-medical waste

a) Concessionaire shall ensure separate collection & transportation of Domestic Bio-medical and domestic hazardous waste and also ensure handover/disposal of such waste as per relevant Rules and standards.

b) Concessionaire shall be responsible for collecting segregated Domestic Hazardous Waste from the households on bi-weekly basis and transport it to the DHW Depositing Centre for its safe storage. The concessionaire shall notify the timing and schedule of receipt of DHW waste collection.

c) As per SWM Rules 2016, One DHW Depositing Centre shall be established for every 20 sq. km. of area. The Authority shall identify suitable location where the DHW depositing center can be established. Authority shall be responsible to provide fully developed DHW Deposition Centre to the Concessionaire.

Required no. of Domestic Hazardous Waste Depositing Centers (As per SWM Rules, 2016)

Particulars	Numbers
Area (Sq. km)	75
Nos. to be established as per rules	4
Area Requirement (sq. m)	10

d) The DHW Depositing Centres shall be maintained by Concessionaire during the Concession Period. The Concessionaire shall provide adequate manpower and infrastructure for the functioning of Deposition Centres as specified under KPIs.

e) The Authority shall make arrangements with UPPCB to ensure that DHW is collected from the DHW Depositing Centers and transported to the UPPCB designated disposal facility/ site as identified by UPPCB. The timings and frequency of clearance of waste in DHW Depositing Centers shall be decided by the Authority.

f) The Concessionaire shall safely keep the DHW at the DHW Depositing Centers and shall handover the DHW to the agency appointed by the UPPCB/Authority.

g) The Concessionaire shall run IEC activities for waste generators for separate storage of DHW and its safe disposal.

h) The DHW Depositing Centre shall comply with the below mentioned requirements

   i. Must be completely enclosed
   ii. Must have decontaminated area for personnel and equipment
   iii. The building units should be chemically compatible with the hazardous waste
   iv. Must have a leak detection system to indicate any failure in the integrity of floor
   v. It must be open form 8.00 am to 8.00 pm to receive the DHW

i) The above provides only indicative requirements of "Domestic Hazardous Waste Depositing Centres". The Authority in consultation with IE and UPPCB shall develop detailed guidelines for management of DHW Depositing Centres with detailed specifications of the each and every component

2.9 Procurement of Equipment / Machinery: Concessionaire shall procure shortfall of vehicle and equipment/assests for door-to-door collection &

Mechanised Sweeping, MRF Cum TS, Drain Cleaning, Road Sweeping and Workshop on 100 % financing of LMC as per approved Detailed Operation Plan & DPR as per the provisions of this agreement. Concessionaire shall ensure transfer of vehicle & assests and ensure its registration in the name of LMC.

2.10 Vehicle required for Door-to-Door Collection: Vehicle required for Door-to-Door Collection shall be procured by concessionaire on 100% financing of LMC. Concessionaire have liberty to propose different type and quantity of such vehicles as proposed and approved in concessionaire operation plan.

2.11 Support Infrastructure development including but not limited to workshops and development of adequate parking Spaces, is to be done by the Concessionaire. Land for construction of workshop and parking of vehicles will be provided by LMC. The bidder shall also arrange necessary infrastructure/ spare parts etc. and manpower for the purpose of regular maintenance of the vehicles, machinery & equipment etc.

2.12 Manpower: The Concessionaire shall be responsible for deployment of all manpower for waste collection, Street Sweeping, Drain Cleaning, transportation, user charges collection & recovery of recyclables of Waste including the key personnel for the management and supervision of all Project-related activities. (This would include the designation of suitably qualified personnel for areas such as contract administration and supervision, construction management, safety, environmental management, plant and equipment maintenance, procurement, materials management and quality control),

2.13 Co-ordination with LMC: The Concessionaire shall provide project related information at regular interval in the form and manner as prescribed by LMC. In case of any law & order problems, the Concessionaire shall inform promptly the LMC about the same and will act as per the direction of the LMC.

2.14 The Concessionaire shall be responsible for all other activities apart from activities as listed above towards successful implementation, operation, maintenance and management of the project in line with Solid Waste Management Rules, 2016 (hereinafter referred as the "SWM Rules 2016"), SBM-2 guidelines or as revised from time to time and Good Industry Practices.

2.15 Awareness Campaign: Concessionaire shall be responsible for undertaking awareness campaigns through various medium to spread awareness about the Project and promote segregation of MSW at the individual household level. Also, it has to undertake awareness campaign regarding non-usage of plastics. It may be clarified over here that LMC on its own will be free to devise booster campaigns on these same issues at its own discretion.

2.16 Time Schedules for implementation of daily work schedule

The Concessionaire shall adhere to the time schedule set out in operation plan and approved by LMC for implementation of the various Package/Parts of the Project. The

successful bidders shall also ensure additional cleaning requirement on festival and other contingency caused by rain and other natural disasters requiring appropriate garbage and other clearing.

2.17 Repairs and Maintenance

Concessionaire shall carry out regular repairing and maintenance of all equipment and vehicles being deployed at his own cost after handover of the vehicles by LMC.

2.18 Smart Solid Waste Collection & Management Systems {Information & Communication Technology (ICT):

a. The successful bidder shall compulsorily install Vehicle Tracking Management System (VTMS) on each vehicle used for collection & transportation of MSW, with the necessary web-based software which have desired functions to monitor Door to Door collection operation, accessible from web, personal computer/ laptops, network links with antivirus installed, printer, GPS / Sim Card / Dongle and shall connect the system with ICCC. Please note that for payment of collection and transportation fee, VTMS record is mandatory. Vehicle Tracking Management System (VTMS) shall be able to detect tempering, track and monitor the vehicles and hence efficiently plan the routing and resources for transportation system.

b. In addition to VTS, the GIS and Point of Interest (POI) based system shall be integrated with Management Information System (MIS)/VTS for collecting information at micro level. GIS based POI of center point of each Road/lane shall be generated and MIS shall be able to generate daily attendance of such POI by their designated vehicles. The MIS system shall be as per the requirement of Authority and if any updates and revision is required during tenure of project the Contractor shall carry such revisions at no extra cost.

c. VTMS shall be able to detect the speed of vehicles deployed for Door to Door collection. Average speed shall not exceed 7.5 Kms/Hour during door-to-door collection.

d. The total GPS/GIS system /mobile based APP for SWM monitoring is required to be integrated with ICCC, Lucknow Smart City Project.

e. ICT (Information and Communication Technology) based attendance system shall be undertaken by the operator for ensuring the timely presence and monitoring of work done by all its deployed manpower and such monitoring is to be based as real time reporting of time and duration spent by the employee for operation of the services. This would entail that each worker/employee deployed by the Operation for all Packages (Part A to Part C) must have a Phone with capability of smart applications to be able to communicate data and other features like photo/video in real time for reporting. Similarly all vehicles and usage of mechanical equipment by the operator must have VTS and other suitably enabled ICT mechanism to make

real time reporting about the movement and usage of such vehicles and equipment deployed by the Operator.

f. Any bin if needed to be deployed, shall be sensors enabled smart bins with QR (Quick Response) code tags or screening system to monitor the collection efficiency.

g. Operator shall maintain database for manpower, vehicles, storage bins, lifting of waste, unnoticed waste, user charge collection, defaulter list, etc. as applicable. The operator shall design software compatible with mobile phone to track and monitor and report in real time on the various parameters.

h. Every deployed vehicle and personnel related to the execution of the project must be tracked in real time with suitable deployment of software/hardware ICT infrastructure for all project execution related work and this requires not only VTS for vehicles and suitable biometric/other IT application but also requires that the Concessionaire ensures all its deployed manpower has proper android based mobile phone with video camera recoding features that may be used for integration of smart ICT solutions envisaged by LMC to be integrated easily and it shall be absolutely mandatory for the Concessionaire to ensure that any monitoring software solution related to the project whenever is implemented by the Authority, the Concessionaire will be fully complying to it for all features in terms of recording of performance of man and resources in real time.

i. All the hardware such as GPS devices, RFID TAGs (Sticker Type), RFID TAG (Metal mount Type), RFID readers, Biometric Fingerprint devices, Necessary hardware for Software Application hosting at LMC Data Centre along with Software Application System and keeping 5% of devices as spare will be in scope of LMC whereas successful bidder shall operate and maintain them at their own cost.

2.19 Complaint Redressal System:

a. The Concessionaire shall set-up a 24 X 7 Complaint Redressal System for handling complaints and requests related to Project Operations. Concessionaire shall put a detailed Standard Operating Plan (SOP) in place to elaborate the System
b. Customer Care center shall be manned by concessionaire staff
c. The Concessionaire shall provide online platform for the logging and tracking the complaints and requests. The Concessionaire shall also enable the system to register the complaints and requests through SMS and provide the status through Automated SMS
d. The Concessionaire shall install a minimum of 10 (ten)dedicated phone lines with short code numbers and staff in the Control Room to receive complaint and requests from Public. The waiting time shall not be more than 2 minutes for any call. While the customer is waiting, a recorded

voice message indicating that complains and requests can be logged by SMS or on web shall be played.

e. The Concessionaire shall maintain records of Complaints and requests received that includes name, date, time, location, type of compliant/requests and the subsequent action taken to solve the complaint and requests. This record shall be verified by PMC and the Authority
f. All calls shall be recorded and shall be reviewed for the quality of interaction of their staff with the customers. This recording shall be made available to PMC and the Authority
g. Complaint redressal shall be done by the Concessionaire within 6 hours of receipt of any complaint/requests regarding daily operational activities. The Concessionaire shall redress any complaint related to infrastructure replacement within 24 hours of receipt of complaint.
h. Control Room shall be staffed adequately to receive and resolve the complaints on specified time. Control room shall be operational from 7 am till 10 pm on all working days

2.19.1 SMS to Receive Complain

a) Short code SMS service shall be deployed by Concessionaire to receive complains/requests in structured SMS form.
b) Similar Short code-based SMS service shall be deployed by Concessionaire to receive requests from the staff of Authority for on demand service.
c) User friendly web-based application shall be created to receive complains from the public and Authority

2.19.2 Workflow to Track Status

a) Each complaint request shall be assigned with unique ticket number.
b) Each complaint shall be forwarded via-SMS to the concerned operator with a copy to reporting supervisor.
c) Once ticket is closed, it shall be updated in the database. In case complaint is not addressed within specified time, reason for delay along with likely resolution time shall be updated in database.
d) Status of complaint if completed or not completed (along with reason and likely date of addressing) shall be provided to the customer on or before the specified date.
e) Similar system shall be in place for request/complaint ticket for the

Authority's staff.

f) Status shall also be made online using ticket number and customer phone number.

g) Current status of all open and closed complaints shall be visible online and user shall be able to view their status by date or/ and complain number etc.

h) On completion of work – SMS shall be sent back to the customer indicating completion of work. Systems shall have provision to take customer feedback based on the level of satisfaction for the service provided

i) Daily summary report of Zone Wise, Sub-Zone, Ward Wise shall be provided to designated staff of the Authority. These repots shall be auto-generated from the customer complaint database

2.20 Unique numbering System for Project Assets

As a precursor for automation, a unique numbering system shall be followed for marking all Secondary Collection Points/ Project Assets in such a manner so that all such points are uniquely identified across the project area. This numbering shall be referred in all time-table/customer complainant redressal systems and other communications.

Following are some examples for unique numbering:

a) For uniquely identify the bin number 120 in Zone-1, Ward 55: LMC/Z4/W55/B120

b) For uniquely identify the secondary storage point in Zone-1, Ward 55: LMC/Z4/W55/SSC120

The final numbering mechanism shall be approved by the PMC/Authority

2.21 GPS in All Vehicles

The Concessionaire shall install GPS system in all the vehicles with following device specification or better:

a) General Specifications**:**
   i. Dual band GPRS (900/1800 Mhz).

ii. On-board Storage of at least 2 days of data.
iii. Internal battery to sustain operation for at least 10 hours with a minimum recording at interval of 30s and reporting at intervals of minimum of 120s.
iv. A minimum reporting interval of 30s.
v. Alerts on external power disconnection.
vi. Internal antenna or antenna wire enclosed in metal sheath.
vii. IP 65 enclosure (i.e., Water proof for occasional sprays of water and dust proof).
viii. Device should be hidden – minimum of -161db gain for GPS antenna.
ix. Ability to work against sustained external voltage of up to 33v and handle transient of as high as non-spike 55v/6000 Joules spikes (To work in presence of hydraulics, falling battery).
x. Digital Input: 2 minimum. Changes to digital input must be communicated immediately – i.e., changes should not be missed because it falls in between recording interval. On the other hand, transients (< 1-2s) must be discarded.
xi. Analog Input: 1 minimum

b) Accessories:
i. Must be able to detect engagement of bin's raising/lowering.
ii. Must be able to detect raising/lowering of tipper's body

c) Protocol:
i. Commands for controlling devices via SMS and protocol/data format must be shared with PMC/Authority and vendor must warrant that the users can choose to use their software to work with devices without paying anything extra.
ii. Must be able to detect engagement of bins
iii. Over the air control of device – including server to which devices communicate with

d) GPS Running Requirement
i. 98% of installed GPS shall be operational all the time.
ii. Any non-operational GPS shall be replaced within 24 hours of time of non- functioning.
iii. If any GPS is not operational (within the above limits), driver shall be provided with android/Mobile Application enabled phone with

location tracking capability and same shall be monitored by Concessionaire

e) **Vehicle Tracking Management System**

Vehicle tracking management system (VTMS) with GPS, GSM, RFID, M2M, and/or LOT sensors (as per requirement) shall be installed along with innovative mobile and web-based applications to improve the ground-level mechanisms for waste collection and efficient processing and recycling of waste

i. Real time tracking of vehicles/fleet
ii. Complete audit trail of movement of vehicles
iii. Alerts-Over speed, excess stoppage time, excess fuel withdrawn
iv. Fleet Summary Report – Stoppage, Speed Violations, Idle Time, Fuel
v. Consumption
vi. Alerts for fuel thefts, tampering, geo-fencing violations
vii. Web enabled live map with history playback and route replay

2.22 Mobile Application for Reporting from site

i. The Concessionaire in consultation with PMC/Authority shall provide robust mobile applications to report the site conditions. Following are minimum requirements:
ii. Mobile application shall be able to send information to control room about the ground situation along with "Photo", "Geo-Tag (latitude-longitude) and Status update.
iii. Citizens connect by integration with Mobile App
iv. This mobile application shall work even when GPRS connectivity is not there and the moment GPRS connectivity is available, data shall be uploaded to the servers.
v. Data collected from this application shall not be alterable by the originator.
vi. Adequate encryption shall be supplied for the same
vii. Track cleanliness score and overall performance of various wards with the Authority
viii. Report incidents in form of tickets to Command Control Center
ix. This application shall be used for (but not limited to):
x. Report Arrival of Collection Vehicles at Secondary Collection Points by sending photograph of street (along with marked timetable on ground) about the arrival.
xi. Reporting after clearing Silt with photographs

xii. Reporting after clearing horticulture waste with photographs
xiii. Reporting after clearing road sweeping with photographs
xiv. Reporting after clearing of Secondary Collection Points
xv. Reporting of any other site condition with photographs

Concessionaire shall be responsible for providing Android phone, SIM with data connection to all its drivers, supervisors and any other staff who are designated for reporting from ground with mobile based application. Non-reporting shall be automatically treated as no work completed. Concessionaire shall also train all their staff to use the application.

2.23 Bio-Metric Attendance

The Concessionaire shall deploy biometric attendance system for all the Ward/Division Offices under the Project Area, to report staff attendance.

Following are minimum requirements:

i. Bio-Metric Attendance System that is fitted with GPRS/any other mechanism
ii. shall display each record instantaneously to the central server
iii. For staff who have missing finger prints (at times reported by few workers), alternate fool proof system shall be deployed.
iv. Bio-metric machines shall be deployed at all offices and attendance points (mobile-bio-metric devices for open points)
v. Only records received from bio-metric attendance shall be treated as valid records for staff reporting – in reports generated from servers

2.24 PAYMENT LINKED WITH ICT BASED REPORTING:

All the monthly payment bills will be linked with the real time based reporting of deployed vehicles on VTS, attendance and working hours of deployed man power and other data fetched into the ICT system related to door to door collection. The Concessionaire will be required to put POI based vehicle Tracking System or other such technology based application that may generate real time report of movement of deployed vehicles for every point to point (door to door collection) in real time. Thus the Concessionaire is required to do following action for raising its' bill:

For every bulk waste generator the data will be fetched in real-time by RFID /QR code/other suitable method installed at the source of collection.

For every non bulk waste generator (Household for door to door collection), the Concessionaire will be required to generate POI at center point of each lane and road and each such POI shall preferably serve at cluster of 15 units each on the routes defined for waste collection of the area. Thus, the VTS deployed by the Concessionaire in each vehicle will provide real time data while providing the collection service. Any missed scanned data will be considered as non-service to that cluster (number of units) and incur not only deduction for the same but also penalty may be imposed for continued failure as per the provisions related to performance indicators in service level bench mark and incur penalty.

2.25 REDRESSAL OF PUBLIC GRIEVANCES:

i. The Contractor shall develop and implement a Complaint Redressal system. Complaints relating to Collection and Transportation services of SWM, user charges (if applicable) shall be received at such office i.e. Consumer Grievances Redressal Cell on 18x7 basis and communicated immediately to the concerned staff of the Contractor/Agency for appropriated redressal. The Cell should have adequate IT enabled infrastructure to receive call by citizens as well online registration of grievances. ICCC should be used for this purpose.

ii. Complaints shall be registered, numbered and immediately passed on to the concerned

iii. staff of the Contractor for redressal through tailor made software compatible with prevailing software of mobile and computer to be installed by the Contractor.

iv. For Redressal of Public Grievances related to SWM services, operator shall promote SBM official app "Swachhata – MoHUA" of Ministry of Housing and Urban Affairs (MoHUA), GOI.

2.26 SUPPORTING SERVICES:

a. In order to provide hygienic service periodic bin washing and its maintenance service shall be planned and implemented by the service provider for all the bins in the project area.

b. An appropriate bin washing arrangement shall be provided for.

c. All Litter Bin/ community bins (if any) on road provided shall be washed and disinfected at least once in 15 days.

d. The ground at the place where vehicles stop for loading shall be clean-swept, if there are any dropping of the refuse from the container while loading and it should be disinfected by an approved disinfectant liquid spray.

e. Disinfectant for spraying around refuse bins on roads and at the spots of collection of the bins should be Eco-friendly, nontoxic, non-acidic. Oil based deodorant and disinfectant shall be used for cleaning purpose.

f. All manpower required to fulfil the operator scope shall be provided by the operator.

g. Establishment of local office/offices for monitoring of the project shall be Successful bidder's responsibility at its own cost.

h. There will be no lease of land for the purpose of this project. LMC will provide right to use the land to Operator for this project only. However, ownership of the land provided will remain with LMC at all times.

i. The Contractor has to carry out their duty 365 days throughout the year. The usual working hours shall start from 6 a.m. on all the seven days of the week.

j. Obtaining of all necessary statutory consent and clearances required for implementation of the Project and maintaining thereon as per Applicable Laws;

k. Environment monitoring plans in line with the statutory norms – Air quality, water quality. As per requirement of UPPCB/CPCB.

l. Development/Implementation of Emergency Response Protocol for the operation of the Project. Removal of waste from the Project Area prior and/or after, in an emergency situation of the LMC such as any public meeting, Government functions and any other occasion/ festivals etc., or during the night hours on instructions from LMC within 2 (two) hours on receipt of instructions.

m. The Contractor shall carry out detailed survey (Micro Level Plan) of the project area street by street in the formats and prepare micro level plan after the survey of the entire project area within 30 days of the date of issue of letter of intent and accordingly submit his work plan & operation plan.

n. The project area of operation defined for the purpose of the Project is limited to the jurisdiction of the LMC at any given point of time during the period of contract.

o. The Bidder has to work out their own manpower requirement based on the scope and city requirement and it shall be included in the Technical Offer.

p. The equipment/vehicles shall be marked with ULB, Swachh Bharat Mission logo, 150th Anniversary of Mahatma Gandhi Logo, Lucknow Smart City Logo of at least 12 inches by 12 inches' size with prior approval from competent authority.

q. All vehicles Pollution under Control Certificate (PUCC) shall be properly displayed and all other document shall be properly maintained by the operator during the contract period.

ii. Although the vehicles required for the project shall be provided by the Authority and vehicles handed over by LMC to the successful bidder will have all document like fitness certificate, insurance, RC, pollution and road tax having proper validity, however it is made clear that Renewal of these documents and the maintenance of the vehicles shall be entirely contractor' responsibility and any liability incurred due to untoward event/accident caused during operation of the vehicle during project period shall be entirely and solely the responsibility of the contractor and the Authority shall be free to recover such liabilities from dues to be paid to the contractor.

a. Each vehicle shall carry first aid kit & fire extinguisher.

b. Name of the facility operator or the transporter, as the case may be, shall be displayed.

c. Emergency phone numbers shall be displayed properly.

d. Exposure of community to the odor, spillages & emissions from wastes shall be avoided during transportation.

e. The quantification of waste shall be done on daily basis and the report of the same shall be shared with the Authority. Vehicle wise daily, weekly, monthly, quarterly, six monthly and annual data shall be maintained by the Concessionaire.

f. The Contractor shall submit the annual report to the Authority as per the Form-III of SWM rules 2016.

g. The Contractor shall provide all the inputs to the Authority as required for filling the form-IV as per SWM rules 2016.

h. The Contractor shall provide training to the worker before commencement of work and it should be part of continued and sustained in systematic manner over contract period to attain the objective of SWM Rules 2016.

3. Daily Work Performance Evaluation Sheet for doorstep collection, transportation of waste

3.1 Performance evaluation sheet

Parameter for Daily Work Performance Evaluation for doorstep collection, transportation of Bio degradable, Non-biodegradable, Recyclable & Green waste, Processing and Landfills etc.

Table 0-1Daily Work Performance Evaluation Sheet- DTDC & Transportation

S. No.	ITEM	Marks assigned	Level achieved in %	Marks Obtained	Justification for award of marks
1	Door to Door collection of waste: **Tolerance Limit:** 0% **Marking Parameter:** 100% attendance at household, shop, commercial & Institutional establishments and other waste generation sources. **Monitoring Mechanism:** GPS/IOT Based Real time monitoring	25			
2	All vehicle and manpower reported and started operation at designed time. Tolerance Limit: 45 minutes Marking Parameter: on every 1% deviation late reporting beyond tolerance limit, 1 mark shall be	4			

	deducted **Monitoring Mechanism:** GPS and online attendance system.				
3	Material recovered at MRF Centre less than 15% of input Dry waste. Tolerance Limit: 0% Marking Parameter: on every 1% less recovery of recyclable, 1 mark shall be deducted. **Monitoring Mechanism:** Weighing reports.	4			
4	Cleanliness of surroundings at the MRF Cum transfer station, standalone transfer station and status of Disinfectant sprayed. Tolerance Limit: 0% Marking Parameter: % of such points found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
5	Cleanliness (washing) of Auto Tippers/transportation vehicles Tolerance Limit: 0% Marking Parameter: % of such Vehicles found clean in Random inspection. **Monitoring Mechanism:** Random inspection reports.	4			
6	Public awareness program-conducted as per schedule. Marking Parameter: % of awareness program- conducted as per schedule. **Monitoring Mechanism:** MIS	4			

	report.				
7	Breakdown of vehicle more than 10% Tolerance Limit: 90% Marking Parameter: non-availability of the vehicle on every 1% in excess 1 mark shall be deducted **Monitoring Mechanism:** VTS and Random inspection report.	4			
8	All trip (primary) reported at MRF/TS/MTS/FCTS. Tolerance Limit: 0% Marking Parameter: % of trips actually reported at designated site. **Monitoring Mechanism:** VTS and Random inspection report.	4			
9	Less Deployment of Manpower Than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less attendance below tolerance Limit, 1 mark shall be deducted **Monitoring Mechanism:** Online attendance report.	4			
10	Less Deployment of Vehicles than from approved in Operation Plan Tolerance Limit: 90% Marking Parameter: on every 1% less vehicle deployment below tolerance Limit, 1 mark shall be deducted. **Monitoring Mechanism:** VTS and Random inspection report.	4			
11	Collection & deposition of Domestic Hazardous waste at Designated collection centre. Tolerance Limit: 0%	4			

	Marking Parameter: % of trips actually reported at designated site. **Monitoring Mechanism:** VTS and Random inspection report.				
12	All Roads Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	10			
13	All Drains Cleaned as per schedule and manpower deployed as per beat plan Marking Parameter: % of roads actually cleaned against to be cleaned as per bet plan. **Monitoring Mechanism:** Personal Tracker and Random inspection report.	5			
14	Number of Complaints Received at CCC or in random inspection for and not cleared within 6 Hrs. of such complaint Marking Parameter: % of Complaints actually cleared within 6 Hrs.				
	viii) Non-attendance for door-to-door collection Data Source: Complaint received at CCC	3			
	ix) Nonattendance of waste deposited in litter bins, open sites and road Data Source: Complaint received at CCC/ random inspection by PMC/Authority	2			
	x) Filth and smell from transfer point Data Source: Complaint received at CCC/ random	2			

	inspection by PMC/Authority				
	xi) Vehicle found without Top cover and/or Spillage of waste during transportation Data Source: Complaint received with photograph/ random inspection by PMC/Authority	2			
	xii) Illegal parking of collection & Transportation vehicles at public places Data Source: Through VTS/random inspection by PMC/Authority	2			
	xiii) Designated staff not present at Secondary Collection Point/ FCTS and Vehicles etc. or not wearing uniform or not having ID. Data Source: random inspection by PMC/Authority	2			
	xiv) Any soil/excavated earth/ water found in vehicle. Data Source: random inspection by PMC/Authority	2			
15	Non-maintenance of statutory compliances. Marking Parameter: 100% deduction for non-maintenance beyond 1 month				
	vi. Vehicle Insurance & fitness Data Source: Random inspection	1			
	vii. PF/ESIC compliance Data Source: Random inspection	1			
	viii. Income Tax Data Source: Random inspection	1			
	ix. CTE/CTO Data Source: Random inspection	1			
	x. Workman compensation Data Source: Random inspection	1			
	Grand Total	100			

4. Mandatory Facilities

During the Active Operations Period and until the hand back of the Collection, Transportation the Concessionaire shall, unless suitably modified with mutual consent and duly documented in the O&M Plan and/or O&M Manual, operate and maintain the project Facilities as per **table 9**.

A. Common Facilities for C&T

Table 9

S. No.	Description of Mandatory Facility	Operation and Maintenance Standard
1	Waste Transportation Vehicles	▪ Regular preventive maintenance of vehicles ▪ Maximum period of non-operation: 5 days ▪ Data recording and reporting format to be decided in consultation with the Project Monitoring Consultant and to form part of the O&M Plan and/or O&M Manual.
2	MRF cum Transfer point	▪ Uninterrupted operation of waste transfer point ▪ No traffic jam around Transfer point ▪ No cracks/ruptures in the top RCC floor and shed structure
3	Litter bins	▪ Regular preventive maintenance of Litter bins and platform ▪ No cracks/ruptures in the top RCC layer

5. Routine Maintenance Standards

5.1 In order to ensure smooth and uninterrupted operations, routine maintenance of the Project Facilities shall include but not be limited to:

(a) Prompt repairs of vehicles & Bins;

(b) Replacement of scrap vehicles and other civil works which are part of the Project Facilities;

(c) Keeping the area around litter bin in a clean, tidy and orderly condition;

(d) Taking all reasonable measures for the safety of all the workmen, material, supplies and equipment, vehicle deployed for work.

5.2 The following standards in order of preference shall be adopted in consultation with the PMC, unless otherwise specified:

(a) MSW Rules

(b) Any other standards specified by statute and Applicable Laws

(c) Bureau of Indian Standards (BIS)

(d) Suitable specification/standard devised by the PMC

(e) Any other standard proposed by the Concessionaire and approved by the Project Monitoring Consultant

5.3 The Concessionaire, for the purpose of routine maintenance shall, in consultation with the Project Monitoring Consultant, set forth such criteria as to conform to good international standards and Good Industry Practice for sound maintenance of the Project Facilities.

5.4 The Concessionaire shall regularly carry out the necessary preventive maintenance activities for the Project Facilities to ensure adherence to the Construction Requirements/ specifications.

6. Emergency Maintenance

6.1 The Emergency Response Protocol ("ERP") shall be developed by the Concessionaire in consultation with the PMC. This shall be a part of the O&M Manual developed by the Concessionaire.

6.2 The ERP shall set out steps to be taken and measures to be adopted by the Concessionaire in responding to dealing with Emergency including those situations related to vehicle accidents involving personal injuries or fatalities, property damage and force majeure as follows:

(a) In the event of an Emergency, the Concessionaire shall immediately carry out an inspection of the area affected by the Emergency. The Concessionaire shall promptly adopt necessary measures to restore the work to standard condition of operations.

(b) The Concessionaire shall ensure that sufficient staff, equipment and materials, including without limitation medical assistance are available to respond to Emergency within reasonable period at all times during the Active Operations Period.

6.3 In case of Emergency, the Concessionaire shall

(a) Carry out such emergency maintenance and repairs as may be required to repair the damages, if any, in consultation with the Project Monitoring Consultant to ensure that the Project Facilities are returned to normal operating standards as quickly as possible

(b) Take all necessary measures to minimize pollution in accordance with the procedure specified in the O&M Plan/ Environmental Management Plan.

7. Reporting

a) The Concessionaire shall ensure that AUTHORITY and Project Monitoring Consultant is provided with adequate information and forewarned of any event or any other matter affecting the Project Facilities to enable them to control/minimize any adverse consequences.

b) Concessionaire shall ensure to submit the annual reports as per Form III & Form IV of Solid Waste Management Rule 2016.

c) The frequency and formats of other reports i.e., daily, weekly, Monthly, quarterly to be submitted shall be finalized in consultation with the Project Monitoring Consultant and form part of the O&M Plan and O&M Manual.

d) The Concessionaire shall furnish to AUTHORITY three copies of "as-built" Drawings of any construction undertaken after COD.

`

SCHEDULE "3"

PAYMENT OF TIPPING FEE

2.0 Tipping Fee

2.1 Tipping Fee for RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8of Lucknow Municipal Corporation

TIPPING FEE

(Amount in Rupees)

Sr. No.	Description	Unit	Quantity	Rate (in Rs.)	Amount
1	First Year Tipping Fee Required for Door-to-Door collection of Municipal Solid Waste, transfer to MRF/TS/designated site, recovery of recyclables and User Charges Collection.				
1(a)	Residential Household	Per Household/day	75682		
1(b)	Commercial Unit	Per Commercial Unit/day	1645		
1(c)	Bulk waste Generator (80kg/unit) Residential Apartments	Per Bulk waste Generator Residential/day	473		
1(d)	Bulk waste Generator (80kg/unit) Commercial Units	Per Bulk waste Generator Commercial/day	71		
2	Unit charge for Roads Sweeping by Manual or Mechanical means or combination of both, cleaning of footpath and removal of Litter. Considerable Sweeping Passes in each Km Road Length: (a) Four Passes for 4 and above lanes (b) Two Passes for 2 lane road (c) One Passes for Single Lane Road/Gali.	Per KM-Passes /day	1224		
3	Unit charge for Drain cleaning (maximum depth - 4feet) by Manual or Mechanical means or combination of both.	Per KM/day	104		

Note: Quantity may very +/- 20%

1. Tipping Fee for Door-to-Door Collection, Segregation at MRF and Transportation of MSW = TF*W*F
Where,

TF is the Tipping Fee Rate per MT of waste transported to Processing Plant

W is the actual Weight of waste Transported to Processing Site

F is **Multiplication Factor for performance-based payment equals to the ratio of** Total Marks obtained and Total Marks designated for 100% performance of work in Schedule 8 of this Concession Agreement.

SCHEDULE "4 "

Performance Security for Operation & Maintenance Requirements

The AUTHORITY

LUCKNOW NAGAR NIGAM

Lucknow, Uttar Pradesh

WHEREAS

1. …….. (The "Concessionaire") and the LUCKNOW NAGAR NIGAM (the "Authority") have entered into a Concession Agreement dated …….. (the "Agreement") whereby AUTHORITY has agreed to the Concessionaire undertaking the Door-to-Door Collection & Transportation of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8of Lucknow Municipal Corporation, subject to and in accordance with the provisions of the Agreement.

2. The Agreement requires the Concessionaire to furnish a Performance Security to AUTHORITY in a sum of Rs..... (Rupees ..... only) (The "Guarantee Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, towards Construction and Operation &Maintenance of the Project (as defined in the Agreement).

2. We ……through our Branch at…….. (The "Bank") have agreed to furnish this Bank Guarantee by way of Performance Security.

NOW THEREFORE, The Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Concessionaire's obligations during the Operation & Maintenance Period, under and in accordance with the Agreement, and agrees and undertakes to pay to AUTHORITY, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the Guarantee Amount as AUTHORITY shall claim, without AUTHORITY being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from AUTHORITY, under the hand of the Additional AUTHORITY, stating that the Concessionaire has committed default in the due and faithful

performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that AUTHORITY shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Operation & Maintenance Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the Bank, notwithstanding any differences between AUTHORITY and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Concessionaire for any reason whatsoever.

3. In order to give effect to this Guarantee, AUTHORITY shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Concessionaire and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for AUTHORITY to proceed against the Concessionaire before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by AUTHORITY against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to AUTHORITY, and the Bank shall not be released from its liability and obligation under these presents by any exercise by AUTHORITY of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of AUTHORITY or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by AUTHORITY in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee will remain in force until compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is

made by the Authority on the Bank under this Guarantee, no later than 6 (six) months from the date of expiry of this Guarantee, all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.

8. The Performance Security will be valid for 12 months and shall be renewed before its expiry till the end of concession period.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of AUTHORITY in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred Branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of AUTHORITY that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months from the date hereof or until it is released earlier by AUTHORITY pursuant to the provisions of the Agreement.

Signed and sealed this ……. day of……., 20…… at ……..

SIGNED, SEALED AND DELIVERED

For and on behalf of the BANK by:

(Signature)

(Name)

(Designation)

(Address)

NOTES:

The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

SCHEDULE "5"

Date: _____

LETTER OF AUTHORISATION

To Whomsoever it may Concern

This is to confirm that to pursuant to the Concession Agreement dated _____ entered into between the AUTHORITY and _____ ("the Concessionaire"), the Concessionaire has been authorised to **RFP for Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8of Lucknow Municipal Corporation** for the city of LUCKNOW and for that purpose, to apply for and obtain all approvals, licenses and permits required therein and to avail the utilities such as power, water, telecommunication and any other incidental utilities or services required in connection therewith.

Yours faithfully,

MUNICIPAL COMMISSIONER

LUCKNOW NAGAR NIGAM,

LUCKNOW

Schedule "6"

<u>घर - घर से प्रत्येक दिन अपशिष्ट संग्रहण के लिए निर्धारित सेवा शुल्क</u> (रुपया में)

Schedule "7"

APPLICABLE PERMITS

1. Applicable Permits

1.1 The Concessionaire shall obtain, as required under the Applicable Laws, the following Applicable Permits on or before the Appointed Date, save and except to the extent of a waiver granted by the Authority in accordance with Clause 4.2.1.

Sl No	Approval/ Clearances	Concerned Agencies	Responsibility
1	Site Authorization under MSW Rules	SPCB	Concessionaire
2	License in accordance with the rules and provisions of Labour (Regulation and Abolition) Act, 1970	MoLE	Concessionaire
3	Consent to establish under Air and Water Act	SPCB	Concessionaire
4	Consent to operate under Air and Water Act	SPCB	Concessionaire
6	NOC from Fire Services	Home Department	Concessionaire
7	Vehicle Registration	RTO	Concessionaire
8	Electricity Approval	Distribution Company	Concessionaire
9	All drawings and document approval	Authority	Concessionaire
10	Water Supply	Authority	Concessionaire

Where;

SPCB- State Pollution Control Board

MoLE-Ministry of Labour and Employment

MoEF- Ministry of Environment and Forest

RTO- Regional Transport Office

ERC- Electricity Regulatory Commission

DoI- Directorate of Industries

Schedule "8"

Safety requirements

1.1 Safety Requirements

Concessionaire is responsible for maintaining an incident/hazard free work environment. In compliance with these provisions, the Concessionaire shall comply with the latest edition of the Contractor Safety Requirements and perform the following:

a. Concessionaire is expected to pre-plan all work to minimize the potential for personal injury and property damage.
b. Develop the plan in a Project specific nature, which is designed to anticipate and identify hazards before work begins. Know in advance what measures will be taken to eliminate hazards or adequately control the anticipated risks for each scope of work. This information shall include, but is not limited to: scope of work, sequence of activities, site specific fall protection, high angle rescue procedures, safety control methods, training records, competent persons, lead abatement, asbestos abatement and excavations. The planning does not stop at the pre-planning stage, but is a continuous process of assessment and evaluation. When changes occur or new hazards are identified during the course of the Project, the work should be suspended while the plan is revised.
c. Ensure all subcontractors, suppliers and vendors are informed of their obligations with regard to safety and of the Contractor Safety Requirements.
d. Plan and execute all work to comply with the stated objectives and safety requirements contained in the Contractor Safety Requirements, contract provisions, federal, state, and local laws and regulations, and standards.
e. Concessionaire or their contractors/subcontractors with 25 or more employees on a single shift will establish a full-time position of a Contractor Safety Manager to perform safety in sections and training services. In addition, for every additional 100-job site employee added, an additional Safety Management Representative shall be required. In the event that the Contractor has less than 25 employees, the contractor shall appoint an onsite person who along with other concurrent duties shall serve as the Contractor's Safety Representative.
f. Concessionaire shall maintain its own orientation program for its employees that shall include as a minimum are view of(1) hazards present in the area in which they will be working and (2) the personal protective equipment and apparel the workers will be required to use or

wear as specified under Occupational Safety and Health Administration (OSHA).

g. Concessionaire shall provide and maintain a chemical and flammable material storage area as described in the Contractor Safety Requirements. Be responsible for the control, availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.

h. Take an active part in all supervisory safety meetings, including the discussion of observed unsafe work practices or conditions and a review of any incidents and corrective actions. Additionally, encourage, solicit and follow up on safety related suggestions from Concessionaire employees.

i. Report all injuries and incidents in a timely manner in accordance with federal and/or state laws and regulations and the Contractor Safety Requirements.

j. Analyse all incidents and implement immediate corrective action.

k. Provide job supervisors with appropriate training materials to conduct weekly safety meetings and attend said meetings to evaluate their effectiveness.

l. Review safety meeting reports submitted by job supervisors and take necessary action to ensure that the job supervisors hold meaningful weekly safety meetings.

m. Implement safety-training programs for Contractor supervisors and employees applicable to their specific responsibilities.

n. Maintain list on-site of personnel available for first aid and emergency treatment for injured Contractor employees.

o. Concessionaire will be responsible for providing a safety orientation training session for all workers before they are allowed to begin work. The orientation safety training will be conducted by the authorized representative as suggested by AUTHORITY and will include a summary of the Contractor Safety requirements/ Heads-Up Safety Training and awareness.

p. At a minimum Contractor representative to adequately train its employees according to applicable safety standards. This training may include but is not limited to: fall protection, fire watch, scaffolds, forklifts, excavation, ladders, confined space entry, respiratory protection, OSHA-PSM (Process Safety Management), grounding, shoring and traffic control etc.

q. In the event of a work-related incident resulting in a Contractor employee injury or near miss, Contractors shall notify their Appointed Representative immediately.

r. Contractors shall provide the appointed representative with an initial report of incident, in writing, within 24 hours of the accident. Hard copy

or electronic formats are acceptable.

s. Contractors shall provide a completed accident investigation report within three (3) working days of the incident. In the event, their investigation requires more time to investigate due to the complexity of the incident, Contractors shall communicate to the appointed Representative in writing including intimation to higher authorities of availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.

t. All first aid injuries shall be documented for record keeping purposes. In the event a first aid case develops into a Contractor employee injury, accident reporting and investigation procedure shall be initiated as outlined previously.

u. In order to maintain a safe and healthy work environment in emergency situations, Concessionaire has developed this emergency action plan to help safeguard Contractor employees while working on AUTHORITY Sites. All Contractor employees will be trained in the use of this plan and informed of their role in implementing it during their required safety orientation training. This policy is mandatory and must be strictly followed by all Contractors and their personnel while working on Sites.

v. When notified of an emergency evacuation (an audible alarm/verbal announcement will be used by Concessionaire to alert employees of an evacuation), Contractors must immediately. Evacuate their personnel from the Project Site, perform a head count and report missing personnel to concerned in-charge of the facility and take appropriate steps for investigation. When evacuating any building, structure or job site, employees should utilize the nearest exit to them. Personnel will remain at the designated site until an all-clear is announced or further evacuation steps are ordered.

w. Concessionaire shall comply with the latest revision Safety Rules & Procedures Permit. Contractors shall provide adequate fire protection equipment in each of their storage areas, offices and other temporary structures.

x. Concessionaire is responsible for orienting employees on the specific safety rules that must be followed by all persons working on Project Facilities. Other personal protective equipment (PPE) is also required in accordance with the appropriate safety standards and equipment as set by the manufacture's specifications. A list of the minimum personal protective requirements is as follows:

    i. The Concessionaire shall be responsible for providing and ensuring the use of required personal protective equipment for its employees.

    ii. Approved hard hats, shall be worn at all times while on the Site. It

is required that each employee use an American National Standards Institute (ANSI) approved hardhat.

iii. Safety glasses, which meet applicable ANSI standards, are required at all times while on the Site and should include approved side shields. Only clear safety glasses are allowed to be used inside buildings or enclosed structures. Shaded goggles or hoods may be used while welding or cutting requires. Prescription safety glasses with self-tinting capabilities may be worn on-site.

iv. PPE shall be worn while travelling from the security gate, while travelling through the plants, working outside or otherwise engaged in work at each station, except in areas specifically designated as PPE not required.

v. Concessionaire's vendors and visitors will be required to meet these same standards.

y. Good housekeeping affects safety, quality and production. It is the responsibility of Concessionaire onsite to keep their work area clean. Concessionaire are responsible or trash and debris that is generated by their work. Trash and debris must be collected and placed in proper containers on a daily basis.

z. Trash shall not be randomly thrown off a floor or through openings in the floor. Trash chutes, trash boxes, or other approved means such as barricading and/or flagging shall be utilized.

aa. Safety requirement mentioned in the Environment and Social Impact Assessment (ESIA) Report shall be complied in accordance to Schedule XXI and Schedule XIV.

Schedule "9"

Reports

1. Door to Door/Street level Primary Solid Waste Collection Service

Table 1: Deployment of Waste Collection Vehicles

Route No.:			Route No.:		
Vehicle Type:			Vehicle Type:		
Ward:			Ward:		
Halt point	Time	Area to be serviced	Halt point	Time	Area to be serviced
Recycling Center		ID of Recycling Center	Recycling Center		ID of Recycling Center
End point		Compactor Location ID	End point		Compactor Location ID

Table 2: SCP's / Street Corner bins situated in areas covered in Door to Door/Street level collection system

ID: Ward/ Location	Capacity of Solid Waste (no. of bins)	Capacity of Silt (no. of bins)	Whether it receives waste from non-street level areas as well?	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 3: Recycling Centers situated in areas covered in Street level collection system

ID: Ward/ Location	No. of Staff to be deployed	Open Timings	Weigh-bridge capacity	Computerized (Y/N)	Nature of dry waste that is accepted

2. Collection of Solid Waste from Commercial Establishments/ Market Areas

Table 4: Deployment of Waste Collection Vehicles

Route No.:			Route No.:		
Vehicle type:			Vehicle Type:		
Ward:			Ward:		
Halt point	Time	Area to be serviced	Halt point	Time	Area to be serviced
Recycling Center		ID of Recycling Center:	Recycling Center		ID of Recycling Center:
End point		Compactor Location ID:	End point		Compactor Location ID:

Table 5: Compacting Servicing Stations for solid waste collection from

commercial establishments

ID: Ward/ Location	Mobile/ Fixed	Capacity	Whether it receives waste from non-commercial establishment	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 6: SCP's / Street Corner bins situated in commercial areas/ markets

ID: Ward/ Location	Capacity of Solid Waste (no. of bins)	Capacity of Silt (no. of bins)	Whether it receives waste from non-commercia l	No. of times per day – to be cleared	Scheduled clearing time(s)

Table 7: SCP's / Street Corner bins specifically for drain silt

ID: Ward/ Location	Capacity of Silt (no. of bins)	Whether it receives waste from non-commercial establishment	No. of times per week – to be cleared	Days of week when to be cleared	Scheduled clearing time(s)

3. Clearing Service of Recycling Centers

Table 8: Clearing Service of Recycling Centers

Rout No.:			Rout No.:		
Vehicle type:			Vehicle Type:		
Ward:			Ward:		
Waste type collected by vehicle:			Waste type collected by vehicle:		
Halt point	Time	Location ID to be serviced	Halt point	Time	Location ID to be serviced
End point		Disposal Location ID:	End point		Disposal Location ID:

4. Bin Washing Schedule

Table 9: Bin Washing Schedule

Location ID	No. of Bins at location	Date of proposed washing	Time of proposed washing

5. Vehicle Servicing Schedule

Table 10: Vehicle Servicing Schedule

Vehicle Registration	Type of Vehicle	Date of proposed washing	Date of proposed

6. Fleet Deployment for the Month

Table 11: Fleet Deployment for the Month

Reg. No. Make	Vehicle Type	Volume (cu m)	SW Capacity (MT)	Green waste capacity (MT)	Silt Capacity (MT)

7. Plan for deployment of manpower-

Table 12: On Vehicles (including secondary transportation vehicles, Hook Loaders etc.)

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Vehicle Reg No. on which deployed

Table 13: On Static Compactors

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Location ID on which deployed

Table 14: On Recycling Centers

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Location ID on which

Table 15: Supervisory Manpower

Employee ID:	Name of Employee	Father's Name	Designation	Mobile No	Area of Supervision

8. Daily (Real Time) Reports

Following reports are generated daily on real time basis.

a) Report on Door-to-Door Collection from Households

Date_____

Colony/ Locality (covered under door to door) _____

Table 16: Household collection report

Waste Collector ID*	Service Area/Beat	No of Households	No of Households	Time period during which

* Waste Collector ID shall be designed in such a manner that it reflects the linkage with type of vehicle that waste collector is assigned to (Motorized tricycle/E-rickshaws, Auto Tipper etc.)

Table 17: Exception reports (Not serviced Areas)

Service Area/Beat No.	No of Households in beat	Whether serviced previous day?	Reason for non-service	Action taken for remedy

Table 18: Motorized Vehicles deployment for door-to-door collection (Report from GPS data - real-time)

Route No. Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time**	Scheduled end time Actual End time*	Drivers' report on waste collection	Quantity of Recyclable waste delivered at Recycling
				<Report sent Visa SMS at the end of route>	

* Excess/ Normal/ Short, **SMS shall be sent by driver at the start of route

Table 19: Exception Report on vehicle deployment (Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled start time	Likely start time	Reason for delay	Remedial action

Table 20: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes	Normal Weight Routes No.	Short Weight Route No

Table 11: Report of SCP's/ Street Corner bins servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 22: Exception Report of SCP (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID	Scheduled clearing	Likely clearing time	Reason for delay	Remedial action

Table 23: Report of Recycling Centers servicing the colony/ locality

Location ID	Schedule d clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclabl e waste cleared	Whether non-confirming waste in the Center (Y/N)	Upload photo with date & time stamp

b) Collection and Transportation of SW from All Markets, Hotels, Dhabas, Restaurant, Banquet Hall, Institution, Farm House & Other Commercial Establishment

Date_____ Ward No. _____

Name of Market / Commercial or Institutional Area _____

Table 24: Deployment of Primary Collection &Transportation Vehicles for waste collection from such entities (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess /Normal/	Quantity of Recyclable waste delivered at Recycling

Table 25: Exception Report on deployment of Primary Collection & Transportation Vehicles
(Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled start time	Likely start time	Reason for delay	Remedial Action taken

Table 26: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes serviced	Normal Weight Routes No.	Short Weight Route No	Excess Weight Route No

Table 27: Report of SCP's/ Street Corner bins servicing the market/area

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF /disposal	Whether non-confirming waste in Dhalao?	Upload photo with date & time stamp

Table 28: Exception Report of SCP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID	Scheduled clearing time	Likely Clearing time	Reason for delay	Remedial action taken

Table 29: Report of Recycling Centers servicing the market etc.

Location ID	Scheduled clearing time	Actual Start time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste delivered at Recycling center	Whether non-confirming waste in the Center	Upload photo with date & time stamp

c) Report on Street Level Primary SW Collection System

Date_____ Ward _____

Table 30: Primary Collection &Transportation Vehicles deployment for street level collection (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess /Normal/ Short	Quantity of Recyclable waste delivered at Recycling center

Table 31: Exception Report on vehicle deployment (Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No.	Scheduled start time	Likely start time	Reason for delay	Remedial action taken

Table 32: Summary report of the trips

Type of vehicle	Total nos. of route	Nos. of routes serviced	Normal Weight Routes No.	Short Weight Route No	Excess Weight Route No

Table 33: Report of SCP's/ Street Corner bins servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 34: Exception Report of SCP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 35: Report of Recycling Centers servicing the colony/ locality

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Quantity of Recyclable waste cleared	Whether non-confirming waste in the Center	Upload photo with date & time stamp

d) Report on Compactor Stations

Date_____

Ward No._____

Table 36: Report of Fixed Compactor Station

Compactor Location ID	Scheduled clearing time(s)	Actual clearing time(s)	Time of arrival at SLF / disposal site	Hook Loader Reg No Driver Name Driver Mobile

Table 37: Report on Mobile Transfer Stations

Location ID	Vehicle Reg. No Driver Name Driver Mobile	Scheduled clearing time	Actual Clearing time	Time of arrival at SLF / disposal site

Table 38: Exception Report of Compactor Clearance (Where compacting station/Point has not been cleared within 2 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action Taken

e) Report on Collection and Transportation of Horticulture Waste:

Date_____ Ward no. ___

Table 39: Primary Collection & Transportation vehicles deployment for street level collection of Horticulture Waste (Report from GPS data– real-time report)

Route No Vehicle type	Vehicle Reg. No Driver Name Driver Tel No	Scheduled start time Actual Start time	Scheduled end time Actual End time	Drivers' report on waste collection enroute Excess

Table 40: Exception Report on Primary Collection & Transportation vehicles deployment
(Where Vehicle has not been deployed within 1 hour of scheduled start time)

Route No	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 41: Overall performance self-assessment of Ward

Estimated quantity of Horticulture Waste expected from ward (MT)	(a)
Horticulture Waste Collected at Street level (MT)	(b)
Approximate quantity of Horticulture waste that could not be collected	(c=a-b)
Collection Efficiency	(d=b/a in %)

f) Report on Collection and Transportation of Street Sweeping Waste/ Clearing of Bins

Date_____ Ward No. ____

Table 42: Report of Dhalao/ Street Corner bins designated for sweeping silt

Location ID	Scheduled clearing time	Actual Clearing time	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF/ disposal site	Whether non-confirming waste in SCP's	Upload photo with date & time stamp

Table 43: Exception Report of CSP Clearance (Where SCP has not been cleared within 1 hour of scheduled time)

Location ID.	Scheduled clearing time	Likely clearing time	Reason for delay	Remedial action taken

Table 44: Exception report where sweeping silt was found to be disposed in non-confirming manner (e.g. disposed in Dhalao meant for solid waste)

Location ID	Nature of Non-conformity	Approximate quantity of silt	Upload photo with date and time stamp	Remedial action taken

g) Report on collection and disposal of Drain Silt

Date_____ Ward No. _____

Table 45: Report of Clearing of Drain silt as requisitioned by LMC staff (Report from GPS data – real-time report)

Requisition ID Date and time of Requisition	Street ID and Name	Scheduled Clearing date and time	Actual Clearing date and time	Requisition - OPEN/ CLOSED	Cleared by- Vehicle Reg. No Driver Name Driver Mobile	Time of arrival at SLF / Disposal

Table 46: Exception Report of Drain silt clearance (Where silt has not been cleared within 1 hour of scheduled time)

Requisition ID Date and time of Requisition	Street ID and Name	Scheduled clearing date & time	Likely clearing date & time	Reason for delay	Remedial action taken

Table 47: Exception report where Drain silt was found to be disposed in non-confirming manner (e.g. disposed in SCP meant for Solid Waste)

Location ID	Nature of Non-conformity	Approximate quantity of silt found	Upload photo with date and time stamp	Remedial action taken

h) Bin washing Report

Table 48: Bin washing undertaken during the day

Location ID	No of Bins at location	Washing Time	Mechanical Washer Reg. No	Driver Name Tel No

Table 49: Exception report of Bins not washed in last week (to be submitted once a week – Every Sunday for last week)

Location ID	No of Bins at location	Last washing date	Reason for default	Remedial action taken

i) Report of Complaints Redressal System (real-time)

Date_____ Ward No. _____

Table 50: Report of complaints and their closure

Complaint ID Time	Source- Phone/ email / SMS	Nature of complaint	OPEN/CLOSED	If Closed, How addressed?	Date of redressal/ closure

9. Consolidated Report of Zone (Generated at the end of the day)

Table 51: Summary Report of Deployment of Vehicles/ Infrastructure

Main Activity	No of Routes/items to be serviced in the day	No of Routes/items actually serviced	No of Vehicles to be deployed in the day	No of vehicles actually deployed in	No of Manpower to be deployed	No of Manpower actually deployed
Door-to-door /street level						
Collection of SW etc. from Commercial etc.						
Collection of horticulture waste						
Collection of drain silt						
Collection of Sweeping Waste						
Clearing of Dhalao/ bins/ open sites						
Clearing of Fixed Compactor						
Collection of small dead animals						

Table 52: Summary Report of Support services

Main Activity	Expected/ received transactions /	Actual No of Transactions processed/	Unit (of transactions)	No of Manpower to be deployed for support	Actual no of manpower deployed
Workshop			Cleaning of vehicle Repair of vehicles		

Customer care (Redressal of complaints)			Complaint calls/ email/SMS Requisitions		
IT System			Receipt of Field reports: e.g- Vehicle deployment report Dhalao/bin clearing report Route servicing report Manpower deployment Fixed Compactor		

10. Inspection Report of SCP's, Open Sites, Street Corner Bins and other infrastructures. (Once a month)

Table 53: Conditions of SSC's

Location ID	Date of inspection	Physical Condition	Signboard	Paint	Flooring	Bins	Littering outside the Dhalao & Any Other	Washing date(s)

Table 54: Conditions of Fixed Compacting Stations

Location ID	Date of inspectio	Physical Condition	Signboard	Paint	Flooring	Bins	Any Other	Washing date(s)

Table 55: Conditions of Street Corner Bins

Location ID	Date of inspection	Physical Condition	Signboard	Paint	Flooring	Littering Around bins	Any Other	Washing date(s)

Table 56: Conditions of Mobile Transfer Stations (Refuge Collector cum Compactors)

The Dust/cloud formation during mechanical sweeping of roads due to non-working of water nozzle fitted In mechanical sweepers	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**
Non-cleaning of bell mouths and gully gratings						

Table 57: Conditions of Auto-tippers (4-Wheeler & 3-Wheeler)

Vehicle Registration No.	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**

Table 58: Conditions of Hook-loader vehicles

Vehicle Registration No.	**Date of inspection**	**Vehicle Condition**	**Any damage**	**Paint & signage**	**Is GPS functional or not**	**Last Service date**

Note: The Monthly Action Plan of works for the next month shall be submitted on 28th of preceding month. This shall be submitted in soft form (the file shall be uploaded in MIS which shall generate reports automatically) as prescribed by PMC/Authority.

Schedule "10"

Annual Price Adjustment

1. Price Escalation/Adjustment formula

The contract price shall be adjusted for Increase or decrease in rates and price of labor, fuel and lubricants in accordance With the following principles and procedures as per formula given below. The amount certified in each payment certificate will be adjusted by applying respective price adjustment factor to the payment amounts due

Price adjustment shall be calculated only for the work earned out within the stipulated time or extension approved by the Authority

Price adjustment shall be calculated for the local components of the payment for the work done as per formula given below and expressions and meanings are assigned to the work done during each month:

Various Components are depicted as follows:

- 50% towards fuel components
- 50% towards labor cost

To the extent that full compensation for any rise or fall in the costs to new operator is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such rise or fall in costs.

2. Adjustment for fuel and lubricants

Price adjustment for increase or decrease in the cost of fuel and lubricants shall be paid in accordance with the following formula:

Vf= 0.85 * Pf/100 * R * (Fi – Fo) / Fo

Vf = increase or decrease in the cost of work during the year under consideration due to changes in the rates of fuels and lubricants.

Fo = The official retail price of non-branded Diesel at the existing consumer pumps of IOC at ULB, on the date of submission of Bids

Fi = The Average Annual official retail price of non-branded Diesel at the existing consumer pumps of IOC in ULB area, on the year previous to the one under consideration to which a particular interim payment certificate is related

Pf = Percentage of fuel and lubricants component of the work

shall be 50% R = Total value of work done in the month

3. Adjustment for Labor Component

Price adjustment for increase or decrease in the cost due to labor shall be paid in accordance with the following formula:

Vl = 0.85 * Pl/100 * R * (Li-Lo) / Lo
Vl = increase or decrease in the cost of work during the year under consideration.
Lo = the labor wages for unskilled adult male mazdoor notified by the ULB authority on the bid submission date.

Li = the labor wages for unskilled adult male mazdoor notified by the ULB authority on the last date of the year previous to the one under consideration to which a particular interim payment certificate is related.

Pl = Percentage of labor component of the work shall be 50% R= Total value of work done during the month

4. Final Price is sum total of Vf+Vl

5. Calculation of O&M Fee rate applicable for the year
The O&M Fee rate for a particular year would be calculated using the following formula:

Tn = To x (1+n*X%)

Where, Tn = O&M Fee rate applicable for the year 'n'
To = Base O&M Fee (as quoted by the Selected Bidder)
X% = Price escalation calculated as in point 4 of this schedule or 5% whichever is less.

NOTE:

- Price adjustment shall be applicable on all the monthly bills passed by the Official-in Charge for payment.
- Price adjustment shall be applicable at the start of every year post 365 days after COD date. COD here refer to date of start of commercial operation.
- The base price shall be the one on the date of bid submission
- Various cost components mentioned above are pre-decided and shall not be amended during entire contract period and no claim shall be entertained from the concessionaire in this regard.
- The adjustment may be positive or negative depending upon the rise or fall of Index/price/wages.

Taxes

GST is not applicable in this contract. In case in further, it GST is imposed that should be borne by Municipal corporation Lucknow Any other Taxes is extra as actual basis.

Schedule "11"

Project Milestones

Sl. No.	Indicative Milestone	Timeline (Days)
1	Issuance of LoA	0
2	Signing of Concession Agreement - Commencement Date	75
3	Appointment of PMC/ Equivalent Group of Officer	75
4	Submission of Draft OP	105
5	Review & Comments to be given by PMC (with approval of the Authority)	120
6	Submission of Revised OP (Version I)	127
7	Second Review & Comments to be given by PMC (with approval of the Authority)	134
8	Submission of Final OP and Approval by Authority	141
9	Achievement of Financial Closure	150
10	Completion of Handing Over of Zone to Concessionaire – Commercial Operation Date (COD)	180

Schedule "13"

Micro Implementation and Operation Plan

a) This schedule provides an indicative framework for preparation of MIOP. The Concessionaire shall prepare Draft Seasonal Action Plan (SAP) on the basis of MIOP. The Seasonal Action Plan shall be submitted by the Concessionaire before 15 working days prior to start of monsoon season. (SAP should be for three period's 1. Summer Period, 2. Monsoon Period, 3. Winter Period). PMC shall review and suggest modifications in the plan in consultation with Authority within seven working days, if any. Concessionaire has to submit final SAP within seven working days.

b) The Concessionaire has to formulate OP for the following activities, but not limited to:

1. **Consent, Clearances and Approval**

The Concessionaire shall prepare a list of consent and clearances required for the Project. The Concessionaire shall define the relevant body and timeline for each consent and clearance.

2. **Labour Absorption**

The Concessionaire may absorb the manpower of the existing Concessionaire for performing its operations to the extent possible.

3. **Route Plan/Beat-wise Plan for Primary Collection**

Concessionaire shall prepare micro level route /beat-wise plan for all the wards. The Plan shall specify location, dedicated timing, manpower, supervisory staff and infrastructure, allocated secondary collection points for waste storage for each route/beat. The Concessionaire shall also take into account extraordinary circumstances and make modifications in the plan accordingly.

4. **Route Plan for Collection of DHW**

Concessionaire shall be responsible for collecting segregated domestic hazardous waste from the households on bi-weekly basis and transport it to the Deposition Centre for its safe storage. Concessionaire shall prepare micro level route /beat-wise plan for bi-weekly collection of DHW which shall be accommodated in primary collection

5. Plan for Removal of horticultural waste

The Concessionaire shall prepare plan for removal of horticultural waste from colonies and road sides in the project area. The removal should be done with the help of designated vehicles. The concessionaire should also be prepared for emergency situations for removal of garden and horticultural waste

6. Asset Deployment Schedule

The Concessionaire shall prepare an Asset Deployment Schedule. The Schedule shall specify the asset deployed for all the activities as required for fulfilling the Project Scope.

7. Allocation of Priority Services Team

Concessionaire shall deploy a Priority Services team consisting of six workers and one vehicle for extraordinary circumstances. The Concessionaire shall nominate one nodal person under MIOP for each ward that shall be responsible for allocation of the Priority Services Team. Priority Services Team should be assembled within two hours.

8. Waste Diversion:

The Concessionaire shall fulfil the obligation of providing the required quantity of biodegradable and recyclable waste to the decentralized units. In this respect, the Concessionaire shall refer section 5.1under PIM, prepare a list of decentralized units and update the list, as the case may be. The Concessionaire shall define the capacity of decentralized plants, respective waste diversion quantities and the planned sources, from where the waste shall be diverted. The Concessionaire shall also prepare plan for setting up of ward wise recycling centres and other means to divert maximum waste at decentralized level

9. Operation and Maintenance Plan for DHW Deposition Centres

Concessionaire is also responsible for the operation and maintenance of DHW Deposition Centres. The Concessionaire shall deploy necessary manpower for the functioning of DHW Deposition Centres. The Plan shall include the no. of deposition centres, dedicated locations attached with the centre and the quantity of DHW. The Concessionaire shall indicate the schedule for the secondary transportation of DHW to Hazardous Waste Facility. The Authority shall be responsible to take note of the

schedule, and organise secondary transportation of DHW.

10. Collection of User Charges

Concessionaire shall be responsible for the collection of user charges from households as well as commercial establishments for providing door to door collection services. The Concessionaire shall prepare the mechanism for user charges collection on monthly basis. The Concessionaire shall specify the coverage, mode of payment collection system and necessary manpower requirement for the collection of user charges.

11. Management Information System

The Concessionaire shall set-up a real-time monitoring system for tracking the daily Project Activities. The Concessionaire shall prepare MIS Formats for reporting the performance to IE and Authority on daily, weekly and monthly basis. The Concessionaire shall prepare a list of all moveable assets, bins and equipment's along with its RFID no. The Concessionaire shall also
specify space requirement for setting-up centralised Control Room in MIOP.

12. Complaint Redressal System

The Concessionaire shall set-up Complaint Redressal System for handling complaints related to Solid Waste. The Concessionaire shall prepare daily log of complaints received, action taken and complaints closed. The Concessionaire shall also display telephone nos. of concerned officials at public locations.

13. Financial Model

The Concessionaire shall submit a soft copy (excel format) of the Financial Model for this Project

14. Asset Maintenance Schedule (O&M plan)

The Concessionaire shall prepare a maintenance schedule for all the project assets. The Schedule shall be made for all the vehicles, equipment's, secondary storage points and bins. The Schedule shall contain the GPS no., date of purchase of asset, servicing schedule and servicing report. The Concessionaire shall also specify the replacement schedule for the project assets. The Schedule shall be align with the KPIs.

15. Garbage Free Vulnerable Points

The Authority shall identify the Garbage Vulnerable Points which needs to be cleared and maintained on daily basis as Garbage Free Vulnerable Points. Concessionaire shall

prepare a maintenance schedule for maintaining the specified areas as Garbage Free Vulnerable Points.

16. Disaster Management Plan

The Concessionaire shall prepare Disaster Management Plan as per the conditions given in Schedule 19.

17. IEC Plan

The Concessionaire shall prepare IEC Plan for creating awareness regarding solid waste management activities. Concessionaire shall specify frequency of IEC programmes, type of activity, date, location, population coverage and maintain records of activities including photographic evidences.

18. Carcass Disposal

The Concessionaire shall deploy one vehicle for collection and transportation of carcasses to the designated facility/ site as prescribed by the Authority during the preparation of MIOP

19. Night Conservancy works

The Concessionaire shall deploy required manpower and infrastructure to perform night conservancy which shall include a minimum of 50 (fifty) percent of mechanized street sweeping and clearance of SCP's.

Indicative Norms to be considered by the Concessionaire while preparing MIOP

S.no	Activity	Indicative Norms
1.	E-rickshaw	Once e- rickshaw for collection from 300 HH per trip (as per Authority recommendation)
2.	Auto Tippers of 1.8 cum Capacity	Once auto tipper for collection from 600 HH per trip (as per Authority recommendation)
3.	Deployment of Mechanical Sweeping Machines	Major Roads having width of 60 ft and above which includes PWD and National Highway. The speed of the vehicle shall be 5-8 km per hour
4.	Cleaning of desilted waste from drains	Cleaning of desilted waste of Storm Water Drains upto 4 feet as per the Authority recommendations.

5.	Secondary Collection bins	Green for wet waste, blue for dry waste, brown for street sweeping waste and black for DHW & Sanitary Waste. Bins should be placed on approval of the Authority and based on public needs.
6.	MTS and FCTS	The FCTS contains civil structure, detachable containers and hook loaders. The MTS is movable refuse compactors for direct transferring of waste from primary collection vehicles. Both MTS & FCTS shall maintain a reciprocative balance but should not go below minimum number
7.	Back up	Minimum 10% backup on the vehicle infrastructure for C&T

2114

LUCKNOW MUNICIPAL CORPORATION, LUCKNOW

Tender Notice No.: D.368/EE/23 **Dated:** 14/8/23

NOTICE INVITING TENDERS

Online bids are invited from experienced bidders for the following work as listed below and will be received online on the website https://etender.up.nic.in as per time schedule (key dates) in the notice published on the above website.

Sl. No.	Name of Work	Tender Fee Rs.	Earnest Money Rs.	Time Period Years
1.	**Request for Proposal for Selection of Concessionaire for Transportation & Processing of Construction & Demolition (C&D) Waste and Disposal of Residual Waste to SLF in Lucknow Municipal Corporation on PPP Mode**	**Rs. 10,000/- (Rupees Ten Thousand Only)**	**Rs 20,00,000 /- (Rupees Twenty Lacs Only)**	**6 Months Construction & 10 Years O&M**

Manual for paying processing Fee & EMD Payment Online

- Bidder needs to go to https://induscollect.indusind.com/pay/index.php
- Fill the details in the form and select the payment type Tender Fee/EMD/Security Deposit with other details.
- Post validating, Bidder needs to click on "proceed" Button.
- Bidder will get the option to pay through Credit Card/Debit Card/Net Banking & NEFT/RTGS Challan Mode.
- For NEFT/RTGS Challan mode – after generating the challan, bidder needs to initiate NEFT/RTGS through their bank as per the beneficiary details provided in the challan.
- Bidder can check the status of the payment.

Event of Calendar:

Sl. No.	Events	Date & Time
1.	Online Tender purchase start date	18/08/2023 by 5:00PM
2.	Online Tender purchase end date	11/09/2023 by 5:00PM
3.	Online Bid Submission End date	12/09/2023 by 5:00PM
4.	Pre-Bid Meeting (LMC Office Lalbagh, Lucknow)	25/08/2023 by 1:00PM
5.	Hard copy of technical submission end date	19/09/2023 by 5:00PM
6.	Technical Proposal open Date	15/09/2023 by 11:00AM

Note: The bidders shall have to submit their bids online and upload the relevant documents from as per key schedule (key dates).

1. The bidders intending to participate in this tender are required to get enrolled/ registered on the e-procurement web site https://etender.up.nic.in Enrolment /registration on the above portal is mandatory.
2. Tender documents can be purchased only online from https://etender.up.nic.in by making online payment as specified above as per key dates. The Bidders shall have to submit their Bids online and upload the relevant documents from as per time schedule (key Dates).
3. Conditional tender will not be accepted and liable to be rejected. LMC reserves the right to accept or reject any or all tender without assigning any reasons thereof.
4. Since the online bidders are required to sign their bids online using Digital Certificates. Contractors are advised to obtain the same at the earliest.

Environmental Engineer,
Lucknow Municipal Corporation,
Lucknow

2115

LUCKNOW MUNICIPAL CORPORATION, LUCKNOW

Tender Notice No.: D/389/E/23 Dated: 19/8/2023.

NOTICE INVITING TENDERS

Online bids are invited from bidders for **the following work as listed below** and will be received online on the website [illegible] as per time schedule (key dates) in the notice published on the above website.

Sl. No.	Name of Work	Tender Fee Rs.	Earnest Money Rs.	Time Period Years
1.	Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-1 of Lucknow Municipal Corporation.	Rs. 25,000/- (Rupees Twenty Five Thousand Only)	Rs 50,00,000 /- (Rupees Fifty Lacs Only)	10 Years Extendable to another 5 Years
2.	Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-2 of Lucknow Municipal Corporation.	Rs. 25,000/- (Rupees Twenty FiveThousand Only)	Rs 41,00,000 /- (Rupees Forty-One Lacs Only)	10 Years Extendable to another 5 Years
3.	Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-3 of Lucknow Municipal Corporation.	Rs. 25,000/- (Rupees Twenty Five Thousand Only)	Rs 92,00,000 /- (Rupees Ninety-Two Lacs Only)	10 Years Extendable to another 5 Years
4.	Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-4 of Lucknow Municipal Corporation.	Rs. 25,000/- (Rupees Twenty Five Thousand Only)	Rs 60,00,000 /- (Rupees Sixty Lacs Only)	10 Years Extendable to another 5 Years
5.	Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-5 of Lucknow Municipal Corporation.	Rs. 25,000/- (Rupees Twenty Five Thousand Only)	Rs 78,00,000 /- (Rupees Seventy-Eight Lacs Only)	10 Years Extendable to another 5 Years
6.	Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and	Rs. 25,000/- (Rupees Twenty Five Thousand Only)	Rs 98,00,000 /- (Rupees Ninety-Eight Lacs Only)	10 Years Extendable to another 5 Years

	Drain Cleaning in Zone-6 of Lucknow Municipal Corporation.			
7.	**Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, Installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-7 of Lucknow Municipal Corporation.**	**Rs. 25,000/- (Rupees Twenty Five Thousand Only)**	**Rs 78,00,000 /- (Rupees Seventy-Eight Lacs Only)**	**10 Years Extendable to another 5 Years**
8.	**Door-to-Door Collection of Municipal Solid Waste, Collection storage & transfer of Domestic hazardous waste, Installation and operation of MRF & TS/MTS/FCTS, Manual/Mechanical Road Sweeping and Drain Cleaning in Zone-8 of Lucknow Municipal Corporation.**	**Rs. 25,000/- (Rupees Twenty Five Thousand Only)**	**Rs 89,00,000 /- (Rupees Eighty-Nine Lacs Only)**	**10 Years Extendable to another 5 Years**

Manual for paying processing Fee & EMD Payment Online

- Bidder needs to go to https://induscollect.indusind.com/pay/index.php
- Fill the details in the form and select the payment type Tender Fee/EMD/Security Deposit with other details.
- Post validating, Bidder needs to click on "proceed" Button.
- Bidder will get the option to pay through Credit Card/Debit Card/Net Banking/Bank Guarantee & NEFT/RTGS Challan Mode.
- For NEFT/RTGS Challan mode – after generating the challan, bidder needs to initiate NEFT/RTGS through their bank as per the beneficiary details provided in the challan.
- Bidder can check the status of the payment.

Event of Calendar:

Sl. No.	Events	Date & Time
1.	Online Tender purchase start date	22/08/2023 by 5:00PM
2.	Online Tender purchase end date	18/09/2023 by 5:00PM
3.	Online Bid Submission End date	18/09/2023 by 5:00PM
4.	Pre-Bid Meeting	29/08/2023 by 1:00PM at LMC , Lalbagh, Lucknow
5.	Hard copy of technical submission end date	19/09/2023 by 5:00PM
6.	Technical Proposal open Date	20/09/2023 by 11:00AM

Note: The bidders shall have to submit their bids online and upload the relevant documents from as per key schedule (key dates).

1. The bidders intending to participate in this tender are required to get enrolled/ registered on the e-procurement web site https://etender.up.nic.in Enrolment /registration on the above portal is mandatory.
2. Tender documents can be purchased only online from https://etender.up.nic.in by making online payment as specified above as per key dates. The Bidders shall have to submit their Bids online and upload the relevant documents from as per time schedule (key Dates).
3. Conditional tender will not be accepted and liable to be rejected. LMC reserves the right to accept or reject any or all tender without assigning any reasons thereof.
4. Since the online bidders are required to sign their bids online using Digital Certificates. Contractors are advised to obtain the same at the earliest.

Environmental Engineer,
Lucknow Municipal Corporation

2117

LUCKNOW MUNICIPAL CORPORATION, LUCKNOW

Tender Notice No.: D-367/EE/23 Dated: 14/8/23

NOTICE INVITING TENDERS

Online bids are invited from experienced bidders for **the following work as listed below** and will be received online on the website https://etender.up.nic.in as per time schedule (key dates) in the notice published on the above website.

Sl. No.	Name of Work	Tender Fee Rs.	Earnest Money Rs.	Time Period Years
1.	**Request for Proposal for Selection of Concessionaire for Installation and Operation & Maintenance of 2000 MT Per Day capacity Municipal Solid Waste Processing Plant at existing defunct waste processing plant at Shivari on long term DBOT basis.**	**Rs. 25,000 /- (Rupees Ten Thousand Only)**	**Rs 1,60,00,000 /- (Rupees one crore sixty lacs only)**	**15 Years Expendable to 5 Years**

Manual for paying processing Fee & EMD Payment Online

- Bidder needs to go to https://induscollect.indusind.com/pay/index.php
- Fill the details in the form and select the payment type Tender Fee/EMD/Security Deposit with other details.
- Post validating, Bidder needs to click on "proceed" Button.
- Bidder will get the option to pay through Credit Card/Debit Card/Net Banking/Bank Guarantee & NEFT/RTGS Challan Mode.
- For NEFT/RTGS Challan mode – after generating the challan, bidder needs to initiate NEFT/RTGS through their bank as per the beneficiary details provided in the challan.
- Bidder can check the status of the payment.

Event of Calendar:

Sl. No.	Events	Date & Time
1.	Online Tender purchase start date	18/08/2023 by 5:00PM
2.	Online Tender purchase end date	15/09/2023 by 5:00PM
3.	Online Bid Submission End date	16/09/2023 by 5:00PM
4.	Pre-Bid Meeting (LMC Office Lalbagh, Lucknow)	25/08/2023 by 1:00PM
5.	Hard copy of technical submission end date	18/09/2023 by 5:00PM
6.	Technical Proposal open Date	19/09/2023 by 11:00AM

Note: The bidders shall have to submit their bids online and upload the relevant documents from as per key schedule (key dates).

1. The bidders intending to participate in this tender are required to get enrolled/ registered on the e-procurement web site https://etender.up.nic.in Enrolment /registration on the above portal is mandatory.
2. Tender documents can be purchased only online from https://etender.up.nic.in by making online payment as specified above as per key dates. The Bidders shall have to submit their Bids online and upload the relevant documents from as per time schedule (key Dates).
3. Conditional tender will not be accepted and liable to be rejected. LMC reserves the right to accept or reject any or all tender without assigning any reasons thereof.
4. Since the online bidders are required to sign their bids online using Digital Certificates. Contractors are advised to obtain the same at the earliest.

Environmental Engineer,
Lucknow Municipal Corporation,

REQUEST FOR PROPOSAL

FOR

"Selection of Concessionaire for Installation and Operation & Maintenance of 2000 MT Per Day capacity Municipal Solid Waste Processing Plant at existing defunct waste processing plant at Shivari on long term DBOT basis."

(RFP NO. D/367/EE/23 2023-24 Dated: 14/8/2023)

VOLUME-I

INSTRUCTION TO BIDDERS

Issued By: -
Municipal Commissioner,
Lucknow Nagar Nigam, Lucknow
Triloknath Road, Lalbagh,
Lucknow, Uttar Pradesh – 226001

PMU (RCUES) SNM, Lucknow

Disclaimer

The information contained in this **Request for Proposal** (hereinafter referred to as "RFP") document provided to the Bidders, by **Lucknow Nagar Nigam, Uttar Pradesh** or any of their employees or advisors, is provided to the Bidder(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. The purpose of this RFP document is to provide the Bidder(s) with information to assist the formulation of their proposals. This RFP document does not purport to contain all the information each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for ULB, their employees or advisors to consider the business/ Investment objectives, financial situation and particular needs of each Bidder who reads or uses this RFP document. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability, and completeness of the information in this RFP document and where necessary obtain independent advice from appropriate sources. ULB, their employees and advisors make no representation or warranty and shall incurno liability under any law, statute, rules, or regulations as to the accuracy, reliability, or completeness of the RFP document. ULB may, in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

PMU (RCUES) * SNN, Lucknow *

Table of Contents

1. Scope of Proposal 5
2. Eligible Bidders 6
3. Number of Proposals 6
4. Validity of Proposal 6
5. Proposal Preparation Cost 6
6. Earnest Money Deposit (EMD) 6
7. Format and Signing of Proposal 7
8. Original Document to be submitted by the Bidder 8
9. Proposal Due Date 9
10. Bidder's Responsibility 9
11. Pre-Proposal Meeting 10
12. Opening of Proposals and Clarifications 10
13. Evaluation 11
14. Execution of Concession Agreement 12
15. Performance Security 13
16. Cost of RFP document 13

Appendix – A 16
Appendix – B 20
Appendix – C 21
Appendix D 22
Appendix D1 26
Appendix – E 32
Appendix – H 34
Appendix – I 37
Appendix – J 39

SWM * PMU (RCUES) * Lucknow

i.) The Request for Proposal Document Contents

The RFP document includes following document.

Volume-I	Instruction to Bidders
Volume- II	Project Information Memorandum
Volume-III	Draft Concession Agreement

ii.) Schedule of Bidding Process

Lucknow Nagar Nigam would Endeavour to adhere to the following schedule during the Bidding Process:

Sl. No.	EVENTS	DATE & TIME
1.	Issue of RFP	
2.	Site Visits	
3.	Last date for receiving queries	
4.	Pre-Bid meeting	
5.	Proposal due date	
6.	Hard Copy Submission	
7.	Opening of technical bid	

SWMS * PMU (RCUES) Lucknow *

Section – I

Instructions to Bidders

MNWS * PMU (RCUES) * Lucknow

1. Scope of Proposal

1.1 The Solid Waste Management Rules, 2016 (herein after referred to as "SWM Rules") mandate that Urban Local Bodies (ULB) carry out treatment and disposal of Municipal Solid Waste (MSW in a scientific manner in waste processing and engineered sanitary landfill facilities. SWM Rules also mandate that MSW shall be treated, and only inert / non-biodegradable material should be landfilled.

1.2 With an objective to improve the urban infrastructure and municipal service delivery levels as per service level benchmark, the Government of India, along with the states and ULBs is implementing Swachh Bharat Mission.

1.3 Solid waste management, including development of Door-to-Door collection, segregation, transportation, waste processing and development of engineered sanitary landfill facilities, is a key component under Swachh Bharat Mission.

1.4 In view of providing clean and environment friendly waste management services in city, the authority i.e., Lucknow Nagar Nigam (LNN) intends to invite bid on PPP basis for **"Selection of Concessionaire for Installation and Operation and Maintenance of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis"** (hereinafter referred to as "the Project") for a Concession period of 15 years after COD and extendable to further 5 years for following major works to be executed by the successful bidder in the city:

A. Construction, Supply, Erection & Commissioning of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari and its operation and maintenance on long term DBOT basis.

B. Receive & Process of total MSW and Operation & Maintenance of 2000 MT Municipal Solid Waste Processing Plant as per MSWM Rules,

C. The bidder shall be responsible for supply erection and commissioning of new waste processing facility at village Shivari. Processing Plant can be of any suitable technology (Including Dry Waste & Wet Waste Processing unit) at Shivari Processing Plant Site. Plant shall comply minimum standards established in CPHEEO manual.

D. Transport & Disposal of Residual Inert Materials in the engineered sanitary landfill as per MSWM Rules, 2016.

E. Construction of Additional capacity of Leachate Treatment Plant and its operation & maintenance so that the effluent can meet the minimum standards of discharge limit set by CPCB.

1.5 The extension in contract period will be solely dependent upon concessionaire performance in first 15 years of contract period.

1.6 The brief scope of work is set out in Appendix A and the detailed scope of work has been set out in the Project Information Memorandum.

1.7 The proposals would be evaluated on the basis of the evaluation criteria set out in this RFP document as per Appendix D in order to identify the successful Bidder for the Project (hereinafter referred to as "Successful Bidder"). The Successful Bidder would then have to enter into a Concession Agreement with the ULBs and perform the

MWS * PMU (RCUES) * Lucknow

obligations as stipulated therein, in respect of the Project.

1.8 Terms used in this RFP document, which have not been defined herein, shall have the meaning ascribed thereto in the Concession Agreement.

2. Eligible Bidders

2.1 Bidders who fulfill the pre-qualification criteria indicated in Appendix D are eligible to submit Technical and Financial Proposal in response to this RFP Document.

2.2 The Bidders eligible for participating in the qualification process shall be a single Business Entity meeting the qualification criteria as set out in Proof of Qualification.

2.3 Only those Bidders whose Technical Bids meet the Minimum Technical Capability and Minimum Financial Capability Criteria shall be further evaluated on the basis of Evaluation Criteria as set out under Appendix D of the RFP. Bidders who's Bid do not meet the aforesaid Minimum Technical Capability and Minimum Financial Capability Criteria shall be rejected.

2.4 Any entity, which has earlier been barred by ULBs / Government of Uttar Pradesh / Any State Govt./Government of India/PSU from participating in any project being undertaken by ULB / Government of Uttar Pradesh/ Any State Govt., would not be eligible to submit a Proposal if such bar subsists as on the Proposal Due Date.

2.5 The Selected Bidder shall be required to incorporate a wholly owned SPV under the Companies Act, 2013 to act as the Concessionaire.

3. Number of Proposals

Each Bidder can submit only one (1) Proposal, in response to this RFP. Any Bidder who submits more than one Proposal, either individually or as a part of consortia, for thesingle town will be disqualified and cause the disqualification of such consortia.

4. Validity of Proposal

The Proposal shall remain valid for a period not less than 180 days from the Proposal Date (hereinafter referred to as "Proposal Validity Period"). LNN reserves the right to reject any Proposal, which does not meet the requirements.

5. Proposal Preparation Cost

The Bidder shall be responsible for all the costs associated with the preparation of its Proposal and its participation in the bidding process. LNN will not be responsible or in any way be liable for such costs, regardless of the conduct or outcome of the Proposal.

6. Earnest Money Deposit (EMD)

6.1 Each Proposal shall be accompanied by **EMD of Rs. 1,60,00,00,000.00 (Rupees One Crore Sixty Lacs Only)**, which shall be valid for a minimum period of 180 days (one hundred and eighty) from the bid due date, in the form of a demand draft/ bank



guarantee(as per format attached at Appendix H) issued by a Scheduled Commercial Bank in India having a branch in Lucknow, in favour of **"MUNICIPAL COMMISSIONER, LUCKNOW NAGAR NIGAM"**, payable at Lucknow (**"Bid Security"**) and refundable not later than 180 (one hundred and eighty) days from the Bid Due Date, except in the case of the Selected Bidder whose Bid Security shall be retained till it has provided a Performance Security in terms hereof.

6.2 The EMD of every unsuccessful Bidder would be returned within a period of 2 weeks from the date of announcement of the Successful Bidder. The EMD submitted by the Successful Bidder would be released upon furnishing of the Performance Security, by way of an irrevocable Bank Guarantee, issued by a scheduled bank/nationalised bank located in India in favor of **MUNICIPAL COMMISSIOEER, LUCKNOW NAGAR NIGAM** for due and punctual performance of the obligations relating to the Project.

6.3 The EMD shall be forfeited in the following cases:

a) If the Bidder withdraws its Proposal during the interval between the Proposal Due Date and expiration of the Proposal Validity Period.

b) If the Successful Bidder fails to provide the Performance Security within the stipulated time or any extension thereof provided by LNN; and

c) If any information or document furnished by the Bidder turns out to be misleading or untrue in any material respect.

7. Format and Signing of Proposal

7.1 The Proposal and all related correspondence and documents should be written in English. Supporting documents and printed literature furnished by the Bidder with the Proposal may be in any other language provided that they are accompanied by certified translations of the pertinent passages in English language. Supporting materials, which are not translated into English, may not be considered for the purpose of interpretation and evaluation of the Proposal, the English language translation shall prevail.

7.2 The currency for the purpose of the Proposal shall be the Indian Rupee (INR). If the Proposal is submitted in any other currency, LNN reserves the right to use suitable exchange rate for the purpose of uniformly evaluating all Proposals.

7.3 The Bidder would provide all the information as per this RFP. LNN would evaluate only those Proposals that are received in the required format and are complete in all respects.

7.4 The bidder shall upload the Technical Bid and Financial Bid in the respective links for the **"Selection of Concessionaire for Installation and Operation and Maintenance of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis."** on the website https://etender.up.nic.in

7.5 Each Proposal shall comprise the following:

A. Part I Submission

a. Covering letter in the format set out in Appendix B

b. Details of the Bidder in the format set out in Appendix C

c. Copy of the certificate of registration issued by the authority concerned (In case of a registered firm or society), Proof of qualification, Work Completion Certificates (for experience in Similar Projects), Financial Capability of the Bidder as set out in Appendix D.
d. Power of Attorney set out in Appendix E.
e. Anti – Collusion Certificate as per Appendix G
f. Proof of Qualification in the format set out in Appendix D
g. Tender Fee in the form of demand draft for Rs. **INR 25000/-including GST** in favour of **MUNICIPAL COMMISSIONER, LUCKNOW NAGAR NIGAM**, Payable at Lucknow
h. Technical Proposal as per format set out in Appendix I
i. Copy of Earnest Money Deposit as per Clause no. 6

B. Part II Submission

a. Financial Proposal in the format set out in Appendix J of this RFP.

7.6 Aforesaid Technical Bid and Financial Bid shall be uploaded in the respective links for the **"Selection of Concessionaire for Installation and Operation and Maintenance of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis"** on the website https://etender.up.nic.in

7.7 The Proposal scanned and uploaded shall be typed or written in indelible ink and each page shall be initiated by an authorized signatory of the Bidder, as applicable. All the alterations, omissions, additions, or any other amendments made to the Proposal shall also be initiated by the person(s) signing the Proposal.

8. Original Document to be submitted by the Bidder

8.1 Original Document to be Submitted by the Bidder: The Bidder shall be required to submit the following documents in Original in sealed envelope after the Bid Due Date but prior to the date of Opening of the Technical Bid as specified in the Bid document, in the office of the **MUNICIPAL COMMISSIOEER, LUCKNOW NAGAR NIGAM**, on the address as mentioned in clause 8.2:

a) DD/ Pay Order towards Cost of Bid Document/ Tender Fee
b) Bid Security for an amount and in the form as specified in Clause no. 6
c) Power of Attorney authorizing the signatory of bid to commit the Bidder in accordance with Appendix E and Appendix E1
d) Litigation History in the format as specified in clause 6 of Appendix C

8.2 The queries and Original Document as mentioned under Clause 8.1 must be submitted to the following address:

Kind attention	: **MUNICIPAL COMMISSIOEER, LUCKNOW NAGAR NIGAM**
Address	: Triloknath Road, Lalbagh, Lucknow, Uttar Pradesh – 226001

8.3 The envelope shall indicate the name and address of the Bidder.

8.4 The envelope shall clearly bear the following identification: -

"Selection of Concessionaire for Installation and Operation and Maintenance of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis"

"Submitted by
Name
Address
Contact Phone No. of the Applicant"

9. Proposal Due Date

9.1 Proposals should be submitted before 5.00 PM IST of Proposal Due Date, in the manner and form as detailed in this RFP. Only e-tenders will be accepted. Proposals submitted through speed post, facsimile transmission or telex will not be accepted.

9.2 LNN may, in exceptional circumstances, and at its sole discretion, extend the above Proposal Due Date by issuing an Addendum. Any Addendum thus issued will be sent in writing to all those who have purchased the RFP document and would also be posted on the website. The same will also be communicated to those who have downloaded the RFP document from the website and have duly intimated this fact to LNN giving their particulars including address for communication by fax.

9.3 It is desirable that each Bidder submits its Proposal after visiting the Project Site for ascertaining the location, surroundings, or any other matter considered relevant.

9.4 Bidders would be granted permission by LNN for visit of the Project Site on receipt of a formal written request, reasonably in advance of the proposed date of visit as mentioned in the Schedule of Bidding Process.

9.5 At any time prior to the Proposal Due Date, LNN may, for any reason, whether at its own initiative or in response to clarifications requested by any Bidder, modify the RFP document by the issuance of Addenda. Any Addendum thus issued will be sentin writing to all those who have purchased the RFP document and would also be posted on the website. The same will also be communicated to those who have downloaded the RFP document from the website and have duly intimated this fact to LNN giving their particulars including address for communication by fax.

10. Bidder's Responsibility

10.1 The Bidder is expected to carefully examine the contents of all the documents provided. Failure to comply with the requirements of RFP shall be at the Bidder's own risk.

10.2 The Bidder is expected to carefully examine the current condition of solid waste management in Lucknow and bidder shall make his own assessment of resources required to meet the service level benchmarks/scope of work defined in this tender.

10.3 It shall be deemed that prior to the submission of Proposal, the Bidder has:

a) made a complete and careful examination of terms & conditions/requirements, and other information set forth in this RFP document.

LNNS * PMU (RCUES) * Lucknow

b) visited the city/site and have done his own assessment of existing situationof solid waste management.
c) satisfied it-self with local conditions, topography of the land, drainage, accessibility, logistics, work environment etc. or any other condition affecting his price/rates before quoting their rates.
d) received all such relevant information as it has requested from LNN; and
e) made a complete and careful examination of the various aspects of the Project including but not limited to:
   i.) the Site and any other property relating to the Project.
   ii.) status of clearances
   iii.) existing facilities and structures.
   iv.) the conditions of the access roads and utilities in the vicinity of the Project Site.
   v.) all other matters that might affect the Bidder's performance under the terms of this RFP document.

10.4 LNN shall not be liable for any mistake or error or neglect by the Bidder in respect of the above.

11. Pre-Proposal Meeting

11.1 To clarify and discuss issues with respect to the Project and the RFP, LNN may hold Pre-Proposal meeting.

11.2 Prior to the Pre-Proposal meeting, the Bidders may submit a list of queries, if any, to the Project requirements and/or the Concession Agreement. Bidders mustformulate their queries and forward the same to LNN prior to the meeting. LNN may, in its sole discretion or based on inputs provided by Bidders, amend the RFP.

11.3 Bidders may note that LNN will not entertain any deviations to the RFP at the time of submission of the Proposal or thereafter. The Proposal to be submitted by the Bidders would have to be unconditional and the Bidders would be deemed to have accepted the terms and conditions of the RFP with all its contents including the Concession Agreement. Any conditional Proposal shall be regarded as nonresponsive and would be liable for rejection.

11.4 LNN will endeavor to hold the Pre-Proposal meeting as per the schedule of bidding process. The details of the meeting will be separately communicated to the Bidders.

11.5 Attendance of the Bidders at the Pre-Proposal meeting is not mandatory.

11.6 All correspondence / enquiries should be submitted to the following in writing by fax/registered post / courier:

Kind attention	: **MUNICIPAL COMMISSIOEER, LUCKNOW NAGAR NIGAM**
Address	: Triloknath Road, Lalbagh, Lucknow, Uttar Pradesh 226001

12. Opening of Proposals and Clarifications

12.1 LNN would open the Proposals on any working day within 3 days of the Proposal Due Date for the purpose of evaluation.

12.2 LNN reserves the right to reject any Proposal not submitted on time and which does

PMU (RGUES) * Lucknow *

not contain the information/documents as set out in this RFP document.

12.3 To facilitate evaluation of Proposals, LNN may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Proposal. The request for such clarification or substantiation and the response shall be in writing or by facsimile. No material change in the substance of the Proposal would be permitted by way of such clarification/substantiation.

12.4 Information relating to the examination, clarification, evaluation, and recommendation of the Proposal shall not be disclosed to any person not officially concerned with the process. LNN will treat all information submitted as part of the Proposal in confidence and would require all those who have access to such material to treat the same in confidence. LNN will not divulge any such information unless it is ordered to do so by any authority pursuant to applicable law or order of a competent court or tribunal or any Government Authority that has the power under law to require its disclosure.

13. Evaluation

13.1 Proposal Evaluation: Part I Submission

14.1.1 The Part I Submission of the Proposal would first be checked for responsiveness with the requirements of the RFP. The Proposal would be considered as responsive if it meets the following conditions:

a) it is received / deemed to be received by the Proposal Due Date including any extension thereof.
b) it contains all the information and documents as requested in the RFP.
c) it contains information in formats specified in this RFP.
d) it mentions the Proposal Validity Period as set out in Clause 5.
e) it provides information in reasonable detail. ("Reasonable Detail" means that, but for minor deviations, the information can be reviewed and evaluated by LNN without communication with the Bidder). LNN reserves the right to determine whether the information has been provided in reasonable detail.
f) There are no inconsistencies between the Proposal and the supporting documents.

A Proposal that is substantially responsive is one that conforms to the preceding requirements without material deviation or reservation. A material deviation or reservation is one: -

a) which affects in any substantial way, the scope, quality, or performance of the Project, or
b) which limits in any substantial way, inconsistent with the RFP, LNN's rights or the Bidder's obligations under the Concession Agreement, or
c) which would affect unfairly the competitive position of other Bidders presenting substantially responsive Proposals.

14.1.2 In case the Proposal is found to be responsive, Part I Submission would be



evaluated in accordance with the criteria for qualification of Bidders set out in Appendix D, based on the Proof of Experience submitted by the Bidders and such Bidders would be Qualified Bidders.

14.1.3 The Technical Proposal of the Qualified Bidders would be evaluated for adequacy of design and operations so as to comply with the conditions set out in Concession Agreement.

14.1.4 As part of the evaluation of the Part I Submission, LNN may also request the Bidder to submit clarifications.

14.1.5 The evaluation of the Part II Submission would be taken up only after Part I Submission is found to meet the requirements of this RFP. LNN reserves the right to reject the Proposal of a Bidder without opening the Part IISubmission if, in its opinion, Part I Submission is not substantially responsive with the requirements of this RFP.

13.2 Proposal Evaluation: Part II Submission

14.2.1 Part II Submission of all the Bidders whose Part I Submission meets the requirements of the RFP will be evaluated. The format for quoting the Financial Proposal is set out in Appendix J and Volume III of this RFP. The Bidders would be required to submit their proposal as per this format.

14.2.2 Selection Methodology

14.2.3 Scoring and bid evaluation will be done as per criteria set out in Appendix D2.

14.2.4 The Bidder ranked first in accordance with the above procedure would be declared as the Preferred Bidder.

14.2.5 In case there are two or more Bidders quoting the same best Financial Proposal, LNN may in such case call all such Bidders for negotiations and select the Preferred Bidder on the outcome of the negotiations. The selection in such cases shall be at the sole discretion of LNN.

13.3 LNN reserves the right to reject any Proposal, if:

a) at any time, a material misrepresentation is made or discovered; or

b) the Bidder does not respond promptly and diligently to requests for supplemental information required for the evaluation of the Proposal. Rejection of a Proposal by LNN as aforesaid would lead to the disqualificationof the Bidder. If such disqualification / rejection occur after the Proposals have been opened and the Preferred Bidder gets disqualified /rejected, then LNN reserves the right to:

a. either select the next best Bidder, or

b. take any such measure/s as may be deemed fit in the sole discretion of LNN, including annulment of the bidding process.

13.4 In the event of acceptance of the Preferred Bidder with or without negotiations, LNN shall declare the Preferred Bidder as the Successful Bidder. LNN will notify the Successful Bidder through a Letter of Acceptance (hereinafter referred to as "LoA") that its Proposal has been accepted.

14. Execution of Concession Agreement



14.1 The Successful Bidder shall execute the Concession Agreement within 2 weeks of the issue of LoA or within such further time as LNN may agree to in its sole discretion.

14.2 Failure of the Successful Bidder to comply with the requirements of Clause 7.3 or Clause 14 shall constitute sufficient grounds for the annulment of the LoA, and forfeiture of the EMD. In such an event, reserves the right to

a) either invite the next best Bidder for negotiations, or
b) take any such measures as may be deemed fit in the sole discretion of LNN, including annulment of the bidding process.

15. Performance Security

15.1 The Successful Bidder shall furnish Performance Security of **equivalent to 5% of** yearly contract value by way of an irrevocable Bank Guarantee issued by a scheduled /nationalized bank in favour of MUNICIPAL COMMISSIONER, LUCKNOW NAGAR NIGAM, as required under the Concession Agreement. If yearly contract value gets escalated in succeeding year of operation, concessionaire shall submit the PBG of extended value.

15.2 The Performance Security shall be in the form of an irrevocable Bank Guarantee in favour of **MUNICIPAL COMMISSIONER, LUCKNOW NAGAR NIGAM,** as per the format set out in the Draft Concession Agreement. The Performance Security shall be kept valid through annual renewal mode for the entire duration of the contract plus 30 days.

15.3 The Performance guarantee shall be forfeited and en-cashed in the following cases:

a) If the Successful Bidder withdraws from the project midway during the project term
b) If during the project term, there Successful Bidder is found to charge userfees which were not agreed.
c) Any other act or acts of the successful bidder which renders the project un-operational and **LUCKNOW NAGAR NIGAM**, establishes sufficientreasons to forfeit the Performance Guarantee.
d) If the bidder fails to meet the service levels as agreed.

16. Cost of RFP document

16.1 The RFP document can be downloaded from https://etender.up.nic.in. The cost of RFP document is **Rs. 25000/-(including 18% GST).** The Proposals must accompany with cost of RFP document in the form of a bank draft in favour of **"MUNICIPAL COMMISSIOEER, LUCKNOW NAGAR NIGAM"** of **Rs. 25000/-(including 18% GST).** The Bidders may also obtain a hard copy of the RFP from the office of **MUNICIPAL COMMISSIOEER, LUCKNOW NAGAR NIGAM.** The Bidders purchasing the hard copy of the RFP must attach the copy of Receipt along with the Proposal.

16.2 To assist in the examination, evaluation, and comparison of Proposals, LNN may utilize the services of consultant(s) or advisor(s).

16.3 Notwithstanding anything contained in this RFP, LNN reserves the right to accept or reject any Proposal, or to annul the bidding process or reject all Proposals,at any



time without any liability or any obligation for such rejection or annulment, without assigning any reasons thereof.

Section – II

Appendices

Appendix – A

Brief Scope of Work

The Brief Scope of Work for the Bidder is as set out below.

1. The contours of the Project include:
   a. Construction, Supply, Erection & Commissioning of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari and its operation and maintenance on long term DBOT basis.
   b. Receive & Process of total MSW and Operation & Maintenance of 2000 MT Municipal Solid Waste Processing Plant as per MSWM Rules,
   c. The bidder shall be responsible for supply erection and commissioning of new waste processing facility at village Shivari. Processing Plant can be of any suitable technology (Including Dry Waste & Wet Waste Processing unit) at Shivari Processing Plant Site. Plant shall comply minimum standards established in CPHEEO manual.
   d. Transport & Disposal of Residual Inert Materials in the engineered sanitary landfill as per MSWM Rules, 2016.
   e. Construction of Additional capacity of Leachate Treatment Plant and its operation & maintenance so that the effluent can meet the minimum standards of discharge limit set by CPCB.

   Work shall be done essentially as per guidelines of MSWM Rules, 2016, Swachh Bharat Mission-2, CPHEEO manual and guideline amended thereupon during concession period.

17. The scope of the Project includes the following:

17.1 **Project Financing & Investment:** All the capital expenditure upon Installation of 2000 MTPD Municipal Solid Waste Processing Plant located at Shivari shall be done by concessionaire except the cost of civil infrastructure which will be paid by LMC on Actual basis.

- ✓ LMC will provide capital grant @70% of Total Estimated cost i.e. 80 cr. and all other capital expenditures for project will be borne by Concessionaire. Agency will submit DPR based on PWD Specification & Schedule of Rate for approval. If the cost of concessionaire DPR is more than Rs 80 Cr., the maximum capital support will be limited to 70% of Rs. 80 Cr. If concessionaire DPR is less than Rs. 80 Cr., the maximum capital support will be limited to 70% of concessionaire DPR.
- ✓ After due approval of DPR by competent authority of LMC, concessionaire will be allowed to start the construction work as per DPR.

Payment of civil work shall be done on the basis of running bill submitted by concessionaire and after verification by LMC.

17.2 **Preparation of Detailed Project Report:** A Project Information Memorandumis enclosed with the RFP document as Volume II and is only being provided for the

purpose of reference of the Bidders. The Concessionaire shall within 1 month of the signing of Agreement provide with a Detailed Project Report to Authority ensuring compliance of the same with the proposed P&D Plan, and detailing out the design, drawings, specifications, and cost estimates of all the items. The Concessionaire shall have the liberty to suggest different equipment for processing & disposal of waste, provided however the DPR must adhere to the outcome as desired in MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and P&D Plan as detailed out in the Project Information Memorandum (Volume II).

17.3 Approvals for the Project:

a) Obtaining statutory clearances, if any, from MoEF /SEIAA as the case may be.
b) Water allocation, construction power for project and any other clearances, tie-up required for setting up waste processing cum disposal facility.
c) Renewal/ obtaining of all project- related clearances required for the project.
d) And all other clearances and permits as are required to be procured for the implementation of the Project in terms of the Concession Agreement

17.4 **Construction, Supply, erection & Commissioning of Processing Plant:** The Concessionaire shall be responsible for Construction, Supply, erection & Commissioning of 2000 MT Per Day Municipal Solid Waste Processing Plant as per SWM Rules, 2016, at defunct Processing Plant, Shivari, Lucknow (Lat. 26°47'51.32"N Long. 80°46'47.66"E), Lucknow Nagar Nigam in Uttar Pradesh, on a long-term Design, Build, Operate and Transfer (DBOT) basis within the stipulated time frame as mentioned under the draft Concession Agreement. The said site for the Construction, Supply, erection & Commissioning of the processing plant shall be handed over by the LNN to the Concessionaire on a license basis, in terms of the Concession Agreement, prior to the Compliance Date.

17.5 Segregation and Processing of Waste:

a) Segregation of waste at the processing site.
b) Processing of the MSW using a suitable technology and management of the products and residual inert generated from processing.
    i. Biodegradable waste shall be processed by any suitable technology compatible with existing infrastructure that maybe composting, vermin composting, anaerobic digestion, or any other appropriate biological processing for stabilization of waste.It shall be ensured that compost or any other end product shall comply with the standards specified in SWM Rules- 2016.
    ii. Mixed waste containing recoverable resources shall follow the route of recycling
    iii. After recovery of recyclable, the mixed dry waste shall be converted to Refused Derived Fuel.
    iv. Post processing residual inert shall be dumped in SLF designated by LMC

17.6 **Procurement of necessary Equipment / Machinery for Plant:** All procurement of equipment, vehicles and machinery for Establishment of Plant shall be done by the Concessionaire within the stipulated time period as provided by concessionaire and

approved by LNN, and PMU. The Concessionaire shall also be responsible for Supply & installation of equipment and machineries and testing of the same.

17.7 **Operation & maintenance:** The Concessionaire shall ascertain that at all times during the Operation Period, the Project conforms to the operation & maintenance requirements set forth in Schedules 4&5 of Volume III of the RFP.

17.8 **Manpower:** The Concessionaire shall be responsible for deployment of all manpower for processing & disposal of Waste including the key personnel for the management and supervision of all Project-related activities. (This would include the designation of suitably qualified personnel for areas such as contract administration and supervision, construction management, safety, environmental management, plant and equipment maintenance, procurement, materials management, and quality control),

17.9 **Co-ordination with LNN:** The Concessionaire shall provide project related information at regular interval in the form and manner asprescribed by LNN. In case of any law & order problems, the Concessionaire shall inform promptly the LNN about the same and will act as per the direction of the LNN.

17.10 The Concessionaire shall be responsible for all other activities apart from activities as listed above towards successful implementation, operation, maintenance, and management of the project in line with Solid Waste Management Rules, 2016 (hereinafter referred as the "SWM Rules 2016"), SBM-2 guidelines or as revised from time to time and Good Industry Practices.

17.11 **Smart Solid Waste Processing monitoring systems {INFORMATION & COMMUNICATION TECHNOLOGY (ICT):** The Successful Bidder would be responsible for setting up a smart IOT based monitoring system to record data related to receipt of waste, Processing of waste, Sale and disposal of products and disposal of residual inert material. Entire campus of processing plant shall have sufficient number of CCTV camera connected to central command and control center.

17.12 The Successful Bidder would design, procure, finance, construct, operate and maintain the Project during the Concession Period on a Design-Build – Operate – Transfer (DBOT) Concession basis. The Project would be transferred back in good running condition to the ULBs at the end of the Concession Period.

17.13 The Successful bidder shall be provided Processing Fee as per manner prescribed in Article 8 of Volume III i.e., Concession Agreement. The Successful Bidder shall at its cost, expenses and risk make remaining required financing arrangements, in a timely manner as would be necessary to implement the Project, and to meet all of its obligations under the Concession Agreement.

17.14 The Successful Bidder shall adhere to the Construction Requirements and achieve Commercial Operations Date (COD) on or before the Scheduled Project Completion Date, as specified in the Concession Agreement.

17.15 The Successful Bidder may undertake Construction Works by itself or through a Concessionaire possessing requisite technical, financial and managerial expertise/capability; but in either case, the Successful Bidder shall remain solely responsible to meet the Construction Requirements, as specified in the Concession Agreement.

17.16 The Successful Bidder shall operate and maintain the Project in accordance with the

O&M Requirements as set out in the Concession Agreement.

17.17 The Successful Bidder shall, at all times, ensure that all aspects of the Project and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including rules such as SWM Rules, policies and guidelines related thereto.

17.18 The Successful Bidder shall maintain the landfill during the post closure period as per the specifications set out in the Concession Agreement and would be required to hand back the Project to the ULBs at the end of the Concession Period.

17.19 Procurement of machine, equipment and vehicle should be done on approval of LNN and PMU.

Appendix – B

Covering Letter

(On the Letterhead of the Bidder)

Date:

To

MUNICIPAL COMMISSIONER,
LUCKNOW NAGAR NIGAM
Lucknow, Uttar Pradesh.

Sub: **Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis.**

Dear Sir,

Being duly authorized to represent and act on behalf of ..... (Herein after referred to as "the Bidder") and having reviewed and fully understood all of the Proposal requirements and information provided and collected, the undersigned hereby submits the Proposal on behalf of for the Project as specified in the RFP, with the details as per the requirements of the RFP, for your evaluation.

We confirm that our Proposal is valid for a period of ..... days from Proposal Due Date.

We also hereby agree and undertake as under:

Notwithstanding any qualifications or conditions, whether implied or otherwise, contained in our Proposal we hereby represent and confirm that our Proposal is unqualified and unconditional in all respects, and we agree to the terms of the proposed Concession Agreement, a draft of which also forms a part of the RFP document providedto us.

Yours faithfully,

For and on behalf of (Name of Bidder)

Duly signed by the Authorised Signatory of the Bidder

(Name, Title and Address of the Authorised Signatory)

Appendix – C

Details of Bidder

(On the Letter Head of the Bidder)

1. Details of Bidder.
    a. Name of Bidder
    b. Address of the office(s)
    c. Date of incorporation and/or commencement of business

2. Brief description of the Bidder's main lines of business.

3. Details of individual(s) who will serve as the point of contact / communication for LNN with the Bidder:
    a. Name:
    b. Designation:
    c. Company/Firm:
    d. Address:
    e. Telephone number:
    f. E-mail address:
    g. Fax number:
    h. Mobile number:

4. Name, Designation, Address and Phone Numbers of Authorised Signatory of the Bidder:
    a. Name:
    b. Designation:
    c. Company/Firm:
    d. Address:
    e. Telephone number:
    f. E-mail address:
    g. Fax number:
    h. Mobile number:

5. A statement by the Bidder disclosing material non-performance or contractual non-compliance in past projects, contractual disputes and litigation/ arbitration in the recent past are given below (Attach extra sheets, if necessary).

Appendix D
Proof of Qualification

1. Minimum Qualification Criteria

The Bidder must satisfy at least Three of the following Qualification Criteria for experience in order to qualify for the Project.

a) The Bidder should have successfully constructed, operated, and maintained for at least one year,

i. One Municipal Solid Waste processing project having combination of Compost, RDF, MRF, WTE and Bio methanation or other suitable technology of capacity 1200 TPD and Annual O&M Cost of 48 Crores or

ii. Two Municipal Solid Waste processing project having combination of Compost, RDF, MRF, WTE and Biomethanation or other suitable technology of capacity 800 TPD and Annual O&M Cost of 32.00 Crores or

iii. Three Municipal Solid Waste processing project having combination of Compost, RDF, MRF, WTE and Biomethanation or other suitable technology of capacity 600 TPD and Annual O&M Cost of 24.0 Crores with any of the approved technologies in India in any of Central or State Government/ urban Local bodies in India within last 5 years till the date of submission of this bid,

(*Ongoing: If the work is ongoing then the bidder should have received at least 60% payment of the total contract value till submission of tender document).

b) The Bidder shall have Experience in sale/disposal of RDF to cement plant/captive power plant,

i. Experience in sale of RDF generated from Municipal Solid Waste processing projects in last 3 financial year, cumulatively of Minimum 44000 Metric Tons in a year to Cement Industries/WTE Plant.

2. Details of Experience

The Bidder should furnish the details of eligible experience as set out below:

S No.	Qualification Criteriafor Experience	ProjectName	Location	Year of Commissioning	OperationalSince FY
1	Construction and O&M of MSW Processing Plant by any of the approved technologies in India in any of Central or State Government/ urban Local bodies in India (input waste handled in TPD)				
2	Project relating to Scientific Dumpsite Reclamation/ Bioremediation of Dumpsites facility with any of the approved				

	technologies in India in any of Central or State Government/ urban Local bodies in India (input waste handled in MT)				
3	Sale of RDF generated from Municipal Solid Waste processing projects in last 5 financial year, cumulatively for a year to Cement Industries/WTE Plant. (Input RDF handled in MT)				

3. Supporting Documents

The following documents would need to be submitted to support the Bidder's claim of experience stated in the table above.

S. No	Qualification Criteria forExperience	Supporting Documents
1	Construction and O&M of MSW Processing Plant by any of the approved technologies in India in any of Central or State Government/ urban Local bodies in India (input waste handled in TPD)	Copy of agreement with Municipal Body or any other client for the relevant years which clearly mentions the quantum of waste being supplied, OR Certificate from the Municipal Body or Pollution Control Board or any other client, OR Certificate from an independent auditor
2	Project relating to Scientific Dumpsite Reclamation/ Bioremediation of Dumpsites facility with any of the approved technologies in India in any of Central or State Government/ urban Local bodies in India (input waste handled in MT)	Copy of agreement with Municipal Body or any other client for the relevant years which clearly mentions the quantum of waste being supplied, OR Certificate from the Municipal Body or Pollution Control Board or any other client, OR Certificate from an independent auditor
4	Sale of RDF generated from Municipal Solid Waste processing projects in last 3 financial year, cumulatively for a year to Cement Industries/WTE Plant. (Input RDF handled in MT)	Copy of agreement with Municipal Body or any other client for the relevant years which clearly mentions the quantum of RDF being supplied, OR Certificate from the Municipal Body or Pollution Control Board or any other client, OR Certificate from an independent auditor

Note:

1. The Bidder should provide the details mentioned above based on its own experience or its subsidiary (ies) or its parent company. Experience of the Bidder's associate company (ies) will also be considered for evaluation of the Experience of the Bidder.
2. The financial year would be the same as the one normally followed by the Bidder for its annual Report / annual financial statement.

4. Financial Capability

3.1 Financial Capability of the Bidders would be evaluated on the basis of the following:
(a) Net worth as at the end of the most recent financial year that is FY 2021-22
(b) Average turnover for the last three completed financial years that is FY 2019-20, FY 2020-2021& FY 2021-2022. The Bidder should provide information regarding the above based on audited annual accounts for the respective financial years. The financial year would be the same as the one normally followed by the Bidder for its annual financial statement.

3.2 The Proposal must be accompanied by the audited annual financial statements of the Bidder for the last three financial years.

3.3 In case the annual accounts for the latest financial year are not audited and therefore the Bidder could not make it available, the Proposal shall give an undertaking to that effect and the statutory auditor shall certify the same. In such a case, the Bidder may provide the unaudited annual Accounts (with Schedules) for the latest financial year. The Bidder would have to provide the Audited annual Financial Statements for the two years preceding the latest financial year, which would be used for the purpose of evaluation of the Proposal. In case the Bidder fails to provide such Audited annual Financial Statements and certificate from statutory auditor specified hereinabove, the Application will be rejected as non-responsive.

5. Evaluation Criteria for Financial Capability

4.1 For the purpose of Qualification, a Bidder would be required to satisfy the Financial Capability measured on the following criteria:

(a) Net Worth of the Bidder as at the end of FY 2022-23 shall be at least equal to Rs. 7.2 Crores (Rupees Seven Crores Twenty Lacs only), and

(b) The Average Turnover of the Bidder for the last three financial years that FY 2020-2021, FY 2021-2022 & FY 2022-2023 shall be at least equal to Rs. 24 Crores (Rupees Twenty-Four Crores only)

Here,
Net Worth shall mean the sum of subscribed and paid- up equity and reserves fromwhich shall be deducted the sum of revaluation reserves, miscellaneous expenditure not written off and reserves not available for distribution to equity shareholders)

Turnover shall mean gross sales or gross revenue, as defined by the Indian Accounting Standards published by the Institute of chartered Accountants of India (ICAI).

The Bidder must satisfy above-mentioned parameters for Financial Capability in order to qualify for the Project.

6. Other Conditions

6.1 The Bidder should provide the details mentioned above based on its own Financial and technical Capability. Financial and Technical Capability of the Bidder's parent company

or associate company can be considered for computation of the Financial and technical Capability of the Bidder.

6.2 The financial year would be the same as the one normally followed by the Bidder for its annual Report / annual financial statement.

Appendix D1

Financial Capability of the Bidder

(In Rs. crore)

S. No.	Bidder Name	Net worth (Applicable for application through Option III)	Annual Turnover for precedingthree Financial Years (Rs. In Cr)		
		31st March 2023 (Rs. In Cr)	2022-23	2021-22	2020-21
1					

Certificate from the Statutory Auditor

This is to certify that..... (name of the Applicant) has Average Annual Turnover of Rs. ..... (Rupees.....only) for the last three Financial Years / has a Net worth of Rs. .....Crores as on 31st March 2022.

(Name and Signature of the Auditor/C. A. along with registration number as applicable and Seal

Instructions:

1. The Bidder shall attach copies of the balance sheets, financial statements and Annual Reports for 3 (three) years preceding the Bid Due Date. The financial statements shall:
   a. reflect the financial situation of the Bidder and its Associates where the Bidder is relying on its Associate's financials

b. be audited by a statutory auditor; Bidder to provide copy of the last 3 years Audited Financial Statement

c. be complete, including all notes to the financial statements; and

d. Correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted)

Appendix D2

PROCEDURE FOR BID EVALUATION

1. TECHNICAL EVALUATION CRITERIA:

Sl No		Criteria	Weightage (%)	Maximum Marks
(I)	Firms General Experience	Firms General Experience & Experience in Similar Assignments.	50%	50
A1	Experience in similar nature of work	Number of Years of Experience i. More than 3 years to 6 years: 05 marks ii. More than 6 years to 9 years: 7.5 marks iii. More than 9 years: 10 marks	10	10
A2	Experience of Projects in Similar eligible sector	Experience of establishing and O&M for at least one year of MSW Processing Plant (any technology) with any of the Government / Local bodies / (i.e., Municipal Corporation / Local Bodies) within last 5 years till the date of submission of this bid. (Cumulative capacity from different Projects) within last 5 years i.e., 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23 (Average for minimum 1 continuous year period) *Subject to Maximum 20 Marks* Marks Obtained: - Xx10 marks; X= Project completed of 1200 to 1800 TPD or 438000 to 657000 Metric Tons/year Xx15 marks; X= Project completed of More than 1800 to 2400 TPD or More than 657000 to 876000 Metric Tons/year Xx20 marks; X= Project completed of More than 2400 TPD or More than 876000 Metric Tons/year	20	20

B1	Experience of Projects in Similar eligible sector	Experience in sale of byproducts Compost generated from Municipal Solid Waste processing projects in last 3 financial year, cumulatively. Bidder shall submit either client certificate or statutory auditors certificate confirming the quantity sold in last three financial years. *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Cumulative sale of byproducts Average of minimum 56940 tons to 85410 tons/year Xx7.5 marks; X= Cumulative sale of byproducts Average of minimum 85410 tons to 113880 tons/year Xx10 marks; X= Cumulative sale by products of more than 113880 tons/year	10	10
B2	Experience of Projects in Similar eligible sector	Experience in sale of byproducts RDF generated from Municipal Solid Waste processing/Bioremediation projects in last 3 financial year, cumulatively. Bidder shall submit either client certificate or statutory auditors certificate confirming the quantity sold in last three financial years. *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Cumulative sale of byproducts Average of minimum 52560 tons to 78840 tons/year Xx7.5 marks; X= Cumulative sale of byproducts Average of minimum 78840 tons to 105120 tons/year Xx10 marks; X= Cumulative sale by products of more than 105120 tons/year	10	10
(iii)	Financial Strength	Financial strength	30%	30
		Average Annual Turnover of last 3 consecutive years i.e., 2020-21, 2021-22 & 2022-23 (As per the bank / CA statement) *Subject to Maximum 20 Marks* Marks Obtained: -	20	20

		Xx10 marks; X= Turnover between Rs. 24 Cr. To Rs. 36 Cr. Xx15 marks; X= Turnover between More than Rs. 36 Cr. To Rs. 48 Cr. Xx20 marks; X= Turnover More than Rs. 48 Cr.		
		Net Worth for FY 2022-23(As per the bank / CA statement) *Subject to Maximum 10 Marks* Marks Obtained: - Xx5 marks; X= Net-Worth between Rs. 7.2 Cr. To Rs. 10.8 Cr. Xx7.5 marks; X= Net-Worth between More than Rs. 10.8 Cr. To Rs. 14.4 Cr. Xx10 marks; X= Net-Worth More than Rs. 14.4 Cr.	**10**	**10**
(iii)	Approach & Methodology (By Presentation)	Approach & Methodology for proposed assignment	20%	20
		Understanding of Objectives	**3**	**3**
		Quality of Methodology	8	8
		Work Program	**3**	**3**
		Organization and Personnel	3	3
		Innovative Idea	**3**	**3**

2. Evaluations of Bids

2.1 Technical proposal of all the responsive bidders shall be evaluated based on the criteria set out in clause 1 of Appendix D2. Bidders scoring more than 60% marks both in technical eligibility and presentation shall qualify for financial bid evaluation.

2.2 In the financial bid, bidder should propose the Tipping fee as given in format for financial bid as given in table below.

S. No.	ITEM DESCRIPTION	UNITS	Approximate QUANTITY	RATE (Per month)	TOTAL AMOUT
		Column No.1	Column No.2	ColumnNo.3	Column2x3
Part C	Tipping Fee for Processing & Disposal of MSW	Per ton	**2000 TPD**		

PMU (RCUES) * SIMW, LUCKNOW *

2.3 The above figures shall be considered for evaluating financial proposal.

2.4 Final Payment Calculation will be based on actual incoming waste quantity at the processing facility.

2.5 Unfair disparity (Unbalanced) in Total OPEX cost will result in rejection of the bid.

Appendix – E

FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL

(On Stamp paper of Rs.100.00 value)

POWER OF ATTORNEY

Know all men by these presents, We..... (Name and address of the registered office) 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 on our behalf, all such acts, deeds and things necessary in connection with or incidental to "RFP for Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis" (hereinafter referred to as "the Project"), on behalf of the LNN including signing and submission of all documents and providing information / responses to LNN in all matters in connection with our Proposal for the Project.

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

Dated this the Day of 20XX

For

(Name and designation of the person(s) signing on behalf of the Bidder)

Accepted

Signature)

(Name, Title and Address of the Attorney)

Date: .....

Note:

1. In case of Bidders who are not resident in India, the Power of Attorney may be submitted on plain paper attested by any authorised officer of the Embassy of India and duly stamped by the Department of Stamps & Registration, Government of-------
   -----(name of state).
2. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the

executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

3. Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a resolution/power of attorney in favour of the Person executing this Power of Attorney for the delegation of powerhereunder on behalf of the Bidder.
4. In case an authorized Director of the Bidder signs the Proposal, a certified copy of the appropriate resolution conveying such authority may be enclosed in lieu of the Power of Attorney.

PMU (RCUES) SMC, Lucknow

Appendix – H

Format for Bank Guarantee for Bid Security

(Refer Clauses 7.1)

B.G. No. Dated:

1. In consideration of you, Lucknow Nagar Nigam, having its office at ....., (hereinafter referred to as LNN, which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of _____ [insert the name of the Bidder] and having its office at_____ (hereinafter referred to as the "Bidder" which expression shall unlessit be repugnant to the subject or context thereof include its/their executors administrators, successors and assigns), for the Project of RFP for Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis (hereinafter referred to as "the Project") pursuant to the RFP Document dated ***** issued in respect of the Project and other related documents (hereinafter collectively referred to as "Bidding Documents"), we [Name of the Bank] having our registered office at_____ and one of itsbranches at___(hereinafter referred to as the "Bank"), at the request ofthe Bidder, do hereby in terms of Clause 7.1 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfillment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and
irrevocably undertake to pay forthwith to LNN an amount of **Rs.** _____ (**_____Only)** as bid security (hereinafter referred to as the "Bid Security") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder if the Bidder shall fail to fulfill or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by LNN stating that the Bidder is in default of the due and faithful fulfillment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Bank.

3. We, the Bank, do hereby unconditionally undertake to pay the amounts due and payable under this Guarantee without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of LNN is disputed by the Bidder or not, merely on the first demand from LNN stating that the amount claimed is due to LNN by reason of failure of the Bidder to fulfill and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as

regards amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding **Rs. _____/- (Rupees _____ Lacs Only).**

4. This Guarantee shall be irrevocable and remain in full force for a period of 180 (one hundred eighty) days from the Bid Due Date inclusive of a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between LNN and the Bidder, and agreed to by the Bank, and shall continue to be enforceable till all amounts under this Guarantee have been paid.

5. We, the Bank, further agree that LNN shall be the sole judge to decide as towhether the Bidder is in default of due and faithful fulfillment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of LNN that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between LNN and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Guarantee shall not be affected by any change in the constitution or winding up of the Bidder or the Bank or any absorption, merger or amalgamation of the Bidder or the Bank with any other person.

7. In order to give full effect to this Guarantee, LNN shall be entitled to treat the Bank as the principal debtor. LNN shall have the fullest liberty without affectingin any way the liability of the Bank under this Guarantee from time to time tovary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Intent by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any timeand from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to LNN, andthe Bank shall not be released from its liability under these presents by any exercise by LNN of the liberty with reference to the matters aforesaid or byreason of time being given to the said Bidder or any other forbearance, act or omission on the part of LNN or any indulgence by LNN to the said Bidder or by any change in the constitution of LNN or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Bank from its such liability.

PMU (RCUES) * SWM, Lucknow *

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Bank and sent by courier or by registered mail to the Bank at the address set forth herein.
9. We undertake to make the payment on receipt of your notice of claim on us addressed to [name of Bank along with branch address] and delivered at our above branch who shall be deemed to have been duly authorised to receive the said notice of claim.
10. It shall not be necessary for LNN to proceed against the said Bidder before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank, notwithstanding any other security which LNN may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Bank hereunder, be outstanding or un realised.
11. We, the Bank, further undertake not to revoke this Guarantee during its currency except with the previous express consent of LNN in writing.
12. The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Guarantee for and on behalf of the Bank.

Signed and delivered by _____Bank

By the hand of Mr./Ms._____, its_____and authorised official.

(Signature of the Authorised Signatory)

(Official Seal)

Appendix – I

Guidelines and Format for Technical Proposal

The Bidder shall submit a Technical Proposal setting out the approach to the Project. The Technical Proposal shall comply with the Construction Requirements and O&M Requirements as set out in Schedules of the Concession Agreement. The design and approach for implementing the Project shall also be in compliance with the Applicable Law, including the SWM Rules.

The Technical Proposal shall set out the following components:

a) Methodology Statement

b) Process Flow Chart and Material Balance Statement

c) Resource Utilization Statement

d) Area Allocation Statement

e) Operations & Maintenance Scheme

f) Project Schedule

g) Environment, Health & Safety Policy and Practice

a) Methodology Statement

The Bidder shall provide a methodology statement, which broadly sets out the approach to the Project. The methodology statement shall include the Bidder's appreciation of the Project, the sequencing of activities to be performed, the facilities to be provided, design standards and basis for calculations of the Processing and Landfilling activities. The methodology statement should address aspects relating to all the activities of Processing and Landfilling including receipt, weighment and Processing of MSW and leachate management activities.

The methodology statement should clearly demonstrate the compliance of the approach to be adopted by the Bidder for the implementation of the Project tothe minimum specifications set out in the Concession Agreement.

b) Process Flow Chart and Material Balance Statement

The Bidder shall provide a process flow chart and a material balance statement setting out the activities and the outputs at each stage. The components, which shall be addressed, include Processing of MSW and Landfilling of Residual Inert

Matter, leachate generation and treatment, greenhouse gas emission and mitigation. The Bidder should indicate supporting calculations and assumptions, if any.

c) Resource Utilisation Statement

A statement indicating the procurement, deployment and utilisation of the resources shall be provided. The statement shall include proposedorganizational structure, employee deployment, equipment procurement and utilisation, contracting activities, utilisation of office and other facilities.

d) Area Allocation Statement

The Bidder shall set out the area utilisation plan for the Project Facilities including the Processing Facility and other facilities, and common areas etc.

e) Operations and Maintenance Scheme

The Bidder shall separately set out the operations and maintenance scheme for Processing of Municipal Solid Waste and Landfilling of Landfill Waste indicating the operational practices during the Active Operations Period. The maintenance (regular and emergency) schedules and mechanism should also be indicated over the Concession Period.

f) Time Schedule

The Bidder shall indicate an activity schedule over the Concession Period including the Construction Activities, O&M Activities and Landfilling.

g) Environment, Health & Safety Policy and Practice

The Bidder shall indicate the environment, health and safety policy and practices, which are proposed to be adopted during the Concession Period. The aspects relating to employee and worker safety, control mechanisms of litter, pest, odour, fire, surface runoffs etc. needs to be elaborated.

(RCUES) * Lucknow * P SMV

Appendix – J

FORMAT FOR FINANCIAL PROPOSAL

(To be submitted on the Letterhead of the Bidder but not with Technical Bid, otherwise the Bid will be rejected)

Date:

To
Municipal Commissioner,
Lucknow Nagar Nigam
Lucknow.

RFP for Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis.

Dear Sir,

We are pleased to submit our Financial Proposal for Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis.

2 TIPPING FEE (Amount in Rupees)

Sr. No.	Description of Work	Tipping Fee Rate Rs. /MT in Figures (in Rs.)	Tipping Fee Rate Rs. /MT in Words
1	First Year Tipping Fee for processing of fresh waste & Disposal of residual inert material at SLF		

We have reviewed all the terms and conditions of the Request for Proposal (RFP) Document and will undertake to abide by all the terms and conditions contained therein. We hereby declare that there are, and shall be, no deviations from the stated terms in the RFP Document.

Yours faithfully,

For and on behalf of (Name of Bidder)

Duly signed by the Authorized Signatory of the Bidder

(Name, Title and Address of the Authorized Signatory)

DRAFT CONCESSION AGREEMENT

(Volume-II)

Between

LUCKNOW NAGAR NIGAM acting through its authorised Officer on this behalf

AND

_____

(Concessionaire)

For

"Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis."

Issued on_____ 2023

Issued By: -
Municipal Commissioner,
Lucknow Nagar Nigam, Lucknow
Trilok Nath Road, Lalbagh,
Lucknow, Uttar Pradesh – 226001

Contents

ARTICLE 1 8
1 DEFINITIONS AND INTERPRETATION 8
1.1 Definitions 8
1.2 The Standards 16
1.3 Interpretation 16
ARTICLE 2 18
2 CONCESSION 18
2.1 Grant of Concession 18
2.2 Concession Period 18
2.3 Extension in Concession Period 18
2.4 Acceptance of Concession 18
ARTICLE 3 19
3 PROJECT SITE 19
3.1 Handover of Site 19
3.2 Rights, Title and Use of the Site 19
3.4 Applicable Permits 20
ARTICLE 4 21
4 Conditions Precedents 21
4.1 Authority's Conditions Precedent 21
4.2 Concessionaire / Selected bidder's Conditions Precedent 21
4.3 Damages for delay by the Authority 23
4.4 Damages for delay by the Concessionaire 23
ARTICLE 5 25
5 PROJECT MONITORING CONSULTANT 25
5.1 Appointment 25
5.2 Payments to Project Monitoring Consultant 25
5.3 PROJECT MONITORING CONSULTANT - SCOPE OF WORK 25
5.4 Scope of Services of the Project Monitoring Consultant 25
5.5 Obligations during Implementation Period 25
5.6 Active Operations Period 27
5.7 Post Closure Period 30
5.8 Obligations during Operations Period 30
Table 1: Random inspection of Project Facility 31
5.9 Awareness Campaign 33

5.10 General Obligations 33
ARTICLE 6 34
6 CONCESSIONAIRE'S OBLIGATIONS 34
6.1 Performance Security 34
6.2 Financing Arrangement 34
6.3 Project Implementation: Construction Works in construction Phase 36
6.4 Project Implementation: Operation and Maintenance 38
6.5 Insurance 40
6.6 Environmental Compliance 40
6.7 Land Use 40
6.8 Weighment, Acceptance & Rejection of Municipal Solid Waste 40
6.9 Sale/Distribution of Compost and Other Recyclables 40
6.10 Landfilling 40
6.11 General Obligations 41
6.12 No Breach of Obligations 42
6.13 Maintenance of Records 42
ARTICLE 7 43
7 AUTHORITY's OBLIGATIONS 43
7.1 AUTHORITY's OBLIGATIONS 43
7.2 Specific Obligations 43
7.3 General Obligations 44
ARTICLE 8 45
8 PAYMENT OF PROCESSING FEE AND POST CLOSURE PAYMENTS 45
8.1 Payment of Processing Fee 45
8.2 Mechanism of Payment 46
8.3 Post Closure Performance Account 47
8.4 Sale of Recyclable, Compost or any other product 48
8.5 Daily Work Performance Evaluation Sheet for Bio degradable, Non-biodegradable, Recyclable & Green waste, Processing and Landfills is as given below. 48
8.6 Performance based Payment 51
8.7 Other Conditions 51
ARTICLE 9 52
9 Financial Close 52
9.1 Financial Close 52
9.2 Termination due to failure to achieve Financial Close 52
9.3 Escrow Account 53
9.4 Deposits into Escrow Account 53

9.5 Withdrawals during Concession Period 53
9.6 Withdrawals upon Termination 54
ARTICLE 10 55
10 Insurance 55
10.1 Notice of the Authority 55
10.2 Evidence of Insurance Cover 55
10.3 Remedy for failure to insure 55
10.4 Waiver of Subrogation 55
10.5 Concessionaire's waiver 56
10.6 Application of Insurance Proceeds 56
10.7 No Breach of Insurance Obligation 56
ARTICLE 11 57
11 Accounts & Audits 57
11.1 Audited accounts 57
11.2 Appointment of auditors 57
11.3 Certification of claims by Statutory Auditors 57
11.4 Set-off 58
11.5 Dispute resolution 58
ARTICLE 12 59
12 FORCE MAJEURE AND CHANGE IN LAW 59
12.1 Force Majeure Event 59
12.2 Notice of Force Majeure Event 60
12.3 Performance of Obligations 60
12.4 Termination due to Force Majeure Event 61
12.5 Liability for other losses, damages etc. 63
12.6 Change in Law 63
ARTICLE 13 65
13 EVENTS OF DEFAULT AND TERMINATION 65
13.1 Events of Default 65
13.2 Termination due to Event of Default 67
13.3 Rights of AUTHORITY on Termination 70
13.4 Accrued Rights of Parties 70
ARTICLE 14 71
14 HANDBACK OF PROJECT FACILITIES 71
14.1 Ownership 71
14.2 Concessionaire's Obligations 71
14.3 AUTHORITY's Obligations 72

PMU (RCUES) SMW, Lucknow

ARTICLE 15 73
15 DISPUTE RESOLUTION 73
15.1 Amicable Resolution 73
15.2 Arbitration 73
15.3 Performance during Dispute 74
ARTICLE 16 75
16 REPRESENTATIONS AND WARRANTIES 75
16.1 Representations and Warranties of the Concessionaire 75
16.2 Representations and Warranties of AUTHORITY 76
16.3 Obligation to Notify Change 76
ARTICLE 17 77
17 MISCELLANEOUS 77
17.1 Assignment and Charges 77
17.2 Interest and Right of Set Off 77
17.3 Governing Law and Jurisdiction 77
17.4 Waiver 78
17.5 Survival 78
17.6 Amendments 78
17.7 Notices 78
17.8 Severability 79
17.9 No Partnership 79
17.10 Language 79
17.11 Exclusion of Implied Warranties etc 79
17.12 Counterparts 80
SCHEDULE "1" 81
SCHEDULE "2" 82
SCHEDULE "3" 92
Schedule "13" 126
Schedule "14" 127
Schedule "15" 129
Schedule "16" 137
Schedule "17" 141
Schedule "18" 144

PMU (RCUES) SMW, Lucknow

(To be printed on a Non-Judicial Stamp Paper of Rs.100/-)

THIS AGREEMENT is made on this ..... day of....., 20..... at Lucknow, Uttar Pradesh, India.

BETWEEN

AND

Lucknow Nagar Nigam, a body constituted under the Municipal Act, having its office at Lucknow acting through its **Municipal Commissioner** (hereinafter referred **"Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis".**

Concessioning Authority" which expression shall unless excluded by or repugnant to the context, be deemed to include its successors and assigns); **OF THE SECOND PART**

(Party of First Part and Party of Second part are jointly termed as Authority)

AND

..... [Name of the SPV incorporated by the selected bidder], a company incorporated in India under the Companies Act of 2013 and having its registered office at..... [address] duly represented through its Authorized Person Mr./Ms._(---------- Designation, if applicable) by a
Board Resolution dated---------- or by a Power of Attorney dated ---------- executed in his favor, (hereinafter referred to as the "Concessionaire"), which expression shall, unless repugnant to the context or meaning thereof, mean and include its successors and assigns) of the THIRD PART;

AND

M/s_____, a company incorporated under the provisions of Companies Act, 2013, having its Registered Office at
_____, duly represented through its Authorized Person Mr./Ms. _____,(---------- Designation, if applicable) by a Board Resolution dated---------- or by a Power of Attorney dated----------executed in his favor, in its capacity as the Confirming Party to this Agreement (Hereinafter referred to as the 'Preferred Bidder' which expression shall, unless the context otherwise requires, include its successors, and administrators) of the FOURTH PART.

MUNICIPAL COMMISSIONER, Lucknow Nagar Nigam, Concessionaire and the Confirming Party are hereinafter referred to individually as the "Party" and collectively as the "Parties"

WHEREAS,

A. Urban Local Body (hereinafter referred to as **"ULB"**) of Lucknow is responsible for providing municipal and civic services.

B. The Ministry of Environment and Forests (MoEF), Government of India (GoI), has formulated the Solid Wastes Management Rules 2016 ("MSW Rules 2016"), which makes it mandatory for every municipal authority to implement a scientific solid waste management system wherein the Municipal Solid Waste is collected, transported, duly processed and the residual inert/non-biodegradable solid wastes disposed in an Engineered Sanitary Landfill (as hereinafter defined).

C. Processing and disposal of Municipal solid waste as per SWM Rules 2016, at Lucknow Nagar Nigam in Uttar Pradesh, on a long-term Design, Build, Operate and Transfer (DBOT) basis.

D. **AUTHORITY** carried out extensive project development work in connection with the Project (as hereinafter defined).

E. **AUTHORITY** had invited competitive proposals from eligible Bidders for implementing the Project and in response thereto AUTHORITY received proposals from several persons including the Concessionaire for implementing the Project.

F. **AUTHORITY**, after evaluating the aforesaid Proposals accepted the Proposal submitted by the Concessionaire and issued Letter of Acceptance No. _____ dated_____to the Concessionaire for developing the Project.

G. The Parties hereto are required to enter into the Concession Agreement being these presents to record the terms, conditions and covenants of the Concession.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS: -

ARTICLE 1

1 DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively ascribedto them hereunder:

Act and Rules: The term "said Act" and "said Rules" shall mean and include the U.P Municipal Act 1959 amended up to date and Rules framed there under from time to time, the Solid Waste Management Rules 2016 and all those/labour laws/ relevant laws and rules mentioned above/applicable to the contract.

Action against bidder: AUTHORITY shall take action against the bidder, if any worker of the bidder or any his/her employee fails to process & dispose waste as per the specified conditions in the Agreement.

"Additional Cost" shall mean the additional capital expenditure and/or the additional operating costs or both as the case may be, which the Concessionaire would be required to incur as a result of Change in Law OR Change in Scope of work or delay on an account of non-fulfillment of obligations either during Construction period of Revival/Repair phase or during O&M period contained in this agreement in time by AUTHORITY

"Agreement" shall mean this Agreement, and include any amendments hereto made in accordance with the provisions hereof.

"Applicable Law" shall mean all laws in force and effect, including MSW Rules, as of the date hereof and which may be promulgated or brought into force and effect hereinafter in India including judgments, decrees, injunctions, writs or orders of any court of record, as may be in force and effect during the subsistence of this Agreement and applicable to the Project/the Concessionaire.

"Applicable Permits" shall mean all clearances, permits, authorizations, consents and approvals required to be obtained or maintained by the Concessionaire under Applicable Law, in connection with the construction, operation and maintenance of the Project during the subsistence of this Agreement.

"Appointed Date" shall mean the date of this Agreement.

"Arbitration Act" shall mean the Arbitration and Conciliation Act, 1996 and shall include any amendment to or any re-enactment thereof as in force from time to time.

"Bank" means a nationalized/scheduled bank incorporated in India

"Bank Rate" means the rate of interest specified by the Reserve Bank of India from time to time in pursuance of section 49 of the Reserve Bank of India Act, 1934 or any replacement of such Bank Rate for the time being in effect

"Bio-degradable waste" means the waste of plant and animal origin e.g. kitchen waste, food & flower waste, leaf litter, kitchen-garden waste, animal dung, fish/meat waste

and any other material that gets decomposed by the action of living organism, as defined in SWM Rules 2016.

"Bio-medical Waste" shall have the meaning ascribed to it under the Biomedical Wastes (Management & Handling) Rules, 1998.

"Book Value" shall mean the cost of the fixed assets incurred by the Concessionaire for the Project, net of accumulated depreciation computed on straight line basis in accordance with the rates specified in Companies Act, 1956 and as determined by an independent firm of chartered accountants mutually agreed upon and appointed by the Parties.

Bulk generator means the owner, occupier or any other person representing owners and occupiers of housing society / housing complexes, restaurants; hotels, markets, industrial estates, parks, garden, traffic islands etc. and shopping complexes / malls and includes any government or public office building, or other users such as clubs, gymkhanas, marriage halls, recreation/ entertainment complexes hospitals, educational institutions, commercial establishments or other establishment sources / premises etc.

"Change in Law" means the occurrence of any of the following after the date of Bid:

(i) The enactment of any new Indian law including laws related to environment;

(ii) The repeal, modification or re-enactment of any existing Indian law

(iii) A change in the interpretation or application of any Indian law by a courtof record.

Provided that Change in Law shall not include:

(i) Coming into effect, after the Appointed Date, of any provision or statute which is already in place as of the Appointed Date,

(ii) Any new law or any change in the existing law under the active consideration of or in the contemplation of any government as of the Appointed Date which is a matter of public knowledge,

(iii) Any change in the rates of the Taxes.

"Change in Ownership" means a transfer of the direct and/or indirect legal or beneficial ownership of any shares, or securities convertible into shares, that causes the aggregate holding of the Selected Bidder, in the total Equity to decline below 100% until expiry of five years from date of execution of the concession agreement, and below 51% (fifty one per cent) thereof at any time during the remaining Concession Period, provided that any material variation (as compared to the representations made by the Concessionaire during the bidding process for the purposes of meeting the minimum conditions of eligibility or for evaluation of its application or Bid, as the case may be,) in the proportion of the equity holding of selected bidder or any member thereof to the total Equity, if it occurs prior to completion of the Concession Period, shall constitute Change in Ownership;

"COD" shall mean the commercial operations date of the Project which shall be the dateon which the Project Monitoring Consultant has issued the Provisional Readiness

SWM, Lucknow (RCUES)

2.3 The above figures shall be considered for evaluating financial proposal.

2.4 Final Payment Calculation will be based on actual incoming waste quantity at the processing facility.

2.5 Unfair disparity (Unbalanced) in Total OPEX cost will result in rejection of the bid.

Certificate or the Readiness Certificate in accordance with the provisions of this agreement.

"Collection" means lifting and removal of municipal solid waste (MSW) from designated collection points or any other location.

"Collection at Source" means the collection of municipal solid waste by the bidder directly from the premises of any building, bulk generators or common premises of a group of buildings etc.

"Construction Requirements" shall mean collectively the Waste Processing Facility Construction Requirements and the Landfill Facility Construction Requirements.

"Construction Works" shall mean all works and things required to be constructed by the Concessionaire, pursuant to the Construction Requirements and O&M Requirements.

Contract: The term "Contract" shall mean and include (i) NIT (ii) Terms and conditions of Contract (iii) Tender Form (iv) Form of acceptance (v) Form of agreement vi) Additional or modified clauses added on account of the pre-bid meeting (vii) Mutually accepted conditions in writing signed by both the parties; AUTHORITY and Contractor. Thus the Contract means the agreement between the successful Bidder(The Bidder to whom the work order is given) and AUTHORITY as recorded in the article of agreement signed by the successful Bidder and AUTHORITY, including all appendices, attachment and documents mentioned there in. The successful Bidder then becomes the Concessionaire/ service provider of the project/work.

"Contractor" shall mean any Person with whom the Concessionaire has entered into/may enter into any material contract in relation with the Construction Works and O&M Requirements.

"Contract Amount": The term "Contract Amount" shall mean the sum quoted by the Contractor in his offer and accepted by the Company.

"Concessionaire": concessionaire shall mean the "the name of the SPV formed by Bidder....."and includes its successors and permitted assigns expressly approved by ULB.

"Conditions Precedent" shall have the meaning set forth in Clause 4.1.1.

"Drawings" shall mean all of the drawings, designs, calculations and documents pertaining to the Project in accordance with the Construction Requirements and O&M Requirements.

"Emergency" shall mean a condition or situation that is likely to endanger the safety ofthe individuals on or about the Project Facilities or which poses an immediate threat of material damage to any of the Project Facilities.

"Encumbrance" shall mean any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, physical encumbrances, claims for any amounts due on account of taxes, cesses, electricity, water and other utility charges and encroachments on the Project Facilities.

"Engineered Sanitary Landfill" shall mean the area within the Waste Processing and Landfill Facility, designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blown litter, bad odor, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion, and utilitised for disposal of inert/non processable residue coming out of Waste processing plant.

"Environment and Social Impact Assessment Plan" shall have the meaning set forth in Schedule 15

"Excluded Waste" waste material of the nature that the Project Facilities are not designed or authorized to receive, manage, process and dispose which includes Hazardous Waste, Bio-medical Waste, Treated Bio-medical waste.

"Escrow Account" means an account opened with a nationalized bank, prior to start of work, in which all inflows and outflows of cash on account of capital and revenue receipts and expenditure shall be credited and debited, as the case may be, in accordance with the provisions of this Agreement.

"Estimated Project Cost" shall mean lower of the project cost estimated in DPR prepared Authority and the project cost estimated in DPR prepared by Concessionaire and approved by AUTHORITY.

"Expiry Date" shall mean the date on which Post Closure Period ends.

"Financial Close" means the fulfillment of all conditions precedent to the initial availability of funds under the Financing Agreements

"Financing Documents" shall mean collectively the documents evidencing Lenders' commitment to finance the Project.

"Financial Year" shall mean the period commencing from April 1 of any given year toMarch 31 of the succeeding year.

"Fit for Land filling" shall have the meaning ascribed to it in Clause 11.1 of **Schedule4B.**

"Force Majeure" or **"Force Majeure Event"** shall mean an act, event, condition or occurrence as specified in Article 12.

"GoI" shall mean the Government of India.

"GoUP" shall mean the Government of Uttar Pradesh.

Good Industry Practice: The term shall mean exercise of that degree of skill, diligence prudence & foresight in compliance with the undertakings and obligations as under the agreement which would reasonably and ordinarily are expected of a skilled & experienced persons engaged in the implementation, operations and maintenance or supervision or monitoring thereof of any of them of a project similar to this project.

"Government Agency" shall mean GoI, GoUP, AUTHORITY or any state government or governmental department, commission, board, body, bureau, agency, authority, instrumentality, court or other judicial or administrative body, central, state, or local, having jurisdiction over the Concessionaire, the Site/Project Facilities or any portion thereof, or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement.

"Hazardous Waste" shall have the meaning as defined under the Hazardous Wastes

(Management and Handling) Rules, 1989 and as amended thereto.

Inert Solid Waste means any solid waste or remnant of processing whose physical, chemical and biological properties make it suitable for sanitary land filling.

"Implementation Period" shall mean the period from the Agreement Date to COD.

"Project Monitoring Consultant" shall mean the Project Monitoring Consultant appointed by AUTHORITY and shall have the meaning ascribed thereto in Article 5

"UPPCB" shall mean Uttar Pradesh State Pollution Control Board.

"Land filling" shall mean the process of disposal of the Residual Inert Matter and process remnants at the scientific Landfill facility designed with protective measures, against pollution of ground water, surface water and air fugitive dust, windblown litter, bad odour, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion, in accordance with the terms of this Agreement, in accordance with the SWM Rules 2016 or any amendment thereto.

"Landfill Facility" shall mean collectively the facilities set out in **Schedule 3,** including the Engineered Sanitary Landfill to be duly designed, engineered, and constructed in accordance with the provisions specified thereto.

"Landfill Facility Construction Requirements" shall mean the requirements as to design and construction of the Landfill Facility set forth in **Schedule 3**.

"Landfill Life" or **"Active Operations Period"** shall mean the period commencing from COD till the completion of activities as per **Clause 6.4** of Operations and Maintenance Requirements for Landfill Facility **(Schedule 4B)** when the Engineered Sanitary Landfillis fully filled with Landfill Waste and a final cover desighed in accordance with the MSW Rules is laid on the Engineered Sanitary Landfill, and in accordance with the provisions of this Agreement. Provided that, the Landfill Life may be further extended after discussions between Parties on mutually agreed terms.

"Landfill Site" shall mean the site for regional processing and scientific landfill facility initially located at **Shivari, Lucknow** and as forth in Clause 1.1 of Schedule 1 and which may during the term of the Concession be relocated, inaccordance with the terms hereof.

"Landfill Waste" shall mean the Residual Inert Matter, duly certified as fit for land filling by the Project Monitoring Consultant in accordance with the O&M Requirements.

"Lenders" shall mean financial institutions, banks, funds and trustees for bond holders or debenture holders, who have provided funds to the Concessionaire for financing any part of the Project.

"Material Adverse Effect" shall mean a material adverse effect on (a) the ability of the Concessionaire to exercise any of its rights to perform/discharge any of its duties/obligations under and in accordance with the provisions of this Agreement and/or (b) the legality, validity, binding nature or enforceability of this Agreement.

"Material Breach" shall mean a breach by either Party of any of its obligations under this Agreement which has or is likely to have a Material Adverse Effect on the Project and which such Party shall have failed to cure.

Municipal Solid Waste: Municipal Solid Waste includes commercial, residential and

other waste generated within the limits of AUTHORITY either in solid or semi-solid form excluding industrial hazardous waste but including treated bio-medical waste. The term Solid Waste shall further mean the Municipal Solid Waste as described under the SWM Rules 2016 notified by MoEF, Govt. of India, notified on 8 April, 2016, generated in the Concession area by all generators which includes domestic/residential, commercial, institutional, green waste generated in the work area inclusive of private markets, recreation centers, public places and from the places of occasional accumulation of such solid waste.

"Monthly Reports" shall constitute the reports to be submitted monthly as defined inthe Schedule 4A

"O&M" means the operation and maintenance of the Project and includes all matters connected with or incidental to such operation and maintenance and provision of services and facilities in accordance with the provisions of this Agreement

"O&M Requirements" shall mean the requirements as to operation and maintenance of the Land fill sites set forth in **Schedule 4A, 4B** and **Schedule 5.**

Party or Parties mean Lucknow Nagar Nigam and the Contractor/ Service provider whohas been assigned the work. **"Parties"** shall mean the parties to this Agreement and **"Party"** shall mean either of them, as the context may admit or require.

"Performance Security" shall mean the guarantee for performance of its obligations to be procured by the Concessionaire in accordance with this agreement.

"Permissible Landfill Waste" shall mean and refer to the maximum allowable waste that can be diverted to the landfill site, without attracting any penal provisions.

"Person" shall mean (unless otherwise specified or required by the context), any individual, company, corporation, partnership, joint venture, trust, unincorporated organisation, government or government body or any other legal entity.

"Post Closure Maintenance Plan" shall have the meaning ascribed thereto in this agreement.

"Post Closure Activities" shall mean the activities to be undertaken by the Concessionaire during the Post Closure Period in accordance with the provisions of **Schedule 4B.**

"Post Closure Activities Escrow Account" An account opened with a nationalized bank in which Retention Fee shall be held towards post-closure obligations after the Concession Period as set in Clause 8.4

"Post Closure Period" shall mean the period commencing from the day immediately following the **Active Operations Period** and ending on the fifth anniversary of the said day.

"Preliminary Notice" shall mean the notice of intended Termination by the Party entitled to terminate this Agreement to the other Party setting out, inter alia, the underlying Event of Default.

"Processing" shall mean the process involving transformation of MSW into new or recycled products by using processes such as composting, bio-methanation, RDF, palletisation or any other Proposed Technology in accordance to the standards set

forth in SWM Rule 2016 and other Applicable Law.

"Project" shall mean Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basisin accordance with the provisions of this Agreement.

"Project Assets" means all physical and other assets relating to and forming part of the Site including (a) rights over the Site in the form of License, Right of Way or otherwise; (b) tangible assets such as civil works and equipment/ vehicles including foundations, roads and pavements, drainage works, electrical systems, communication systems and administrative offices, transport vehicles; (c) Project Facilities situated on the Site; (d)all rights of the Concessionaire under the Project Agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) Applicable Permits and authorisations relating to or in respect of the Project

"Project Monitoring Consultant" shall mean a reputed Person being a firm, company or a body corporate appointed in accordance with this agreement for supervision and monitoring of compliance by the Concessionaire with the Construction Requirements and O&M Requirements, more particularly to undertake, perform and carry out the duties, responsibilities, services and activities set forth in this agreement which can also be termed as project Management Consultant that is **"PMC"**

"Project Facilities" shall mean all the amenities and facilities, including (a) Processing facilities (b) Sanitary Landfill (c) The machinery and equipment procured, installed and operated and (d) all other project related physical assets (e) and any other offsite/onsite facilities created for the Project.

Public place includes any road, arch road, viaduct, lane, footway, alley or passage, highway, causeway, bridge, square alley or passage whether a thoroughfare or not over which the public have a right of passage, and such places to which the public has access such as parks, gardens, recreation grounds, playgrounds, beaches, water bodies, water courses, public plazas and promenades, government and municipal buildings, public hospitals, markets, slaughter houses, courts, etc.

"Readiness Certificate" shall mean the certificate issued by Project Monitoring Consultant certifying, inter alia, that:

(i) The Concessionaire has constructed all the facilities within the Waste Processing Facility and the Landfill Facility so as to enable receipt of Municipal Solid Waste for Processing and Land filling.

(ii) The Concessionaire has obtained all approvals necessary to receive the Municipal Solid Waste supplied by AUTHORITY.

"Remuneration" shall mean all fees, costs, charges and expenses payable to the Project Monitoring Consultant in accordance with the terms of his appointment.

"Residual Inert Matter" shall mean the material left as residue after Processing of Municipal Solid Waste and segregation and removal of the organic matter, compost or organic manure there from, either wholly or in part, and includes pre-processing rejects.

"Rupees" or "Rs." refers to the lawful currency of the Republic of India.

The Services means all activities direct or ancillary to the work like guarding, up keeping, operating and maintaining the vehicles, equipment, systems and related

infrastructure required performing the Work assigned to the successful bidder / Contractor in a specified manner for a specified period for fulfilling the desired performance. The services will include Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis.

SPV means Special Purpose Vehicle Company.

"Specifications and Standards" means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project, and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Concessionaire to, and expressly approved by, the Authority

"SWM Rules" shall mean the Solid Wastes Management Rules, 2016 and includes any amendments thereto.

"SPCB" State Pollution Control Board: specifically, State Pollution Control Board.

"Tax" shall mean and includes all taxes, fees, cess, levies that may be payable by the Concessionaire under Applicable Law.

Technical offer: The term shall mean the details of the technical and financial eligibility of the bidder; acceptance of the terms and condition of the project / work and undertakings regarding the same; project plan and operational details including identification of activities, resources requirement and details of type, capability, quality and quantity; methodology of work; plan of resources deployment; implementation plan and evaluation of the results. This will be contained in a separate cover.

"Termination" shall mean early termination of this Agreement pursuant to Termination Notice or otherwise in accordance with the provisions of this Agreement but shall not, unless the context otherwise requires, include expiry of this Agreement due to efflux of time in the normal course.

"Termination Date" shall mean the date specified in the Termination Notice as the date on which Termination occurs.

"Termination Notice" shall mean the notice of Termination by either Party to the other Party, in accordance with the applicable provisions of this Agreement.

"Termination Payment" means the amount payable by the Authority to the Concessionaire upon Termination in accordance with the provisions of this Agreement.

"Tests" shall mean the tests to be carried out in accordance with the Construction Requirements or the O&M Requirements.

"Processing Fee" shall mean the amounts payable by AUTHORITY to Concessionaire in accordance with **Article 8**.

"Processing Fee Statement" shall have the meaning as ascribed thereto in **Article 8**.

"Processing Fee Rate" shall mean the amounts payable per tonne of Municipal Solid Waste entering at waste processing site as set out in **Financial Bid**.

Transportation means conveyance of Municipal Solid Waste from place to place hygienically through specially designed transport system, so as to prevent foul odour, littering, spillage unsightly condition and accessibility to vectors.

"Waste generators" all residential, commercial establishments, institutions and other sources/ generators of MSW, located within the service area of AUTHORITY and generating MSW as defined in SWM Rules, 2016.

"Waste Processing Facility (ies)" shall mean the facilities for Processing Municipal Solid Waste to be designed, engineered and constructed, within the area earmarked on the Site, by the Concessionaire in accordance with the provisions of this agreement.

"Waste Processing Facility Construction Requirements" shall mean the requirements as to design and construction of the Waste Processing Facility set forth in this agreement.

OTHER DEFINITIONS of TERMS: As defined in the SWM Rules 2016 of MoEF, Govt. of India.

1.2 The Standards

The Goods, vehicles, equipment, systems and services provided under the Tender/Contract shall conform to the standard as specified in the technical specifications;

In specific, Vehicles should conform to Euro IV standards of emission and above - up graded from time to time as per statutory requirement

Where no standards are specified for particular goods, vehicles, equipment, services, they should conform to the latest minimum Bureau of Indian Standards specifications if prescribed for the product, machinery, equipment, services required in the tender, if not prescribed under BIS they should conform to the latest ISO standard.

Or the authoritative latest standards used in the country of origin, appropriate to the specified goods, vehicles, equipment systems, and services.

A declaration will be submitted by the bidder / contractor for the above with the certification of the authorized agency of the origin

1.3 Interpretation

In this Agreement, unless the context otherwise requires,

(a) any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modificationor re-enactment or consolidation applies to, or is capable of being applied to any transactions entered into hereunder;

(b) references to Applicable Law shall include the laws, acts, ordinances, rules, regulations, notifications, guidelines or bylaws which have the force of law;

(c) the words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organizations or other entities (whether or not having a separate legal entity);

(d) the headings are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;

(e) the words "include" and "including" are to be construed without limitation;

(f) any reference to day, month or year shall mean a reference to a calendar day, calendar month or calendar year respectively;

(g) the Schedules to this Agreement form an integral part of this Agreement as though they were expressly set out in the body of this Agreement;

(h) any reference at any time to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference;

(i) references to recitals, Articles, sub-articles, clauses, or Schedules in this Agreement shall, except where the context otherwise requires, be deemed to be references to recitals, Articles, sub-articles, clauses and Schedules of or to this Agreement;

(j) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or by Project Monitoring Consultant shall be valid and effectual only ifit is in writing under the hands of duly authorized representative of such Party or Project Monitoring Consultant in this behalf and not otherwise;

(k) any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days or dates;

ARTICLE 2

2 CONCESSION

2.1 Grant of Concession

Subject to and in accordance with the terms and conditions set forth in this Agreement, the Concessioning Authority hereby grants and authorizes the Concessionaire to investigate, study, design, engineer, procure, finance, construct, operate and maintain the Project Facilities and to exercise and / or enjoy the rights, powers, benefits, privileges, authorizations and entitlements as set forth in this Agreement ("the Concession").

2.2 Concession Period

The Concession is hereby granted for a period of 15 years of active operation period commencing from the Appointed Date and ending on the Expiry Date ("the Concession Period") during which the Concessionaire is authorized to design, finance, construct, operate and maintain the Project Facilities in accordance with the provisions hereof. Provided that in the event of Termination, the Concession Period shall mean and be limited to the period commencing from the Appointed Date and ending with the Termination Date. The word "Design" is limited to electromechanical design of waste processing unit, Design of external & plant electrification system, only after duly approved and accepted by PMC/ AUTHORITY.

2.3 Extension in Concession Period

Contract period can be extended for a period of 5 years after successful completion of initial 15 years contract period. The extension in contract period will be solely dependent upon concessionaire performance in First 10 years of contract period and subsequent mutual consent of all parties. For further clarification, the concessionaire would be eligible for extension if he receives more than 80% marks in performance evaluation criteria as set out in clause 8.7 in minimum 80% contract months in initial 10 years contract period.

2.4 Acceptance of Concession

In consideration of the rights, privileges and benefits conferred upon the Concessionaire, and other good and valuable consideration expressed herein, the Concessionaire hereby accepts the Concession and agrees and undertakes to perform / discharge all of its obligations in accordance with the provisions hereof.

PMU (RCUES) SMW, Lucknow

ARTICLE 3

3 PROJECT SITE

3.1 Handover of Site

a. **AUTHORITY** shall, within 15 days from the Appointed Date, handover to the Concessionaire on as-is-where-is basis, vacant and peaceful physical possession of the Site free from Encumbrance, for the purpose of implementing the Project.

b. The efforts will be made by the **AUTHORITY** to handover the site to the Concessionaire free of encumbrances. However, in case of any delay in handing overof the site to the Concessionaire, the **AUTHORITY** shall only consider suitable extension of time for the execution of the work. It should be clearly understood that the **AUTHORITY** shall not consider any revision in contract price or any other compensation whatsoever viz. towards idleness of Contractor's labour, equipment etc.

c. The information about the public utilities (whether over ground or underground) like electrical/ telephone/ water supply lines, OFC Cables, open drain etc. is the responsibility of contractor to ascertain the utilities that are to be affected by the works through the site investigation and collection of information from the concerned utility owners.

d. The **AUTHORITY** shall be responsible to obtain necessary approval from the respective authorities for shifting/ re-alignment of existing public utilities. However, the concessionaire shall assist the **AUTHORITY** for liaising in obtaining the approval from the concerned authorities.

e. Upon the Site being handed over pursuant to the preceding sub-article (a), the Concessionaire shall, subject to the provisions of **Article 3.2**, have the right to enter upon, occupy and use the same and to make at its costs, charges and expenses such investigation, development and improvements in the Site as may be necessary or appropriate to implement the Project and provide the Project Facilities in accordance with the provisions of this Agreement.

3.2 Rights, Title and Use of the Site

a) The Concessionaire shall have the right to the use of the Site in accordance with the provisions of this Agreement and for this purpose, it may regulate the entry into and use of the same by third parties.

b) The Project site and Project Facilities shall be and continue to be the property of **AUTHORITY.**

c) The Concessionaire shall not part with or create any Encumbrance on the whole orany part of the Project Facilities, including the Site save and except as set forth and

PMU (RCUES) * SMW, Lucknow *

permitted under this Agreement.

d) The Concessionaire shall not, without the prior written approval of AUTHORITY, use the Project Facilities for any purpose other than for the purpose of the Project and purposes incidental or ancillary thereto.

e) The Concessionaire shall allow access to and use of the Site for laying / installing / maintaining telegraph lines, electric lines or for such other public purposes as AUTHORITY may specify.

Provided that such access or use shall not result in a Material Adverse Effect and that AUTHORITY shall, in the event of any physical damage to the Project Facilities on account thereof, ensure that the Project Facilities are promptly restored at its cost and expenses.

Provided further, that to the extent such access and use allowed by the Concessionaire affects the performance of any of its obligations hereunder, the Concessionaire shall not be deemed or construed to be in breach of its obligations nor shall it incur/suffer any liability on account thereof.

3.3 Peaceful Possession AUTHORITY hereby warrants that:

a) The Site together with the necessary right of way/way-leaves has been acquired through the due process of law belongs to, or has been leased to AUTHORITY and is vested in AUTHORITY and that AUTHORITY has full powers to hold, dispose of and deal with the same consistent, interalia, with the provisions of this Agreement and that the Concessionaire shall, in respect of the Site, have no liability regarding any compensation payment on account of land acquisition or rehabilitation/resettlement of any Persons affected thereby.

- The Concessionaire shall, subject to complying with the terms and conditions of this Agreement, remain in peaceful possession and enjoyment of the whole Site during the Active Operations Period, and the area on which the Landfill Facility has been created during the Post ClosurePeriod.

In the event the Concessionaire is obstructed by any Person claiming any right, title or interest in or over the Site or any part thereof or in the event of any enforcement action including any attachment, distrait, appointment of receiver or liquidator being initiated by any Person claiming to have any interest in/charge on the Site or any part thereof, AUTHORITY shall, if called upon by the Concessionaire, defend such claims and proceedings and also keep the Concessionaire indemnified against any consequential loss or damages which the Concessionaire may suffer, on account of any such right, title, interest or charge.

3.4 Applicable Permits

The Concessionaire shall obtain and maintain the Applicable Permits in such sequence as is consistent with the requirements of the Project. The Concessionaire shall be responsible and shall be in compliance with the terms and conditions subject to which Applicable Permits have been issued.

The Concessionaire shall be responsible to obtain necessary Environmental clearances and if required, get the EIA done at its own cost.

ARTICLE 4

4 Conditions Precedents

Save and except as expressly provided in Articles 4, 6, 9, 12 and 13 or unless the context otherwise requires, the respective rights and obligations of the Parties under this Agreement shall be subject to the satisfaction in full of the condition's precedent specified in this Clause 4 (the "Conditions Precedent").

4.1 Authority's Conditions Precedent

4.1.1 The Conditions Precedent required to be satisfied by the Authority shall be deemed to have been fulfilled when:

a. The Authority shall have handed over the Project Site & Project Facility as per Schedule 1 of this draft Concession Agreement to the Concessionaire for the development of the Project; **The Project Site shall be provided on an "as-is-where-is basis" condition for use during the Concession Period for the purpose of the Project free of any charges.**

b. The Authority shall have appointed a Project Monitoring Consultant/Project Monitoring Consultant in accordance with Article 5.

c. Copies of the council resolution authorizing the Authority to execute the Agreement.

4.2 Concessionaire / Selected bidder's Conditions Precedent

4.2.1 The Conditions Precedent required to be satisfied by the Concessionaire prior to the Appointed Date shall be deemed to have been fulfilled when the Concessionaire shall have:

a. prepare Detailed Project Report within 1 month of the signing of Agreement based on the SBM-2 Guidelines, SWM Rule 2016 and Project Information Memorandum. The Concessionaire may suggest or improve processing & disposal of waste, provided the DPR must adhere to the outcome as desired in MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and P&D Plan as detailed out in the Project Information Memorandum (Volume II).

b. obtained approval from the Project Monitoring Consultant on the following:

i. detailed project report covering the adopted processing technology, detailed construction drawings & plans, and Construction Milestones during Revival/Repair phase as perprovisions of the Agreement.;

c. obtained approval from the Authority for the following:

i. on the detailed Construction Plan comprising of details delineating the Site for revival/repair of Project Facilities and ensuring continued use of the Site for managing MSW by AUTHORITY till COD;

d. prepared the Environment and Social Impact Assessment (ESIA) Report through a competent agency in accordance with Schedule 15 and obtained an approval from the Authority on the ESIA;

i. obtained the EIA approval for the Project from competent authorities;

ii. Obtain all other requisite approvals required for the Project from various Statutory Authorities;

iii. executed and procured execution of the Substitution Agreement;

iv. procured all the Applicable Permits specified in Schedule 11 unconditionally and if subject to conditions, the all such conditions required to be fulfilled by the date specified therein shall have been satisfied in full and such Applicable Permits are in full force and effect;

v. achieved financial closure of the project and executed the Financing Agreements and delivered to the Authority 3 (three) true copies thereof, duly attested by a Director of the Concessionaire;

vi. executed and procured execution of the Escrow Agreement;

e. delivered to the Authority 3 (three) true copies of the Financial Package and the Financial Model, duly attested by a Director of the Concessionaire, along with 3 (three) soft copies of the Financial Model in MS Excel version or any substitute thereof, which is acceptable to the Senior Lenders;

f. delivered to the Authority a confirmation from the Selected Bidder, in original, of the correctness of their representations and Warranties set forth in Clause 16.1.

g. Undertake the Additional Works in accordance with terms hereof, to the satisfaction of the Authority.

h. Prepare Operation Plan and procure approval of Authority thereon, and upon approval of Authority thereon, commence the MSW works in the municipal area of AUTHORITY.

4.2.1 Each Party shall make all reasonable endeavors to satisfy the Conditions Precedent within maximum 120 days including all extensions in respect thereof and shall provide the other Party with such reasonable cooperation as may be required to assist that Party in satisfying the Conditions Precedent for which that Party is responsible

Provided that upon request in writing by the Concessionaire, the Authority may, in its discretion, waive or further extend the time limit of any of the Conditions Precedent set forth in this Clause 4.2 provided the required waiver/ extension is not because of concessionaire event of default. For the avoidance of doubt, the Authority may, in its sole discretion, grant any waiver hereunder with such conditions as it may deem fit.

a. The Parties shall notify each other in writing at least once a month on the progress made in satisfying the Conditions Precedent. Each Party shall promptly inform the other Party when any Condition Precedent for which

itis responsible has been satisfied.

b. Provided however that neither Party shall be entitled to terminate this Agreement if non-fulfillment of condition precedent by either party is result and/or consequence of Force Majeure event

4.3 Damages for delay by the Authority

In the event that (i) the Authority does not procure fulfillment of any or all of the Conditions Precedent set forth in Clause 4.1.1 within the period specified in respect thereof, and (ii) the delay has not occurred as a result of breach of this Agreement by the Concessionaire or due to Force Majeure, the Authority shall pay to the Concessionaire Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the Performance Security for each day's delay until the fulfillment of such Conditions Precedent, subject to a maximum of 20% (twenty percent) of the Performance Security.

Any delay by the Authority in the fulfilment of any or all of the Conditions Precedent set forth in Clause 4.1.1, save and except for reasons attributable in whole or parts to the Selected Bidder/Concessionaire or Force Majeure; beyond a period of 220 (two hundred twenty) days from the date of this Agreement or such later date as mutually agreed between the Parties, would entitle the Concessionaire to terminate this Agreement ;provided the Concessionaire has issued a written notice to Authority allowing 60 days remedy period for curing such default/delay, and the default remains un-remedied upon the expiry of such cure period.

In such an event of termination, the Authority shall,

(i) release the Performance Security, subject to any outstanding dues payable to the Authority by the Concessionaire in terms hereof; provided however that in the event the Authority's failure to fulfill its Conditions Precedent is attributable to the Concessionaire's default, the Authority shall forfeit the Performance Security as damages; and

(ii) In the event the access to and right of way in respect of the land parcels comprising the Project Site shall have been granted to the Concessionairein terms hereof on or before such date of termination; then the ProjectSite shall immediately revert to the Authority, free and clear from any encumbrances and along with all associated easementary rights, irrespective of any outstanding mutual claims between the parties or any third-party claims.

4.4 Damages for delay by the Concessionaire

a) In the event that (i) the Concessionaire does not procure fulfillment of any or all of the Conditions Precedent set forth in Clause 4.2.1 within a period specified in respect thereof, and (ii) the delay has not occurred as a result offailure to fulfill the obligations under Clause 4.2.1 or other breach of this Agreement by the Authority, or due to Force Majeure, the Concessionaire shall pay to the Authority Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the

PMU (RCUES) LUCKNOW

Performance Security for each day's delay until the fulfillment of such Conditions Precedent, subject to a maximum of 20% (twenty percent) of the Performance Security.

b) Notwithstanding anything to the contrary in the event delay referred to in aforesaid clause 4.3 (a) above, exceeds a period of 220 (two hundred twenty) days from the date of this Agreement or goes beyond such later date as may be mutually agreed between the Parties for fulfilment of condition precedent, then the Authority would be entitled to terminate this Agreement in accordance with the provisions hereto.

In such an event, notwithstanding anything to the contrary contained in the Agreement, the Authority shall, without prejudice to any other right or remedy that may be available to the Authority under this Agreement, be entitled to

(i) forfeit/invoke and appropriate the Performance Security;

(ii) In the event the access to and right of way in respect of the land parcels comprising the Project Site shall have been granted to the Concessionairein terms hereof on or before such date of termination; then the Project Site shall immediately revert to the Authority, free and clear from any encumbrances and along with all associated easementary rights, irrespective of any outstanding mutual claims between the parties or any third party claims;

(iii) Without prejudice to and notwithstanding anything to the contrary set out in the foregoing, the Parties may by mutual agreement, instead of terminating the Agreement, decide to extend the time for fulfilling the Conditions Precedent.

ARTICLE 5

5 PROJECT MONITORING CONSULTANT

5.1 Appointment

AUTHORITY shall appoint a project monitoring consultant (PMC).

The scope of work of PMC is bid process management, project monitoring during revival/repair phase and project monitoring during O&M phase for a period of 10 Yrs.

5.2 Payments to Project Monitoring Consultant

All fees, costs, charges and expenses payable to the Project Monitoring Consultant shallbe paid by AUTHORITY in accordance with the terms of its appointment within 15 daysof receiving an invoice from PMC/Authority.

5.3 PROJECT MONITORING CONSULTANT - SCOPE OF WORK

5.3.1 The Project Monitoring Consultant is expected to play a positive and independent role in discharging its functions, thereby facilitating the smooth implementation and operation of the Project. Broadly, the role of the Project Monitoring Consultant shall encompass:

5.3.2 Deleted

5.3.3 Verification and random checks of weighment and Testing of the MSW at the Processing and Landfill Site.

5.3.4 Independently review, monitor and where required by the Agreement, to approve the design, construction, operation and maintenance of the Project Facilities to ensure compliance by the bidder with the Operations Plan, Design Requirements, Construction Requirements and O&M Requirements,

5.3.5 Report to the Parties on the various physical, technical and financial aspects ofthe Project based on inspections, site visits and Tests,

5.3.6 Assist the Parties in arriving at an amicable settlement of disputes, should the need arise, and

5.3.7 Review matters related to safety and environment management measures adopted by the bidder for the Project.

5.4 Scope of Services of the Project Monitoring Consultant

The services to be provided by the Project Monitoring Consultant shall be in accordance with the applicable provisions of agreement made between AUTHORITY and PMC and also as per the general obligations of this Agreement are specified in this section.

5.5 Obligations during Implementation Period

The Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the progress in implementation of the Waste Processing Facility and the Landfill Facility and ensure compliance with the Construction & Procurement Requirements. For this purpose, the Project Monitoring Consultant

shall undertake, interalia, the following activities and where appropriate make suitable suggestions:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and check the quality of vehicles and material procured;

(e) Review and approve test results and materials and/or equipment used in the Construction Works;

(f) Interpret the requirements of the contract and make decisions regarding performance of the Concessionaire. The PMC shall inform and advise the AUTHORITY, in a timely manner all matters relating to the execution, progress, and completeness of the Construction Works;

(g) Reject work which fails to comply with the specifications and requirements of the Agreement. Whenever considered necessary or advisable to ensure correction of defective work, the PMC may require inspection or testing of such work, whether or not such work be then fabricated, installed, or completed;

(h) Review, approve or disapprove drawings, samples, and other submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(i) Provide the services of a full time resident project representative duringthe period commencing from 7 (seven) days from the date of appointment of the PE until the expiry of the PMC's appointment;

(j) Provide the services of experts to check the quality of materials and the workmanship during the procurement/installation/construction phase of waste processing facility, including the following:

(i) weigh bridge at the Project Facility entry gate;

(ii) windrow platforms;

(iii) drainage system;

(iv) leachate collection and treatment system;

(v) water supply system;

(vi) sieving mechanism for the Residual Inert Matter;

(vii) quality control laboratory and associated equipment;

(viii) Electrical systems.

(k) Provide the services of experts to check the quality of materials and the workmanship during the installation/construction of the Landfill Facility,

including the following:

(i) drainage system;

(ii) leachate collection system;

(iii) leachate treatment system

(iv) composite liner system of the Engineered Sanitary Landfill;

(v) Stability of the Engineered Landfill up to Final Cover

(vi) testing laboratory and associated equipment

(l) Address issues relating to specific site conditions, design modifications, orConcessionaire disputes.

The PMC shall prepare and submit to AUTHORITY, Fortnightly Progress Reportsincluding the following:

(a) Daily progress of works;

(b) Slippages, if any, in the construction vis-à-vis planned construction schedule and the reasons thereof;

(c) Construction schedule for the succeeding week;

(i) Report on Tests

(ii) Report on notices issued

(d) Issues, if any, with regard to the works along with the details of the actiontaken for the resolution of the same;

(e) Photographic record of progress of works over the previous week.

The PMC shall provide all other services as normally provided by an engineer incharge.

5.6 Active Operations Period

During this period the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by the Concessionaire so as to ensure compliance with the O&M Requirements. Thespecific activities to be undertaken would include the following:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and approve test results and materials and/or equipment used;

(e) Interpret the requirements of the contract and make decisions regarding performance of the Concessionaire. The PMC shall inform and advise the AUTHORITY, in a timely manner all matters relating to the execution, progress, and completeness of works;



(f) Reject work which fails to comply with the specifications and requirements of the Agreement. Whenever considered necessary or advisable to ensure correction of defective work, the PMC may require inspection or testing of such work, whether or not such work be then fabricated, installed, or completed;

(g) Review, approve or disapprove drawings, samples, and other submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(h) Provide the services of a full time resident project representative duringthe period commencing from 7 seven days from the date of appointmentof the PE until the expiry of the PMC's appointment;

(i) In addition to the daily responsibilities, conduct a general inspection of the Project Facilities at least once a month and as and when exigencies require to ascertain conformity with Construction Requirements and O&M Requirements;

(j) Provide the services of experts to check the quality of materials and the workmanship during the construction of the Landfill Facility

(k) Inspect the quality of compost being sold or otherwise disposed outside the Site

(l) Inspect and certify composition of the Residual Inert Matter

(m) Address issues relating to specific site conditions, design modifications, or Concessionaire disputes.

(n) Review the O&M Plans submitted by the Concessionaire from time to time and assist the Concessionaire in finalising the same. The Project

Monitoring Consultant shall also consult AUTHORITY prior to finalisationof the O&M Plans;

(o) Periodically review the O&M Manual for adequacy;

(p) Monitor Operation and Maintenance activities (including maintenance of Project Facilities and equipment, standards of service, safety and environmental issues) and the overall quality of O&M activities so as to ensure compliance by the Concessionaire with the O&M Requirements, O&M Plan and O&M Manual;

(q) Review and ascertain the cost variation arising as a result of Change in Law and determine the Additional Cost;

(r) Undertake a quarterly review of the various records and registers to be maintained by the Concessionaire and suggest suitable remedial measures/ procedures, where necessary.

5.6.1 The PMC shall attend regular meetings ("Project Review Meetings" or "PRMs") with the AUTHORITY and the Concessionaire, to be held at least once in every month during the Active Operations Period to report on progress and quality of

work performed by the Concessionaire and to discuss problems or other pertinent matters relating to the work. The IC shall take notes at the meetings and provide a copy of the PRM minutes to each person who attended the meeting.

5.6.2 The PMC shall prepare and submit to AUTHORITY, Monthly Project Reports including the following:

(a) Report on Tests

(b) Report on notices issued

(c) Issues, if any, with regard to the works along with the details of the action taken for the resolution of the same;

(f) Photographic record of progress of works over the previous week.

5.6.3 Attend meetings with the AUTHORITY and the Concessionaire, to be held at intervals as mutually decided upon by the Parties, to discuss problems or other pertinent matters relating to the Project. The PMC shall take notes at the meetings and provide a copy of the minutes of such meetings to each person who attended the meeting.

a) Review of the Operations Plan submitted by the Concessionaire in accordance with of the Agreement.

b) Monitoring and reporting to AUTHORITY on whether the bidder has complied with the timelines for activities as specified in the Operations Plan in (a) above;

c) Verify and report to AUTHORITY whether (i) the New Project Facilities complywith the Design Requirements (ii) Existing Project Facilities comply with the

Construction Requirements and (iii) the Project Facilities comply with all Applicable Laws including SWM Rules 2016.

d) Issue Provisional/Readiness Certificate in accordance with the of this Agreement;

e) The Project Monitoring Consultant shall undertake, interalia, the following activities and where appropriate:

(i) Require suspension of whole or any part of the Construction Works if in its reasonable opinion the same does not conform to the Construction Requirements;

(ii) Require clearing of any construction site of all construction equipment, surplus materials, debris and temporary installations as per applicable provisions of this Agreement.

(iii) Review the monthly progress report submitted by the bidder during the Implementation Period and its conformity with the Operations Plan, report on the same to the AUTHORITY and suggest corrective measures, if any.

(iv) If during the course or upon review / inspection undertaken by the PMC/Authority, it transpires that either of the Parties is in breach/ default of any of its obligations under the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/ default within time frame as may be felt

suitable by the PMC/Authority.

5.7 Post Closure Period

5.7.1 During the Post Closure Period, the PMC shall monitor and certify compliance with the Post Closure Maintenance Plan.

5.8 Obligations during Operations Period

5.8.1 Monitoring at processing and Landfill Site

The Project Monitoring Consultant's prime responsibility would be to monitor the operations at the weighbridge and waste inspection area at the processing and Landfill Site. For this purpose, the Project Monitoring Consultant shall undertake, inter alia, the following activities:

a) Verification of the weighment;

b) Verification of the Testing of the MSW.

c) Verification of the records generated at the weighbridge and Waste Inspection Area.

d) Issue "Notice to Remedy" in event of observing non-compliance to O&M Requirements;

e) If during the course or upon review/inspection undertaken by the Project Monitoring Consultant or otherwise, it transpires that either of the Parties is in breach/default of any of its obligations under the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/default within such time and in such manner as the Project Monitoring Consultant may deem fit and, in each case, the same shall be recorded.

5.8.2 Conducting Random Inspections

The Project Monitoring Consultant shall conduct random inspections of the Project Facilities as well as the operations as follows:

a) The random inspections may be carried out by visual assessment with careful observation of the specific object/item for identification and for quantification of the deficiencies or damages of the Project Facilities and operation and maintenance of the Project Facilities. For this purpose, the Project Monitoring Consultant can use photographs with time and place record.

b) During the random inspections, the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by the Contractor so as to ensure compliance with the O&M Requirements;

c) Issue "Notice to Remedy" in the event of non-compliance to O&M Requirements and recording the same.

d) Record and report to the AUTHORITY on the incidents of Material Breach or Persistent Breach of O&M Requirements;

5.8.3 Random inspection of Project Facilities

The Project Monitoring Consultant shall undertake inspection of the Project Facilities, Facility Site and Workshop Site in such frequency and sample selection as mentioned in the table below:

Table 1: Random inspection of Project Facility

S. No	Project Facilities	Frequency of inspection	Sample selection requirement
1	Facility Site	Once a Month	-
2	Workshop Site	Once a Month	-
3	Earth Moving Vehicles	Once a Month	A minimum sample of 10 % of each category of vehicles deployed in the Concession Area. There should not be repetition of the same set of vehicles in the next round of inspection.

5.8.4 Hand back and Transfer of Project Facilities to AUTHORITY

At the time of hand back and transfer of the Project Facilities to AUTHORITY at the end of Concession Period, the Project Monitoring Consultant shall:

a) Monitor the compliance with the Hand back and Transfer Requirements as provided in Chapter 10 of this Agreement and

b) Issue a certificate of compliance on satisfactory completion of Hand back and Transfer Requirements by the bidder.

5.8.5 Maintenance of Records

a) The Project Monitoring Consultant would be required to participate in the Project review meetings held from time to time by the Parties, which are ordinarily expected to be held once a month during the Implementation Period and once every two months during the Operations Period as also to participate in emergency or extra-ordinary meetings of the Parties held to deal with any Emergency, Force Majeure Event or other exigencies.

5.8.5.1 The Project Monitoring Consultant shall maintain record of the activities undertaken by it in discharge of its functions and responsibilities. This would include records in respect of the following:

a. Manpower deployed and other organizational arrangements of the Project Monitoring Consultant;

b. Inspections undertaken and notices/instructions issued to the bidder;

c. Review compliance by the bidder with the Agreement;

d. Force Majeure Events;

e. Material and Persistent Breach of O&M Requirements and Events of Default by the Parties; and

PMU (RCUES) SMW, Lucknow

f. Compliance by the bidder with Hand back and Transfer Requirements

5.8.5.2 The Project Monitoring Consultant would be required to verify/issue the following reports to the Parties:

Table 5-1 Reports issued by PMC

Period/Event	Verification	Applicable report to be issued by the Project Monitoring Consultant
1. Implementation Period	- Review monthly progress report submitted by the Contractor - Issue "Notice to Remedy" in event of non-compliance by the Contractor - Issue Provisional/ Readiness Certificate	
2.Monitoring at Weighbridge	- Verify weighment slip - Verify monthly Processing Fee Statement	- Monthly Inspection Report
3. Monitoring at Waste Inspection Area	- Verify recording of Test results - Verify monthly Processing Fee statement and penalties (ifapplicable)	- Monthly Inspection Report
4. Random Inspections of Project facilities	- Advise AUTHORITY on penalties payable by the Contractor	Monthly Inspection Report
5. Force Majeure/ Material and Persistent Breach of O&M Requirements/Events of Default.	- Issue "Notice to Remedy" in event on non-compliance Record Events of Default, Material/Persistent Breach of O&M Requirements, Force Majeure Events	
6. Hand back and Transfer of Project Facilities	- Specify list of works/jobs to be carried out by the Contractor. - Specify list of items to be handed back and transferred back to AUTHORITY by the Contractor. - Verify compliance by the Contractor with Hand back and Transfer Requirements	- Issue of compliance certificate of Hand back and Transfer Requirements

5.8.6 Material and Persistent Breach of O&M Requirements

The Project Monitoring Consultant shall monitor the performance of the Contractor and report on incidence of material and persistent breach of O&M requirements with

SMW, Lucknow PMU

reference to the compliance and tolerance criteria as laid out in of the O&M Requirements:

5.9 Awareness Campaign

The Project Monitoring Consultant shall review the Awareness Campaign programme conducted by the bidder.

5.10 General Obligations

The Project Monitoring Consultant shall carry out such other functions as may be specifically assigned to it under the agreement including certification of adequacy of insurance and verification of termination payments.

SMW, Lucknow * P.I.U (RCUES) *

ARTICLE 6

6 CONCESSIONAIRE'S OBLIGATIONS

In addition to and not in derogation or substitution of any of its other obligations underthis Agreement, the Concessionaire shall have the following obligations:

6.1 Performance Security

(a) The Concessionaire shall, for due and punctual performance of its obligations hereunder relating to the Project under construction phase, deliver to AUTHORITY, simultaneously with the execution of this Agreement, a bank guarantee from a nationalized bank/scheduled bank acceptable to AUTHORITY, in the form as set out in **Schedule 7**, ("Performance Security") for a sum of Rs. Equivalent to 5% of yearly Processing Fee amount of respective year.

(b) The Performance Security shall be kept **valid for the entire project period including post closure period.**

Provided that if the Agreement is terminated due to any event other than a Concessionaire Event of Default, the Performance Security if subsisting as of the Termination Date shall, subject to AUTHORITY's right to receive amounts, if any, due from the Concessionaire under this Agreement, be duly discharged and released to the Concessionaire.

6.2 Financing Arrangement

All the capital expenditure upon Installation of 2000 MTPD Municipal Solid Waste Processing Plant located at Shivari shall be done by concessionaire except the cost of civil infrastructure which will be paid by LMC on Actual basis.

- ✓ LMC will provide capital grant @70% of Total Estimated cost i.e. 80 cr. and all other capital expenditures for project will be borne by Concessionaire. Agency will submit DPR based on PWD Specification & Schedule of Rate for approval. If the cost of concessionaire DPR is more than Rs 80 Cr., the maximum capital support will be limited to 70% of Rs. 80 Cr. If concessionaire DPR is less than Rs. 80 Cr., the maximum capital support will be limited to 70% of concessionaire DPR.
- ✓ After due approval of DPR by competent authority of LMC, concessionaire will be allowed to start the construction work as per DPR.

The Concessionaire shall at its cost; expenses and risk make financing arrangements of balance amount as would be necessary to implement the Project and to meet all of its obligations under this Agreement, in a timely manner.

AUTHORITY shall provide Processing fee as per the financial bid parameters as mentionedbelow;

Sr. No.	Description of Work	Processing Fee Rate Rs. /MT in Figures (in Rs.)	Processing Fee Rate Rs. /MT in Words

1	First Year Processing Fee for processing of fresh waste & Disposal of residual inert material at SLF		

(a) Preparation of DPR

(i) The Concessionaire may, subject to the Construction Requirements, adopt with or without modifications the DPR made available by AUTHORITY. Provided that, the Concessionaire shall in any event be solely responsible for the adequacy of the DPR and all the provisions made in DPR, Design, estimation and fit for construction Drawings in accordance to the SWM Rule 2016, SBM-2 Guidelines and PIM as in Volume -3 of RFP. DPR and operation plan must adhere to scope of work and provisions of SWM Rule 2016, SBM-2 Guidelines and PIM as in Volume -3 of RFP.

(ii) The DPR prepared by Concessionaire shall be subject to review by the Project Monitoring Consultant, AUTHORITY as hereinafter provided in clause (b).

(b) Review of DPR

(i) The Concessionaire shall promptly and in such sequence as is consistent with the Construction Requirements, submit three copies of DPR to the Project Monitoring Consultant and AUTHORITY.

(ii) By forwarding the DPR to the Project Monitoring Consultant and AUTHORITY pursuant to the preceding clause (i), the Concessionaire shall be deemed to have represented that it has verified and determined that the DPR, Designs, Drawings and all other content of DPR are in conformity with the Construction and O&M Requirements.

(iii) Within 30 days of receipt of the DPR, Project Monitoring Consultant shall review the same taking into account, interalia, comments of AUTHORITY,if any, thereon, and convey its comments/observations to the Concessionaire on the conformity of DPR with Construction and O&M Requirements. If the comments/observations of the Project Monitoring Consultant indicate that the DPR is not in conformity with the Construction Requirements, the DPR shall be revised by the Concessionaire to the extent necessary and resubmitted to Project Monitoring Consultant for further review within 15 days. The Project Monitoring Consultant, AUTHORITY shall give its observations and comments, if any, within 15 (Fifteen) days of receipt of such revised DPR, which shall be taken into account by the Concessionaire while finalising the DPR.

(iv) If, within the period stipulated in the preceding clause (iii), the Project Monitoring Consultant does not respond to the DPR submitted to it by the Concessionaire the Concessionaire shall be entitled to proceed with the

PMU (RCUES) SMW, Lucknow

Project on the basis of such DPR submitted by it to the PMC/Authority, and intimate the same to AUTHORITY. The same should behighlighted in the periodic reporting by the Concessionaire.

(v) Notwithstanding any review or failure to review by or the comments / observations of the Project Monitoring Consultant or AUTHORITY, the Concessionaire shall be solely responsible for the adequacy of the DPR and their conformity with the Construction and O&M Requirements, and shall not be relieved or absolved in any manner whatsoever of any of its obligations hereunder.

(vi) The Concessionaire shall be responsible for delays in meeting the Construction Requirements caused by reason of any DPR not being in conformity with the Construction Requirements, and shall not be entitled to seek any relief in that regard from AUTHORITY.

(vii) The Concessionaire shall in consultation with the Project Monitoring Consultant finalize an implementation schedule for the Project in accordance with the Construction Requirements.

(viii) Within 90 (ninety) days of issue of Readiness Certificate or Provisional Readiness Certificate, as the case may be, the Concessionaire shall furnish to AUTHORITY three copies of "as built" Drawings of the Construction Works which have been completed as on COD, in a manner as set out in Construction Requirements.

6.3 Project Implementation: Construction Works in construction Phase

(a) Unless otherwise permitted by AUTHORITY/Project Monitoring Consultant, no Construction Works shall begin.

(b) The scope of work covered in this tender shall be as per the Bill of Quantities, specifications provided in DPR prepared by concessionaire and approved by PMC, AUTHORITY and the specifications, drawings, instructions, orders issued to the concessionaire from time to time during the pendency of work. The contents of Project Information Memorandum provide broad idea about the work to be performed under the scope ofthis contract. However, the work shall be executed according to the DPR submitted by Concessionaire and approved by the Project Monitoring Consultant/ AUTHORITY and "GOOD FOR CONSTRUCTION Drawings" approved in DPR. It shall be the responsibility of the concessionaire to incorporate all the aspects of scope of work in his DPR.

(c) The Concessionaire shall adhere to the Construction Requirements and achieve COD on or before the Scheduled Project Completion Date.

(d) The Concessionaire may undertake Construction Works by itself or through a Contractor possessing requisite technical, financial and managerial expertise/capability; but in either case, the Concessionaire shall remain solely responsible to meet the Construction Requirements.

(e) The Concessionaire shall, before commencement of Construction Works;

SWM, Lucknow * PROJECT(S) *

(i) have requisite organization and designate and appoint suitable officers/ representatives as it may deem appropriate to supervise the Project, to deal with the Project Monitoring Consultant/AUTHORITY andto be responsible for all necessary exchange of information required pursuant to this Agreement;

(ii) construct, provide and maintain a reasonably furnished site office accommodation for the Project Monitoring Consultant, at the Project Site.

(f) For the purposes of determining that Construction Works are being undertaken in accordance with the Construction Requirements and O&M Requirements, the Concessionaire shall with due diligence carry out all necessary and periodical Tests in accordance with the instructions and under the supervision of the Project Monitoring Consultant and the Construction Requirements and O&M Requirements. The Concessionaire shall maintain proper record of such Tests and the remedial measures taken to cure the defects or deficiencies, if any, indicated by the Test results.

(g) All Tests shall be conducted in accordance with Construction Requirements. If the Tests are successful and the Project Facilities can be safely and reliably opened for operation, the Project Monitoring Consultant shall issue Readiness Certificate.

Provided, notwithstanding that certain works or things forming part of Construction Works are not complete, if following Tests, the Project Monitoring Consultant determines that the Project Facilities can be safely and reliably opened for operations, the Project Monitoring Consultant may issue Provisional Readiness Certificate to the Concessionaire. The Provisional Readiness Certificate shall have appended thereto a list of outstanding items signed jointly by the Project Monitoring Consultant and the Concessionaire ("Punch List"). All Punch List items shall be completed by the Concessionaire within such time as may be determined by the PMC/Authority, not exceeding 60 (Sixty) days of the date of issue of the Provisional Readiness Certificate. Upon satisfactory completion of all Punch List items, the Project Monitoring Consultant shall promptly and in any case within 15 days thereof, issue Readiness Certificate.

(h) If the Concessionaire fails to complete the Punch List items within the said period of 60 days, AUTHORITY may, without prejudice to any other rights or remedy available to it under this Agreement, have such itemscompleted at the risk and costs of the Concessionaire. The cost incurred by AUTHORITY in completing the Punch List items, as certified by the PMC/Authority, shall be reimbursed by the Concessionaire to AUTHORITY within 7 days from the date of receipt of a claim in respect thereof from AUTHORITY. Thereupon, Project Monitoring Consultant may issue Readiness Certificate.

(i) The Project Monitoring Consultant, may, by written notice, require the Concessionaire to suspend forthwith the whole or any part of the Construction Works, if in its reasonable opinion the same is being carriedon in a manner that is not in conformity with the Construction Requirements.

(j) The Project shall be deemed to be complete and ready to receive Municipal Solid Waste only when the Provisional Readiness Certificate or the Readiness Certificate is issued by the Project Monitoring Consultant in accordance with the provisions hereof.

Provided if COD is delayed beyond 30 days of the Scheduled Project Completion Date, AUTHORITY shall, subject to the provisions of **Article 8**, be entitled to terminate this Agreement and to appropriate the Performance Security.

6.4 Project Implementation: Operation and Maintenance

(a) The Concessionaire shall operate and maintain the Project Facilities in accordance with the O&M Requirements. Concessionaire shall prepare O&M plan before start of work and thereafter before start of each financial year and get approval of Authority and PMC.

(b) The Concessionaire may undertake operations and maintenance of the Project Facilities by itself or through a Contractor possessing requisite technical, financial and managerial expertise / capability; but in either case, the Concessionaire shall remain solely responsible to meet the O&M Requirements.

(c) The Concessionaire shall, during the Active Operations Period;

(i) have requisite organisation and designate and appoint suitable officers/ representatives as it may deem appropriate to supervise the Project, to deal with the Project Monitoring Consultant/AUTHORITY and to be responsible for all necessary exchange of information required pursuantto this Agreement;

(ii) construct, provide and maintain a reasonably furnished site office accommodation for the PMC/Authority, at the Project Site;

(iii) for the purposes of determining that the Construction Works and Project Facilities are being maintained in accordance with the Construction Requirements and O&M Requirements, the Concessionaire shall with due diligence carry out all necessary and periodical Tests in accordance with the instructions and under the supervision of the PMC/Authority. The Concessionaire shall maintain proper record of such Tests and the remedial measures taken to cure the defects or deficiencies, if any, indicated by the Test results.

(iv) Conduct all Tests to ascertain compliance with Construction Requirements and O&M Requirements.

(v) suspend forthwith the whole or any part of the Construction Works upon receiving a written notice from the PMC/Authority, who may require the

Concessionaire to suspend the activities in whole or part if in the reasonable opinion of the PMC/Authority, the operations are being carried on in a manner that is not in conformity with the O&M Requirements.

(d) In the event the Concessionaire has failed to operate and maintain the Project in accordance with the O&M Requirements, and such failure has not been remedied despite a notice to that effect issued by the Project Monitoring Consultant or AUTHORITY ("Notice to Remedy"), AUTHORITY may, without prejudice to any of its other rights/remedies under this Agreement, be entitled to operate and maintain the Project or cause to repair and maintain the Project Facilities at the risk and cost of the Concessionaire. The Concessionaire shall reimburse all costs incurred by AUTHORITY on account of such operation and maintenance or repair and maintenance within 7 days of receipt of AUTHORITY's claim therefore.

(e) The Concessionaire shall be deemed to be in material breach of O&M Requirements if the Project Monitoring Consultant acting reasonably and in accordance with the provisions of this Agreement, has determined that due to breach of its obligations by the Concessionaire:

(i) there has been failure/undue delay in carrying out scheduled/planned maintenance or the scheduled/planned maintenance has not been carried out in accordance with the O&M Requirements;

(ii) the maintenance of the Project Facilities or any part thereof has deteriorated to a level which is below the acceptance level prescribed by the O&M Requirements;

(iii) there has been a serious or persistent let up in adhering to the O&M Requirements and thereby the Project Facilities or any part thereof is not safe for operations;

(iv) There has been persistent breach of O&M Requirements. For avoidance of doubt, persistent breach shall mean:

a. any breach of O&M Requirements by the Concessionaire which has not been remedied by the Concessionaire despite a Notice to Remedy in respect thereof issued by the PMC/Authority/AUTHORITY;

b. recurrence of a breach by the Concessionaire, during the pendency of Notice to Remedy by the PMC/Authority/AUTHORITY requiring the Concessionaire to remedy a breach, and

c. repeated occurrence of a breach notwithstanding that earlier breaches have been remedied pursuant to Notice to Remedy or otherwise.

Upon occurrence of a material breach of O&M Requirements, AUTHORITY shall, without prejudice to and notwithstanding any other consequences provided therefore under

this Agreement, be entitled to terminate this Agreement.

6.5 Insurance

The Concessionaire shall as be specified in Article 10 of this agreement, at its cost and expense, purchase and maintain by due re-instatement or otherwise, during the Concession Period all insurances in respect of the Project Facilities in accordance withthe Good Industry Practice. The Concessionaire shall maintain a register of entry in order of premiums paid towards the Project Facilities and proof of payments made shall be submitted to AUTHORITY whenever requested for.

6.6 Environmental Compliance

The Concessionaire shall, at all times, ensure that all aspects of the Project Facilities and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including rules such as MSW Rules, policies and guidelines related thereto. The Concessionaire shall obtain and maintain from time to time all necessary clearances from the SPCB or any other similarly empowered Government Agency and for this purpose shall carry out the necessary environmental impact assessment studies and implement appropriate environment management plans in respect of the Project Facilities.

6.7 Land Use

The Concessionaire shall ensure optimum utilisation of the Site and shall not use the same for any purpose unconnected or which is not incidental to the Project or related activities.

6.8 Weighment, Acceptance & Rejection of Municipal Solid Waste

(a) The Concessionaire shall weigh the Municipal Solid Waste at the entry gate to the Processing Site and weigh the Landfill Waste prior to disposal of the same in the Landfill Facility in the manner as set out in the O&M Requirements.

(b) The Concessionaire also undertakes not to accept Municipal Solid Waste which is not supplied by any Person appointed by it.

6.9 Sale/Distribution of Compost and Other Recyclables

(a) The Concessionaire may adopt such processes and methods as it considers necessary or expedient for Processing of Municipal Solid Waste and Landfilling at the Project Facilities, subject to meeting the Construction Requirements and O&M Requirements.

(b) The Concessionaire shall be free to sell or otherwise dispose of the recyclables, compost or organic manure, energy (power) and/ or other material recovered after Processing the Municipal Solid Waste, at the Project Facilities at such price and to such Persons and using such marketing and selling arrangements and strategies as it may deem appropriate subject to meeting the O&M Requirements.

6.10 Landfilling

The Concessionaire shall carry out Landfilling, including carrying out of relevant Tests, maintenance of records and ensure certification by PMC/Authority, in accordance with O&M Requirements. The Concessionaire shall weigh the Landfill Waste prior to disposal

of the same in the Landfill Facility.

6.11 General Obligations

The Concessionaire shall at its own cost and expense:

(a) investigate, study, design, construct/ renovate, operate and maintain the Project Facilities in accordance with the provisions hereof;

(b) obtain all Applicable Permits as required by or under the Applicable Law and be in compliance thereof at all times during the Concession Period;

(c) comply with Applicable Law governing the operations of Municipal Solid Waste processing units and engineered sanitary landfills at all times during the Concession Period;

(d) ensure and procure that any contract relating to the Project, entered into by the Concessionaire for implementing the Project in accordance with this Agreement contains provisions that would entitle a nominee of AUTHORITY to step into such contract/s at AUTHORITY's discretion, in place and substitution of the Concessionaire, pursuant to the provisions of this Agreement

(e) endeavor to sell or otherwise dispose off, without Landfilling, all recyclables in a manner which is not detrimental to the environment;

(f) endeavor to improve the ancillary conditions and infrastructure related to the Project including assistance to informal recycling workers,

(g) procure and maintain in full force and effect, as necessary, appropriate proprietary rights, licenses, agreements and permissions for materials, methods, processes and systems used in or incorporated into the Project;

(h) make efforts to maintain harmony and good industrial relations among the personnel employed in connection with the performance of its obligations under this Agreement and shall be solely responsible for compliance with all labour laws and solely liable for all possible claims and employment related liabilities of its staff employed in relation with the Project and hereby indemnifies AUTHORITY against any claims, damages, expenses or losses in this regard andthat in no case and shall for no purpose shall AUTHORITY be treated as employer in this regard;

(i) make its own arrangements for construction materials and observe and fulfill the environmental and other requirements under the Applicable Law and Applicable Permits;

(j) be responsible for all the health, security, environment and safety aspects of the Project at all times during the Concession Period.

(k) ensure that the Project Facilities remain free from all encroachments and take all steps necessary to remove encroachments, if any;

(l) upon receipt of a request thereof, afford access to the Project Facilities to the authorised representatives of AUTHORITY for the purpose of ascertaining compliance with the terms, covenants and conditions of this Agreement.

(m) pay all Taxes, duties and outgoings, including utility charges relating to the Project Facilities.

6.12 No Breach of Obligations

The Concessionaire shall not be considered to be in breach of its obligations under this Agreement nor shall it incur or suffer any liability if and to the extent performance ofany of its obligations under this Agreement is affected by or on account of any of the following:

(a) Force Majeure Event, subject to Article 8.3;

(b) AUTHORITY Event of Default;

(c) Compliance with the instructions of the Project Monitoring Consultant/AUTHORITY or the directions of any Government Agency other than instructions issued as a consequence of a breach by the Concessionaire of any of its obligations hereunder;

(d) Closure of the Project Facilities or part thereof with the approval of the Project Monitoring Consultant / AUTHORITY.

6.13 Maintenance of Records

The Concessionaire shall maintain records of the quantum (measured in tonnes) of biodegradable substance, non-biodegradable, recyclable and green waste substance, Landfill Waste deposited at the Waste Processing Facility and the Landfill Facility, duly countersigned by the Project Monitoring Consultant and provide monthly, quarterly and annual reports of the same to the Project Monitoring Consultant, AUTHORITY.

ARTICLE 7

7 AUTHORITY's OBLIGATIONS

7.1 AUTHORITY's OBLIGATIONS

In addition to and not in derogation or substitution of any of its other obligationsunder this Agreement, AUTHORITY shall have the following obligations:

7.2 Specific Obligations

a) AUTHORITY shall provide Processing Fee as per the provisions of this agreement.

b) The barest minimum Land in the Concession Area or at Waste Processing & Land Fill Site (WPLFS) for vehicles maintenance work shop to the contractor, during the contract period.

c) AUTHORITY shall also provide premises for parking purpose at WPLFS. This area can be provided as small areas where in the contractors can park their vehicles.

d) The Contractor shall erect fencing, construct roads/ office and other infrastructure & services as required for effective implementation of the contract and install other services as necessary to safe and effective completion of the work. Such movable and immovable infrastructure shall be transferred to AUTHORITY as applicable in working conditions, on completion of the contract period or at the time of termination of contract.

e) The successful bidder will use these premises for organizing, inspecting, monitoring and controlling the work including receipt of the complaints directly from citizens to be redressed within 24 hours.

f) AUTHORITY shall jointly provide barest minimum land area at one or more locations or at WPLFS for storage as mentioned above Separate workshop area shall also be provided as mentioned above by AUTHORITY. The contractor shall make own arrangements at such parking facilities including security, light, water, telephone etc. AUTHORITY shall provide required land allotment documentation for the same.

g) AUTHORITY shall not provide any additional infrastructure or services to the contractor on this account, such as printing, stationary, electricity, water supply, telephone. The contractor shall make their own arrangement and the charges forall such services will have to be borne by the contractor.

h) AUTHORITY shall declare and maintain, or cause to declare and maintain, a no-development zone around the Processing and Land Fill Site in accordance with Applicable Laws.

i) AUTHORITY shall grant in a timely manner all such approvals, permissions and authorizations which the Concessionaire may require or is obliged to seek from AUTHORITY under this Agreement, in connection with implementation of the Project and the performance of its obligations. Provided where authorization for availment of utilities such as power, water, sewerage, telecommunications or any other incidental services/utilities is required, the same shall be provided by

AUTHORITY in the form as set out in **Schedule 9**, within thirty days (30) days from receipt of request from the Concessionaire to make available such authorisation.

j) AUTHORITY shall endeavor to assist the Concessionaire in obtaining finances from the financial institutions as applicable for the Project.

7.3 General Obligations

AUTHORITY shall :

(a) Where appropriate provide necessary assistance to the Concessionaire in securing Applicable Permits;

(b) Observe and comply with all its obligations set forth in this Agreement.

ARTICLE 8

8 PAYMENT OF PROCESSING FEE AND POST CLOSURE PAYMENTS

8.1 Payment of Processing Fee

(a) Subject to the provisions of this Agreement and in consideration of the Concessionaire accepting the Concession and undertaking to perform and discharge its obligations in accordance with the terms, conditions and covenants set forth in this Agreement, AUTHORITY agrees and undertakes to pay to Concessionaire, the Processing Fee in financial Bid.

Cost of Operation & maintenance shall be recovered under two heads i) Revenue from sale of products of waste processing ii) revenue from O&M grant in the form of Processing Fee. Concessionaire shall be responsible to generate the desired revenue from first head whereas AUTHORITY will provide Processing Fee at the rate tendered and negotiated thereupon by concessionaire.

All the payments and revenues to concessionaire shall accrue to Escrow account only and can be appropriated only thereafter.

(b) PAYMENT & PENALTY CALCULATION MODULE

The payment to the contractor for Processing & Disposal will based on per MT of waste received at processing plant and percentage of waste processed and Landfilled. For 100% payment for processing and disposal, concessionaire shall ensure 100% processing of waste and the quantity of waste going to landfill shall be restricted to 20% of incoming waste. The Concessionaire shall weigh the Waste coming to waste processing and landfill site (WPLFS) using digital weighbridge installed at entry of processing plant and at entry of SLF and get it duly certified by the Project Monitoring Consultant in the manner as set out in the O&M Requirements. The Concessionaire shall, on the 5th day of every Month or in case the 5th day of a Month is a holiday then on the following working day of such Month, submit to AUTHORITY /PMC a statement ("Processing Fee & Work Statement") providing the following details, in the manner as set out in the O&M Requirements:

(i) quantity of Municipal Solid Waste processed for the previous Month alongwith proof;

(ii) Aggregate quantity of Landfill Waste for the previous Month,

(iii) Quantity of Permissible Landfill Waste on each day of the previous Month,

(iv) Aggregate quantity of Permissible Landfill Waste for the previous Month

(v) Amount of Processing Fee for Processing & Disposal for the previous

RCUES * PMU * SWM, Lucknow

Month calculated in accordance with **Schedule 6**.

Note:

1. Inert Material to be landfilled shall not be more than 20% of the garbage entering to the Processing and Land Fill site, as set out in the Technical Proposal [in third phase].

(c) The Concessionaire shall receive Processing Fee only for the component for which service has been provided actually.

(d) O&M of existing processing plant shall also be started immediately after 4 months of Date of signing the Agreement with full capacity of 1500 TPD. The Concessionaire will complete all the works for revival of the plant as proposed and approved by PMC/ Authority within 4 months.

8.2 Mechanism of Payment

(a) In accordance to the performance indicator linked for payment for scopeof services, the invoice raised will be considered only as per service level benchmark defined for the relevant package/part/component and deductions, penalty shall be imposed for failure to deliver the services as per **Schedule 6**

(b) The Authority shall make the payment to the Contractor for performing works and providing services as per scope of work and performance indicators specified. The payment to the contractor shall be made on monthly basis. The contractor shall submit bills along with the daily performance measurement sheets based on the ICT module implemented for the project.

(c) The Contractor must submit the bills by 7th of every month. LNN will pay 80% of the amount within two week(14) working days upon submission of bills verified and supported by the ICT based reporting. The payment shall be released by 20th of each month. 18 % amount will be paid after complete verification and its payment will be released up to 7th of next month. The bills shall be paid after due scrutiny of records. "Record Keeping & Reporting Requirements". Each invoice shall indicate thenumber of units serviced and the unit price for each item. LNN shall withhold payment on any and all invoices until such time the Contractorhas supplied the required monthly report in a satisfactory manner. Monthly reports shall include Verification from reports in support of KPI as mention in Schedule 6. LNN shall make deduction and levy penalty for the Contractor's failure to perform and maintain Service Level Benchmarks and performance indicators.

(d) Deductions from the Payment will be made if available towards Income Tax, Service Tax and Royalties etc as per provisions of the statutory authorities, in force from time to time in the State of Uttar Pradesh. The Contractor is expected to include all such charges at the time of bidding submission. Any new tax's, increase in such tax's imposed/ applicable during the contract period shall be reimbursed by LNN as per actuals

PMU (RCUES) Mohan Lucknow

after submitting the proof of the same.

(i) Authority shall pay balance 2% of the total amounts payable to Concessionaire into a special account designated as "Post Closure Performance Account", which shall be utilised for post closure maintenance work.

Provided, however, the Concessionaire shall be eligible to receive at the end of each year, during the Active Operations Period, an amount equivalent to two-thirds of the amounts accrued in the Post Closure Performance Account during that year, subject to the Concessionaire furnishing of a bank guarantee of equivalent value in favour of AUTHORITY.

Provided further that the bank guarantees shall be kept valid and co-terminus and shall be released with the Post Closure Performance Account payments due as stated in **sub – article 8.3 (b)** herein below.

(e) The amounts in the Post Closure Performance Account would be payable to the Concessionaire during the Post Closure Period in 60 Monthly installments upon Cheque on the Post Closure Performance Account duly signed by AUTHORITY and the Concessionaire.

(f) Any delay in making any payment in accordance with the Processing Fee Statement shall, without prejudice to any other consequences under this Agreement, entail payment of interest on the amount in default at prevailing annual prime lending rate of State Bank of India calculated for the duration of delay. The period of delay shall be counted from 60 days after; the day of submission of the Processing Fee Statement.

(g) All payments to the Concessionaire shall be made in Escrow account by way of Cheque/electronic transfer. All payments to AUTHORITY if applicable shall be made by way of demand draft in favour of MUNICIPAL COMMISSIONER, LUCKNOW NAGAR NIGAM.

(h) Annual Price Adjustments will be made in accordance and as described in Schedule 18.

8.3 Post Closure Performance Account

(a) Within 30 days from the Appointed Date, the Parties shall open a special account designated as Post Closure Performance Account for making the payments as set out in **Article 8.3 (b)**.

(b) Subject to the Concessionaire meeting his obligations in respect to the Post Closure Period in accordance with the O&M Requirements, payments from the Post Closure Performance Account shall be made to the Concessionaire in accordance with **Schedule 8**.

(c) AUTHORITY and the Concessionaire would set out a mechanism, within 30 days of COD, for investing the amounts in Post Closure Performance Account in Permitted Investments. AUTHORITY agrees to pay to the Concessionaire interest accrued / received from Permitted Investments.

AUTHORITY and the Concessionaire shall suitably structure the operation of Post Closure Performance Account.

8.4 Sale of Recyclable, Compost or any other product

Concessionaire shall be allowed to remove the recyclable materials from the waste and make profit out of it. He shall also be allowed to use biodegradable materials for composting or any other process. The LNN will not claim any share out of the income derived out of these activities by the contractor.

All the revenues to concessionaire from sale of recyclable, sale of compost or sale of any other product such as electricity shall accrue to Escrow account only and can be appropriated only thereafter.

8.5 Daily Work Performance Evaluation Sheet for Bio degradable, Non-biodegradable, Recyclable & Green waste, Processing and Landfills is as given below.

Table 8-1 Daily Work Performance Evaluation Sheet- Processing & Disposal

S. No.	ITEM	Marks assigned	Level achieved in %	Marks Obtained	Justification foraward of marks
1	Waste segregated and processed as per standard operating procedure. Tolerance Limit: 0% Marking Parameter: 100% marks for 100% processing on daily basis Monitoring Mechanism: Weighbridge record	15			
2	Product Generation (RDF & Compost) – 25% of total waste Tolerance Limit: 10% Marking Parameter: 1 mark to be deducted for every 1% less product conversion than tolerance limit. Monitoring Mechanism: Weighbridge record	7.5			
3	Sale/Disposal of Recyclables & RDF – 100 % of product (RDF, recyclable etc) sold/disposed as per approved methodology. Marking Parameter: 100% marks for 100% sale/disposal of product of particular month before last day of next month. Monitoring Mechanism: Weighbridge	5			

	record and sale records				
4	Sale of compost – 100 % of product (compost) sold/disposed as per approved methodology. Marking Parameter: 100% marks for 100% sale/disposal of product of particular month before last day of next month. Monitoring Mechanism: Weighbridge record and sale records	5			
5	Quality of product based on test results conducted in laboratory. Marking Parameter: 100% mark for product found as per approved standards else zero (0) marks. Monitoring Mechanism: Test report	5			
6	Manpower (Uniforms & Safety Gears) 2.5 Marks on Each Marking Parameter: 100% mark for all labour found in uniform and with safety gears. Monitoring Mechanism: Test report	5			
7	Operational reporting on the basis of IOT based Online Monitoring System fitted with CCTV, online weighing system etc.	5			
8	Cleanliness of surroundings at processing plant and Disinfectant sprayed	5			
9	Breakdown of Machineries for more than 90% of days in a month. Tolerance Limit: 90% Marking Parameter: Breakdown of the machineries on every 1% in excess above tolerance limit, 1 mark shall be deducted **Monitoring Mechanism:** daily inspection report.	7.5			

10	Effluent and emissions complying standards prescribed in SWM Rule 2016	05			
11	Inerts for landfilling not to exceed 20% of waste received at processing plant. Tolerance Limit: 10% Marking Parameter: 1 mark to be deducted for every 1% less product conversion than tolerance limit. Monitoring Mechanism: Weighbridge record	15			
12	Non-maintenance of statutory compliances. Marking Parameter: 100% deduction for non-maintenance beyond 1 month				
	i. Plant & Vehicle Insurance & fitness Data Source: Random inspection	2			
	ii. PF/ESIC compliance Data Source: Random inspection	2			
	ii. Income Tax Data Source: Random inspection	2			
	v. EC/CTE/CTO Data Source: Random inspection	2			
	v. Workman compensation Data Source: Random inspection	2			
13	Number of Complaints in random inspection for and not cleared within 6 Hrs. of such complaint Marking Parameter: % of Complaints actually cleared within 6 Hrs.				
	i) Leachate flowing out of designated drainage system Data Source: Random inspection by PMC/LMC	2			
	ii) Waste spilled beyond approved area such as receiving platform, Windrow etc Data Source: Random inspection by PMC/LMC	2			
	iii) Filth and smell from Plant area Data Source: Random inspection by PMC/LMC	2			

PMC SWM, Lucknow (UP)

	iv) Weighbridge found non-operational Data Source: Random inspection by PMC/LMC.	2			
	v) Disinfectant sprayed twice a day	2			
	Grand Total	100			

8.6 Performance based Payment

a) The net payment based on performance evaluation of Processing and Land filling etc. will be worked out = Total value of work x (pointsobtained /points assigned). If the points obtained are not 75%, then one chance is given for rectification in the next month. After a chance is given for rectification of the defect the payment proportionate to percentage point obtained after second inspection will be released.

b) Usually, a regular payment shall be made to the bidder in accordance to the marks achieved. If the bidder fails to achieve at least 75% marks; more than two occasions in a month during the entire contract period, the AUTHORITY may initiate the proceedingsfor serving default notice and if the bidder fails to achieve at least 75% marks for more than 15 consecutive days in a month AUTHORITY may initiate cancelling the contract with the bidder and the work during the remaining period of the contract; shall be carried out, by engaging another agency (through call of tenders) at the risk and cost of the bidder.

8.7 Other Conditions

a) In case of inspection by Project Monitoring Consultant on particular day after the work is completed, if work is not found satisfactory on measurement through

marks/points, the amount in accordance to the loss of points for that day, shall be deducted from the monthly running bills

b) In case of AUTHORITY's representative not available for the joint inspection with the PMC/Authority, the evaluation carried out by the Project Monitoring Consultant shall be taken for processing the payment.

ARTICLE 9

9 Financial Close

9.1 Financial Close

9.1.1 The Concessionaire hereby agrees and undertakes that it shall achieve Financial Close within 120 (one hundred and Twenty) days from the date of this Agreement and in the event of delay, it shall be entitled to a further period not exceeding 30 (thirty) days, subject to payment of Damages to the Authority in a sum calculated at the rate of 0.2% (zero point two per cent) of the Performance Security for each day of delay, or for a further period not exceeding 100 (one hundred) days, subject to payment of Damages specified in Clause 4.3; provided that the Damages specified herein shall be payable every week in advance and the period beyond the said 120 (one hundred and Twenty) days shall be granted only to the extent of Damages so paid; provided further that no Damages shall be payable if such delay in Financial Close has occurred solely as a result of any default or delay by the Authority in procuring satisfaction of the Conditions Precedent specified in Clause 4.1.1 or due to Force Majeure. For the avoidance of doubt, the Damages payable hereunder by the Concessionaire shall be in addition to the Damages, if any, due and payable under the provisions of Clause 4.3.

9.1.2 The Concessionaire shall, upon occurrence of Financial Close, notify the Authority forthwith, and shall have provided to the Authority, at least 2 (two) days prior to Financial Close, 3 (three) true copies of the Financial Package and the Financial Model, duly attested by a Director of the Concessionaire, along with 3 (three) soft copies of the Financial Model in MS Excel version or any substitute thereof, which is acceptable to the Senior Lenders.

9.2 Termination due to failure to achieve Financial Close

9.2.1 Notwithstanding anything to the contrary contained in this Agreement, in the event that Financial Close does not occur, for any reason whatsoever, within the period set forth in Clause 9.1.1 or the extended period provided thereunder, all rights, privileges, claims and entitlements of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Concessionaire, and the Concession Agreement shall be deemed to have been terminated by mutual agreement of the Parties. For the avoidance of doubt, it is agreed that in the event the Parties hereto have, by mutual consent, determined the Appointed Date to precede the Financial Close, the provisions of this Clause 9.2.1 shall not apply.

9.2.2 Upon Termination under Clause 9.2.1, the Authority shall be entitled to encash the Performance Security and appropriate the proceeds thereof as Damages; provided, however, that if Financial Close has not occurred solely as a result ofthe Authority being in default of any of its obligations under Clause 4.2, it shall, upon Termination, return the Bid Security forthwith along with the Damages due and payable under Clause 4.2.

9.3 Escrow Account

9.3.1 The Concessionaire shall, prior to the Appointed Date, open and establish an Escrow Account with a Bank (the "Escrow Bank") in accordance with this Agreement read with the Escrow Agreement.

9.3.2 The nature and scope of the Escrow Account shall be fully described in the agreement (the "Escrow Agreement") to be entered into amongst the Concessionaire, the Authority, the Escrow Bank.

9.4 Deposits into Escrow Account

9.4.1 The Concessionaire shall deposit or cause to be deposited the following inflowsand receipts into the Escrow Account:

a. All funds received from AUTHORITY as Grant-in-Aid

b. all funds constituting the Financial Package including Loans, self-investment or investments from subsidiaries.

c. all and any other revenues from or in respect of the Project including the proceeds of any rentals, deposits, capital receipts or insurance claims; and

d. all payments by the Authority, after deduction of amounts specified for post closure activity

9.5 Withdrawals during Concession Period

9.5.1 The Concessionaire shall, at the time of opening the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriatedin the following order every month, or at shorter intervals as necessary, and ifnot due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

a. all taxes due and payable by the Concessionaire for and in respect of the Project;

b. all payments relating to construction & procurement of the Project, subject to and in accordance with the conditions, if any, set forth in the Financing Agreements;

c. O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;

d. O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of this Agreement, and certified by the Authority as due and payable to it;

e. License fees & revenue due and payable to the Authority;

f. monthly proportionate provision of Debt Service due in an Accounting Year;

g. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire, including repayment of Revenue Shortfall Loan;

h. monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;

i. any reserve requirements set forth in the Financing Agreements; and

j. balance, if any, in accordance with the instructions of the Concessionaire.

9.5.2 The Concessionaire shall not in any manner modify the order of payment specified in Clause 9.5.1, except with the prior written approval of the Authority.

9.6 Withdrawals upon Termination

9.6.1 Notwithstanding anything to the contrary contained in this Agreement, all amounts standing to the credit of the Escrow Account shall, upon Termination, be appropriated in the following order:

a. all taxes due and payable by the Concessionaire for and in respect of the Project;

b. 90% (ninety per cent) of Debt Due excluding Subordinated Debt;

c. outstanding License Fees;

d. all payments and Damages certified by the Authority as due and payable toit by the Concessionaire, including repayment of Revenue Shortfall Loan [if any];

e. retention and payments relating to the liability for defects and deficiencies set forth in the Agreement;

f. outstanding Debt Service including the balance of Debt Due;

g. outstanding Subordinated Debt;

h. incurred or accrued O&M Expenses;

i. any other payments required to be made under this Agreement; and

j. balance, if any, in accordance with the instructions of the Concessionaire:

Provided that no appropriations shall be made under Sub-clause (j) of this Clause 9.7.1 until a Vesting Certificate has been issued by the Authority.

9.6.2 The provisions of Clause 9.3 to Clause 9.6 and the instructions contained in the Escrow Agreement shall remain in full force and effect until the obligations set forth in Clause 9.7.1 have been discharged.

PMU (RCUES) * SMW, Lucknow *

ARTICLE 10

10 Insurance

The Concessionaire shall at its cost and expense, purchase and maintain by due re-instatement or otherwise, during the Concession Period all insurances in respect of the Project Facilities in accordance with the Good Industry Practices. The Concessionaire shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on the Authority as a consequence of any act or omission of the Concessionaire during the Construction Period. The Concessionaire shall procure that in each insurance policy, the Authority shall be a co-insured and that the insurer shall pay the proceeds to insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by the Concessionaire after repayment of Senior Lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of Senior Lenders' dues.

10.1 Notice of the Authority

No later than 45 (forty-five) days prior to commencement of the Construction Period and the Operation Period, as the case may be, the Concessionaire shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to effect and maintain in accordance with this Clause 10. Within 30 (thirty) days of receipt of such notice, the Authority may require the Concessionaire to effect and maintain such other insurances as may be necessary pursuant hereto, and in the event of any difference or disagreement relating to any such insurance, the Dispute Resolution Procedure shall apply.

10.2 Evidence of Insurance Cover

All insurances obtained by the Concessionaire in accordance with this Article 10 shall be maintained with insurers on terms consistent with Good Industry Practice. Within 15 (fifteen) days of obtaining any insurance cover, the Concessionaire shall furnish to the Authority, notarized true copies of the certificate(s) of insurance, copies of insurance policies and premium payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty five) days after notice of such proposed cancellation, modification or non-renewal has been delivered by the Concessionaire to the Authority. The Concessionaire shall maintain a register of entry in order of premiums paid towards Insurance of the Project Facilities.

10.3 Remedy for failure to insure

If the Concessionaire shall fail to effect and keep in force all insurances for which it is responsible pursuant hereto, the Authority shall have the option to either keep in force any such insurances, and pay such premium and recover the costs thereof from the Concessionaire, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Concessionaire.

10.4 Waiver of Subrogation

All insurance policies in respect of the insurance obtained by the Concessionaire pursuant to this Article 10 shall include a waiver of any and all right of subrogation or recovery of the insurers thereunder against, inter alia, the Authority, and its assigns, successor, underrating and their subsidiaries, affiliates, employees, insurers and underwriters and of any right of the insurers of any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

10.5 Concessionaire's waiver

The Concessionaire hereby further releases, assigns and waives any and all rights of recovery against, inter alia, the Authority, and its assigns, undertaking, and their affiliates, subsidiaries, employees, successors, assigns, insurers and underwriters, which the Concessionaire may otherwise have or acquire in or from or in any way connected with any loss, liability or obligations covered by policies of insurance maintained or required to be maintained by the Concessionaire pursuant to this Agreement (other than Third Party liability insurance policies) or because of deductible Articles in or inadequacy of limits of any such policies of insurance.

10.6 Application of Insurance Proceeds

Subject to the provisions of the Financing Documents and unless otherwise provided herein, the proceeds of all insurance policies received shall be promptly applied by Concessionaire towards repair, renovation, restoration or re-instatement of the Project Facilities or any part thereof which may have been damaged or destroyed. The Concessionaire shall designate the Authority as the beneficiary for the assets under ownership of the Authority and may designate the Senior Lenders as the beneficiaries for the assets under the Concessionaire ownership or assign the insurance policies in their favour as security for the financial assistance provided by them to the Project. The Concessionaire shall carry such repair, renovation, restoration or re-instatement to the extent possible in such manner that the Project Facilities after such repair, renovation, restoration or re-instatement to the extent possible in the same condition as it were prior to such damage or destruction, normal wear and tear accepted.

10.7 No Breach of Insurance Obligation

If during the Concession Period, any risk which has been previously insured becomes un-insurable due to the fact that the insurers have ceased to insure such a risk and therefore insurance cannot be maintained / re-instated in respect of such risk, Concessionaire shall not be in breach of its obligations regarding insurance under this Agreement.

ARTICLE 11

11 Accounts & Audits

11.1 Audited accounts

11.1.1 The Concessionaire shall maintain books of accounts recording all its receipts (including all Processing Fee and other revenues derived/collected by it from or on account of the Project and/or its use), income, expenditure, payments (including payments from the Escrow Account), assets and liabilities, in accordance withthis Agreement, Good Industry Practice, Applicable Laws and Applicable Permits. The Concessionaire shall provide 2 (two) copies of its Balance Sheet, Cash Flow Statement and Profit and Loss Account, along with a report thereon by its Statutory Auditors, within 90 (ninety) days of the close of the Accounting Year to which they pertain and such audited accounts, save and except where expressly provided to the contrary, shall form the basis of payments by either Party under this Agreement. The Authority shall have the right to inspect the records of the Concessionaire during office hours and require copies of relevant extracts of books of accounts, duly certified by the Statutory Auditors, to be provided to the Authority for verification of basis of payments, and in the event of any discrepancy or error being found, the same shall be rectified and such rectified account shall form the basis of payments by either Party under this Agreement.

11.1.2 The Concessionaire shall, within 30 (thirty) days of the close of each quarter ofan Accounting Year, furnish to the Authority its unaudited financial results in respect of the preceding quarter, in the manner and form prescribed by the Securities and Exchange Board of India for publication of quarterly results by the companies listed on a stock exchange.

11.2 Appointment of auditors

11.2.1 The Concessionaire shall appoint, and have during the subsistence of this Agreement as its Statutory Auditors, a firm chosen by it from the mutually agreed list of 10 (ten) reputable firms of chartered accountants (the "Panel of Chartered Accountants"). All fees and expenses of the Statutory Auditors shall be borne by the Concessionaire.

11.2.2 The Concessionaire may terminate the appointment of its Statutory Auditors after a notice of 45 (forty five) days to the Authority, subject to the replacement Statutory Auditors being appointed from the Panel of Chartered Accountants.

11.2.3 Notwithstanding anything to the contrary contained in this Agreement, the Authority shall have the right, but not the obligation, to appoint at its cost from time to time and at anytime, another firm (the "Additional Auditors") from the Panel of Chartered Accountants to audit and verify all those matters, expenses, costs, realizations and things which the Statutory Auditors are required to do, undertake or certify pursuant to this Agreement.

11.3 Certification of claims by Statutory Auditors

PMU (RCUES) SMW, Lucknow

Any claim or document provided by the Concessionaire to the Authority in connection with or relating to receipts, income, payments, costs, expenses, accounts or audit, and any matter incidental thereto shall be valid and effective only if certified by its Statutory Auditors.

11.4 Set-off

11.4.1 In the event any amount is due and payable by the Authority to the Concessionaire, it may set-off any sums payable to it by the Concessionaire and pay the balance remaining. Any exercise by the Authority of its rights under this Clause shall be without prejudice to any other rights or remedies available to it under this Agreement or otherwise.

11.5 Dispute resolution

11.5.1 In the event of there being any difference between the findings of the Additional Auditors and the Statutory Auditors, such Auditors shall meet to resolve the differences and if they are unable to resolve the same, such Dispute shall be resolved by the Authority by recourse to the Dispute Resolution Procedure.

PMU (RCUES) SMW, LUCKNOW

ARTICLE 12

12 FORCE MAJEURE AND CHANGE IN LAW

12.1 Force Majeure Event

Any of the following events which is beyond the control of the Party claiming to be affected thereby ("Affected Party") and which the Affected Party has been unable to overcome or prevent despite exercise of due care and diligence, and results in Material Adverse Effect shall constitute Force Majeure Event:

(a) earthquake, flood, inundation and landslide

(b) Epidemic& Pandemic

(c) storm, tempest, hurricane, cyclone, lightning, thunder or other extreme atmospheric disturbances

(d) fire caused by reasons not attributable to the Concessionaire or any of the employees, Contractors or agents appointed by the Concessionaire for purposesof the Project;

(e) acts of terrorism;

(f) strikes, labour disruptions or any other industrial disturbances not arising on account of the acts or omissions of the Concessionaire or the Contractor

(g) action of a Government Agency having Material Adverse Effect including but not limited to

  (i) acts of expropriation, compulsory acquisition or takeover by any Government Agency of the Project/Project Facilities or any part thereof or of the Concessionaire's or the Contractor's rights in relation to the Project,

  (ii) any judgment or order of a court of competent jurisdiction or statutory authority in India made against the Concessionaire or the Contractor in any proceedings which is non-collusive and duly prosecuted by the Concessionaire, and

  (iii) any unlawful, unauthorised or without jurisdiction refusal to issue or to renew or the revocation of any Applicable Permits, in each case, for reasons other than Concessionaire's or the Contractor's breach or failure in complying with the Project Requirements, Applicable Laws, Applicable Permits, any judgment or order of a Governmental Agency or of any contract by which the Concessionaire or the Contractor as the case maybe is bound.

(h) early termination of this Agreement by AUTHORITY for reasons of national emergency or national security.

(i) any failure or delay of a Contractor caused by any of the sub-clauses (f) and (g) hereinabove, for which no offsetting compensation is payable to the Concessionaire by or on behalf of the Contractor.

(j) War, hostilities (whether declared or not), invasion, act of foreign enemy, rebellion, riots, weapon conflict or military actions, civil war, ionising radiation, contamination by radioactivity from nuclear fuel, any nuclear waste, radioactive toxic explosion, volcanic eruptions, any failure or delay of a Contractor caused by the events mentioned in this sub-clause for which no offsetting compensation is payable to the Concessionaire by or on behalf of the Contractor

12.2 Notice of Force Majeure Event

(a) As soon as practicable and in any case within 7 days of the date of occurrence ofa Force Majeure Event or the date of knowledge thereof, the Affected Party shall notify Project Monitoring Consultant and the other Party of the same setting out, inter alia, the following in reasonable detail:

(i) the nature and extent of the Force Majeure Event;

(ii) the estimated Force Majeure Period;

(iii) the nature of and the extent to which, performance of any of its obligations under this Agreement is affected by the Force Majeure Event;

(iv) the measures which the Affected Party has taken or proposes to take to alleviate/mitigate the impact of the Force Majeure Event and to resume performance of such of its obligations affected thereby; and

(v) any other relevant information concerning the Force Majeure Event, and /or the rights and obligations of the Parties under this Agreement.

(b) As soon as practicable and in any case within 5 days of notification by the Affected Party in accordance with the preceding clause (a), the Parties shall along with the PMC/Authority, meet, hold discussions in good faith and where necessary conduct physical inspection/survey of the Project Facilities in order to:

(i) assess the impact of the underlying Force Majeure Event,

(ii) to determine the likely duration of Force Majeure Period and,

(iii) to formulate damage mitigation measures and steps to be undertaken by the Parties for resumption of obligations, the performance of which shall have been affected by the underlying Force Majeure Event.

(c) The Affected Party shall during the Force Majeure Period provide to the other Party and the Project Monitoring Consultant regular (not less than weekly)

reports concerning the matters set out in the preceding clause (b) as also any information, details or document, which the other Party may reasonably require.

12.3 Performance of Obligations

If the Affected Party is rendered wholly or partially unable to perform any of its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such obligations to the extent it is unable to perform the same on account of such Force Majeure Event provided that:

(a) due notice of the Force Majeure Event has been given as required by the preceding **Clause 12.2;**

(b) the excuse from performance shall be of no greater scope and of no longer duration than is necessitated by the Force Majeure Event;

(c) the Affected Party has taken all reasonable efforts to avoid, prevent, mitigate and limit damage, if any, caused or is likely to be caused to the Project Facilities as a result of the Force Majeure Event and to restore the Project Facilities, in accordance with the Good Industry Practice and its relative obligations under this Agreement;

(d) when the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party and the Project Monitoring Consultant written notice to that effect and shall promptly resume performanceof its obligations hereunder, the non-issue of such notice being no excuse for any delay for resuming such performance;

(e) the Affected Party shall continue to perform such of its obligations which are not affected by the Force Majeure Event and which are capable of being performed in accordance with this Agreement; and

(f) any insurance proceeds received shall be, subject to the provisions of Financing Documents, entirely applied to repair, replace or restore the assets damaged on account of the Force Majeure Event, or in accordance with Good Industry Practice.

12.4 Termination due to Force Majeure Event

(a) Termination

(i) If a Force Majeure Event, excluding events described under **Clauses 12.1(f), 12.1(g) and 12.1(h),** continues or is in the reasonable judgmentof the Parties likely to continue beyond a period of 120 days, the Parties may mutually decide to terminate this Agreement or continue this Agreement on mutually agreed revised terms. If the Parties are unable to reach an agreement in this regard, the Affected Party shall after the expiry of the said period of 120 days, be entitled to terminate this Agreement.

Notwithstanding anything inconsistent contained in this Agreement, if a Force Majeure Event is an event described under **Clauses 12.1(f), or 12.1(h),** and the same subsists for a period exceeding 365 days, then either Party shall be entitled to terminate this Agreement.

Provided that AUTHORITY may at its sole discretion have the option to terminate this Agreement any time after the occurrence of any event described under Clauses

12.1(f)or 12.1(h).

(b) **Termination Notice**

If either Party, having become entitled to do so, decides to terminate this Agreement pursuant to the preceding clause (a), it shall issue Termination Notice setting out;

(i) in sufficient detail the underlying Force Majeure Event;

(ii) the Termination Date which shall be a date occurring not earlier than 30 days from the date of Termination Notice;

(iii) the estimated Termination Payment including the details of computationthereof and;

(iv) any other relevant information.

(c) **Obligation of Parties**

Following issue of Termination Notice by either Party, the Parties shall promptly take all such steps as may be necessary or required to ensure that;

(i) the Termination Payment, if any, payable by AUTHORITY in accordance with the following **clause (d)** is paid to the Concessionaire on the Termination Date and

(ii) the Project Facilities are handed back to AUTHORITY by the Concessionaire on the Termination Date free from all Encumbrance.

(d) **Termination Payment**

Upon Termination of this Agreement due to a Force Majeure Event, Termination Payment shall be made to the Concessionaire by AUTHORITY in accordance with the following:

(i) If Termination is due to a Force Majeure Event, described under **Clauses 12.1(a) to 12.1(e)**, no Termination Payment shall be made by AUTHORITY to the Concessionaire but, the Concessionaire shall be entitled to receive and appropriate

(a) the proceeds of any amounts under insurance policies and

(b) the amounts in the Post Closure Performance Account

(ii) If Termination is due to the occurrence of any event described under **Clauses 12.1(f), 12.1(g) or 12.1(h)**, AUTHORITY shall pay to the Concessionaire Termination Payment equal to 100 % of the Book Value of total assets as on the Date of Termination Notice less the capital grants provided by AUTHORITY, adjusted on the basis of PLR of SBI at the time of termination. The Concessionaire would also be allowed to appropriate the amounts in the Post Closure Performance Account.

(iii) If Termination is due to the occurrence of any event described under Clause **12.1(i)**, AUTHORITY shall subject to the certification of PMC/Authority, pay to the Concessionaire, Termination payment equal to 100 % of the Book Value of total assets as on the Date of Termination

Notice less the capital grants provided by AUTHORITY, adjusted on the basis of PLR of SBI at the time of termination. The Concessionaire would also be allowed to appropriate the amounts in the Post Closure Performance Account.

Provided AUTHORITY shall be entitled to deduct from the Termination Payment any amount due and recoverable by AUTHORITY from the Concessionaire as on the Termination Date.

12.5 Liability for other losses, damages etc.

Save and except as expressly provided in this **Article 12**, neither Party hereto shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event.

12.6 Change in Law

(a) Change in Law shall mean the occurrence or coming into force of any of the following, after the Appointed Date:

(iv) The enactment of any new Indian law including laws related to environment;

(v) The repeal, modification or re-enactment of any existing Indian law

(vi) A change in the interpretation or application of any Indian law by a courtof record.

Provided that Change in Law shall not include:

(iv) Coming into effect, after the Appointed Date, of any provision or statute which is already in place as of the Appointed Date,

(v) Any new law or any change in the existing law under the active consideration of or in the contemplation of any government as of the Appointed Date which is a matter of public knowledge,

(vi) Any change in the rates of the Taxes.

(b) Subject to Change in Law resulting in Material Adverse Effect and subject to the Concessionaire taking necessary measures to mitigate the impact or likely impact of Change in Law on the Project, if as a direct consequence of a Change in Law, the Concessionaire is obliged to incur Additional Costs, and AUTHORITY shall subsequently reimburse to the Concessionaire 50% of such Additional Costs.

(c) Upon occurrence of a Change in Law, the Concessionaire may, notify AUTHORITY and the Project Monitoring Consultant of the following:

(i) The nature and the impact of Change in Law on the Project

(ii) In sufficient detail, the estimate of the Additional Cost likely to be incurred by the Concessionaire on account of Change in Law

(iii) The measures, which the Concessionaire has taken or proposes to take to

mitigate the impact of Change in Law, including in particular, minimizing the Additional Cost

(iv) The relief sought by the Concessionaire

(d) Upon receipt of the notice of Change in Law issued by the Concessionaire pursuant to preceding sub-clause, AUTHORITY and the Concessionaire shall along with the Project Monitoring Consultant hold discussions and take all such steps as may be necessary including determination/certification by the Project Monitoring Consultant of the quantum of the Additional Cost to be borne and paid by AUTHORITY.

(e) AUTHORITY shall within 30 days from the date of determination of quantum of Additional Cost, provide relief to the Concessionaire in the manner as mutually agreed upon by the Parties.

PMU (RCUES) * SMW, Lucknow *

ARTICLE 13

13 EVENTS OF DEFAULT AND TERMINATION

13.1 Events of Default

Event of Default shall mean either Concessionaire Event of Default or AUTHORITY Event of Default or both as the context may admit or require.

(a) Concessionaire Event of Default

a) AUTHORITY at any time may terminate the contract by giving written notice to the bidder.

If the Bidder/ Contractor becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to AUTHORITY.

If the Bidder/ Contractor creates events of default of any of the terms and conditions governing the contract or any clause of the contract including those of operation clauses of designated processing & disposal of waste etc.

If it is proved that the Contractor is intentionally and deliberately violating the provisions of the contract.

b) AUTHORITY requires that the Bidders under this tender observe the highest standards of ethics during the procurement and execution of such Contracts. In pursuance of this policy, AUTHORITY defines for the purposes of this provision, the terms set forth as follows:

"Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and

"Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or execution of the contract to the detriment of AUTHORITY, and includes collusive practice among Bidders (prior to or after Tender submission) designed to establish Contract Prices at artificial non-competitive levels and to deprive AUTHORITY of the benefits of the free and open competition.

c) If the bidder indulges in Corrupt or Fraudulent Practices, it gets disqualified for tendering or AUTHORITY may at any point of time terminate the contract by giving written notice to the Bidder, even after the work is started, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the AUTHORITY.

d) In case of failure to clarify or improve the work to the utmost satisfaction of AUTHORITY, letter of termination will be sent to the bidder.

e) If the order /contract is cancelled / terminated after commencing the work, on account of the reasons and / or failure of the Contractor to perform up to the standard as evaluated, Contractor shall;

- Hand over the entire infrastructure, sheds, cabins built, services provided by the service provider, in the premises given by AUTHORITY to an authorized representative of AUTHORITY; without any compensation.
- Hand over vehicles, equipment, procured for use immediately again to an authorized representative of AUTHORITY; without any compensation.

AUTHORITY may/shall assign the entire work and its set up to the next willing bidder or any other company or individual for operations of the services along with infrastructure, places and all vehicles and equipment acquired from the Contractor, at the risk and cost of the bidder.

Any of the following events shall constitute an Event of Default by the Concessionaire ("Concessionaire Event of Default") unless such event has occurred as a result of one or more reasons set out in this agreement:

(i) The Concessionaire has failed to adhere to the Construction Requirements and such failure, in the reasonable estimation of the PMC/Authority, is likely to delay achievement of COD beyond 60 days of the Scheduled Project Completion Date;

(ii) The Concessionaire has failed to achieve COD within 60 days of the Scheduled Project Completion Date because of the reasons attributed to failure in functioning of concessionaire;

(iii) At any time during the Concession Period, the Concessionaire fails to adhere to the Construction Requirements or O&M Requirements or O&M standards as stated in approved DPR and this agreement and has failed to remedy the same within 30 days;

(iv) The Concessionaire has failed to make any payments due to AUTHORITY and more than 30 days have elapsed since such payment default;

(v) The Concessionaire is in Material Breach of any of its obligations under this Agreement and the same has not been remedied for more than 30 days;

(vi) Any representation made or warranty given by the Concessionaire under this Agreement is found to be false or misleading;

(vii) A resolution for voluntary winding up has been passed by the shareholders of the Concessionaire;

(viii) Any petition for winding up of the Concessionaire has been admitted and liquidator or provisional liquidator has been appointed or the Concessionaire has been ordered to be wound up by Court of competent jurisdiction, except for the purpose of amalgamation or reconstruction with the prior consent of AUTHORITY, provided that, as part of such amalgamation or reconstruction and the amalgamated or reconstructed entity has unconditionally assumed all surviving obligations of the Concessionaire under this Agreement.

(ix) A default has occurred under any of the Financing Documents and any of

PMU (RCUES) SMW Lucknow

the Lenders has recalled its financial assistance and demanded payment of the amounts outstanding under the Financing Documents or any of them as applicable;

(x) The Concessionaire has abandoned the Project Facilities;

(xi) The Concessionaire has unlawfully repudiated this Agreement or has otherwise expressed an intention not to be bound by this Agreement;

(xii) The Concessionaire has suffered an attachment levied on any of its assets which has caused or is likely to cause a Material Adverse Effect on the Project and such attachment has continued for a period exceeding 90 days.

(b) AUTHORITY Event of Default

a) The Contractor may at any times request for termination of the contract if desired on default on the part of AUTHORITY; such as non-payment of bills or resistance from citizens and it does not get resolved by AUTHORITY, by giving written communication to AUTHORITY, the Contractor may hand over the vehicles, equipment, bins, and fixed assets created by them to AUTHORITY.

b) In case of termination /cancellation of the contract after commencing the work when AUTHORITY asks to do so on account of AUTHORITY's inability to continue, all the infrastructure, vehicles , equipment, containers brought by the Contractor may be taken over by the AUTHORITY; if requested by the Contractor; at the mutually agreed rates.

Any of the following events shall constitute an event of default by AUTHORITY ("AUTHORITY Event of Default"), when not caused by a Concessionaire Event of Default or Force Majeure Event:

(i) AUTHORITY has failed to make any payments due to the Concessionaire and more than 180 days have elapsed since such default;

(ii) AUTHORITY is in Material Breach of any of its obligations under this Agreement and has failed to cure such breach within 90 (ninety) days of receipt of notice thereof issued by the Concessionaire;

(iii) AUTHORITY has unlawfully repudiated this Agreement or otherwise expressed its intention not to be bound by this Agreement;

(iv) AUTHORITY has unreasonably withheld or delayed grant of any approval or permission which the Concessionaire is obliged to seek under this Agreement, and thereby caused or likely to cause Material Adverse Effect;

(v) Any representation made or warranties given by the AUTHORITY under this Agreement has been found to be false or misleading.

13.2 Termination due to Event of Default

(a) Termination for Concessionaire Event of Default

(i) Without prejudice to any other right or remedy which AUTHORITY may

have in respect thereof under this Agreement, upon the occurrence of a Concessionaire Event of Default, AUTHORITY shall, subject to the provisions of this Agreement, be entitled to terminate this Agreement in the manner as set out under this agreement.

Provided however that upon the occurrence of a Concessionaire Event of Default as specified under this agreement, AUTHORITY may terminate this Agreement by issue of Termination Notice in the manner set out under this agreement.

(ii) If AUTHORITY decides to terminate this Agreement pursuant to preceding **clause 13.2 (i)**, it shall in the first instance issue Preliminary Notice to the Concessionaire. Within thirty (30) days of receipt of the Preliminary Notice, the Concessionaire shall submit to AUTHORITY in sufficient detail, the manner in which it proposes to cure the underlying Event of Default(the "Concessionaire's Proposal to Rectify"). In case of non-submission of the Concessionaire's Proposal to Rectify within the said period of 30 days, AUTHORITY shall be entitled to terminate this Agreement by issuing Termination Notice, and to appropriate:

a. the Performance Security, if subsisting and

b. the amounts in the Post Closure Performance Account

(iii) If the Concessionaire's Proposal to Rectify is submitted within the period stipulated therefore, the Concessionaire shall have further period of 30 days to remedy/ cure the underlying Event of Default. If, however the Concessionaire fails to remedy/cure the underlying Event of Default within such further period allowed, AUTHORITY shall be entitled to terminate this Agreement, by issue of Termination Notice and to appropriate

(a) the Performance Security, if subsisting and

(b) the amounts in the Post Closure Performance Account

(b) **Termination for AUTHORITY Event of Default**

(i) Without prejudice to any other right or remedy which the Concessionaire may have in respect thereof under this Agreement, upon the occurrence of AUTHORITY Event of Default, the Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(ii) If the Concessionaire decides to terminate this Agreement pursuant to preceding clause (i) it shall in the first instance issue Preliminary Notice to AUTHORITY. Within 30 days of receipt of Preliminary Notice, AUTHORITY shall forward to the Concessionaire its proposal to remedy/ cure the underlying Event of Default (the "AUTHORITY Proposal to Rectify"). In case of non-submission of AUTHORITY Proposal to rectify within the period stipulated therefore, Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(iii) If AUTHORITY Proposal to Rectify is forwarded to the Concessionaire within the period stipulated therefore, AUTHORITY shall have further period of 30 days to remedy/ cure the underlying Event of Default. If, however AUTHORITY fails to remedy/ cure the underlying Event of Default within such further period allowed, the Concessionaire shall be entitled to terminate this Agreement by issuing Termination Notice.

(c) Termination Notice

If a Party is having become entitled to do so decide to terminate this Agreement pursuant to the preceding sub article (a) or (b), it shall issue Termination Notice setting out:

(i) in sufficient detail the underlying Event of Default;

(ii) the Termination Date which shall be a date occurring not earlier than 30days from the date of Termination Notice;

(iii) the estimated termination payment including the details of computationthereof; and,

(iv) any other relevant information.

(d) Obligation of Parties

Following issue of Termination Notice by either Party, the Parties shall promptly takeall such steps as may be necessary or required to ensure that;

(i) until Termination the Parties shall, to the fullest extent possible, discharge their respective obligations so as to maintain the continued operation of the Project Facilities;

(ii) the termination payment, if any, payable by AUTHORITY in accordance with the following **sub - article (f)** is paid to the Concessionaire on the Termination Date; and

(iii) the Project Facilities are handed back to AUTHORITY by the Concessionaire on the Termination Date free from any Encumbrance along with any payment that may be due by the Concessionaire to AUTHORITY.

(e) Withdrawal of Termination Notice

Notwithstanding anything inconsistent contained in this Agreement, if the Party who has been served with the Termination Notice cures the underlying Event of Default to the satisfaction of the other Party at any time before the Termination occurs, the Termination Notice shall be withdrawn by the Party which had issued the same.

Provided that the Party in breach shall compensate the other Party for any direct costs/consequences occasioned by the Event of Default which caused the issue of Termination Notice.

(f) Termination Payments

Upon Termination of this Agreement on account of AUTHORITY Event of Default, the Concessionaire shall be entitled to withdraw the Performance Security, if subsisting, and receive from AUTHORITY, termination payment equal to 120% of the Book Value

of Concessionaire's investment as on Termination Date and amounts in the Post Closure Performance Account less the capital grants received by concessionaire adjusted on the basis of PLR of SBI at the time. Cost of valuator in such case shall be borne by AUTHORITY.

Upon Termination of this Agreement on account of Concessionaire Event of Default, Concessionaire shall be entitled to receive from AUTHORITY termination payment equal to 80% of the Book Value of Concessionaire's investment as approved by AUTHORITY less grants received by concessionaire and adjusted on the basis of PLR of SBI as on theTermination Date less the penalties imposed by AUTHORITY for event of default.

Here **Estimated Project Cost** shall mean lower of the project cost estimated in DPR prepared by Authority and the project cost estimated in DPR prepared by Concessionaire and approved by AUTHORITY.

13.3 Rights of AUTHORITY on Termination

(a) Upon Termination of this Agreement for any reason whatsoever, AUTHORITY shall upon making the Termination Payment, if any, to the Concessionaire have the power and authority to:

(i) enter upon and take possession and control of the Project Facilities i/c vehicles, workshop etc. forthwith;

(ii) prohibit the Concessionaire and any person claiming through or under the Concessionaire from entering upon/ dealing with the Project Facilities;

(b) Notwithstanding anything contained in this Agreement, AUTHORITY shall not, as a consequence of Termination or otherwise, have any obligation whatsoever including but not limited to obligations as to compensation for loss of employment, continuance or regularisation of employment, absorption or re-employment on any ground, in relation to any person in the employment of or engaged by the Concessionaire in connection with the Project, and the hand backof the Project Facilities by the Concessionaire to AUTHORITY shall be free from any such obligation.

13.4 Accrued Rights of Parties

Notwithstanding anything to the contrary contained in this Agreement, Termination pursuant to any of the provisions of this Agreement shall be without prejudice to accrued rights of either Party including its right to claim and recover money damages and other rights and remedies which it may have in law or contract. The rights and obligations of either Party under this Agreement, including without limitation those relating to the Termination Payment, shall survive the Termination but only to the extent such survival is necessary for giving effect to such rights and obligations.

ARTICLE 14

14 HANDBACK OF PROJECT FACILITIES

14.1 Ownership

Without prejudice and subject to the Concession, the ownership of the Project Facilities, including all improvements made therein by the Concessionaire, shall at all times remain that of AUTHORITY.

14.2 Concessionaire's Obligations

12.1.1 Transfer of the movable and immovable assets by the bidder; after Completion of the Contract i.e. 15 Years after COD or as extended thereupon, to the ULB

(a) The Contractor shall at the end of the Contract period hand back vacant and peaceful possession of the Project Facilities to ULB free of cost and in good operable condition.

(b) AUTHORITY may decide to extend the contract or announce completion; a letter to this effect shall be given by AUTHORITY. On acceptance of the extension a new contract agreement shall be signed and the work shall continue un-interruptedly with use of same vehicles, equipment and infrastructure etc.

(c) During the extended period there shall be no escalation in the rate payable to the bidder in 15th year. The bidder shall work at the twentieth year's rate for further years, for a maximum of two years.

(a) All Vehicles, Workshops, Offices, Communication arrangements etc. and immovable infrastructure/ facilities: On completion of the contract period, unless it is extended, the bidder will transfer All Vehicles, Workshop, Offices, Communication arrangements etc. and immovable infrastructure/ facilities to ULB, in working conditions, free of cost.

(b) Waste Processing Facility

(i) The Concessionaire shall on the date of expiry of Landfill Life, hand back peaceful possession of the Waste Processing Facility to ULB free of cost and in good operable condition.

(ii) At least 12 months before the expected expiry of the Landfill Life a joint inspection of the Project Facilities shall be undertaken by ULB, Project Monitoring Consultant and the Concessionaire. AUTHORITY/ Project Monitoring Consultant shall, within 45 days of such inspection prepare and furnish to the Concessionaire a list of works/ jobs ("Handback Requirements"), if any, to be carried out so as to conform to the Construction Requirements and O&M Requirements. The Concessionaire shall promptly undertake and complete such works/jobs at least three months prior to the expected expiry of Landfill Life and ensure that the Project Facilities continue to meet such requirements until the same are handed back to ULB.

(iii) AUTHORITY/ Project Monitoring Consultant shall, within 45 days of the joint inspection undertaken shall prepare and furnish to the Concessionaire a list of items, if any, with corresponding distinctive descriptions, which are to be compulsorily handed back to AUTHORITY along with the Waste Processing Facilities.

(c) Landfill Facility

(i) At least 12 months before the expected expiry of the Landfill Life, the Parties jointly with the Project Monitoring Consultant shall, in accordance with Schedule 4B, discuss and jointly prepare the Post Closure Operating Plan for maintenance of the Landfill Facility, under the provisions of the prevailing statutory regulations ("Post Closure Maintenance Plan").

(ii) The Concessionaire shall after expiry of the Active Operations Period maintain the Landfill Facility in accordance with the Post Closure Maintenance Plan.

(iii) Upon the expiry of the Concession Period, the Concessionaire shall hand back peaceful possession of the Landfill Facility to ULB free of cost and in good condition.

(d) The Concessionaire hereby acknowledges AUTHORITY's and ULB's rights specified in this agreement enforceable against it upon Termination and its corresponding obligations arising there from. The Concessionaire undertakes to comply with and discharge promptly all such obligations.

14.3 AUTHORITY's Obligations

AUTHORITY shall, subject to AUTHORITY's right to deduct amounts from the Post Closure Performance Account towards;

(i) carrying out works/jobs listed under **Article 14.2**, which have not been carried out by the Concessionaire,

(ii) purchase of items, which have not been handed back to ULB along with the Project Facilities in terms of **Article 14.2**, and

(iii) any outstanding dues, which may have accrued in respect of the Project during the Concession Period, duly discharge and release to the Concessionaire the amounts in the Post Closure Performance Account in accordance with this agreement.

ARTICLE 15

15 DISPUTE RESOLUTION

15.1 Amicable Resolution

(a) Save where expressly stated to the contrary in this Agreement, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to this Agreement, including those arising with regard to acts, decision or opinion of the Project Monitoring Consultant (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set forth in **clause (b)** below.

(b) Either Party may require such Dispute to be referred to the MUNICIPAL COMMISSIONER (or the Person holding charge) and the Director of the Concessionaire for the time being, for amicable settlement. Upon such reference, the two shall meet at the earliest mutual convenience and in any event within 15 days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicably settled within 15 (fifteen) days of such meeting between the two, either Party may refer the Dispute to arbitration in accordance with the provisions of **Article 15.2** below.

15.2 Arbitration

(a) **Procedure**

Subject to the provisions of **Article 15.1**, any Dispute which is not resolved amicably shall be finally settled by binding arbitration under the Arbitration Act. The arbitration shall be by a panel of three arbitrators, one to be appointed by each Party and the third to be appointed by the two arbitrators appointed by the Parties. The Party requiring arbitration shall appoint an arbitrator in writing, inform the other Party about such appointment and call upon the other Party to appoint its arbitrator. If within 15 days of receipt of such intimation, the other Party fails to appoint its arbitrator, the Party seeking appointment of arbitrator may take further steps in accordance with Arbitration Act.

(b) **Place of Arbitration**

The place of arbitration shall be Lucknow/Lucknow.

(c) **English Language**

The request for arbitration, the answer to the request, the terms of reference, any written submissions, any orders and awards shall be in English and, if oral hearings take place, English shall be the language to be used in the hearings.

(d) **Enforcement of Award**

The Parties agree that the decision or award resulting from arbitration shall be final and binding upon the Parties and shall be enforceable in accordance

withthe provisions of the Arbitration Act subject to the rights of the aggrieved partiesto secure relief from any higher forum.

15.3 Performance during Dispute

Pending the submission of and/or decision on a Dispute and until the arbitral award is published, the Parties shall continue to perform their respective obligations under this Agreement without prejudice to a final adjustment in accordance with such award.

ARTICLE 16

16 REPRESENTATIONS AND WARRANTIES

16.1 Representations and Warranties of the Concessionaire

The Concessionaire represents and warrants to AUTHORITY that:

(a) it is duly organised, validly existing and in good standing under the laws of India;

(b) it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

(c) it has taken all necessary corporate and other action under Applicable Laws and its constitutional documents to authorise the execution, delivery and performance of this Agreement;

(d) it has the financial standing and capacity to undertake the Project;

(e) this Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(f) the execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of the Concessionaire's Memorandum and Articles of Association or any Applicable Laws or any covenant, agreement, understanding, decree or order to which it is a party or by which it or any of its properties or assets are bound or affected;

(g) there are no actions, suits, proceedings or investigations pending or to the Concessionaire's knowledge threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcomeof which may constitute Concessionaire Event of Default or which individuallyor in the aggregate may result in Material Adverse Effect;

(h) it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Agency which may result in Material Adverse Effect;

(i) it has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect;

(j) subject to receipt by the Concessionaire from AUTHORITY of any amount due under any of the provisions of this Agreement, in the manner and to the extent provided for under the applicable provisions of this Agreement all rights and interests of the Concessionaire in and to the Project Facilities shall pass to and vest in AUTHORITY on the Termination Date free and clear of all Encumbrances without any further act or deed on the part of the Concessionaire or AUTHORITY;

PMU (RCUES)

(k) no representation or warranty by the Concessionaire contained herein or in any other document furnished by it to AUTHORITY or to any Government Agency in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;

(l) no bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Concessionaire to any person to procure the Concession.

(m) Without prejudice to any express provision contained in this Agreement, the Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has after a complete and careful examination made an independent evaluation of the Project Facilities, and the information provided by AUTHORITY, and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Concessionaire in the course of performance of its obligations hereunder.

(n) The Concessionaire also acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth above and hereby confirms that AUTHORITY shall not be liable for the same in any manner whatsoever to the Concessionaire.

16.2 Representations and Warranties of AUTHORITY

AUTHORITY represents and warrants to the Concessionaire that:

(a) AUTHORITY has full power and authority to grant the Concession;

(b) AUTHORITY has taken all necessary action to authorise the execution, delivery and performance of this Agreement;

(c) This Agreement constitutes AUTHORITY's legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(d) There are no suits or other legal proceedings pending or threatened against AUTHORITY in respect of the Project Facilities or the Project.

16.3 Obligation to Notify Change

In the event that any of the representations or warranties made/given by a Party ceases to be true or stands changed, the Party who had made such representation or given such warranty shall promptly notify the other of the same.

ARTICLE 17

17 MISCELLANEOUS

17.1 Assignment and Charges

(a) The Concessionaire shall not assign in favour of any person this Agreement orthe rights, benefits and obligations hereunder save and except with prior consent of AUTHORITY.

(b) The Concessionaire shall not create nor permit to subsist any Encumbrance over the Project Facilities except with prior consent in writing of AUTHORITY, which consent AUTHORITY shall be entitled to decline without assigning any reason whatsoever.

(c) Restraint set forth in clauses (a) and (b) above shall not apply to:

(i) liens/encumbrances arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Concessionaire:

(ii) Pledges/hypothecation of goods/ moveable assets, revenue and receivables as security for indebtedness, in favour of the Lenders and working capital providers for the Project;

(iii) Assignment of Concessionaire's rights and benefits under this Agreement to or in favour of the Lenders as security for financial assistance provided by them.

17.2 Interest and Right of Set Off

Any sum which becomes payable under any of the provisions of this Agreement by one Party to the other Party shall, if the same be not paid within the time allowed for payment thereof, shall be deemed to be a debt owed by the Party responsible for payment thereof to the Party entitled to receive the same. Such sum shall until payment thereof carry interest at prevailing prime lending rate of State Bank of India per annum from the due date for payment thereof until the same is paid to or otherwise realised by the Party entitled to the same. Without prejudice to any other right or remedy that maybe available under this Agreement or otherwise under law, the Party entitled to receive such amount shall also have the right of set off.

Provided the stipulation regarding interest for delayed payments contained in this agreement shall neither be deemed nor construed to authorise any delay in payment of any amount due by a Party nor be deemed or construed to be a waiver of the underlying breach of payment obligations.

17.3 Governing Law and Jurisdiction

This Agreement shall be governed by the laws of India. The Courts at Lucknowshall have jurisdiction over all matters arising out of or relating to this Agreement.

PMU (RCUES) * MOUD

17.4 Waiver

(a) Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:

(i) shall not operate or be construed as a waiver of any other or subsequentdefault hereof or of other provisions or obligations under this Agreement;

(ii) shall not be effective unless it is in writing and executed by a duly authorised representative of such Party; and

(iii) shall not affect the validity or enforceability of this Agreement in any manner.

(b) Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation hereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver/breach of any terms, conditions or provisions of this Agreement.

17.5 Survival

Termination of this Agreement

(a) shall not relieve the Concessionaire or AUTHORITY of any obligations already incurred hereunder which expressly or by implication survives Termination hereof, and

(b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

17.6 Amendments

This Agreement and the Schedules together constitute a complete and exclusive understanding of the terms of the Agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

17.7 Notices

Unless otherwise stated, notices to be given under this Agreement including but not limited to a notice of waiver of any term, breach of any term of this Agreement and termination of this Agreement, shall be in writing and shall be given by hand delivery, recognized international courier, mail, telex or facsimile transmission and delivered or transmitted to the Parties at their respective addresses set forth below:

If to AUTHORITY:

Municipal Commissioner

LUCKNOW NAGAR

NIGAM

If to the Concessionaire:

The Managing Director,

----------,

----------,

- Fax No. ----------

--

Or such address, telex number, or facsimile number as may be duly notified by the respective Parties from time to time, and shall be deemed to have been made or delivered

(i) in the case of any communication made by letter, when delivered by hand, by recognized international courier or by mail (registered, return receipt requested) at that address, and

(ii) in the case of any communication made by telex or facsimile, when transmitted properly addressed to such telex number or facsimile number.

17.8 Severability

If for any reason whatsoever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Agreement or otherwise.

17.9 No Partnership

Nothing contained in this Agreement shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any authority to bind the other in any manner whatsoever.

17.10 Language

All notices required to be given under this Agreement and all communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

17.11 Exclusion of Implied Warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement

betweenthe Parties and any representation by any Party not contained in a binding legal agreement executed by the Parties.

17.12 Counterparts

This Agreement may be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement but shall together constitute one and only the Agreement.

IN WITNESS WHEREOF THE, PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED SEALED AND DELIVERED

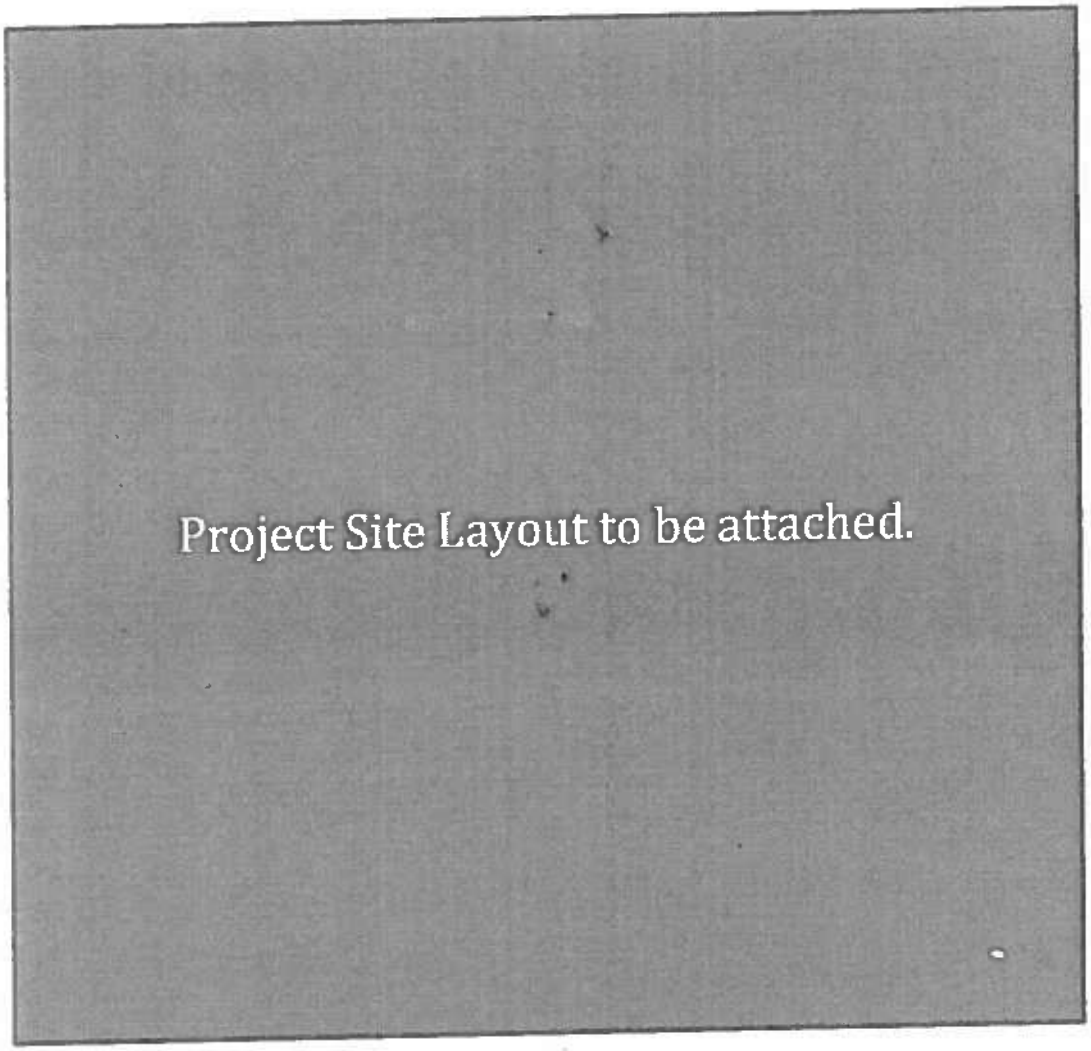
For and on behalf ofLUCKNOW NAGAR NIGAM by: (Signature) (Name) (Designation)	**For and on behalf of CONCESSIONAIRE by:** (Signature) (Name) (Designation)
In the presence of: 1)	2)

PMU (RCUES) SMW, Lucknow

SCHEDULE "1"

DETAILS OF PROJECT SITE

The proposed site for sanitary landfill development is located at **Shivari, Lucknow** for ULBs namely Lucknow.



SCHEDULE "2"

CONSTRUCTION REQUIREMENTS FOR REVIVAL/REPAIR OF WASTE PROCESSING FACILITY

1. General

1.1 The minimum facilities to be provided in the Waste Processing Facility which is to be implemented by the Concessionaire as part of the Project have been highlighted in this Schedule.

1.2 The Waste Processing Facilities shall conform to the minimum design requirements set out in the DPR of Solid waste Management for Lucknow this Schedule and to the MSW Rules.

2. Overall Design Parameters

2.1 Area

The area earmarked for Processing of Municipal Solid Waste, including for provision of the facilities listed under Clause 3 herein below, shall be as per the layout drawing of waste processing and landfill site and assessment madein DPR of SWM.

2.2 Capacity

The Concessionaire shall design the Waste Processing Facilities so as to have a minimum capacity for 2000 MT/day.

3. List of Mandatory Facilities

The Concessionaire shall provide the facilities in the manner as set out under this clause ("Mandatory Waste Processing Facilities"). The Concessionaire, subject to review and approval of the same by Project Monitoring Consultant/AUTHORITY, may adopt alternate designs for the Mandatory Waste Processing Facilities.

Part "A"

3.1 Weigh Bridge

(a) The Concessionaire shall provide one weigh bridge of rated capacity of 100 metric tonnes each at the entry gate of the Processing Facilities.

(b) The weigh bridge shall meet the minimum technical specifications as given in BOQ.

3.2 Municipal Solid Waste Inspection/Receiving /Manual segregation Area

The Concessionaire shall, for the purpose of inspection/Receiving/Manual segregation of Municipal Solid Waste, as required under this agreement shall,provide a separate area, which shall meet the minimum technical specifications set out in **BOQ/Drawings.**

MUNICIPAL * PMU (RCUES) * LUCKNOW

3.3 Storm Water Drainage System

The Concessionaire shall provide the storm water drainage system within theWaste Processing Facility as given in respective drawings and in such a manner as to ensure that

(a) it is independent from the Leachate System (as provided in **Clause 3.4** below);

(b) the run-off rain water from the hinterland does not enter the Municipal Solid Waste storage and processing area;

(c) there is no stagnation of rain water in the Site.

3.4 Leachate System

(a) The Concessionaire shall,

(i) Construct/repair leachate collection tank/s and provide a leachate collection network which shall meet the O&M Requirements;

(ii) ensure that the leachate from the Waste Processing Facility is carried to the Leachate Collection Tank without any stagnation (except instorage/holding tanks)

(b) The Concessionaire shall repair and augment the existing leachate treatment plant as per current norms of CPCB and the drawings approved by PMC/ Authority.

(c) Overall design of the leachate system should be such as to ensure that there is no percolation of the leachate into the ground and it does not come into contact with any water body.

(d) The Concessionaire however cross check the maximum leachate flow generated as calculated in DPR, depending on the maximum prevailing rainfall intensity and the landfill area, in case of any case of any deviation shall report to PMC for necessary amendments.

3.5 Water Supply System

The Concessionaire shall repair and augment the existing water supply system.

3.6 Quality Control Laboratory

The Concessionaire shall repair and augment the existing quality control laboratory with theequipment adequate to carry out the following tests:

(a) Municipal Solid Waste analysis and characterization

(b) Leachate quality as per SWM Rules 2016.

PMU (RCU) (ES) SWM, Lucknow

(c) Compost quality as per SWM Rules 2016.

(d) RDF Quality (Moisture, silt, GCV, Chemical Composition)

(d) Air quality as per SWM Rules 2016.

(e) Maturity Test for the Residual Inert Matter as set out in

Article 11 of Schedule 4B.

3.7 Worker Amenities

The Concessionaire shall repair and augment the existing workers amenities in accordance with DPRand Drawings provided.

3.8 Internal Roads

The Concessionaire shall repair and augment the existing good quality motorable roads within the Site which shall meet the minimum criteria as set out in **DPR/Drawings** approved by Project Monitoring Consultant.

3.9 Lighting

The Concessionaire shall repair and augment the existing,

(a) adequate lighting system to achieve the lux levels, specified in the Indian Standard Codes (latest versions) of SP – 30 and IS 6665 – 1972 for the different working areas;

(b) street lighting with permanent steel light posts for main internal roads and access roads;

3.10 Other Electrical Works

The Concessionaire shall repair and augment all the existing electrical equipment and implement all electrical works in accordance with Good Industry Practices and as per the Drawings approved by the Project Monitoring Consultant. The Concessionaire shall repair and augment the existing power back-up to ensure operation of at least the following facilities:

(a) Weigh bridge

(b) Lighting of work area

(c) Processing plant machineries

(d) Water supply system

3.11 Boundary Wall and Fencing

(a) The Concessionaire shall repair and augment the existing boundary wall as per approveddrawings.

(b) There shall be only one entrance into the Waste Processing Facility from

outside the Site.

3.12 Green Belt

The Concessionaire shall repair and augment the existing vegetative cover as given in layout drawing and approved by PMC/Authority. The species of trees for providing vegetative cover shall be approved by the PMC/Authority.

3.13 Name Board

A. The Concessionaire shall erect two signboards, one in Hindi and the other in English, of a size not less than 2 ft. by 4 ft each, adjacent to the main entrance to the Project Facilities in a manner such that it is ordinarily visible to any person using such entrance. The signboard shall prominently display thefollowing text in English (and its translation in Hindi) in black upper-case letters on a white/yellow background:

"This property belongs to the LUCKNOW NAGAR NIGAM, and has been handed over to M/s_____for Developing, Operating and Maintaining Waste Processing & Engineered Sanitary Landfill Facility under a Design, Build, Operate and Transfer Concession Agreement".

The Concessionaire shall ensure that the signboard is maintained in good condition throughout the Landfill Life.

B. Specific facilities for Waste Processing Facilities

In addition to the facilities mentioned in Part A above, the Concessionaire, based on the DPR prepared by him and approved by Project Monitoring consultant and AUTHORITY provide specific facilities for Processing of Municipal Solid Waste like waste to RDF and/or waste to compost and/or Waste to Energy or any other facility as considered fit by concessionaire for Lucknow.

The Design and drawing of all the facilities shall be submitted to PMC and MUNICIPAL COMMISSIONER for approval and shall considered as good for construction only after due approval of these authorities.

3.14 Landfill Rejects from Waste Processing Facility

Landfill Rejects from proposed waste Processing plant shall not exceed 20% of the waste received at Weighbridge. Any violation to this clause will be considered as concessionaire event of default.

4. Codes and Standards

4.1 The following standards in order of preference shall be adopted in consultation with the Project Monitoring Consultant, unless otherwise specified:

(a) Solid Waste Management Rules 2016

SWM * PMU (RCUES) * Lucknow

(b) Any other standards specified by statute and Applicable Laws

(c) Bureau of Indian Standards (BIS)

(d) Suitable specification/standard devised by the PMC/Authority

(e) Any other standard proposed by the Concessionaire and approved bythe Project Monitoring Consultant

4.2 All items of building works shall conform to Uttar Pradesh Public Works Department (UPPWD) specifications for Class 1 building works and standards given in the National Building Code (NBC).

5. Procedure

5.1 Before Commencement of construction

5.1.1 Prior to commencement of any construction activity, the Concessionaire shall finalize an implementation plan for the Project ("Implementation Plan") in consultation with the PMC/Authority. The Implementation Plan shall, inter alia, include:

(a) A detailed schedule of implementation for putting up and operationalizing the Project Facilities, which shall specify at least four major milestones;

(b) The Critical Path Method (CPM)/Programme Evaluation and Review Technique (PERT) charts or similar activity planning technique/ method for monitoring. This would cover all stages/ aspects of implementation of the Project Facilities including design and engineering, procurement of materials and equipment, installation,construction and testing;

(c) Manpower deployment plan, including the designation of key personnel for the management and supervision of all Project-related activities. (This would include the designation of suitably qualified personnel for areas such as contract administration and supervision, construction management, safety, environmental management, plant and equipment maintenance, procurement, materials management and quality control);

(d) A broad method statement for key items (including earth works, concrete works, structural concrete work, and road works) setting outthe methodology of construction, materials and construction equipment mobilization/ utilisation plans;

(e) Details of the quality assurance and quality control procedures; and

(f) Format of the Monthly Project Progress Report giving details of the physical progress in implementation of the Project Facilities and

UPMWS * PMU (RCUES) * Lucknow

operations and maintenance activities undertaken ("Monthly Project Progress Report").

5.1.2 Prior to commencement of any construction activity, the Concessionaire shallalso finalize in consultation with the PMC:

(a) an operations and maintenance plan for the Project Facilities during the Implementation Period (O&M Plan – Implementation Period) and which shall, inter alia, include an Environmental Management Plan,

(b) Quality Assurance Plan

5.1.3 The Concessionaire shall, in consultation with the Project Monitoring Consultant/Authority workout an appropriate schedule for submission of documents set out in **Clauses 5.1.1** and **5.1.2** above to the Project Monitoring Consultant/Authority for review.

5.1.4 Prior to commencement of construction of any of the Project Facilities, the Concessionaire shall have:

(a) Obtained all such Applicable Permits as are necessary to commence construction of such Project Facilities;

(b) Finalized such Drawings as are necessary and the Implementation Schedule in consultation with the Project Monitoring Consultant/Authority;

(c) Mobilized the requisite resources, personnel and organisation necessary for the same and designated and appointed suitable officers/ representatives as it may deem appropriate with responsibility to supervise implementation of the Project and for exchange of information with the Project Monitoring Consultant and AUTHORITY;

(d) Finalized in consultation with the Project Monitoring Consultant/Authority amethod statement setting out details of the actual methods that wouldbe adopted by the Concessionaire for the construction of such Project Facilities including details of equipment and machinery that would be used, their locations, and arrangements for conveying and handling materials;

(e) Finalized in consultation with the Project Monitoring Consultant/Authority quality assurance and quality control procedures to cover all aspectsof the work so as to ensure the desired quality. This would include establishment of a well-equipped functional laboratory.

5.1.5 The Concessionaire shall immediately upon commencement of Construction Works notify ULB of the same.

5.2 During Construction

MWS * PMU (RCUES) * Lucknow

5.2.1 The Concessionaire shall:

(a) Ensure that the construction/ rehabilitation of the Project Facilities are undertaken with minimal inconvenience to the traffic using the existing access road to the Site.

(b) Take precautions to avoid inconvenience to, damage to, destruction of or disturbance to any third party rights and properties;

(c) ensure adequate safety of the personnel deployed at the Project Site which would include measures such as the provision and maintenance of barricades, and illumination during night in consultation with the PMC/Authority;

(d) be in compliance with the Applicable Laws and Applicable Permits obtained for the Project including the clearances obtained by ULB;

(e) Adhere to the Implementation Plan and O&M Plan-Implementation Period;

(f) deploy adequate number of qualified and competent personnel having relevant experience and skills for implementation of the Project and interaction with the PMC.

5.2.2 Positions and Levels

The Concessionaire shall be responsible for:

(a) The accurate setting-out survey control points, lines and levels of reference;

(i) The correctness of the positions, levels, dimensions and alignment of all parts of the works;

(ii) The provision of all necessary instruments, appliances and labour in connection with the foregoing responsibilities;

(iii) If, at any time during execution of the works, any error is noticed in the position, levels, dimensions or alignment of any part of the ConstructionWorks, the Concessionaire, on being asked to do so by the ProjectMonitoring Consultant, shall at his own cost, rectify such errors to the satisfaction of the PMC.

(b) The checking of any setting-out or of any line or level by the Project Monitoring Consultant shall not in any way relieve the Concessionaire of his responsibility for the accuracy thereof and the Concessionaire shall carefully protect and preserve all benchmarks, sight rails, pegs and other materials used in setting-out the works.

5.2.3 Tests

(a) Various tests ("Tests") would be undertaken for the Project as per the standards prescribed under MSW Rules and Bureau of Indian Standards. Where no testing methods are specified by the said standards, details of the Tests to be carried out and specifications to be achieved for the respective

Project Facilities/Construction Works or part thereof shall be agreed upon with the Project Monitoring Consultant prior to construction.

(b) Where material properties vary from or comply only marginally with the specifications contained in the Construction Requirements, the Project Monitoring Consultant shall increase the frequency of Testing as appropriate at the cost of the Concessionaire.

(c) The Tests would be carried out at a location (place of manufacture, fabrication or preparation, at site or any specialized testing laboratory) that the Project Monitoring Consultant may reasonably require, at the cost and expense of the Concessionaire.

(d) The Concessionaire shall provide such assistance, labour, electricity, fuels, stores, apparatus and instruments as are normally required for examining, measuring and testing any materials or plant and shall supply samples of materials, as required by the Project Monitoring Consultant to undertake Tests.

5.2.4 No part of the Construction Works shall be covered up or put out of view before the same has been examined by the PMC.

5.2.5 The Project Monitoring Consultant may from time to time require:

(a) removal from the Project Site, within such time as may be specified in its instructions, any material, equipment, machinery or plant which, in its opinion, do not meet the standards specified in the Construction Requirements;

(b) Substitution/ replacement of such improper material, equipment, machinery or plant;

(c) Re-execution, of any or part of the Construction Works which in the opinion of the Project Monitoring Consultant do not meet the standards set out in the Construction Requirements;

(d) the Concessionaire to make boreholes or to carry out exploratory excavation for the Project.

5.2.6 The Concessionaire shall mobilize adequate numbers of equipment, plants and machinery to ensure adherence to the Implementation Plan.

5.2.7 The Concessionaire shall arrange for all the material requirements for the Project and disposal of all material wastes. The Applicable Permits in this regard would have to be obtained by the Concessionaire. All operations shall be carried out by the Concessionaire with minimum degradation of the environment. All excessive and unsuitable excavated materials shall be stacked at appropriate dumping places or otherwise disposed of by the Concessionaire in consultation with the PMC/Authority.

5.2.8 Prior to making the request for the issue of Readiness Certificate or

Provisional Readiness Certificate, the Concessionaire shall submit to the Project Monitoring Consultant/AUTHORITY the following, duly finalized in consultation with the PMC/Authority:

(a) the Operations and Maintenance Manual for the Project ("O&M Manual") setting out in detail the standards, schedules, procedures, type, periodicity and other details of the operation and maintenance activities to be carried out for the Project during the Active Operations Period so as to meet theO&M Requirements as well as details of the management information system to be incorporated, reports to be submitted and procedure for reviews, and

(b) the Operations & Maintenance Plan ("O&M Plan") for the first year of operations.

5.3 After Completion of Construction

Upon completion of construction but prior to issue of the Readiness Certificate, the Site shall be cleared of all construction equipment, surplus materials, debris and temporary installations and shall be left in tidy and clean manner and to the satisfaction of the Project Monitoring Consultant.

5.4 Reporting Requirements and Documents to be provided

5.4.1 During the period of construction of the Project ("Implementation Period"), the Concessionaire shall submit to the PMC/AUTHORITY, Monthly Project Progress Reports (for each calendar month or part thereof) within 5 working days of the last day of the month. The report shall review the progress made, identify slippages, if any, and project the future activities to be undertaken (including rectifications), operations and maintenance activities undertaken and would, inter alia, include the following:

(a) Listing of working drawings/sketches submitted

(b) Comments of PMC, if any on the working drawings/sketches submitted

(c) Concessionaire's response to the comments on the Drawings/sketches

(d) Listing of the "As Built" drawings submitted

(e) Progress of pre-construction activities - mobilization of plant and equipment, personnel, site office, utility relocation etc.

(f) Concessionaire's compliance inspection report, if any required

(g) Constraints in construction

(h) Progress data

(i) Project data with contract detail and sectional completion details

(j) Tests carried out, if any, and results thereof

SWM PMU (RCUES) Mojjiwada

(k) Remedial measures taken by the Concessionaire following such tests, where required

(l) Review of milestones and reasons for delay, if any

(m) Suspension of construction, if any, its reasons, duration and the steps undertaken to resume construction

(n) All actual or potential deviations from the Implementation Plan

(o) Disagreements/ Disputes, if any, and proposed measures to be taken

(p) Maintenance activities carried out by the Concessionaire

(q) Monthly weather report giving daily temperature maximum and minimum value, rainfall and any other significant event

(r) Injury to any personnel, its severity, cause and remedial measure(s) taken to avoid recurrence

(s) Brief report of any accident / incident within the Site, injury/fatality, property damage, cause of accident and actions taken to avoid recurrence

(t) Notes of meetings between the Concessionaire, the Project Monitoring Consultant and AUTHORITY highlighting critical decisions taken or agreements reached.

5.4.2 Within 90 days of issue of Readiness Certificate or the Provisional Readiness Certificate, as the case may be, the Concessionaire shall submit to AUTHORITY the following documents, free of cost:

(a) three hardcopies and two copies in electronic form (two Compact Discs) of the "as-built" Drawings of the Construction Works which have been completed as on COD, duly verified by the Project Monitoring Consultant, including, but without limitation, an "as-built" survey illustrating the layout of the Project and setback lines, if any, of the buildings and structures forming part of Project Facilities reflecting the Project as actually designed, engineered and constructed. Such "as-built" Drawings shall be detailed, accurately scaled and sequentially numbered, covering all relevant engineering features, which in relation to structures shall also include cross sections in each drawing;

(b) copies of all geo-technical, meteorological reports, if any;

(c) three hardcopies and two copies in electronic form (two Compact Discs) of the Operations and Maintenance Manual.

SCHEDULE "3"

OPERATIONS AND MAINTENANCE REQUIREMENTSWASTE PROCESSING FACILITY

1 General

(a) The Concessionaire shall comply with the O&M Requirements set out in this Schedule. In doing so, the Concessionaire shall ensure that the Waste Processing Facilities are maintained to the standards and specifications as set out in the Construction Requirements and also meet the other requirements, if any, set out in the Agreement.

(b) In the design, planning and implementation of all works and functions associated with the operation and maintenance of the Waste Processing Facilities, the Concessionaire shall take all such actions and do all such things(including without limitation, organizing itself, adopting measures and standards, executing procedures including inspection procedures, and engaging contractors, if any, agents and employees) in such manner, as will :

(i) ensure the safety of personnel deployed on and users of the WasteProcessing Facilities or part thereof;

(ii) keep the Waste Processing Facilities from undue deterioration andwear;

(iii) permit unimpaired performance of statutory duties and functions ofany party in relation to the Project;

(c) During the Active Operations Period and till the date of hand back of the Waste Processing Facilities, the Concessionaire shall, in respect of the Waste Processing Facilities, ensure that :

(i) applicable and adequate safety measures are taken;

(ii) the Project Facilities are kept free from undue deterioration and undue wear;

(iii) adverse effects on the environment and to the owners and occupiers of property and/or land in the vicinity of the Waste Processing Facilities, due to any of its actions, is minimised;

(iv) any situation which has arisen or likely to arise on account of any accident or other emergency is responded to as quickly as possible and its adverse effects controlled/minimised;

(v) disturbance or damage or destruction to property of third party by

PMU (RCUES) * SWM *

operations of the Waste Processing Facilities is controlled/minimised;

(vi) data relating to the operation and maintenance of the Waste Processing Facilities is collected;

(vii) all materials used in the maintenance, repair and replacement of anyof the Waste Processing Facilities shall meet the Construction Requirements;

(viii) the personnel assigned by the Concessionaire have the requisite qualifications and experience and are given the training necessary to enable the Concessionaire meet the O&M Requirements.

2 Operations and Maintenance Manual and O&M Plans

(a) Prior to making application for the Readiness Certificate for the Project the Concessionaire shall finalise in consultation with the Project Monitoring Consultant:

(i) the O&M Manual (including the formats for the reports to be submitted during the Active Operations Period and the Post Closure Period)

(ii) the O&M Plan for the first year of operations.

(b) Six weeks prior to the anniversary of COD each year, the Concessionaire shall submit to the Project Monitoring Consultant and PMC and AUTHORITY an annual O&M Plan for the next year of operations.

3 Weighment, Acceptance and Rejection of Municipal Solid Waste

3.1 Weighment of Municipal Solid Waste

3.1.1 The Concessionaire shall provide for a weigh-bridge in accordance with the Construction Requirements for weighment of the Municipal Solid Waste.

3.1.2 The Concessionaire shall record at least the following data:

(a) Date of operation

(b) Registration number of the truck supplying Municipal Solid Waste/ Lorry number

(c) Total laden weight of the truck

(d) Time of entry of the truck

(e) Circle/Ward from which Municipal Solid Waste has been collected

(f) Total unladen weight of the truck

(g) Net weight of Municipal Solid Waste

(h) Time of exit of the truck

3.1.3 The format for recording shall be finalised in consultation with the PMC/Authority, and the same shall be documented as part of the O&M Manual.

3.1.4 In the event that the weigh-bridge provided in accordance with **sub-clause 3.1.1** above is not in operation, the following methodology shall, unless modified with mutual consent of the Parties, be adopted for computing the weight of Municipal Solid Waste supplied by ULB:

$$W_S = W_{AVG} * N_T$$

Where,

W_S, is the weight of Municipal Solid Waste supplied during the period for which the weigh-bridge was inoperable

W_{AVG}, is the average weight of Municipal Solid Waste carried per truck based on the data available for the six Months prior to the Month in which the weigh-bridge was rendered inoperable.

N_T, is the number of truck-loads of Municipal Solid Waste accepted by the Concessionaire during the period for which the weigh-bridge was inoperable.

4 Production of Products from Waste Processing

4.1 The Concessionaire may adopt any such process and/or methods as it considers necessary for the Processing of Municipal Solid Waste in order to ensure that the all the products produced after such Processing is meets all such standards as defined in Solid Waste Handling Rule 2016 and certified as being Fit for Sale by PMC/AUTHORITY.

4.2 All the gaseous emissions, effluent, discharge/Rejects for disposal shall meet the criteria as specified in Solid Waste Handling Rule 2016, other Rules pertaining to such subject framed by MoEF and statutory bodies of India and the articles of this concession agreement .

5 Mandatory Facilities

During the Active Operations Period and until the handback of the Waste Processing Facilities, the Concessionaire shall, unless suitably modified with mutual consent and duly documented in the O&M Plan and/or O&M Manual, operate and maintain the Waste Processing Facilities as per **table 2.**

A. Common Facilities for Waste Processing

Table 2

SMW, Lucknow * PMU (RCUES) *

S. No.	Description of Mandatory Facility	Operation and Maintenance Standard
1	Weigh Bridge	▪ Calibration certification from manufacturer/ independent certification agency approved from weight and measurement department (approved by the PMC/Authority) to be renewed every year ▪ Maximum period of non-operation: 5 days ▪ Data recording and reporting format to be decided in consultation with the Project Monitoring Consultant and to form part of the O&M Plan and/or O&M Manual/Weight & Measurement Department.
2	Municipal Solid Waste Inspection Area	▪ Leachate drain around the Municipal Solid Waste Inspection Area is free from clogging and allows unobstructed flow of leachate. Maintain shape & scope of the leachate drains in the designed manner during the lifetime ▪ No cracks/ruptures in the top RCC layer
3	Storm Water Drainage System	▪ All storm water drains are free from clogging and allows unobstructed flow of water ▪ Maintain shape & scope in the designed manner during the lifetime ▪ No stagnation of rain water on the Site
4	Leachate Collection and Drainage System	▪ No overflow of leachate from the Leachate Collection Tanks ▪ Cracks or leaks in the leachate collection and drainage system to be sealed immediately ▪ Should be free from clogging and allows unobstructed flow of leachate
5	Water Supply System	▪ Water for drinking purposes to meet IS :10500 ▪ Water supply for gardening and flushing to meet Inland Surface Water standards as per Central Public Health and Environmental Engineering Organisation (CPHEEO)

PMU (PCUES) * SIMW, Lucknow *

6	Quality Control Laboratory	▪ Quality and calibration certification from manufacturer/independent certification agency (approved by the PMC/Authority) to be renewed every year ▪ Maximum period of non-operation: 5 days ▪ Data recording and reporting format to be decided in consultation with the Project Monitoring Consultant and to form part of the O&M Plan and/or O&M Manual.
7	Internal Roads	▪ The main roads shall be pot-hole free and in good motorable condition
8	Lighting and other electrical works	▪ Minimum lux level of 20 in the area of operation (in case of 2 shift operations)
9	Boundary Wall and Fencing	▪ Any breach in the boundary wall and fencing to be brought to the notice of the Project Monitoring Consultant immediately and to be sealed within 1 day ▪ Boundary wall and fencing to be inspected at least once every week and rejects (paper, plastics etc.), if any, found trapped in thefencing to be removed promptly
10	Green Belt	▪ Maintained in accordance with O&M Plan and O&M Manual

Table 3: Standard for Treated Leachate

S.No.	Parameter	Standard (Maximum)	Units
1	PH	5.5 – 9.0	
2	Suspended Solids	100	Ppm
3	Dissolved Solids-inorganic	2100	Ppm
4	Arsenic (as As)	0.2	Ppm
5	Ammonical nitrogen (as N)	50	Ppm
6	Total Kjeldahl Nitrogen (asN)	100	Ppm
7	Cadmium (as Cd)	2	Ppm
8	Copper (as Cu)	3	Ppm

S.No.	Parameter	Standard (Maximum)	Units
9	Total Chromium (as Cr)	2	Ppm
10	Lead (as Pb)	0.1	Ppm
11	Mercury (as Hg)	0.01	Ppm
12	Nickel (as Ni)	3	Ppm
13	Cyanide (as CN)	0.2	Ppm
14	Fluoride (as F)	2	Ppm
15	Zinc (as Zn)	5	Ppm
16	Chloride (as Cl)	1000	Ppm
17	Phenolic compounds (as C_6H_5OH)	1	Ppm
18	BOD (3 days at 27° C)	30	Ppm
19	COD	250	Ppm

B. Specific Waste Processing Facilities

1	Specific Waste processing Machines/units like Waste to RDF unit and/or Waste to Compost unit and/or Waste to Energy unit	▪ As per operation & maintenance manual developed by concessionaire and approved by PMC/AUTHORITY/.

6 Routine Maintenance Standards

6.1 In order to ensure smooth and uninterrupted operations, routine maintenance of the Project Facilities shall include but not be limited to:

(a) Prompt repairs of the weigh-bridge, Waste Receiving platforms/Pits, leachate collection drainage and treatment system, electrical items, drains, internal roads, machinery, lighting and fencing & other specific waste processing units as specified in DPR prepared by concessionaire and approved by PMC/AUTHORITY/ ;

(b) Replacement of equipment/consumables, horticultural maintenance and repairs to equipment, structures and other civil works which are part of the Project Facilities;

MWS * PMU (RCUES) * Lucknow

(c) Maintaining the shape, scope, full cross-section of the storm water drainage system and leachate collèction and drainage system;

(d) keeping the Project Facilities in a clean, tidy and orderly condition and takingall practical measures to prevent damage to the Project Facilities or any otherproperty on or near the Site;

(e) undertaking maintenance works in accordance with the O&M Plan and O&M Manual;

(f) preventing, with the assistance of law enforcement agencies, where necessary, any unauthorised entry to and exit from and any encroachments including any encroachments on the Site;

(g) taking all reasonable measures for the safety of all the workmen, material, supplies and equipment brought to the Site. Explosives, if any, shall be stored, transported and disposed of by the Concessionaire in accordance with Applicable Laws/Applicable Permits.

6.2 The following standards in order of preference shall be adopted in consultation with the PMC/Authority, unless otherwise specified:

(a) Solid Waste Management Rules 2016

(b) Any other standards specified by statute and Applicable Laws

(c) Bureau of Indian Standards (BIS)

(d) Suitable specification/standard devised by the PMC/Authority

(e) Any other standard proposed by the Concessionaire and approved by the Project Monitoring Consultant

6.3 The Concessionaire, for the purpose of routine maintenance shall, in consultation with the PMC/Authority, set forth such criteria as to conform to good international standards and Good Industry Practice for sound maintenance of the Project Facilities.

6.4 The Concessionaire shall regularly carry out the necessary preventive maintenance activities for the Project Facilities to ensure adherence to the Construction Requirements/ specifications.

7 Emergency Maintenance

7.1 The Emergency Response Protocol ("ERP") shall be developed by the Concessionaire in consultation with the Project Monitoring Consultant. This shall be a part of the O&M Manual developed by the Concessionaire.

7.2 The ERP shall set out steps to be taken and measures to be adopted by the Concessionaire in responding to dealing with Emergency including those situations related to vehicle accidents involving personal injuries or fatalities,property damage and force majeure as follows:

(a) In the event of an Emergency, the Concessionaire shall immediately carry out an inspection of the area affected by the Emergency. Where Emergency has necessitated closure of the Project Facilities or part thereof, the Concessionaire shall promptly carry out any repair works necessary to restore the Project Facilities to safe condition and in any event shall carry out such works before the affected area of the Project Facilities is re-opened to for normal operations.

(b) The Concessionaire shall ensure that sufficient staff, plant, equipment and materials, including without limitation medical assistance are available to respond to Emergency within reasonable period at alltimes during the Active Operations Period.

7.3 In case of Emergency, the Concessionaire shall

(a) carry out such emergency maintenance and repairs as may be required to repair the damages, if any, in consultation with the Project Monitoring Consultant and where required under the supervision of the police in order to ensure that the Project Facilities are returned to normal operating standards as quickly as possible

(b) take all necessary measures to minimize pollution in accordance with the procedure specified in the O&M Plan/ Environmental Management Plan/SWM Rules 2016.

8 Reporting

(a) The Concessionaire shall ensure that AUTHORITY and Project Monitoring Consultant is provided with adequate information and forewarned of any event or any other matter affecting the Project Facilities to enable them to control/minimize any adverse consequences.

(b) Concessionaire shall ensure to submit the annual reports as per Form III & Form IV of Solid Waste Management Rule 2016.

(c) The frequency and formats of other reports i.e. daily, weekly, Monthly, Quarterly to be submitted shall be finalized in consultation with the Project Monitoring Consultant and form part of the O&M Plan and O&M Manual.

(d) The following data should form part of the reports submitted by the Concessionaire:

(i) Circle/Ward wise quantity of Municipal Solid Waste received

(ii) Municipal Solid Waste characterization

(iii) Leachate generation

(iv) Rainfall

(v) Compost / Pellets quality test reports

(vi) Monitoring report of all type emissions from processing plant

(e) The Concessionaire shall furnish to AUTHORITY three copies of "as-built" Drawings of any construction undertaken after COD.

SMW, Lucknow * PMU (RCUES) *

SCHEDULE "4B"

OPERATIONS AND MAINTENANCE REQUIREMENTS FOR LANDFILL FACILITY

1 General

(a) The Concessionaire shall comply with the O&M Requirements set out in this Schedule and O&M schedule prepared by concessionaire as part of DPR duly approved by PMC, AUTHORITY and . In doing so, the Concessionaire shall ensure that the Landfill Facilities are operated and maintained to the standards and specifications as set out in the Construction Requirements andalso meet the other requirements, if any, set out in the Agreement.

(b) In the design, planning and implementation of all works and functions associated with the operation and maintenance of the Landfill Facility, the Concessionaire shall take all such actions and do all such things (including without limitation, organising itself, adopting measures and standards, executing procedures including inspection procedures, and engaging contractors, if any, agents and employees) in such manner, as will :

(i) ensure the safety of personnel deployed on and users of the LandfillFacility or part thereof;

(ii) keep the equipment and machinery employed at the Landfill Facilityfrom undue deterioration and wear;

(iii) permit unimpaired performance of statutory duties and functions ofany party in relation to the Project;

(c) During the Concession Period, the Concessionaire shall, in respect of the Landfill Facility, ensure that :

(i) applicable and adequate safety measures are taken;

(ii) adverse effects on the environment and to the owners and occupiers of property and/or land in the vicinity of the Landfill Facility, due to any of its actions, is minimized;

(iii) any situation which has arisen or likely to arise on account of any accident or other emergency is responded to as quickly as possible and its adverse effects controlled/minimized;

(iv) disturbance or damage or destruction to property of third party by operations of the Landfill Facility is controlled/minimized;

(v) data relating to the operation and maintenance of the Landfill Facility is collected;

(vi) all materials used in the operation, maintenance of any of the Landfill Facility shall meet the Construction Requirements;

(vii) the personnel assigned by the Concessionaire have the requisite

qualifications and experience and are given the training necessary to enable the Concessionaire meet the O&M Requirements.

2 Operations and Maintenance Manual and O&M Plans

The Concessionaire shall finalise the O&M Plan and the O&M Manual for theLandfill Facility in the manner as set out under Clause 5.2.8 of **Schedule 2.**

3 Sampling and Testing

3.1 Unless modified with mutual consent by the Parties, the Residual Inert Matter shall be sampled and tested in the manner as set out below:

The Residual Inert Matter proposed to be taken to the Landfill Facility shall be placed in at least ten heaps of almost equivalent size. The Project Monitoring Consultant shall take ten random samples from each of these heaps. These random samples shall then be thoroughly mixed and a single random sample taken and tested as per the procedure set out in Article 11 of this Schedule. In case the composition of this single random sample satisfies the criteria set out in **Article 11** of this Schedule, it shall be certified as being "Fit for Land filling".

3.2 Any sample which fails to be certified as "Fit for Land filling" shall be rejectedand cause the rejection of the all the heaps from which it was sourced and theConcessionaire shall subsequently act in accordance with the direction of the Project Monitoring Consultant with regard to such rejected heaps.

3.3 Notwithstanding any certification of the Project Monitoring Consultant, the Concessionaire shall be solely responsible for the composition of the materialdisposed in the Landfill Facility.

4 Weighment

4.1 The Concessionaire shall not take any Residual Inert Matter into the Landfill Facility without having obtained the "Fit for Land filling" certificate from the PMC/Authority. The Concessionaire shall plan his operations in a manner such that the Landfill Waste is taken into the Landfill Facility only between 9 AM and 6 PM or as mutually agreed upon between AUTHORITY and the Concessionaire.

4.2 The Concessionaire shall ensure that the quantum of Landfill Waste does not exceed 20 % of the garbage entered at the gate of processing and land fill site.

4.3 The Concessionaire shall record the following minimum data with regard to the Landfill Waste:

(a) Date of operation

(b) Total laden weight of the truck

(c) Time of entry of the truck

(d) Total unladen weight of the truck

(e) Time of exit of the truck

4.4 In the event that the weigh-bridge provided in accordance with **sub-clause 4.1** hereinabove is not in operation, the Concessionaire shall use the weighbridge provided at the entry gate of the Waste Processing Facility for weighment of the Residual Inert Matter. Such weighment and transport ofthe Residual Inert Matter shall be done only under the direct supervision of the Project Monitoring Consultant.

4.5 The procedure for weighment of the Landfill Waste and certification by the Project Monitoring Consultant shall be as set out in the O&M Plan and the O&M Manual.

2. Landfill Operation

2.1 Intermediate liner system

(a) The Concessionaire shall provide a liner layer ("Intermediate Liner") before the onset of monsoon leaving only a temporary unrestored sloping face.

(b) The Intermediate Liner shall be as per the Construction Requirements.

2.2 Daily Cell Cover

On each day during the Active Operations Period, the Concessionaire shall compact the Landfill Waste and cover the same ("Daily Cell Cover") in the manner as specified in the Construction Requirements.

2.3 Special Operational Conditions

Except with specific approval from the PMC/Authority, the Concessionaire shall ensure the following:

(a) Provide a benching (terrace) of 3.5 m width for every 5 m height offilling within the Engineered Sanitary Landfill.

(b) The slope of the Engineered Sanitary Landfill face shall not exceed 1:3 and shall be in accordance with the guidelines of CPHEEO manual.

2.4 Landfill Closure and Final Cover

(a) The Concessionaire shall demonstrate the actual stability by considering the strength parameters of compacted inert material for every 3.5 m of benching.

(b) Upon reaching a height of the Engineered Sanitary Landfill such that the area at the top of the Engineered Sanitary Landfill is 25% of the area of the base ofthe Engineered Sanitary Landfill, or before starting the final cover, whicheveris earlier, the Concessionaire shall promptly intimate the Project

MWS * PMU (RCUES) * Lucknow

Monitoring Consultant and AUTHORITY providing the following details:

(i) The estimated quantity of Landfill Waste that can be Landfilled in future

(ii) The probable date till which Municipal Solid Waste can be accepted bythe Waste Processing Facility

(iii) The plan for laying the final cover ("Final Cover") for the Landfill Facility

(c) The Concessionaire shall provide the Final Cover in accordance with the Construction Requirements.

2.5 Vegetative cover

(a) The Concessionaire shall, in accordance with MSW Rules ensure the provision of a vegetative cover after laying of the Final Cover.

(b) The selection of the varieties of plants and trees to be planted shall be decided in consultation with the Project Monitoring Consultant/AUTHORITY and shall form part of the Post Closure Maintenance Plan.

2.6 Leachate Collection and Removal System ("LCRS")

(a) The Concessionaire shall ensure that there is no overflow of leachate fromthe LCRS.

(b) The Concessionaire shall ensure that all leachate drains are free from clogging and allows unobstructed flow of leachate.

(c) No untreated leachate to be let out from the Site, unless it meets the standards as set out in **Table 3** of **Schedule 4A.**

2.7 Gas Recovery and Greenhouse Gas Mitigation System ("GRGS")

2.7.1 The Concessionaire shall

(a) ensure that the greenhouse gas emission from the Landfill Facility conformsto the permissible limits as per Applicable Law;

(b) collect information pertaining to the quantum of greenhouse gases produced from the Engineered Sanitary Landfill.

2.8 Post-Closure Maintenance Plan

2.8.1 The Concessionaire shall maintain the Landfill Facility during the Post Closure Period in accordance with the Post-Closure Maintenance Plan.

2.8.2 At least three months prior to the completion of any Financial Year during the Post Closure Period, the Concessionaire shall prepare and submit for review and approval by the PMC/Authority/AUTHORITY, the Post Closure Maintenance Plan for the subsequent Financial Year.

2.8.3 Post-closure maintenance shall be in accordance with Applicable Laws and shall involve periodical inspections, of at least once every three months, of the Landfill Facility to monitor land surface care, leachate collection, and methane control by way of flaring and to maintain flaring equipment.

2.8.4 Post-closure maintenance shall also involve investigations for detection of adverse environmental impacts, if any, and implementation of measures for mitigation of the same.

3. Environment Monitoring System

6.1.1 Monitoring shall be carried out in the following four zones:

(a) On and within the Engineered Sanitary Landfill

(b) In the unsaturated subsurface zone (vadose zone) around the Engineered Sanitary Landfill.

(c) In the ground water (saturated) zone around the Engineered SanitaryLandfill.

(d) In the atmosphere/local air above and around the Engineered Sanitary Landfill.

6.1.2 The quality of air (at the gas control facilities within the Site, at buildings on or near the Engineered Sanitary Landfill and along any preferential migrationpaths) shall meet the standards ("Acceptable Levels") as set out in **table 4**.

Table 4

Sl. No.	Description	Acceptable Levels
1	Sulphur dioxide	120 mg/m^3 (24 hours)
2	Suspended Particulate Matter	500 mg/m^3 (24 hours)
3	Methane	Not to exceed 25% of Lower Explosive Limit (equivalent to 650 mg/m^3)

SMW, Lucknow * PMU (RCUES) *

4	Ammonia daily average	0.4 mg/m^3 (24 hours)
5	Carbon monoxide	2 mg/m^3 (1 hour average) 1 mg/ m^3 (8 hour average)

6.1.3 The quality of ground water (one source in the upstream of Engineered Sanitary Landfill and three sources on the downstream of Engineered Sanitary Landfill, within 50 m from the site and to a depth tapping the entire unsaturated zone and minimum 4 m down in confined aquifer) in the saturated zone shall meet the standards ("Acceptable Levels") as set out in Table 5.

Table 5

S. No.	Parameter	Standard	Units
1	Arsenic	0.02	mg/l
2	Cadmium	0.01	mg/l
3	Chromium	0.05	mg/l
4	Copper	0.005	mg/l
5	Cyanide	0.05	mg/l
6	Lead	0.05	mg/l
7	Mercury	0.001	mg/l
8	Nickel	-	
9	Nitrate as NO_3	10.0	mg/l
10	pH	6.5-8.5	
11	Iron	0.3	
12	Dissolved solids	500	mg/l
13	Chlorides	250	mg/l
14	Sulphate (as CO_3)	200	mg/l
15	Zinc	5.0	
16	Phenolic Compounds (as C_6H_5OH)	0.001	mg/l
17	Total hardness (as $CaCO_3$)	250 or lower	mg/l

6.1.4 The frequency of monitoring shall be as per the **table 6.**

Table 6

Sl. No.	Description	Frequency
During Active Operations Period		
1	Leachate quantity	Daily
2	Leachate quality	Weekly
3	Ground water quality – within the site	Once in 3months
4	Ground water quality – outside the site	Once in 6months
5	Air Quality	Once every 2months
During Post Closure Period		
1	Movement of the Engineered SanitaryLandfill cover	Yearly
2	Leachate quantity	Quarterly
3	Leachate quality	Quarterly
4	Ground water quality – within the site	Once in 6 months
5	Ground water quality – outside the site	Once in 6 months
6	Air Quality	Once in 6 months
7	Gas quality	Once in 6 months

6.1.5 The Concessionaire shall provide the instruments/equipment required forcarrying out the environmental monitoring tests set out hereinabove.

4. Mandatory Facilities

The Concessionaire shall, unless suitably modified in the O&M Plan and/or the O&M Manual, operate and maintain the mandatory facilities in accordance with the standards set out in the table 7.

Table 7

S. No.	Description of Mandatory Facility	Operation and Maintenance Standard

PMU (RCUES) SNM, Lucknow

1	Storm Water Drainage System	▪ All storm water drains are free from clogging and allows unobstructed flow of water ▪ Maintain shape & scope in the designed manner during the lifetime ▪ No stagnation of rain water on the Landfill Facility
2	Leachate Collection and Drainage System	▪ No overflow of leachate from the Leachate Collection Tanks ▪ Cracks or leaks in the leachate collection and drainage system to be sealed immediately ▪ Should be free from clogging and allows unobstructed flow of leachate ▪ No untreated leachate shall be let out from the Site unless it meets the standards as set out in **Table 3 of Schedule 4A**
3	Green Belt	▪ Maintained in accordance with O&M Plan and O&M Manual

5. Routine Maintenance Standards

The terms and conditions shall be as set out under **Clause 7 of Schedule 4A.**

6. Emergency Maintenance

The terms and conditions shall be as set out under **Clause 8 of Schedule 4A.**

7. Reporting

(a) The Concessionaire shall ensure that AUTHORITY and Project Monitoring Consultant is provided with adequate information and forewarned of any event or any other matter affecting the Project Facilities to enable them to control/minimize any adverse consequences.

(b) The frequency and formats for the reports to be submitted shall be finalized in consultation with the Project Monitoring Consultant and form part of the O&M Plan and O&M Manual.

(c) The following data should form part of the reports submitted by the Concessionaire:

(i) Residual Inert Matter quality test reports (including moisture content)

(ii) Leachate generation

(iii) Emission of greenhouse gases

(iv) Ground Water quality (both within and outside the Site)

(d) The Concessionaire shall also maintain a system for tracking the location of Landfilling operations within the Engineered Sanitary Landfill on a daily basis.

(e) The Concessionaire shall furnish to MUNICIPAL COMMISSIONER and PMC three copies of "as-built" Drawings of any construction undertaken after COD.

8. Maturity Test

Maturity tests shall include the following two tests. The Concessionaire shall carry out Maturity Tests as per procedure set out below to ascertain whether the ResidualInert Matter is Fit for Landfilling. Only the Residual Inert Matter which has passed the following two tests shall be termed as fit for Landfilling:

8.1 Starch Iodine Test

The Concessionaire shall carry out Maturity Test as per procedure set out below to ascertain whether the Residual Inert Matter is Fit for Landfilling. Only the Residual Inert Matter which is completely degraded is termed as Fit for Landfilling.

Objective	**To determine the maturity of the composting sample**
Reagents & Chemicals	1. 35% perchoric acid (v/v) 2. 2% Iodine solution 3. Dissolve 4 gms of iodine (AR grade) and 8 gms of Potassium iodide in 500 ml distilled water
Method	1. Weigh 1 gm of air-dried sample in a 100ml beaker. 2. Add 20ml of 35% perchloric acid beaker, keep the mixture to react for 20 minutes. 3. Filter the slurry through Whatman No. 542 filter paper in a 250 ml conical flask 4. Add 2 ml of iodine solution to the filtrate and observe the colour change
Results	
Golden Yellow Colour	Indicates complete degradation
Reddish Brown Colour	Indicates incomplete degradation
Greenish Blue to Blue Colour	Indicates no degradation

8.2 Carbon – Nitrogen Ration (CN Ratio) Test

The samples shall be tested for the C/N ratio (Organic water-soluble Carbon/ Organic water-soluble nitrogen). The C/N ratio shall be less than 7. If this acceptance criteria is not fulfilled all the heaps of Residual Inert Matter is **"not fitfor landfilling"** and further stabilization is required. They will be recycled back to the treatment facility. The Test of C/N Ratio will be carried out regularly on daily basis. The results of the tests should be documented on daily basis and certified by the PMC/Authority.

The Analysis Procedure for finding the C/N Ratio for the MSW is based on the following Standards :

Carbon / Nitrogen Ratio : IS 10158, 1982, Reaffirmed 1995, Serial No 4 and 6. The procedure as laid down in the standard to be followed.

PMU (RUDES) * MMC, Lucknow *

SCHEDULE "6"

PAYMENT OF PROCESSING FEE

2.0 Processing Fee

3 PROCESSING FEE (Amount in Rupees)

Sr. No.	Description of Work	Processing Fee Rate Rs./MT in Figures (in Rs.)	Processing Fee Rate Rs./MT in Words
1	First Year Processing Fee for processing of fresh waste & Disposal of residual inert material at SLF		

1. Processing Fee for Processing of fresh waste & Disposal of residual inert material = TF*W*F

Where,

TF is the Processing Fee Rate per MT of waste received at Processing Plant

W is the actual Weight of waste received at Processing Plant

F is **Multiplication Factor for performance based payment equals to the ratio of** Total Marks obtained and Total Marks designated for 100% performance of work in Schedule 8 of this Concession Agreement.

SCHEDULE "7 A"

PERFORMANCE SECURITY FOR CONSTRUCTION REQUIREMENT

(PROFORMA OF BANK GUARANTEE)

THIS DEED OF GUARANTEE executed on this the_____day of _____at _____by_____*(Name of the Bank)* having its Registered office at_____hereinafter referred to as "theGuarantor" which expression shall unless it be repugnant to the subject or context thereof include successors and assigns;

In favour of

LUCKNOW NAGAR NIGAM, a body constituted under the Uttar Pradesh Municipal Act 2000 (hereinafter referred to as **"AUTHORITY"**) which expression shall unless excluded by or repugnant to the context, be deemed to include its successors and assigns)

WHEREAS

By the Concession Agreement ("the Concession Agreement") being entered into between AUTHORITY and_____, a company incorporated under the CompaniesAct, 1956, having its registered office at_____, ("the Concessionaire"), the Concessionaire has been granted the Concession to implement the project envisaging design, financing, construction, operations, maintenance and transfer of Municipal Solid Waste Processing Facility and Engineered Sanitary Landfill Facility for the City of LUCKNOW NAGAR NIGAM (hereinafter referred to as "the Project").

A. In terms of **Article 6.1** of the Concession Agreement, the Concessionaire is required to furnish to AUTHORITY, an unconditional and irrevocable bank guarantee for an amount of _____ **Lakhs (Rs.** _____ **only)** as security for due and punctual performance / discharge of its obligations under the Concession Agreement, relating to achievement of COD by the Concessionaire.

B. At the request of the Concessionaire, the Guarantor has agreed to provide bank guarantee, being these presents guaranteeing the due and punctual performance/discharge by the Concessionaire of its obligations relating to the Project.

NOW THEREFORE THIS DEED WITNESSETH AS FOLLOWS:

Capitalised terms used herein but not defined shall have the meaning assigned to them respectively in the Concession Agreement.

1. The Guarantor hereby irrevocably guarantees the due and punctual performanceby M/s_____(hereinafter called "the Concessionaire") of all its obligations relating to the Project and in connection with achievement of COD by the Concessionaire in accordance with the Concession Agreement.

1 To be issued by a Scheduled Bank in India

2. The Guarantor shall, without demur, pay to AUTHORITY sums not exceeding in aggregate _____ **Lakhs (Rs._____only)** within five (5) calendar days of receipt of a written demand therefore from AUTHORITY stating that the Company has failed to meet its obligations underthe Concession Agreement. The Guarantor shall not go into the veracity of any breach or failure on the part of the Concessionaire or validity of demand so madeby AUTHORITY and shall pay the amount specified in the demand notwithstanding any direction to the contrary given or any dispute whatsoever raised by the Concessionaire or any other Person. The Guarantor's obligations hereunder shall subsist until all such demands are duly met and discharged in accordance with the provisions hereof.

3. In order to give effect to this Guarantee, AUTHORITY shall be entitled to treat theGuarantor as the principal debtor. The obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Concession Agreement or other documents or by the extension of time for performance granted to the Concessionaire or postponement/non exercise/ delayed exercise of any of its rights by AUTHORITY or any indulgence shown by AUTHORITY to the Concessionaire and the Guarantor shall not be relieved from its obligations under this Guarantee on account of any such variation, extension, postponement,non-exercise, delayed exercise of any of its rights by AUTHORITY or any indulgence shown by AUTHORITY, provided nothing contained herein shall enlarge the Guarantor's obligation hereunder.

4. This Guarantee shall be irrevocable and shall remain in full force and effect until unless discharged/released earlier by AUTHORITY in accordance with the provisions of the Concession Agreement. The Guarantor's liability in aggregate be limited to a sum of **Rs.** _____ **(_____only).**

5. This Guarantee shall not be affected by any change in the constitution or windingup of the Concessionaire/the Guarantor or any absorption, merger or amalgamation of the Concessionaire/the Guarantor with any other Person.

6. The Guarantor has power to issue this guarantee and discharge the obligations contemplated herein, and the undersigned is duly authorised to execute this Guarantee pursuant to the power granted under_____.

IN WITNESS WHEREOF THE GUARANTOR HAS SET ITS HANDS HEREUNTO ON THEDAY, MONTH AND YEAR FIRST HEREINABOVE WRITTEN.

SIGNED AND DELIVERED by

_____Bank by the hand of Shri _____

its_____and authorised official.

NOTES:

_____

- *24 months from the date of signing the Concession Agreement*

The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch

JNNURM * PMU (RCUES) * Lucknow

2278

SCHEDULE "7 B"

Performance Security for Operation & Maintenance Requirements

The AUTHORITY

LUCKNOW NAGAR

NIGAM

Lucknow, Uttar Pradesh

WHEREAS

1. ..... (The "Concessionaire") and the LUCKNOW NAGAR NIGAM (the"Authority") have entered into a Concession Agreement dated (the "Agreement") whereby AUTHORITY has agreed to the Concessionaire undertaking the Development of MSW Management Facility, subject to and in accordance with the provisions of the Agreement.
2. The Agreement requires the Concessionaire to furnish a Performance Security to AUTHORITY in a sum of Rs..... (Rupees ..... only) (The "Guarantee Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, towards Operation &Maintenance of the Project (as defined in the Agreement).
2. We .....through our Branch at (The "Bank") have agreed to furnish this Bank Guarantee by way of Performance Security.

NOW THEREFORE, The Bank hereby, unconditionally and irrevocably,guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due andfaithful performance of the Concessionaire's obligations during the Operation & Maintenance Period, under and in accordance with the Agreement, and agrees and undertakes to pay to AUTHORITY, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the Guarantee Amount as AUTHORITY shall claim, without AUTHORITY being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

MWS * PMU Lucknow

2. A letter from AUTHORITY, under the hand of the Additional AUTHORITY, stating that the Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that AUTHORITY shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Operation & Maintenance Period under the Agreement and its decision that the Concessionaire is indefault shall be final, and binding on the Bank, notwithstanding any differences between AUTHORITY and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Concessionaire for anyreason whatsoever.
3. In order to give effect to this Guarantee, AUTHORITY shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Concessionaire and/or the Bank, whether by theirabsorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under thisGuarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for AUTHORITY to proceed against the Concessionaire before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by AUTHORITY against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to AUTHORITY, and the Bank shall not be released from its liability and obligation under these presents by any exercise by AUTHORITY of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of AUTHORITY or of any other matter or thingwhatsoever which under any law relating to sureties and guarantorswould but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by AUTHORITY in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the

obligations of the Concessionaire under the Agreement.

7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee will remain in force until compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee, no later than 6 (six) months from the date of expiry of this Guarantee, all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The Performance Security will be valid for 12 months.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of AUTHORITY in writing and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred Branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemedto have been given at the time when it ought to have been delivered in

    due course of post and in proving such notice, when given by post, it shallbe sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of AUTHORITY that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months from the date hereof or until it is released earlier by AUTHORITY pursuant to the provisions of the Agreement.

Signed and sealed this ..... day of....., 20..... at .....

SIGNED, SEALED AND DELIVERED

For and on behalf of the BANK by:

(Signature)

(Name)(Designation)(Address)

NOTES:

The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

SCHEDULE "8"

SCHEDULE OF PAYMENTS TO THE CONCESSIONAIRE FROM THE POST CLOSUREPERFORMANCE ACCOUNT

Time Period from Commencement of Post Closure Period	Amount Payable to Concessionaire
End of 1st month	1/12th of account balance
End of 2nd month	1/11th of account balance
End of 3rd month	1/10 of account balance
End of 4th month	1/9th of account balance
End of 5th month and so on	1/8th of account balance and so on

SCHEDULE "9"

Date: _____

LETTER OF AUTHORISATION

To Whomsoever it may Concern

This is to confirm that to pursuant to the Concession Agreement dated _____ entered into between the AUTHORITY and _("the Concessionaire"),the Concessionaire has been authorised to construct, operate and maintain an project of developing and operating an integrated Municipal Solid Waste Processing Facility and Engineered Sanitary Landfill Facility for the city of LUCKNOW and for that purpose, to apply for and obtain all approvals, licenses and permits required therein and to avail the utilities such as power, water, telecommunication and any other incidental utilities or services required in connection therewith.

Yours faithfully,

MUNICIPAL
COMMISSIONER
LUCKNOW NAGAR
NIGAM, LUCKNOW

Schedule "10"

Deleted

MWS ★ PMU (RCUES) ★ Lucknow

Schedule "11"

APPLICABLE PERMITS

1. Applicable Permits

1.1 The Concessionaire shall obtain, as required under the Applicable Laws, the following Applicable Permits on or before the Appointed Date, save and except to the extent of a waiver granted by the Authority in accordance with Clause 4.2.1.

Sl No	Approval/ Clearances	Concerned Agencies	Responsibility
1	Environmental clearance	MoEF	Concessionaire
2	Site Authorization under MSW Rules	UPSPCB/ SEAC	Concessionaire
3	License in accordance with the rules and provisions of Labour (Regulation and Abolition) Act, 1970	MoLE	Concessionaire
4	Consent to establish under Air and Water Act	UPSPCB/ SEAC	Concessionaire
5	Consent to operate under Air and Water Act	UPSPCB/ SEAC	Concessionaire
6	NOC from Fire Services	Home Department	Concessionaire
7	Disaster Management Plan	State Disaster Management Authority	Concessionaire
8	Vehicle Registration	RTO	Concessionaire
9	Electricity Approval	Distribution Company	Concessionaire
10	Power Generation and Purchase	SERC	Concessionaire
11	Airport Authority clearance	ATC/ AAI	Concessionaire
12	Industrial Setup Approval	DoI	Concessionaire

'MWS * PMU (RCUES) Lucknow *'

13	All drawings and document approval	Authority	Concessionaire
14	Water Supply	Authority	Concessionaire

Where;

SPCB- State Pollution Control Board

SEAC: State Environment Approval

CommitteeMoLE-Ministry of Labour and

Employment MoEF- Ministry of

Environment and Forest

RTO- Regional Transport Office

JERC- Electricity Regulatory

CommissionDoI- Directorate of

Industries, Orissa ATC – Air Traffic

Control

AAI- Airports Authority of India

Schedule "12"

Project Completion Schedule

1.0 Project Completion Schedule

The milestones stated in the table below are tentative and Concessionaire can start some of the activities simultaneously to meet the Project Completion Schedule and achieve COD on or before completion of 04 months from the Appointed Date.

2.0 The time required for Conducting EIA and obtaining Environmental Clearance may be extended beyond the present limit of 4 months provided the delay is not because of concessionaire event of default and has timely intimated PMC/AUTHORITY in this regard. In such situation where extension is granted by AUTHORITY, the time of construction period for processing plant and Sanitary Landfill shall be considered 04 months from award of Environmental Clearances.

SWM, Lucknow * PMU (RCUES) *

Schedule "13"

Tests

1.0 Tests

1.1 For determining that the Construction Works conform to the Specifications and Standards, the Project Monitoring Consultant shall require the Concessionaire to carry out or cause to be carried out tests, at such time and frequency and in such manner as may be specified by the Project Monitoring Consultant fromtime to time, in accordance with Good Industry Practice for quality assurance.

1.2 In the event that results of any tests conducted, any defects or deficiencies in the Construction Works observed, the Concessionaire shall carry out remedial measures and furnish a report to the Project Monitoring Consultant on this behalf.

1.3 During the Construction Period, Project Monitoring Consultant to carry tests to determine whether the Construction is being carried out in conformance withthe Construction Requirements given in the Schedules to this Agreement and whether the Construction Milestones of the Project have been achieved.

1.4 At least 90 (ninety) days prior to the likely completion of the Project Facilities,the Concessionaire shall notify the Project Monitoring Consultant of its intent to subject the Project Facilities to Tests. The date and time of each of the Testsshall be determined by the Project Monitoring Consultant in consultation with the Concessionaire and notified to AUTHORITY who may designate its representative to witness the Tests. The Concessionaire shall provide such assistance as the Project Monitoring Consultant may reasonably require for conducting the Tests.

1.5 Before the civil construction starts, the Concessionaire shall needs to follow the entire standards test such as soil investigations, ground water levels, hydro-geological tests, concrete grades tests, etc.

1.6 The Concessionaire shall arrange the tests as per recommendations of the manufacturer of all electrical and mechanical machinery and equipment, and the test results shall be recorded in presences of the Project Monitoring Consultant.

1.7 The Concessionaire shall arrange the tests of electrical equipment as per the requirement of the supply company and the test reports shall be furnished to them to get the electric supply. Similarly, any test required to be carried out as per Supply Company requirements shall be carried out in presence of the Project Monitoring Consultant.

1.8 All tests in relation to the electrical equipment shall be conducted by the licensed electrical contractors only.

1.9 The relevant tests to be conducted shall be finalized by the Concessionaire in consultation with the Project Monitoring Consultant from time to time.

Schedule "14"

Completion Certificates

1.0 Completion Certificate

1. I, ... (Name of the Project Monitoring Consultant), acting as Project Monitoring Consultant, under and in accordance with the Concession Agreement dated ..... (the "Agreement"), for Municipal Solid Waste Management Facility at LUCKNOW, on design, build, finance, operate and transfer (DBFOT) basis, through ..... (Name of Concessionaire), hereby certify that the Tests specified in the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I am satisfied that the Project can be safely and reliably placedin commercial service.
2. It is certified that, in terms of the aforesaid Agreement, all works forming part of Project have been completed, and the Project is hereby declared fit for entry into commercial operation on this the ..... day of ..... 20...

SIGNED, SEALED AND DELIVERED

For and on behalf of the PROJECT MONITORING CONSULTANT by:

(Signature)

(Name)

(Designation)

(Address)

1.1 Provisional Certificate

1. I, ... (Name of the Project Monitoring Consultant), acting as Project Monitoring Consultant, under and in accordance with the Concession Agreement dated ..... (the "Agreement"), for Municipal Solid Waste Management Facility at LUCKNOW, on design, build, finance, operate and transfer (DBFOT) basis, through ..... (Name of Concessionaire), hereby certify that the Tests specified in this Agreement have been undertaken to determine compliance of the Project with the provisions of the Agreement.
2. Construction Works that were found to be incomplete and/or deficient have been specified in the Punch List appended hereto, and the Concessionaire has agreed and accepted that it shall complete and/or rectify all such works in the time and manner set forth in the Agreement. (Some of the incomplete works have been delayed as a result of reasons attributable to the Authority or due to Force Majeure and the Provisional Certificate cannot be withheld on this account. Though the remaining incomplete works have been delayed as a result of reasons attributable to the Concessionaire,) I am satisfied that having regard to the nature and extent of such incomplete works, it would not be prudent to withhold commercial operation of the Project, pending completion thereof.
3. In view of the foregoing, I am satisfied that the Project can be safely and reliably placed in commercial service, and in terms of the Agreement, the Project is hereby provisionally declared fit for entry into commercial operation on this the ..... day of ..... 20...

ACCEPTED, SIGNED, SEALED AND DELIVERED

For and on behalf of the PROJECT MONITORING CONSULTANT by:

(Signature)

(Name)

(Designation)

(Address)

Schedule "15"

Environmental Standards

1.2 Environmental Standards

a. The Concessionaire shall follow all the environmental standards for processing facility as per SWM Rules 2016 and any amendments thereto till date.
It shall also follow all those additional or stricter standards as per applicable Indian Standards, rules, Guidelines ,Acts and as directed by the Project Monitoring Consultant.

b. The Concessionaire shall implement the recommendations of the Environmental and Social Impact Assessment (ESIA) and Environment Management Plan (EMP) report prepared.

c. The Concessionaire shall meet the standards during the construction period as per the instruction or suggestion by the Project Monitoring Consultant from time to time based on the environmental standards applicable.

d. The Concessionaire shall meet the standards during the operation period as per the instruction or suggestion by the Project Monitoring Consultant from time to time as per the design requirement and applicable standards.

e. The Concessionaire shall form the Environmental Monitoring Cell (EMC) to review the effectiveness of environment management system during construction and operation phase of the Project Facilities. Project Monitoring Consultant shall be the Governing Authority over the EMCfunctions.

f. EMC shall meet regularly to review the effectiveness of the EMP (Environmental Monitoring Programme) implementation. The data collected on various EMP measures would be reviewed by EMC and if needed corrective action will be formulated for implementation purposes.

g. The Concessionaire through EMC shall co-ordinate all monitoring programmes at Project Site and data thus generated shall be regularly furnished to the state regulatory agencies. The Environmental Audit reports and review shall be prepared for the entire year of operations and shall be regularly submitted to regulatory authorities.

h. The Concessionaire shall setup a well-equipped laboratory for monitoring and analysis of environmental parameters for air quality, meteorology, water, wastewater, noise, groundwater, etc. based on the overall monitoring requirements.

i. The Concessionaire shall follow the QA/QC procedures for all laboratory services and strive to get the certified laboratory status from quality point of view such as ISO 9000 and other similar standards. The overall goal should also be to acquire the status of certified and recognized laboratory under MOEF, Government of India. The Concessionaire shall strive to get ISO 14001 certification for the entire facility.(i)The Concessionaire shall follow the environmental issues with management action along with responsibilities as mentioned in the following table.

Environmental issues	Management Action	Implementation Responsibilities
Project Location		
Tree Clearance	EMC will prepare a detailed Transplantation and Plantation plan and monitoring the implementation	Concessionaire
Increase in power consumption	EMC will prepare a detailed Energy Conservation plan and monitoring the implementation	Concessionaire
Loss of local fauna	EMC to create plan asper EIA report andimplement the same	Concessionaire

Loss of trees& vegetation in the Project area	EMC will prepare a detailed plantation plan and monitoring the implementation AUTHORITY / Project Monitoring Consultant to closely oversee the work of trees and vegetationremoval or plantation	AUTHORITY/ Concessionaire
Increase in the water requirement for domestic purpose	EMC to monitor and prevent the excess waterconsumption	Concessionaire
Stress on the surrounding marine ecosystem(if any)	EMC will plan the earth movement in consultation with the Concessionaire and see to it that the mitigation measures are implemented by the contractor/ operator	Concessionaire/ AUTHORITY
Change inland use pattern	Preparation the landscaping and greenery plan	Concessionaire
Loss of any archaeological / cultural/historic site	The operator of the facility will be planned to eliminate any odour or pollution	Concessionaire
Processing/ Landfill Facility		
Air Pollution	The EMC would look into the action of the operator on regular basis The EMC would look into the action of the contractor on a regular basis.	Concessionaire
	AUTHORITY through Project Monitoring Consultant can	AUTHORITY/Co

High dust level	receive a feedback and direct the agency for corrective measures	ncessionaire
Sediment runoff	EMC will plan the excavation, etc. in consultation with the contractor and see to it that the mitigation measuresare implemented by the Contractor	**Concessionaire**
Safety of workers	EMC to monitor andensure the security and safety of workers	Concessionaire
Interference with the natural drainage of the local ecosystem	Possible changes in natural drainage system to be avoided AUTHORITY to closely oversee any changes in natural drainage system	AUTHORITY/ Concessionaire
Flooding in other low lying areas	EMC to monitor the construction and layout plan	Concessionaire
Noise Pollution	Make provision in thecontract to limit the noise pollution EMC will monitor noise Low noise vehicles with proper maintenance and monitoring	**Concessionaire**
Disposal of excavated material	EMC to monitor the quantity and disposal	Concessionaire
Safety hazard during the erection and	Regular monitoring and reporting	Concessionaire

operation		
Landfill Construction		
Extremely high dust levels	The EMC would look into the action of the contractor on a regular basis	Concessionaire
Air Pollution due to equipment fuel usage	EMC to monitor the air pollution	Concessionaire
Air Pollution due to land cell creation	these requirements are apart of the tender document for the contractor carrying out this activity. The EMC would look into the action of the contractor on a regular basis	Concessionaire
Air Pollution due to other construction activity	EMC to monitor the air pollution and set the construction working schedule	Concessionaire
Accident during the construction stage	Make provision for reporting and action	Concessionaire
Fire hazard during the construction stage	Make provision for reporting and action	Concessionaire
Noise Pollution	Make provision for reporting and action	Concessionaire
Lack of Sewerage and Sewage Treatment Facilities leading to unhygienic condition	Make provision for reporting and action	Concessionaire
Indoor air pollution in the camp due tobiomass fuel for cooking	EMC to monitor the air pollution.	Concessionaire
Air Pollution due to construction vehicle	EMC to monitor the air pollution	Concessionaire

SNWS * PMU (RCUES) Lucknow *

usages		
Water logging andcross drainage issue during construction	Make provision for reporting and action EMC will monitor	Concessionaire
Solid waste generation and inadequate disposal	Make provision for reporting and action. EMC to monitor the adequacy of the solid wastedisposal	Concessionaire
Disposal of excavated Material	To make available theland for disposal of excavated material	Concessionaire
Pollution of land, ground water and surface water arising from wastes and spillage due to construction	make provision for reporting and action EMC to monitor the adequacy of waste disposal	Concessionaire
Incomplete post-use clearance and rein-statement of base camp, leading to degradation of soil	make provision for reporting and action	Concessionaire
Operation Phase		
Air pollution due to the MSW vehicles and processing plants	EMC to ensure the air pollution of facility meets the norms Regular noise monitoringand reporting	Concessionaire
Increase in power Consumption	EMC will prepare a detailed Energy Conservation plan and monitor the implementation with the Operator of the Facility	Concessionaire

High air pollution along the various transport corridors leading to and away from the site	EMC will monitor pollution and inspection log of vehicles	**Concessionaire**
Noise pollution due to the operational activities	EMC to monitor noise and give feedback for control	Concessionaire
Noise pollution along the various transport corridors leading to and away from the landfill site	EMC to monitor the noise pollution	**Concessionaire**
Solid waste management issues	EMC to monitor and report	Concessionaire
Sewage/leachate treatment issues	to maintain the STP as per the standard prescribed norms. EMC to monitor the same	**Concessionaire**
Periphery Development	**AUTHORITY initiatives to be communicated to Concessionaire for its implementation**	Concessionaire

1.3 Social Standards

a. The Concessionaire shall provide a separate clinic at the Project Site where people can approach for primary health advice

b. The Concessionaire shall provide community and training center within the Project Site where in multiple employments related capacity building and training activities shall be under taken and necessary skills shall be imparted.

c. The Concessionaire shall provide an employment opportunity based on training and skill assessment. The secondary employment and/or

business opportunity shall be created through the facility operator or support services.

d. The Concessionaire shall provide training and awareness to labors at plant, which should be a continuous activity.

e. The Concessionaire shall set up MSW management and innovation center for every-one which will be useful to locals, students and others who would wish to work in this field.

f. The Concessionaire shall give prior importance to nearby population to get involved in the activities of horticulture, garden maintenance, energy management, etc. at the Project Facilities

U (RCUES) Lucknow

Schedule "16"

Safety requirements

1.1 Safety Requirements

Concessionaire is responsible for maintaining an incident/hazard free work environment. In compliance with these provisions, the Concessionaire shall comply with the latest edition of the Contractor Safety Requirements and perform the following:

a. Concessionaire is expected to pre-plan all work to minimize the potential for personal injury and property damage.
b. Develop the plan in a Project specific nature, which is designed to anticipate and identify hazards before work begins. Know in advance what measures will be taken to eliminate hazards or adequately control the anticipated risks for each scope of work. This information shall include, but is not limited to: scope of work, sequence of activities, site specific fall protection, high angle rescue procedures, safety control methods, training records, competent persons, lead abatement, asbestos abatement and excavations. The planning does not stop at the pre-planning stage, but is a continuous process of assessment and evaluation. When changes occur or new hazards are identified during the course of the Project, the work should be suspended while the plan is revised.
c. Ensure all subcontractors, suppliers and vendors are informed of their obligations with regard to safety and of the Contractor Safety Requirements.
d. Plan and execute all work to comply with the stated objectives and safety requirements contained in the Contractor Safety Requirements, contract provisions, federal, state, and local laws and regulations, and standards.
e. Concessionaire or their contractors/subcontractors with 25 or more employees on a single shift will establish a full time position of a Contractor Safety Manager to perform safety in sections and training services. In addition, for every additional 100-job site employees added, an additional Safety Management Representative shall be required. In the event that the Contractor has less than 25 employees, the contractor shall appoint an onsite person who along with other concurrent duties shall serve as the Contractor's Safety Representative.
f. Concessionaire shall maintain its own orientation program for its employees that shall include as a minimum are view of(1) hazards present in the area in which they will be working and (2) the personal protective equipment and apparel the workers will be required to use or wear as specified under Occupational Safety and Health Administration(OSHA).

g. Concessionaire shall provide and maintain a chemical and flammable material storage area as described in the Contractor Safety Requirements. Be responsible for the control, availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.

h. Take an active part in all supervisory safety meetings, including the discussion of observed unsafe work practices or conditions and a reviewof any incidents and corrective actions. Additionally, encourage, solicit and follow up on safety related suggestions from Concessionaire employees.

i. Report all injuries and incidents in a timely manner in accordance with federal and/or state laws and regulations and the Contractor Safety Requirements.

j. Analyze all incidents and implement immediate corrective action.

k. Provide job supervisors with appropriate training materials to conduct weekly safety meetings and attend said meetings to evaluate their effectiveness.

l. Review safety meeting reports submitted by job supervisors and take necessary action to ensure that the job supervisors hold meaningful weekly safety meetings.

m. Implement safety-training programs for Contractor supervisors and employees applicable to their specific responsibilities.

n. Maintain list on-site of personnel available for first aid and emergency treatment for injured Contractor employees.

o. Concessionaire will be responsible for providing a safety orientation training session for all workers before they are allowed to begin work. The orientation safety training will be conducted by the authorized representative as suggested by AUTHORITY and will include a summary of the Contractor Safety requirements/ Heads-Up Safety Training and awareness.

p. At a minimum Contractor representative to adequately train its employees according to applicable safety standards. This training may include but is not limited to: fall protection, fire watch, scaffolds, forklifts, excavation, ladders, confined space entry, respiratory protection, OSHA-PSM (Process Safety Management), grounding, shoring and traffic control etc.

q. In the event of a work-related incident resulting in a Contractor employee injury or near miss, Contractors shall notify their Appointed Representative immediately.

r. Contractors shall provide the appointed representative with an initial report of incident, in writing, within 24 hours of the accident. Hard copy or electronic formats are acceptable.

s. Contractors shall provide a completed accident investigation report within three (3) working days of the incident. In the event, their investigation requires more time to investigate due to the complexity of

SWM PMU (RCUES) Lucknow

the incident, Contractors shall communicate to the appointed Representative in writing including intimation to higher authorities of availability and use of necessary safety equipment, including personal Protective equipment (PPE) and apparels for the Concessionaire employees.

t. All first aid injuries shall be documented for record keeping purposes. In the event a first aid case develops into a Contractor employee injury, accident reporting and investigation procedure shall be initiated as outlined previously.

u. In order to maintain a safe and healthy work environment in emergency situations, Concessionaire has developed this emergency action plan to help safeguard Contractor employees while working on AUTHORITY Sites. All Contractor employees will be trained in the use of this plan and informed of their role in implementing it during their required safety orientation training. This policy is mandatory and must be strictly followed by all Contractors and their personnel while working on Sites.

v. When notified of an emergency evacuation (an audible alarm/verbal announcement will be used by Concessionaire to alert employees of an evacuation), Contractors must immediately. Evacuate their personnel from the Project Site, perform a head count and report missing personnel to concerned in-charge of the facility and take appropriate steps for investigation. When evacuating any building, structure or job site, employees should utilize the nearest exit to them. Personnel will remainat the designated site until an all-clear is announced or further evacuation steps are ordered.

w. Concessionaire shall comply with the latest revision Safety Rules & Procedures Permit. Contractors shall provide adequate fire protection equipment in each of their storage areas, offices and other temporary structures.

x. Concessionaire is responsible for orienting employees on the specific safety rules that must be followed by all persons working on Project Facilities. Other personal protective equipment (PPE) is also required in accordance with the appropriate safety standards and equipment as set by the manufacture's specifications. A list of the minimum personal protective requirements is as follows:

   i. The Concessionaire shall be responsible for providing and ensuring the use of required personal protective equipment for its employees.
   ii. Approved hard hats, shall be worn at all times while on the Site. Itis required that each employee use an American National Standards Institute (ANSI) approved hardhat.
   iii. Safety glasses, which meet applicable ANSI standards, are required at all times while on the Site and should include approved side shields. Only clear safety glasses are allowed to be

NWS * PMU (RCUES) * Lucknow

used inside buildings or enclosed structures. Shaded goggles or hoods may be used while welding or cutting requires. Prescription safety glasses with self-tinting capabilities may be worn on-site.

iv. PPE shall be worn while travelling from the security gate, while travelling through the plants, working outside or otherwise engaged in work at each station, except in areas specifically designated as PPE not required.

v. Concessionaire's vendors and visitors will be required to meet these same standards.

y. Good housekeeping affects safety, quality and production. It is the responsibility of Concessionaire onsite to keep their work area clean. Concessionaire are responsible or trash and debris that is generated by their work. Trash and debris must be collected and placed in proper containers on a daily basis.

z. Trash shall not be randomly thrown off a floor or through openings in the floor. Trash chutes, trash boxes, or other approved means such as barricading and/or flagging shall be utilized.

aa. Safety requirement mentioned in the Environment and Social Impact Assessment (ESIA) Report shall be complied in accordance to Schedule XXI and Schedule XIV.

Schedule "17"

Reports

1. Report for Processing Plant

1.1 Daily report for Vehicles incoming to Processing Facility

Date								
Time								
Sl. No (1)	Vehicle No (2)	Log sheet No (3)	Time (4)		Travelled Time (5)	Laden Wt. (6)	Unladen Wt. (7)	Net Wt. (6-7)
			In	out				
Total								

1.2 Daily report for other details of the Processing Facility

Date:			
Downtime of Weighbridges (hrs):			
Downtime of Pre segregation unit (hrs):			
Downtime of Processing Plant Module (hrs)		Description of the Module	
Total Quantity of MSW Received			------- (tonnes)
Quantity of recyclable MSW recovered		%	------- (tonnes)
Quantity of biodegradable and combustible MSW		%	------- (tonnes)
Quantity of	Inert Waste	%	------- (tonnes)

Waste landfilled	Process remnants	%	------- (tonnes)
	Total	%	------- (tonnes)
Quantity of unprocessed MSW at the processing plant			------- (tonnes)
15 days trailing average of the quantity of MSW received at the processing plant			------- (tonnes)
Quantity of MSW rejected	------- (tonnes)	Reasons for the rejection	

1.3 Monthly report for other details of the Processing Facility

Date from:		Date to:	
Total Downtime of Weighbridges (hrs.):			
Total Downtime of Pre-Segregation unit (hrs.):			
Downtime of Each Processing Plant module (no of shifts)	Sl No	Module Description	Downtime
Total Quantity of MSW Received			------- (tonnes)
Total Quantity of recyclable MSW recovered		%	------- (tonnes)
Total Quantity of biodegradable and combustible MSW		%	------- (tonnes)
Total Quantity of Waste landfilled	Inert Waste	%	------- (tonnes)
	Process remnants	%	------- (tonnes)
	Total	%	------- (tonnes)
Total Quantity of unprocessed MSW at the processing plant			------- (tonnes)
Total Quantity of MSW rejected	------- (tonnes)	Reasons for the rejection	
Note on compliance to applicable standards			

3 Report for Weighbridges for Landfill inert

MWS * PMU (RCUES) * Lucknow

3.1 Daily report

Date								
Downtime of Scientific landfill Facility (hrs)								
Downtime of weighbridges (hrs)								
Sl. No (1)	Vehicle No (2)	Log sheet No (3)	Time (4)		Travelled Time (5)	Laden Wt. (6)	Unladen Wt. (7)	Net Wt. (6-7)
			in	Out				
Total								

3.2 Monthly report

Date from:	Date to:
Total Downtime of Weighbridges (no of shifts):	
Total quantity of Waste landfilled	---------- tonnes
Note on compliance to Applicable Standards	

4 Consolidated Monthly Report

Monthly Waste Report		
Date from		Date to:
Total Quantity of MSW received at Processing Facility		
Total Quantity of Waste landfilled		

Schedule "18"

Annual Price Adjustment

A. Price Escalation/Adjustment formula

The contract price shall be adjusted for Increase or decrease in rates and price of labor, fuel and lubricants in accordance with the following principles and procedures as per formula given below. The amount certified in each payment certificate will be adjusted by applying respective price adjustment factor to the payment amounts due.

Price adjustment shall be calculated only for the work earned out within the stipulated timeor extension approved by the Authority.

Price adjustment shall be calculated for the local components of the payment for the work done as per formula given below and expressions and meanings are assigned to the work done during each month:

Various Components are depicted as follows:

- 50% towards fuel components
- 50% towards labor cost

To the extent that full compensation for any rise or fall in the costs to new operator is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such rise or fall in costs.

B. Adjustment for fuel and lubricants

Price adjustment for increase or decrease in the cost of fuel and lubricants shall be paid in accordance with the following formula:

$Vf = 0.85 * Pf/100 * R * (Fi - Fo) / Fo$

Vf = increase or decrease in the cost of work during the year under consideration due to changes in the rates of fuels and lubricants.

Fo = The official retail price of non-branded Diesel at the existing consumer pumps ofIOC at ULB, on the date of submission of Bids

Fi = The official retail price of non-branded Diesel at the existing consumer pumps of IOC at ULB, on the last date of the year previous to the one under consideration to which a particular interim payment certificate is related

Pf = Percentage of fuel and lubricants component of the work shall be

MWS * PMU (RCUES) * Lucknow

50% R = Total value of work done in the month

C. Adjustment for Labor Component

Price adjustment for increase or decrease in the cost due to labor shall be paid in accordancewith the following formula:

Vl = 0.85 * Pl/100 * R * (Li-Lo) / Lo

Vl = increase or decrease in the cost of work during the year under consideration.

Lo = the labor wages for unskilled adult male mazdoor notified by the ULB authority onthe bid submission date.

Li = the labor wages for unskilled adult male mazdoor notified by the ULB authority on the last date of the year previous to the one under consideration to which a particular interim payment certificate is related.

Pl = Percentage of labor component of the work

shall be 50% R= Total value of work done during

the month

D. Final Price is sum total of Vf+Vl

NOTE:

- Price adjustment shall be applicable on all the monthly bills passed by theOfficial-in Charge for payment.
- Price adjustment shall be applicable at the start of every year post 365 days after CODdate. COD here refer to date of start of commercial operation.
- The base price shall be the one on the date of bid submission.
- Various cost components mentioned above are pre-decided and shall not be amended during entire contract period and no claim shall be entertained from the concessionaire in this regard.
- The adjustment may be positive or negative depending upon the rise or fallof Index/price/wages.

Taxes

GST is not applicable in this contract. In case in further, if GST is imposed that should be borne by Municipal corporation Lucknow. Any other Taxes is extra as actual basis.

SMW, Lucknow * (RCUES) *

REQUEST FOR PROPOSAL

FOR

"RFP for "Selection of Concessionaire for Installation and O & M of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis."

(RFP NO. _____ _2023-24 Dated: __/__/2023)

VOLUME-III PROJECT INFORMATION MEMORANDUM

Issued By: -

Municipal Commissioner,

Lucknow Nagar Nigam, Lucknow

Triloknath Road, Lalbagh,

Lucknow, Uttar Pradesh – 226001

PMU (RCUES) * SMW, Lucknow *

1 City Profile

ULB Population (2011): 28,17,105 Nos
Present Households : 5,69,898 Nos.
No. of Zone : 8 Nos.
No of Wards : 110 Wards
Door to Door Collection: 110 Wards
Total Waste Generation: 1950 MTD (approx.)
Plants Operational : No
Waste Disposal: Dumpsite at Shivari, Lucknow

Lucknow is the capital city of the state of Uttar Pradesh in India. It is the largest and most developed city in North India after Delhi. This metro city is the administrative headquarters of Lucknow District and Lucknow Division. Lucknow has always been known as a multicultural city and flourished as a cultural and artistic capital of North India. The city is spread on both the banks of River Gomti over an area of 350 Sq. Km with a population of over 2.8 million. Lucknow city contributes 6.33% of urban population of the state's urban population. The city is famous for its heritage character and popularly known as seat of Nawabs. The city is now among the fastest growing cities of India and as rapidly emerging as commercial and retailing hub. Being the capital city, it is the seat of government and also the trading hub for nearby towns, Lucknow is also referred as "Golden City of the East".

Lucknow is situated 123 meters above sea level and is located on 26030" and 27010" North latitude and 80030" and 81013" East longitude. On its eastern side, city is bounded by Barabanki District; on the western side is Unnao District; on the southern side Raibareli District and on the northern side the Sitapur and Hardoi districts.

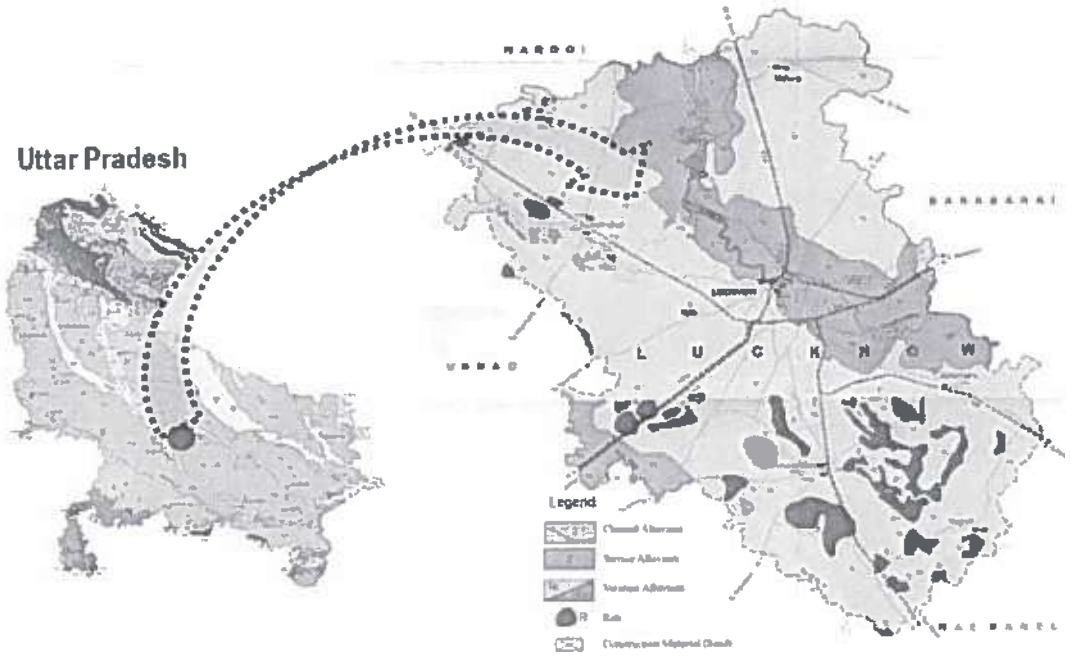


FIGURE 1-1 LOCATION OF LUCKNOW CITY

Lucknow lies in Ganga basin with flat alluvial terrain and is covered with thick pile of Quaternary sediments uncomfortably overlying the basement of Bundelkhand Granitoids and sedimentary rocks of the Vindhyan Supergroup. The Quaternary sediments have been classified into Older and Newer Alluvium. The Older Alluvium is represented by Varanasi Alluvium of Middle to Late Pleistocene age and comprises grey to brown coloured silt-clay and sand with or without kankar. Lucknow has been placed

in the zone of moderate intensity earthquake (zone III). Seasonally, it has to face natural hazards which include flooding, water logging along channels and canal banks, besides, river bank erosion.

Gomti River, the chief geographical feature, meanders through the city, dividing it into the Trans-Gomti and CisGomti regions. Apart from Gomti, Sai and their tributaries are other surface water source. Network of Sarda canal system and its distributaries also partly serve as the surface water potential. Gomti River is the major source of water supply to Lucknow City.

Till the year 1884, Lucknow was administered as Municipal Committee however in the same year it was upgraded to Municipal Board and continued working till 1995. Lucknow Nagar Mahapalika was constituted in the year 1959 under Uttar Pradesh Nagar Mahapalika Act 1959. At the time of constitution total area under its jurisdiction was 48 sq. km which was expanded four times to 101 sq. km, 107 sq. km, 118 sq. km and 350 sq. km till the year 1987. Under 74th constitution amendment act Lucknow Nagar Mahapalika was again reconstituted on 31.05.94 and given the status of Municipal Corporation. Currently, population of LMC is 28.17 lakh spread over an area of 350 sq. km with density of 8049 persons/sq.km

1.1 Population

As per the provisional census data for the year 2011, Lucknow City"s total population is 28.17 lakh. There is a growth of almost six times in the city population in the last six decades, from 5 lakh in the year 1951 to 28 lakh in the year 2011. Lucknow city"s decadal population growth rate of 28.87% for the last decade is less than the country urban population growth rate (31.80%) and is at a little higher side from state urban population growth rate i.e., 28.75%.

1.2 Topography, Climate and Rainfall

Gomti River, the chief geographical feature, meanders through the city, dividing it into the Trans-Gomti and CIS Gomti regions. Apart from Gomti, Sai and their tributaries are other surface water source. Network of Sarda canal system and its distributaries also partly serve as the surface water potential. Gomti River is the major source of water supply to Lucknow City. Location of Lucknow city in the Gomti River basin.

Lucknow has a warm humid subtropical climate with cool, dry winters from December to February and dry, hot summers from April to June. In winter the maximum temperature is around 25 °C (77 °F) and the minimum is in the 3 °C (37 °F) to 7 °C (45 °F) range. Fog is quite common from late December to late January. Summers are extremely hot with temperatures ranging from 40 °C (104 °F) to 45 °C (113 °F)

The rainy season is from mid-June to mid-September, when Lucknow gets an average rainfall of 896.2 millimetres (35.28 in) from the south-west monsoon winds, and occasionally frontal rainfall will occur in January.

Lucknow city has very low proportion of area under forest. Even in the Lucknow district the forest area is negligible. At district level; Shisham, Dhak, Mahua, Babul, Neem, Peepal, Ashok, Khajur, Mango and Gular trees are grown. The main crops are wheat, paddy, sugarcane, mustard, potatoes, cauliflower, cabbage, tomato and brinjals. Similarly, sunflowers, roses, and marigold are cultivated on quite a large area of the land in whole of the district. Apart from this, many medicinal and herbal plants are also grown.

The city is located at the confluence of the national highways and state highways

National Highways crossing through the city are:

- NH 24: leading towards Delhi

MNS PMU Lucknow

- NH 24B: leading towards Raibareli
- NH 25: leading towards Jhansi in Uttar Pradesh and Shivpuri in Madhya Pradesh
- NH 28: leading towards Barauni in Bihar
- NH 56: leading towards Varanasi
- State Highways crossing through the city are:
- SH 40: leading towards Etawah
- SH 25: leading towards Hardoi

Lucknow provides rail connectivity to major towns across India. Lucknow has two major railway stations, first Charbagh main station (broad gauge) providing connectivity to Delhi, Kolkata, Bhopal, Jaisalmer etc. and Charbagh Junction (meter gauge) for Kanpur, Mumbai, Pune, Bangalore, Ernakulam etc. Apart from these two major stations, there are fourteen sub stations in the city area and in the surroundings.

Chaudhary Charan Singh International Airport located 11 km from the center of the city provides air connectivity to major urban centers in India name a few Ahmedabad, Bangalore, Chennai, Bhubaneswar, Bhopal, Delhi, Indore, Hyderabad, Kolkata, Mumbai Patna etc. It has both domestic as well international terminals. Apart from daily domestic flights Lucknow airport provides direct flights to Dubai, Jeddah, Muscat and Riyad.

NWS PMU Lucknow

2 Scope of Work.

1.1 Project Background

a) Lucknow Area is a Capital city of the Uttar Pradesh State, comprising Business Hub & Central Govt offices, and important heritage monuments and markets. It is divided into eight Zones for sanitations for micro level management of Civics amenities. Approximately 2000 -2200 MT of Municipal Solid waste is generated on a daily basis in city.

b) Presently, mixed waste from all over the town, (except the segregated waste collected from the residential areas) is transported and dumped at dumpsite at Shivari, Lucknow Uttar Pradesh. Shivari Plant established under JNNURM scheme have

- Pre-Processing Section
- Compost Processing Section
- RDF processing section

c) The Bidder shall be responsible for Upgradation of existing municipal solid waste processing plant located at village Shivri. Upgradation of Processing Plant (Including Dry Waste & Wet Waste Processing Unit) at Shivari Processing Plant Site is needed to comply minimum standards established in CPHEEO manual.

1.2 Project Scope

A. The Salient feature of project are

i. Capacity of existing plant: - 1200 MT/Day
ii. Required Capacity of Processing Plant: 2000 MT/Day extendable to 3000 MT/Day
iii. Concession period is 15 years after COD and extendable to another 5years
iv. Mode of contract: PPP
v. Maximum Capital Grant: 17.46 Cr
vi. Approx capital Cost of Work: 50 Cr

B. Brief Scope of Work

The Brief Scope of Work for the Bidder is as set out below.

1. The contours of the Project include:
   a. Construction, Supply, Erection & Commissioning of 2000 MT Per Day capacity Municipal Solid Waste processing plant at existing defunct waste processing plant at Shivari on long term DBOT basis.
   b. Receive & Process of total MSW and Operation & Maintenance of 2000 MT Municipal Solid Waste Processing Plant as per MSWM Rules,
   c. Transport & Disposal of Residual Inert Materials in the engineered sanitary landfill as per MSWM Rules, 2016.
   d. Construction of Additional capacity of Leachate Treatment Plant and its operation & maintenance so that the effluent can meet the minimum standards of discharge limit set by CPCB.

Work shall be done essentially as per guidelines of MSWM Rules, 2016, Swachh

Bharat Mission-2, CPHEEO manual and guideline amended thereupon during concession period.

2. The scope of the Project includes the following:

2.1 **Project Financing & Investment:** All the capital expenditure upon Construction, Supply, Erection & Commissioning of 2000 MTPD Municipal Solid Waste Processing Plant shall be done by concessionaire except the cost of civil infrastructure which shall be paid by LMC on Actual basis.

LMC will provide only a capital grant as required to develop essential civil infrastructure for setting up the plant. Required Essential civil infrastructure shall be approved by committee of Lucknow Municipal Corporation. Agency will submit DPR based on PWD Specification & Schedule of Rate for approval. After due approval of DPR by competent authority of LMC, concessionaire will be allowed to start the construction work as per DPR.

- ✓ LMC will provide grant of 17.46 crores for capital expenditure and all other capital expenditure for project shall be borne by concessionaire.

Payment of civil work shall be done on the basis of running bill submitted by concessionaire and after verification by LMC.

3.1 **Preparation of Detailed Project Report:** A Project Information Memorandumis enclosed with the RFP document as Volume II and is **only being provided for the purpose of reference of the Bidders**. The Concessionaire shall within 1 month of the signing of Agreement provide with a Detailed Project Report to Authority ensuring compliance of the same with the proposed P&D Plan, and detailing out the design, drawings, specifications, and cost estimates of all the items. The Concessionaire shall have the liberty to suggest different equipment for processing & disposal of waste, provided however the DPR must adhere to the outcome as desired in MSW Rule 2016, Swachh Bharat Mission-2, CPHEEO manual and P&D Plan as detailed out in the Project Information Memorandum (Volume II).

3.2 **Approvals for the Project:**

a) Obtaining statutory clearances, if any, from MoEF /SEIAA as the case may be.

b) Water allocation, construction power for project and any other clearances, tie-up required for setting up waste processing cum disposal facility.

c) Renewal/ obtaining of all project- related clearances required for the project.

d) And all other clearances and permits as are required to be procured for the implementation of the Project in terms of the Concession Agreement

3.3 **Construction, Supply, erection & Commissioning of Processing Plant:** The Concessionaire shall be responsible for Construction, Supply, erection & Commissioning of 2000 MT Per Day Municipal Solid Waste Processing Plant as per SWM Rules, 2016, at defunct Processing Plant, Shivari, Lucknow (Lat. 26°47'51.32"N Long. 80°46'47.66"E), Lucknow Nagar Nigam in Uttar Pradesh, on a long-term Design, Build, Operate and Transfer (DBOT) basis within the stipulated time frame as mentioned under the draft Concession Agreement. The said site for the Construction, Supply, erection & Commissioning of the processing plant shall be handed over by the LNN to the Concessionaire on a license basis, in terms of the Concession Agreement, prior to



the Compliance Date.

3.4 Segregation and Processing of Waste:

a) Segregation of waste at the processing site.

b) Processing of the MSW using a suitable technology and management of the products and residual inert generated from processing.

i. Biodegradable waste shall be processed by any suitable technology compatible with existing infrastructure that maybe composting, vermin composting, anaerobic digestion, or any other appropriate biological processing for stabilization of waste. It shall be ensured that compost or any other end product shall comply with the standards specified in SWM Rules- 2016.

ii. Mixed waste containing recoverable resources shall follow the route of recycling

iii. After recovery of recyclable, the mixed dry waste shall be converted to Refused Derived Fuel.

iv. Post processing residual inert shall be dumped in SLF designated by LMC

c) The Bidder shall be responsible for supply, erection and commissioning of new waste processing facility at existing plant located at village Shivri. Processing Plant can be of any suitable technology (Including Dry Waste & Wet Waste Processing Unit) at Shivari Processing Plant Site. Plant shall comply minimum standards established in CPHEEO manual.

3.5 **Procurement of necessary Equipment / Machinery for Plant:** All procurement of equipment, vehicles and machinery for Establishment of Plant shall be done by the Concessionaire within the stipulated time period as provided by concessionaire and approved by LNN, and PMU. The Concessionaire shall also be responsible for Supply & installation of equipment and machineries and testing of the same.

3.6 **Operation & maintenance:** The Concessionaire shall ascertain that at all times during the Operation Period, the Project conforms to the operation & maintenance requirements set forth in Schedules 3 of Volume II of the RFP.

3.7 **Manpower:** The Concessionaire shall be responsible for deployment of all manpower for processing & disposal of Waste including the key personnel for the management and supervision of allProject-related activities. (This would include the designation of suitably qualified personnel for areas such as contract administration and supervision, construction management, safety, environmental management, plant and equipment maintenance, procurement, materials management, and quality control),

3.8 **Co-ordination with LNN:** The Concessionaire shall provide project related information at regular interval in the form and manner asprescribed by LNN. In case of any law & order problems, the Concessionaire shall inform promptly the LNN about the same and will act as per the direction of the LNN.

3.9 The Concessionaire shall be responsible for all other activities apart from activities as listed above towards successful implementation, operation, maintenance, and management of the project in line with Solid Waste Management Rules, 2016



(hereinafter referred as the "SWM Rules 2016"), SBM-2 guidelines or as revised from time to time and Good Industry Practices.

3.10 Smart Solid Waste Processing monitoring systems (INFORMATION & COMMUNICATION TECHNOLOGY (ICT): The Successful Bidder would be responsible for setting up a smart IOT based monitoring system to record data related to receipt of waste, Processing of waste, Sale and disposal of products and disposal of residual inert material. Entire campus of processing plant shall have sufficient number of CCTV camera connected to central command and control center.

3.11 The Successful Bidder would design, procure, finance, construct, operate and maintain the Project during the Concession Period on a Design-Build – Operate – Transfer (DBOT) Concession basis. The Project would be transferred back in good running condition to the ULBs at the end of the Concession Period.

3.12 The Successful bidder shall be provided Processing Fee as per manner prescribed in Article 8 of Volume III i.e., Concession Agreement. The Successful Bidder shall at its cost, expenses and risk make remaining required financing arrangements, in a timely manner as would be necessary to implement the Project, and to meet all of its obligations under the Concession Agreement.

3.13 The Successful Bidder shall adhere to the Construction Requirements and achieve Commercial Operations Date (COD) on or before the Scheduled Project Completion Date, as specified in the Concession Agreement.

3.14 The Successful Bidder may undertake Construction Works by itself or through a Concessionaire possessing requisite technical, financial and managerial expertise/capability; but in either case, the Successful Bidder shall remain solely responsible to meet the Construction Requirements, as specified in the Concession Agreement.

3.15 The Successful Bidder shall operate and maintain the Project in accordance with the O&M Requirements as set out in the Concession Agreement.

3.16 The Successful Bidder shall, at all times, ensure that all aspects of the Project and processes employed in the construction, operation and maintenance thereof shall conform with the laws pertaining to environment, health and safety aspects including rules such as SWM Rules, policies and guidelines related thereto.

3.17 The Successful Bidder shall maintain the landfill during the post closure period as per the specifications set out in the Concession Agreement and would be required to hand back the Project to the ULBs at the end of the Concession Period.

3.18 Procurement of machine, equipment and vehicle should be done on approval of LNN and PMU.

3 Solid Waste Management Scenario

3.1 Quantification of MSW in Lucknow

As information given by the Nagar Nigam, Lucknow City officials the quantity of waste generated is 1950.0 MT/day.

zones	wards	Population	HH	Commercial	Waste from HH	Waste from commercial & others	Sweeping and drain Silt	Green Waste	C&D	Total Generation (Except C & D Waste)
Zone 1	14	404888	76917	9103	153.80	68.30	22.20	4.40	33.30	248.70
Zone 2	12	384699	73082	3315	146.20	24.90	17.10	3.40	25.70	191.60
Zone 3	19	689059	130902	4500	261.80	33.80	29.60	5.90	44.30	331.10
Zone 4	8	357742	67961	6000	135.90	45.00	18.10	3.60	27.10	202.60
Zone 5	10	352196	66907	1976	133.80	14.80	14.90	3.00	22.30	166.50
Zone 6	22	811853	154229	3022	308.50	22.70	33.10	6.60	49.70	370.90
Zone 7	13	515869	98000	4030	196.00	30.20	22.60	4.50	33.90	253.30
Zone 8	12	497983	94603	2350	189.20	17.60	20.70	4.10	31.00	231.60
Total	**110**	**4014289**	**762601**	**34296**	**1525.2**	**257.3**	**178.3**	**35.5**	**267.3**	**1996.3**

3.2 Present Status of the Processing Site

Machines Deployed at Shivari are operational but need heavy repair/replacement. A huge amount of unprocessed MSW is dumped on windrow and area behind pre-processing shed. Un-processed Legacy waste is being cleared by LNN using Bio-remediation technique through a separate project.

leachate management and treatment system is inadequate and non-functional at present and successful bidder need to give due care in making Leachate collection & treatment system funtional.

Status of physical Infrastructure like shed, roads and drains are poor and need repair and maintenance. For more clarity, the current image of processing plant marked with key components is presented in Figure-1.

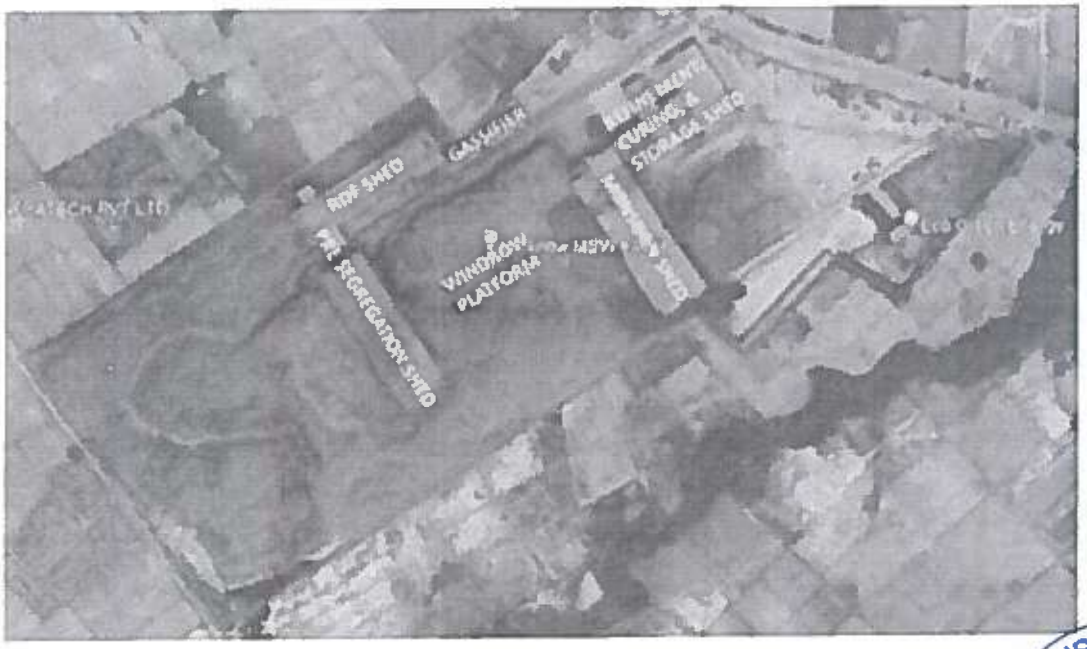


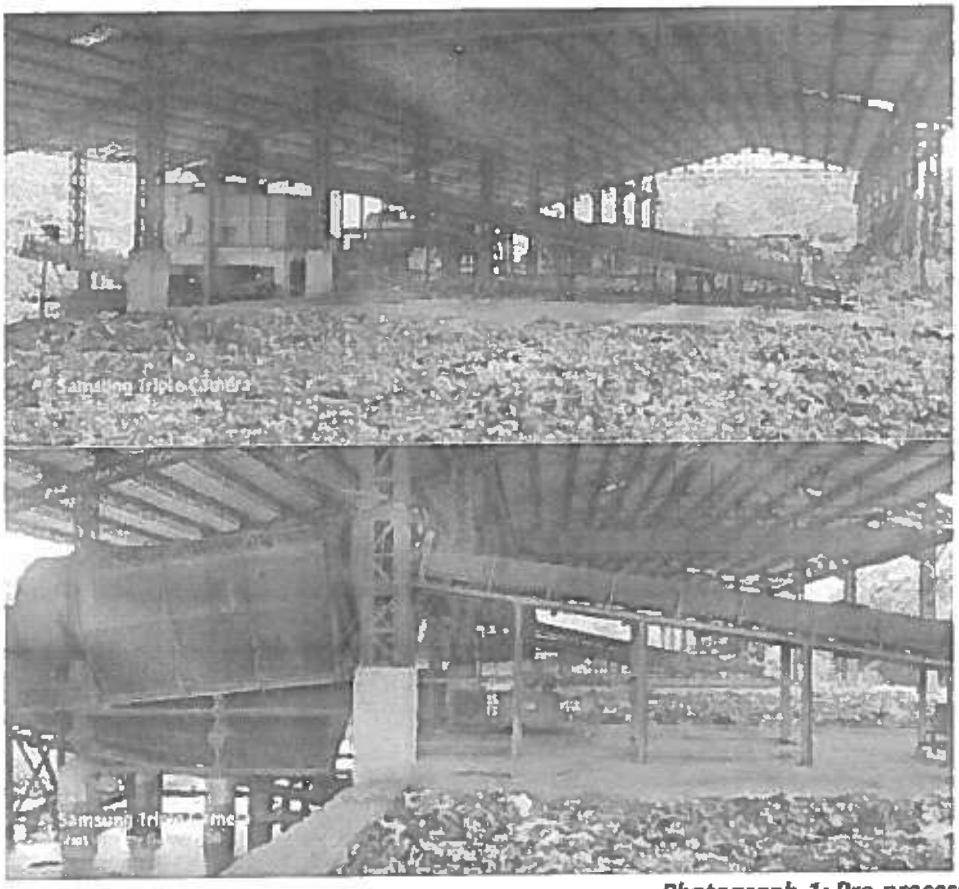
Figure-1: image of processing plant

LNN *PMU (SE) Lucknow *

Technical Aspect

a.1. Pre-processing section

Pre-processing section have Two Ballistic separators and Three Trommels of 150 mm hole size. The processing capacity of Each unit is 30 TPH with a combined capacity of 150 TPH.



Photograph-1: Pre-processing area

a.2. Windrow

Windrows are completely filled with garbage and garbage pile has reached up to 12 to 13 meters at some places. Leachate drains are found completely filled with garbage resulting in overflowing of leachate on roads and surrounding area.

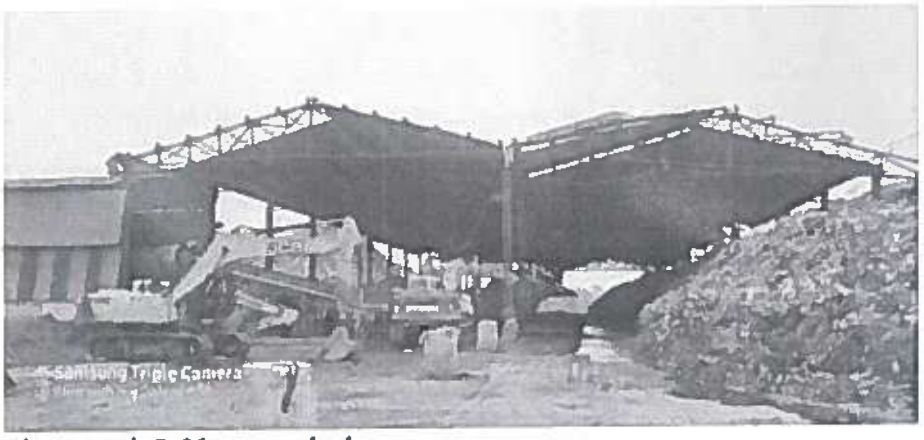
Legacy waste dumped on windrow area will be processed and removed by LNN in order to make space for fresh garbage



Photograph-2: Windrow area

a.3. Monsoon shed

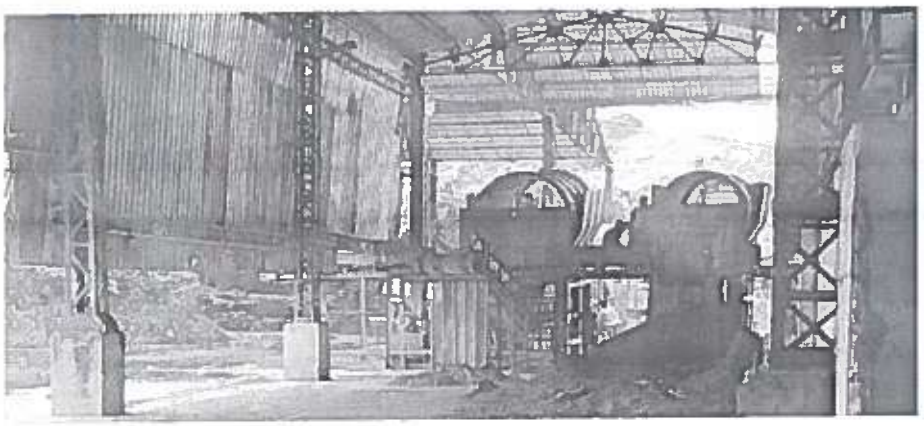
Monsoon shed need repair/replacement.



Photograph-3: Monsoon shed

a.4. Coarse segregation, Curing and Refinement section

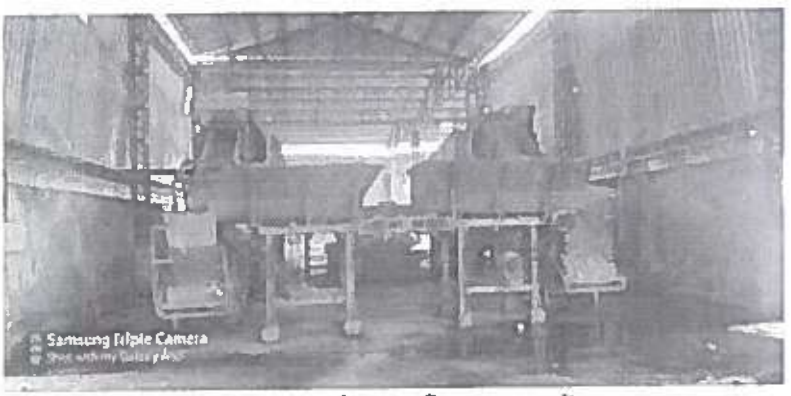
Coarse segregation unit have two trommel of 15 TPH capacity and seems inadequate to process biodegradable waste segregated at Pre-segregation and semi-digested at windows.



Photograph-4: Coarse Segregation unit

a.5. Fine refinement

Refinement unit have three trommel of 10 TPH capacity. Only one destoner is available to remove inert particle from refined compost resulting in poor quality of compost.



Photograph-5: Refinement unit

MWS*PMU Luck

a.6. RDF Section

Conveyor installed to convey +150 mm material to from Pre-segregation to RDF shed was found non-functional.

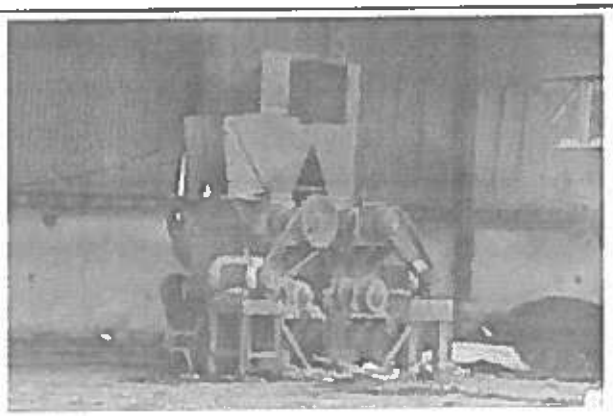
Only one shredder was found in entire RDF section and that is also non-functional.

No mechanism like air Density separators is available in plant to remove inert from semi-processed RDF.

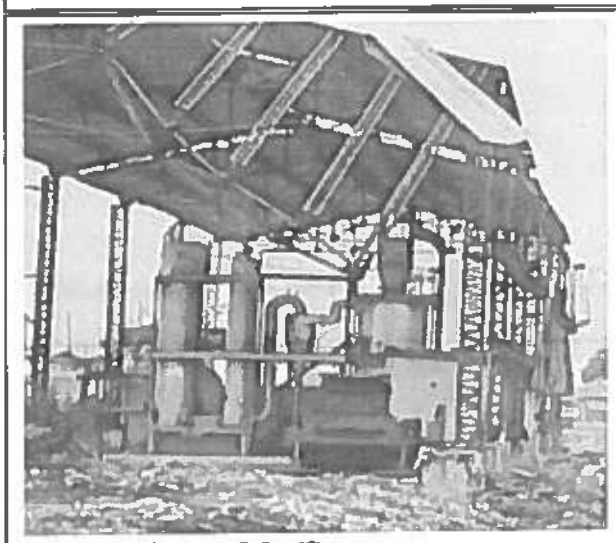
The necessity of secondary shredder to reduce the size of RDF within standard limit shall also be explored.

RDF Gasifier unit was also non-functional.

Overhauling/Replacement of existing equipment and addition of density-based separators is necessary to make RDF section functional.



Photograph-6: RDF shredder



Photograph-7: RDF Gasifier

3.3 Available Processing plant

Available capacity of Plant at Shivari

S. No	Unit Name	Quantity	Capacity TPH	Status
1	Pre segregation Unit			
1a	Ballistic Separator	2	35	Need Repair/Replacement
1b	Trommal	3	25	Need Repair/Replacement
2	Coarse Segregation			
	Trommal 20 mm	2	15	Need Repair/Replacement
3	Fine Refinement			
	Trommal 4 mm	1	15	Need Repair/Replacement
	Trommal 4 mm	2	10	Need Repair/Replacement
4	RDF Plant	Non-functional, non-rectifiable		

Conclusion

Major overhaling of plant machineries and infrastructure is needed to make existing plant fully functional. Additional units such as trommel and destoners are required in compost coarse segregation and refinement section to increase the processing capacity and improve the quality of compost.

RDF section must be designed and provided with density separators to improve the quality of RDF. Legacy waste dumped on windrow area shall be processed and removed in order to make space for fresh garbage.

Concessionaire shall prepare an operation plan/SOP and get it approved from authority and shall operate as per that only. Logbook with vital information like quantity of incoming waste, waste processed and waste sent to landfill shall be filled on daily basis.

Plan and Provisions shall be made for Occupational safety and health, including compliance with the OSH requirements pursuant to national laws and regulations.

Concessionaire shall prepare an environment monitoring plan and shall do quarterly monitoring of air, underground water.

4 Proposed Solid Waste Processing Facility (Indicative)

4.1 Introduction

The approach for processing and disposal of generated waste with different treatment facility is as shown below: -

Type of Waste	Wet Waste (MT/Day)	Dry Waste (MT/Day)	C&D Waste (MT/Day)	Horticulture (MT/Day)	Silt (MT/Day)	Total (MT/Day)
Generation	1098	685	267	35.5	178	2263.5

4.2 Proposed action Plan

LMC requires to set municipal solid waste processing plant located at village Shivari. Construction Installation & Commissioning Processing Plant (Including Processing of Dry Waste, Wet Waste, Operation of RDF Facility along with Sale of Recovered Materials from Waste) at Shivari Processing Plant Site is needed to comply.

Based on availability characterization of generated waste in Lucknow, the proposed Plan for the SWM Processing facility is as under:

1. MRF cum Pre-sorting section of 5X35 TPH (2 Shift)
2. An RDF Processing facility of 2X 25TPH (2 Shift)
3. A Wet Waste Processing Facility of 3X 25 TPH (2 Shift)

Concessionaire shall meet the minimum specification of machineries as mentioned in Clause 4.3. The Concessionaire shall have the liberty to suggest different equipment for processing & disposal of waste, provided however the DPR must adhere to the P&D Plan as detailed out machineries as

SWM PMU Lucknow

mentioned in Clause 4.3. The Concessionaire shall adopt measures on such odour control. The Entire Waste Processing plan shall have negative pressure (Suction). The shed shall be covered with cladding upto side wall. The shed shall have proper ventilation by installation of turbo vent except from compost shed.

4.3 Minimum Specification of Machineries

1.3 Minimum Technical Specification and Capacity of Machinery and Equipment for MRF cum Pre-segregation

1.3.1 Moving bed Conveyor with Hopper

The types of conveyors will be chain/belt type. The conveyor is horizontally placed. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF MOVING BED CONVEYOR WITH HOPPER

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Moving bed Conveyor with Hopper
2.	Profile	Horizontal
3.	Length of conveyor C/C	5 M
4.	Inclination	-
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.3.2 Feeding Conveyor

The types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

The location of idlers shall be carefully decided so as to limit sags and at feed and collection points so as to achieve minimum loss of power and easy flow of materials. A belt cleaning device is to be provided either by rubber scraper blades or taut wire.

The drive mechanism including the chain/belt drive/reduction gear box as the case may be will be located at a convenient place taking into account operational safety and maintenance.

The entire belt conveyor will be housed in sheet steel enclosure of minimum sheet thickness of 1mm. Necessary bracing's supports etc. made in structural steel angles, channels and R.S. Joists will be provided. Necessary windows with gaskets and locking arrangements will be provided.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Feeding Conveyor
2.	Profile	Horizontal - Inclined - Horizontal
3.	Length of conveyor C/C	9 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

MWS*PMU (RCUES) Lucknow

1.3.3 Magnetic Separator

Magnetic separation is the process of separating components of mixtures by using a magnet to attract ferrous materials. The process that is used for magnetic separation separates non-magnetic materials from those that are magnetic. This technique is useful for the select few minerals which are ferromagnetic (iron-, nickel-, and cobalt-containing minerals) and paramagnetic.

TECHNICAL SPECIFICATION OF MAGNETIC SEPARATOR

Sl. No.	Particulars	Specification/Remarks
1.	Name of Equipment	Magnetic Separator
2.	Type	Over Band Magnetic Separator
3.	Magnet Size	1500 x 1000x 300 mm
4.	Gauss	1500-1600 G
5.	Drive	1 HP Geared Motor
6.	Operating height	400 mm
7.	Min. Tramp iron to be lifted	M24 x 100mm
8.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.3.4 Rotary Trommel with 100mm sieve

A Trommel screen, also known as a rotary screen, is a mechanical screening machine used to separate materials, mainly in the mineral and solid-waste processing industries. It consists of a perforated cylindrical drum that is normally elevated at an angle at the feed end. Physical size separation is achieved as the feed material spirals down the rotating drum, where the undersized material smaller than the screen apertures passes through the screen, while the oversized material exits at the other end of the drum.

- ✓ The Trommel Screen shall be integrated in the municipal solid waste sorting line with a maximum carrying capacity of 5 tons per hour at maximum 19 rpm rotational speed.
- ✓ The Trommel Screen must be supplied by a handbook for its usage and maintenance, a workshop manual and parts catalogue.
- ✓ The Trommel Screen will be unused and un-refurbished the year model is 2022 or newer.
- ✓ It must be manufactured of Indian make and must be provided with a 1 year guarantee.
- ✓ The Trommel Screen shall consist of a drum with 100 mm openings throughout the cylindrical body of the Trommel.

TECHNICAL SPECIFICATION OF ROTARY TROMMEL

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of Equipment	Trommel Screen
2.	Size	Ø 2500 mm x 8000 mm
3.	Mounting	Inclined
4.	Inclination	7°
5.	Material to be handled	Dry Waste
6.	Screen opening	Ø 80 x 5 mm Thk. M.S Sheet conforming to IS 2062
7.	Guards & Chutes	16G,10G,14G M.S Sheet
8.	Bearing	Self-aligning ball bearings
9.	Drive	Duel
10.	Motor	Hydraulic. Radial piston type
11.	Coupling	Chain
12.	Speed	8-10 RPM
13.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

- ✓ **Frame** – The Mounting and support frame and maintenance platform shall be included with the Trommel Screen made of at least 3-4 mm thick steel plates and at least 10 mm thick steel I beams for columns, beams and bracing. The steel of the frame, walls, and platform shall be coated with anti-corrosive coating being sand blasted; a double coat primer should be applied. Then a final coat of the required colour then finished Epoxy coat is applied.

  Varnishing:

  ***Primer:** 2 component polyurethane primer*
  ***Layer thickness:** 40 µm dry layer thickness*
  ***Top coat:** 2 component polyurethane primer*
  ***Layer thickness:** 40 µm dry layer thickness*
  ***Total layer thickness:** min. 80 µm dry layer thickness*

- ✓ The screen drum will be powered by two (1 x 7.5 KW geared AC motors) electrically driven motors 50 HZ, 3 phase. The motor type and frequency converter will be very good quality with endurance guaranteed. The platform (1-meter-wide) shall provide access on both sides and both ends of the drum within the body of the machine to facilitate maintenance. The walls of the body shall contain 2 access doors for each side to facilitate the maintenance process.
- ✓ The screen drum shall be supported on minimum 4 Nos high-grade heavy duty supporting wheels (minimum diameter 250 mm & min thickness 150 mm).
- ✓ The bearings for all supporting wheels shall be maintenance-free and need no additional lubrication over the duration of their operational life. The Trommel screen shall be equipped with outlet hopper with very steep walls to direct the organic waste to the collection conveyor located underneath the machine.
- ✓ **Control Panel** – The Trommel Screen Unit shall be equipped with an electrical control panel to allow manual control and an emergency stop switch and can be operated in either **"Manual"** or **"Auto"** mode.
- ✓ Complete Electrical control system with controls PLC (durable)
- ✓ **Motor protection:** by a temperature control and over-current trip, IP 54 or equivalent.
- ✓ The necessary cables between the machine, the switch cabinet, and the MDB shall be included in the offer.
- ✓ **HOPPERS** – The feeding, collection and connection hoppers shall be designed with a solid frame construction of profile steel. The hoppers walls shall be made at least of 4 mm steel sheets and minimum 10 mm thickness of beams with necessary stiffeners.

1.3.5 Cross/Extension/Reversible Conveyor to carry <100 mm

The Cross/Extension/Reversible Conveyor will be used for carrying <100 mm size particles to further processing of waste. The conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Under
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.3.6 Feeding Conveyor to carry < 100mm to MSC 1

The Feeding Conveyor will be used for carrying <100 mm to Manual Sorting Conveyor – 1 further manual sorting of lager size of waste. The conveyors will be chain/belt type. The conveyor horizontally fitted. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR TO CARRY < 100MM TO MSC 1

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	11 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.

Sl. No.	Name of Equipment	Specification/Remarks
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
11.	***Conveyor Sprockets***	
12.	Teeth	Flame Hardened
13.	Pitch	76.2 mm pitch
14.	Material	C-45
15.	Bearings	Self-aligning ball bearings
16.	MOC of Drive/Driven shaft	EN8
	Side Wall	
17.	Length	On both sides at inclined portion
18.	Height	600 mm
19.	Thickness	3.15 mm MS confirming to IS 1079
20.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
21.	Take-up	Screw take – up
	Drive	
22.	Motor	Hydraulic. Radial piston type
23.	Gear box	Worm Reducer (Elecon/Shanti)
24.	Coupling	Chain Coupling
25.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.3.7 Feeding Conveyor to carry > 100mm to MSC 2

The Feeding Conveyor will be used for carrying > 100 mm to Manual Sorting Conveyor – 2 further manual sorting of lager size of waste. The conveyors will be chain/belt type. The conveyor horizontally fitted. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR TO CARRY > 100MM TO MSC 2

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	11 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
11.	***Conveyor Sprockets***	

Sl. No.	Name of Equipment	Specification/Remarks
12.	Teeth	Flame Hardened
13.	Pitch	76.2 mm pitch
14.	Material	C-45
15.	Bearings	Self-aligning ball bearings
16.	MOC of Drive/Driven shaft	EN8
	Side Wall	
17.	Length	On both sides at inclined portion
18.	Height	600 mm
19.	Thickness	3.15 mm MS confirming to IS 1079
20.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
21.	Take-up	Screw take – up
	Drive	
22.	Motor	Hydraulic. Radial piston type
23.	Gear box	Worm Reducer (Elecon/Shanti)
24.	Coupling	Chain Coupling
25.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.3.8 Manual Sorting Conveyor 1 & 2 for <100mm fraction >100mm fraction

Two number of manual sorting conveyors one for -80 mm fraction and one for + 80 mm fraction separated from Trommal will be provided for manual sorting of recyclables. Waste will be feed through a 1000 mm wide inclined belt conveyor of length approximately 8 meters. Manual sorting conveyor will be one-meter-wide and 20-meter-long to accommodate 16 numbers of waste pickers.

TECHNICAL SPECIFICATION OF MANUAL SORTING CONVEYOR 1 & 2 FOR <100MM FRACTION >100MM FRACTION

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Manual Sorting Conveyor
2.	Profile	Horizontal
3.	Length of conveyor C/C	20 M
4.	Inclination	NA
5.	Material to be handled	Dry Waste
6.	Belt specification	1000 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	C-45
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	

Sl. No.	Name of Equipment	Specification/Remarks
16.	Length	On both sides at inclined portion
17.	Height	300mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.3.9 Conveyor for Baling section

TECHNICAL SPECIFICATION OF CONVEYOR FOR BALING SECTION

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	11 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
11.	***Conveyor Sprockets***	
12.	Teeth	Flame Hardened
13.	Pitch	76.2 mm pitch
14.	Material	C-45
15.	Bearings	Self-aligning ball bearings
16.	MOC of Drive/Driven shaft	EN8
	Side Wall	
17.	Length	On both sides at inclined portion
18.	Height	600 mm
19.	Thickness	3.15 mm MS confirming to IS 1079
20.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
21.	Take-up	Screw take – up
	Drive	
22.	Motor	Hydraulic. Radial piston type
23.	Gear box	Worm Reducer (Elecon/Shanti)
24.	Coupling	Chain Coupling
25.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

NMS * PMU Lucknow

1.3.10 Baling Press

A Baling press is a dedicated waste management machine that compresses recyclable materials such as paper, cardboard, and plastic, into dense, manageable bundles (bales). Also called a baler or baling machine, a baling press is a large steel chamber with a pressing plate that runs up and down to press the material inside.

The press creates thick compressed bales which are then collected by waste collection companies who send them to recycling companies for resale and reuse.

A baling press is typically only used for recyclable materials: paper & cardboard, plastic, polystyrene, cans and drums, metal, and glass, though they can be used to press unorthodox material such as car bumpers or clothes.

TECHNICAL SPECIFICATION OF BAILING PRESS MACHINE

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Plastic Bailing Machine
2.	Capacity	15 Tonne
3.	Material	RDF/ Plastic
4.	Brick Size	425 x 425 x 425mm
5.	Bale Weight	35 – 38 Kg
6.	Production Capacity	4000 Kg / hr
7.	Bricks / hr	120 Bales / hr
8.	Compression ratio	3 : 1
9.	Supporting Structure & Hopper	MS as per IS 2062
10.	Motor for Hydraulic Power Pack	50 *HP, 1440 rpm, Foot cum Flange Mounting, 3PH, Continuous Rated, 415V AC +/- 10%, 50 HZ +/- 5%, S1 Duty Class F Insulation, Fan Cooled, IP 55 degree of protection*
11.	Hydraulic Cylinder Pipe	ST 52 Honed finish
12.	Piston Rod	EN 8 hard chrome plated & grounded
13.	Seal Kit	Polyurethene- Bushak shampon/Parker
14.	Pump	Dowty
15.	Direction Control Valve	Yuken
16.	Check Valve	Polyhydron
17.	Accessories	Demcon
18.	Controls	Electrical Panel

1.3.11 Electrical Control Panel

TECHNICAL SPECIFICATION OF ELECTRICAL CONTROL PANEL

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Electrical Control Panel
2.	Material of construction	1.6mm thick CRCA sheet
3.	Degree of protection	IP54 /IP65
4.	Earth bus	25 x 6 mm aluminium earth flat
5.	Gasket	Neoprene for dust and vermin proofing
6.	Canopy	Provided only for outdoor panels
7.	Power Indications	RYB indication lamps provided
8.	Isolation of panel	Provided with MCCB/SDF

Sl. No.	Name of Equipment	Specification/Remarks
9.	Operation modes	Local
10.	Status Indications	Provided with lamps for ON/OFF/TRIP
11.	Operating Push Buttons	Start/Stop PB's provided
12.	Mounting Arrangement	75mm base frame provided with holes
13.	Gland Plate	3mm thick GI gland plate provided
14.	Certifications	CPRI and IP54/IP65

1.4 Technical Specification of RDF Plant

1.4.1 Feeding Conveyor to Primary Shredder

The types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR TO PRIMARY SHREDDER

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Feeding Conveyor
2.	Profile	Horizontal - Inclined - Horizontal
3.	Length of conveyor C/C	9 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint



1.4.2 Primary Shredder

The shredder is required to reduce the volume of waste and to make uniform size for better degradation of substrate. The final size of substrate would be 25 - 30 mm. The capacity of shredder would be able to cater five hundred Kg of waste per hour which will be equipped with parallel shaft with minimum number of sixteen blades.

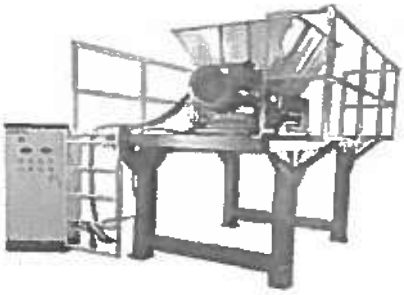




IMAGE REPRESENTING RDF

TECHNICAL SPECIFICATION OF PRIMARY SHREDDER

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Shredder
2.	Type	Shear
3.	Material to be handled	MSW Garbage inorganic portion
4.	Capacity	7.5 TPH
5.	Bulk Density	0.25 – 0.35 T/m3
6.	Material Input size	+200 mm
7.	Material Output size	-70 mm
8.	Material Characteristics	Abrasive, Corrosive
9.	Moisture	20-30%
10.	Material Temperature	Ambient
11.	Duty	Continues
12.	Feed from	Conveyor
13.	Discharge to	Conveyor
	Specification	
14.	Size of Rotor	Ø 600 x 1200 L
15.	Shell	MS as per IS 2062
16.	Movable Job Plate	MS and Hardox 400
17.	Cutting Tips	Alloy Steel
18.	Shaft	EN 19
19.	Mesh to filter the material	C 45
20.	Supporting Structure	MS as per IS 2062
21.	End Plates	MS as per IS 2062
22.	Bearings	Spherical Roller Bearings
23.	Bearing Housing	MS
24.	Drive	100 HP coupled with Belt drive to Gear Box Input Shaft
25.	Coupling	Gear Coupling for Rotor to Gear Box Output Shaft
26.	Electrical Panel	IP 54/IP65 Protected
	Hydraulics for pusher	
27.	Tank Capacity	150 Ltrs

Sl. No.	Name of Equipment	Specification/Remarks
28.	Electric Motor	35 HP
29.	Pumps	Dowty
30.	Pressure Relief Valve	Yuken
31.	Direction Control valve	Yuken
32.	Filter	Oil Filling Cap Felted with Filter (breather)
33.	Pressure gauge	Glyserine filled 0 to 200 Kg/Cm Sq
34.	Hydraulic Piping	Standard as per DIN 2391/C ST 35 NBK
35.	Hydraulic Fitting	Hylok (250 Bar)
36.	Hydraulic Cylinders	Ø80 x 440 Stroke (P.R. Ø 50mm)

1.4.3 Feeding Conveyor from MSC 1 to 10 mm Trommal

The types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR FROM MSC 1 TO 10 MM TROMMAL

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Feeding Conveyor
2.	Profile	Horizontal - Inclined - Horizontal
3.	Length of conveyor C/C	9 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling

Sl. No.	Particulars	Specification/Remarks
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.4.4 Feeding Conveyor from Primary Shredder to 10 mm Trommal

The types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR FROM PRIMARY SHREDDER TO 10 MM TROMMAL

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Feeding Conveyor
2.	Profile	Horizontal - Inclined - Horizontal
3.	Length of conveyor C/C	9 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.4.5 10 mm Trommal

A trommel is a screen that is curved into a cylinder. The machine spins the cylindrical screen in order to sort through the material as it is fed through. During this process, the wet material tumbles around. Air is added and the soil, mulch, or sand becomes lighter and drier.

TECHNICAL SPECIFICATION OF 10 MM TROMMAL

Sl. No.	Name of Equipment	Specification/Remarks

1.	Name of Equipment	Trommel Screen
2.	Size	Ø 1800 mm x 5000 mm
3.	Mounting	Inclined
4.	Inclination	7°
5.	Material to be handled	Dry Waste
6.	Screen opening	Ø 10 x 5 mm Thk. M.S Sheet conforming to IS 2062
7.	Guards & Chutes	16G,10G,14G M.S Sheet
8.	Bearing	Self-aligning ball bearings
9.	Drive	Duel
10.	Motor	Hydraulic. Radial piston type
11.	Coupling	Chain
12.	Speed	8-10 RPM
13.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.4.6 Cross/Extension/Reversible Conveyor to carry <10 mm

The Cross/Extension/Reversible Conveyor will be used for carrying <10 mm size particles to further disposal of waste as inerts. The conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF CROSS/EXTENSION/REVERSIBLE CONVEYOR

Sl. No.	Name of Equipment	Specification/Remarks
1	Name of the equipment	Conveyor – Under
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up

Sl. No.	Name of Equipment	Specification/Remarks
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.4.7 Feeding Conveyor to Air Density Separator (ADS)

The Feeding Conveyor will be used for carrying > 100 mm to Manual Sorting Conveyor – 2 further manual sorting of lager size of waste. The conveyors will be chain/belt type. The conveyor horizontally fitted. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR TO AIR DENSITY SEPARATOR (ADS)

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	11 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
11.	***Conveyor Sprockets***	
12.	Teeth	Flame Hardened
13.	Pitch	76.2 mm pitch
14.	Material	C-45
15.	Bearings	Self-aligning ball bearings
16.	MOC of Drive/Driven shaft	EN8
	Side Wall	
17.	Length	On both sides at inclined portion
18.	Height	600 mm
19.	Thickness	3.15 mm MS confirming to IS 1079
20.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
21.	Take-up	Screw take – up
	Drive	
22.	Motor	Hydraulic. Radial piston type
23.	Gear box	Worm Reducer (Elecon/Shanti)
24.	Coupling	Chain Coupling
25.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.4.8 Air Density Separator (ADS) with proper chutes to avoid spillage

Air density separation/ wind shifting /wind sifting is a method of separating waste based on the density of material using the principles of controlled air. The input material is separated into two fractions varying from light to heavy.

TECHNICAL SPECIFICATION OF AIR DENSITY SEPARATOR (ADS)

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Air Density Separator
2.	Capacity (input)	5 MT/Hour
3.	Capacity (output)	8MT/Hour
4.	Input material density	400 – 600 Kg/m^3
5.	Combustible fraction	Below 300 kg/m^3.
	Air Lock Details	
6.	Inlet airlock motor drive	5 Hp/1500 rpm
7.	Outlet airlock motor drive	3 Hp/1500 rpm
8.	Gear ratio	50:1
9.	Drive mechanism	Chain Sprocket
10.	Support structure	Civil foundation on base plate
11.	Material construction	MS
12.	Static Load	2.5 Tons
13.	Dynamic Load	5 Tons
	Dimensions	
14.	Length	1800 Mm
15.	Width	1500 Mm
16.	Height	6000 Mm
	Inlet Airlock	
17.	Diameter	1000 Mm
18.	Length	1200 Mm
19.	Gear Box	U 700
	Outlet Airlock	
20.	Diameter	600 Mm
21.	Length	500 Mm
22.	Gear Box	U 287
	Cyclone	
23.	Length/Diameter	3500 mm/1400 mm
24.	Inlet duct	300 mm
25.	Outlet duct	350 mm
26.	Height	6100 mm

1.4.9 Inert Discharge conveyor

The Inert discharge conveyor from cyclone and ADS will convey dust inerts which will be disposed to Sanitary landfill. These types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled.

TECHNICAL SPECIFICATION OF INERT DISCHARGE CONVEYOR

Sl. No.	Name of Equipment	Specification/Remarks
1	Name of the equipment	Conveyor – Under
2.	Profile	Horizontal – Inclined

SWM PMU (Lucknow)

Sl. No.	Name of Equipment	Specification/Remarks
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.4.10 Feeding Conveyor to Secondary Shredder

The types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION FEEDING CONVEYOR TO SECONDARY SHREDDER

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Feeding Conveyor
2.	Profile	Horizontal - Inclined - Horizontal
3.	Length of conveyor C/C	9 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor

Sl. No.	Particulars	Specification/Remarks
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.4.11 Secondary Shredder

The shredder is required to reduce the volume of waste and to make uniform size for better degradation of substrate. The final size of substrate would be 25 - 30 mm. The capacity of shredder would be able to cater five hundred Kg of waste per hour which will be equipped with parallel shaft with minimum number of sixteen blades.

TECHNICAL SPECIFICATION OF SECONDARY SHREDDER

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Shredder
2.	Type	Shear
3.	Material to be handled	MSW Garbage inorganic portion
4.	Capacity	7.5 TPH
5.	Bulk Density	0.25 – 0.35 T/m3
6.	Material Input size	+200 mm
7.	Material Output size	-70 mm
8.	Material Characteristics	Abrasive, Corrosive
9.	Moisture	20-30%
10.	Material Temperature	Ambient
11.	Duty	Continues
12.	Feed from	Conveyor
13.	Discharge to	Conveyor
	Specification	
14.	Size of Rotor	Ø 600 x 1200 L
15.	Shell	MS as per IS 2062
16.	Movable Job Plate	MS and Hardox 400
17.	Cutting Tips	Alloy Steel

NWS * PMU Lucknow

Sl. No.	Name of Equipment	Specification/Remarks
18.	Shaft	EN 19
19.	Mesh to filter the material	C 45
20.	Supporting Structure	MS as per IS 2062
21.	End Plates	MS as per IS 2062
22.	Bearings	Spherical Roller Bearings
23.	Bearing Housing	MS
24.	Drive	100 HP coupled with Belt drive to Gear Box Input Shaft
25.	Coupling	Gear Coupling for Rotor to Gear Box Output Shaft
26.	Electrical Panel	IP 54/IP65 Protected
	Hydraulics for pusher	
27.	Tank Capacity	150 Ltrs
28.	Electric Motor	35 HP
29.	Pumps	Dowty
30.	Pressure Relief Valve	Yuken
31.	Direction Control valve	Yuken
32.	Filter	Oil Filling Cap Felted with Filter (breather)
33.	Pressure gauge	Glyserine filled 0 to 200 Kg/Cm Sq
34.	Hydraulic Piping	Standard as per DIN 2391/C ST 35 NBK
35.	Hydraulic Fitting	Hylok (250 Bar)
36.	Hydraulic Cylinders	Ø80 x 440 Stroke (P.R. Ø 50mm)

1.4.12 Control Panel Board

TECHNICAL SPECIFICATION OF CONTROL PANEL BOARD

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Electrical Control Panel
2.	Material of construction	1.6mm thick CRCA sheet
3.	Degree of protection	IP54 /IP65
4.	Earth bus	25 x 6 mm aluminium earth flat
5.	Gasket	Neoprene for dust and vermin proofing
6.	Canopy	Provided only for outdoor panels
7.	Power Indications	RYB indication lamps provided
8.	Isolation of panel	Provided with MCCB/SDF
9.	Operation modes	Local
10.	Status Indications	Provided with lamps for ON/OFF/TRIP
11.	Operating Push Buttons	Start/Stop PB's provided
12.	Mounting Arrangement	75mm base frame provided with holes
13.	Gland Plate	3mm thick GI gland plate provided
14.	Certifications	CPRI and IP54/IP65

1.5 Technical Specification of Compost Plant (Preparatory Section)

1.5.1 Feeding Conveyor

The types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF FEEDING CONVEYOR

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Feeding Conveyor
2.	Profile	Horizontal - Inclined - Horizontal
3.	Length of conveyor C/C	9 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24- Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.5.2 Trommel 35 mm Screen

A Trommel screen, also known as a rotary screen, is a mechanical screening machine used to separate materials, mainly in the mineral and solid-waste processing industries. It consists of a perforated cylindrical drum that is normally elevated at an angle at the feed end. Physical size separation is achieved as the feed material spirals down the rotating drum, where the undersized material smaller than the screen apertures passes through the screen, while the oversized material exits at the other end of the drum.

- ✓ The Trommel Screen shall be integrated in the municipal solid waste sorting line with a maximum carrying capacity of 20 tons per hour at maximum 19 rpm rotational speed.

NNS & PMU Lucknow

- ✓ The Trommel Screen must be supplied by a handbook for its usage and maintenance, a workshop manual and parts catalogue.
- ✓ The Trommel Screen will be unused and un-refurbished the year model is 2022 or newer.
- ✓ It must be manufactured of Indian make and must be provided with a 1 year guarantee.
- ✓ The Trommel Screen shall consist of a drum with 35mm openings throughout the cylindrical body of the Trommel.

TECHNICAL SPECIFICATION OF TROMMEL 35 MM SCREEN

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of Equipment	Trommel Screen
2.	Size	Ø 2000 mm x 8000 mm
3.	Mounting	Inclined
4.	Inclination	7°
5.	Material to be handled	Dry Waste
6.	Screen opening	Ø 80 x 5 mm Thk. M.S Sheet conforming to IS 2062
7.	Guards & Chutes	16G,10G,14G M.S Sheet
8.	Bearing	Self-aligning ball bearings
9.	Drive	Duel
10.	Motor	Hydraulic. Radial piston type
11.	Coupling	Chain
12.	Speed	8-10 RPM
13.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

- ✓ Frame – The Mounting and support frame and maintenance platform shall be included with the Trommel Screen made of at least 3-4 mm thick steel plates and at least 10 mm thick steel I beams for columns, beams and bracing. The steel of the frame, walls, and platform shall be coated with anti-corrosive coating being sand blasted; a double coat primer should be applied. Then a final coat of the required colour then finished Epoxy coat is applied.

Varnishing:

Primer: *2 component polyurethane primer*
Layer thickness: *40 µm dry layer thickness*
Top coat: *2 component polyurethane primer*
Layer thickness: *40 µm dry layer thickness*
Total layer thickness: *min. 80 µm dry layer thickness*

- ✓ The screen drum will be powered by two (1 x 7.5 KW geared AC motors) electrically driven motors 50 HZ, 3 phase. The motor type and frequency converter will be very good quality with endurance guaranteed. The platform (1-meter-wide) shall provide access on both sides and both ends of the drum within the body of the machine to facilitate maintenance. The walls of the body shall contain 2 access doors for each side to facilitate the maintenance process.
- ✓ The screen drum shall be supported on minimum 4 Nos high-grade heavy duty supporting wheels (minimum diameter 250 mm & min thickness 150 mm).
- ✓ The bearings for all supporting wheels shall be maintenance-free and need no additional lubrication over the duration of their operational life. The Trommel screen shall be equipped with outlet hopper with very steep walls to direct the organic waste to the collection conveyor located underneath the machine.

- ✓ **Control Panel** – The Trommel Screen Unit shall be equipped with an electrical control panel to allow manual control and an emergency stop switch and can be operated in either **"Manual"** or **"Auto"** mode.
- ✓ Complete Electrical control system with controls PLC (durable)
- ✓ **Motor protection:** by a temperature control and over-current trip, IP 54 or equivalent.
- ✓ The necessary cables between the machine, the switch cabinet, and the MDB shall be included in the offer.
- ✓ **HOPPERS** – The feeding, collection and connection hoppers shall be designed with a solid frame construction of profile steel. The hoppers walls shall be made at least of 4 mm steel sheets and minimum 10 mm thickness of beams with necessary stiffeners.

1.5.3 Reject Conveyor >35 mm

The Reject Conveyor will be used for carrying >35 mm size particles to further processing of waste. The conveyors will be chain/belt type. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF REJECT CONVEYOR >35 MM

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type

Sl. No.	Name of Equipment	Specification/Remarks
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.5.4 Process Conveyor < 35mm

The Process Conveyor will be used for carrying <35 mm size particles to further processing of waste. The conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF PROCESS CONVEYOR < 35MM

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Under
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24- Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint



1.5.5 Trommel 16 mm

A 16mm Trommel screen, is a mechanical screening machine used to separate materials, mainly in the mineral and solid-waste processing industries. It consists of a perforated cylindrical drum that is normally elevated at an angle at the feed end. Physical size separation is achieved as the feed material spirals down the rotating drum, where the undersized material smaller than the screen apertures passes through the screen, while the oversized material exits at the other end of the drum.

- ✓ The Trommel Screen shall be integrated in the municipal solid waste sorting line with a maximum carrying capacity of 20 tons per hour at maximum 19 rpm rotational speed.
- ✓ The Trommel Screen must be supplied by a handbook for its usage and maintenance, a workshop manual and parts catalogue.
- ✓ The Trommel Screen will be unused and un-refurbished the year model is 2022 or newer.
- ✓ It must be manufactured of Indian make and must be provided with a 1 year guarantee.
- ✓ The Trommel Screen shall consist of a drum with 35mm openings throughout the cylindrical body of the Trommel.

TECHNICAL SPECIFICATION OF TROMMEL 16 MM

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of Equipment	Trommel Screen
2.	Size	Ø 2000 mm x 8000 mm
3.	Mounting	Inclined
4.	Inclination	7°
5.	Material to be handled	Dry Waste
6.	Screen opening	Ø 80 x 5 mm Thk. M.S Sheet conforming to IS 2062
7.	Guards & Chutes	16G,10G,14G M.S Sheet
8.	Bearing	Self-aligning ball bearings
9.	Drive	Duel
10.	Motor	Hydraulic. Radial piston type
11.	Coupling	Chain
12.	Speed	8-10 RPM
13.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

- ✓ **Frame** – The Mounting and support frame and maintenance platform shall be included with the Trommel Screen made of at least 3-4 mm thick steel plates and at least 10 mm thick steel I beams for columns, beams and bracing. The steel of the frame, walls, and platform shall be coated with anti-corrosive coating being sand blasted; a double coat primer should be applied. Then a final coat of the required colour then finished Epoxy coat is applied.

Varnishing:

Primer: *2 component polyurethane primer*
Layer thickness: *40 µm dry layer thickness*
Top coat: *2 component polyurethane primer*
Layer thickness: *40 µm dry layer thickness*
Total layer thickness: *min. 80 µm dry layer thickness*

- ✓ The screen drum will be powered by two (1 x 7.5 KW geared AC motors) electrically driven motors 50 HZ, 3 phase. The motor type and frequency converter will be very good quality with endurance guaranteed. The platform (1-meter-wide) shall provide access on both sides and

both ends of the drum within the body of the machine to facilitate maintenance. The walls of the body shall contain 2 access doors for each side to facilitate the maintenance process.

- ✓ The screen drum shall be supported on minimum 4 Nos high-grade heavy duty supporting wheels (minimum diameter 250 mm & min thickness 150 mm).
- ✓ The bearings for all supporting wheels shall be maintenance-free and need no additional lubrication over the duration of their operational life. The Trommel screen shall be equipped with outlet hopper with very steep walls to direct the organic waste to the collection conveyor located underneath the machine.
- ✓ **Control Panel –** The Trommel Screen Unit shall be equipped with an electrical control panel to allow manual control and an emergency stop switch and can be operated in either **"Manual"** or **"Auto"** mode.
- ✓ Complete Electrical control system with controls PLC (durable)
- ✓ **Motor protection:** by a temperature control and over-current trip, IP 54 or equivalent.
- ✓ The necessary cables between the machine, the switch cabinet, and the MDB shall be included in the offer.

1.5.6 Reject Conveyor >16 mm mass

The reject conveyor from Trommel will convey Recyclable to RDF processing unit which will be further treated as RDF. These types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled.

TECHNICAL SPECIFICATION OF REJECT CONVEYOR >16 MM MASS

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079



Sl. No.	Name of Equipment	Specification/Remarks
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.5.7 Process Conveyor to carry < 16mm

The Process Conveyor will be used for carrying <35 mm size particles to further processing of waste. The conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

TECHNICAL SPECIFICATION OF PROCESS CONVEYOR < 35MM

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Under
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type



Sl. No.	Name of Equipment	Specification/Remarks
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.5.8 Multi-port Distributor Conveyor

Multi – port Distributor conveyor distributes the processed compost to further processing. The conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled.

TECHNICAL SPECIFICATION OF PROCESS CONVEYOR < 35MM

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Under
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	7 M
4.	Inclination	30°
5.	Material to be handled	Dry Waste
6.	Belt specification	1200 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

1.5.9 Control Panel Board

TECHNICAL SPECIFICATION OF CONTROL PANEL BOARD

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Electrical Control Panel
2.	Material of construction	1.6mm thick CRCA sheet
3.	Degree of protection	IP54 /IP65
4.	Earth bus	25 x 6 mm aluminium earth flat
5.	Gasket	Neoprene for dust and vermin proofing
6.	Canopy	Provided only for outdoor panels
7.	Power Indications	RYB indication lamps provided
8.	Isolation of panel	Provided with MCCB/SDF
9.	Operation modes	Local
10.	Status Indications	Provided with lamps for ON/OFF/TRIP
11.	Operating Push Buttons	Start/Stop PB's provided
12.	Mounting Arrangement	75mm base frame provided with holes
13.	Gland Plate	3mm thick GI gland plate provided
14.	Certifications	CPRI and IP54/IP65



LUCKNOW MUNICIPAL CORPORATION, LUCKNOW

Tender Notice No.: D/299/MC/EE/23 2353 Dated: 18/07/23

NOTICE INVITING TENDERS

Online bids are invited from bidders for **Selection of Bidder for the treatment of Legacy Waste through Bio-remediation, Resource Recovery and Scientific Rejects Disposal at Shivari Lucknow, Uttar Pradesh** and will be received online on the website https://etender.up.nic.in as per time schedule (key dates) in the notice published on the above website

Sl. No.	Name of Work	Tender Fee Rs.	Earnest Money Rs.	Time Period
1.	**"Request for Proposal for Selection of Bidder for the treatment of Legacy Waste through Bio-remediation, Resource Recovery and Scientific Rejects Disposal at Shivari Lucknow (UP)"**	**Rs. 25,000/- (Rupees Twenty-Five Thousand Only)**	**Rs 1,96,80,000 /- (Rupees One Crore Ninety-Six Lacs Eighty Thousand Only)**	**9 Months (275 Days)**

Manual for paying processing Fee & EMD Payment Online

- Bidder needs to go to https://indiscollect.indusind.com/pay/index.php
- Fill the details in the form and select the payment type Tender Fee/EMD/Security Deposit with other details.
- Post validating, Bidder needs to click on "proceed" Button.
- Bidder will get the option to pay through Credit Card/Debit Card/Net Banking & NEFT/RTGS Challan Mode.
- For NEFT/RTGS Challan mode – after generating the challan, bidder needs to initiate NEFT/RTGS through their bank as per the beneficiary details provided in the challan.
- Bidder can check the status of the payment.

Event of Calendar:

Sl. No.	Events	Date & Time
1.	Online Tender purchase start date	21/07/2023 by 5:00PM
2.	Online Tender purchase end date	17/08/2023 by 5:00PM
3.	Online Bid Submission End date	17/08/2023 by 5:00PM
4.	Hard copy of technical submission end date	18/08/2023 by 5:00PM
5.	Technical Proposal open Date	19/08/2023 by 11:00AM
6.	Pre-bid meeting	31/07/2023 by 1:0PM at Lal bagh office

Note: The bidders shall have to submit their bids online and upload the relevant documents from as per key schedule (key dates).

1. The bidders intending to participate in this tender are required to get enrolled/ registered on the e- procurement web site https://etender.up.nic.in. Enrolment /registration on the above portal is mandatory.
2. Tender documents can be purchased only online from https://etender.up.nic.in by making online payment as specified above as per key dates. The Bidders shall have to submit their Bids online and upload the relevant documents from as per time schedule (key Dates).
3. Conditional tender will not be accepted and liable to be rejected. LMC reserves the right to accept or reject any or all tender without assigning any reasons thereof.
4. Since the online bidders are required to sign their bids online using Digital Certificates. Contractors are advised to obtain the same at the earliest.

Sd/-

Municipal Commissioner,

Lucknow Municipal Corporation

LUCKNOW NAGAR NIGAM

Selection of Bidder for the treatment of Legacy Waste through Bio-remediation, Resource Recovery and Scientific Rejects Disposal at Shivari Lucknow (UP)

Volume-1

NIT No: D/299/MC/EE/23 **Date:** 18/07/23

Issued By: -
Municipal Commissioner,
Lucknow Nagar Nigam, Lucknow
Triloknath Road, Lalbagh,
Lucknow, Uttar Pradesh – 226001

ई ई
पर्यावरण अभियन्ता
नगर निगम, लखनऊ

PMU (RCUES) ★ MNNL, Lucknow

Table of Contents

Sl.No.	Section	Description	Pages	
			From	To
1	Section-I	Tender Notice	4	4
2		Important Dates	4	4
3	Section-2	Brief Particulars of Work	5	7
4		Scope of Work	8	19
5		Instruction to Bidders	20	24
6		Eligibility Criteria	25	35
7		Evaluation and Qualification Procedure	36	37
8		Preparation & Submission of e-Bids	38	42
9	Section-3	Criteria for Evaluation Annexure-I	43	43
10		General Information, Form-I	45	45
11		Declaration Form for Earnest Money, I-A	46	46
12		Affidavit for Bid Validity I-B	47	47
15		Financial Information, Form-II (A&B)	48	49
16		Detail of similar type of work, Form-III	50	50
17		Information regarding bid capacity- Form-IV	51	51
18		Personnel Capabilities Form-V	52	52
19		Format for performance report. Form-VI (A&B)	53	53
20		Proposed Technology/Methodology in Form- VI (C)	56	56
21		Detailed Bar chart with micro planning in Form- VI (D) for execution of work	57	57
22		Equipment Capabilities, Form-VII	58	58
23		Litigation History, Form-VIII	59	59
24		Letter Comprising Bid, Form-IX	60	63
25		Format of Power of Attorney	64	65

Sl.No.	Section	Description	Pages	
			From	To
26	Section-4, Pt-I	General Conditions of Contract		
27		Contract Data		
28		Appendix to General Conditions of Contract		
29	Pt-II	Special Conditions of Contract		
30	Section-5	Specifications		
31	Section-6	Schedule - A to F		
32		Schedule-G		
33		Schedule-H		
34	Section-7	Letter of Acceptance.		
35		Issue of Notice to Proceed with Work.		
36		Standard Form of Agreement.		
37		Sample Format for Willingness Certificate of specialized agency.		
38		Model Format for Performance Bank Guarantee		
39		Model Format for BG against Mobilisation Advance		

2357

Section -1

LUCKNOW MUNICIPAL CORPORATION, LUCKNOW

Tender Notice No.: ..... **Dated: .....**

NOTICE INVITING TENDERS

Online bids are invited from bidders for Selection of Bidder for the treatment of Legacy Waste through Bio-remediation, Resource Recovery and Scientific Rejects Disposal at Shivari Lucknow, Uttar Pradesh and will be received online on the website https://etender.up.nic.in as per time schedule (key dates) in the notice published on the above website

Sl. No.	Name of Work	Tender Fee Rs.	Earnest Money Rs.	Time Period
1.	"Request for Proposal for Selection of Bidder for the treatment of Legacy Waste through Bio-remediation, Resource Recovery and Scientific Rejects Disposal at Shivari Lucknow (UP)"	Rs. 25,000/- (Rupees Twenty-Five Thousand Only)	Rs 1,96,80,000 /- (Rupees One Crore Ninety-Six Lacs Eighty Thousand Only)	9 Months (275 Days)

Manual for paying processing Fee & EMD Payment Online

- Bidder needs to go to https://induscollect.indusind.com/pay/index.php
- Fill the details in the form and select the payment type Tender Fee/EMD/Security Deposit with other details.
- Post validating, Bidder needs to click on "proceed" Button.
- Bidder will get the option to pay through Credit Card/Debit Card/Net Banking & NEFT/RTGS Challan Mode.
- For NEFT/RTGS Challan mode – after generating the challan, bidder needs to initiate NEFT/RTGS through their bank as per the beneficiary details provided in the challan.
- Bidder can check the status of the payment.

Event of Calendar:

Sl. No.	Events	Date & Time
1.	Online Tender purchase start date	21/07/2023 by 5:00PM
2.	Online Tender purchase end date	17/08/2023 by 5:00PM
3.	Online Bid Submission End date	17/08/2023 by 5:00PM
4.	Hard copy of technical submission end date	18/08/2023 by 5:00PM
5.	Technical Proposal open Date	19/08/2023 by 11:00AM
6	Pre bid meeting	31/07/2023 at Lal bagh Lucknow

Note: The bidders shall have to submit their bids online and upload the relevant documents from as per key schedule (key dates).

1. The bidders intending to participate in this tender are required to get enrolled/ registered on the e-procurement web site https://etender.up.nic.in Enrolment /registration on the above portal is mandatory.
2. Tender documents can be purchased only online from https://etender.up.nic.in by making online payment as specified above as per key dates. The Bidders shall have to submit their Bids online and upload the relevant documents from as per time schedule (key Dates).
3. Conditional tender will not be accepted and liable to be rejected. LMC reserves the right to accept or reject any or all tender without assigning any reasons thereof.
4. Since the online bidders are required to sign their bids online using Digital Certificates. Contractors are advised to obtain the same at the earliest.

Sd/-
Municipal Commissioner,
Lucknow Municipal Corporation

SECTION-2
CHAPTER-1

BRIEF PARTICULARS OF WORK AND SCOPE OF WORK

1.1 Introduction

The composition of mixed waste dumped at old sites is more or less similar across the State. Bio-remediating the dump site is important to reclaim the space and also to save on GHG emissions. It is probably the quickest and the most frugal way possible to solve problem of legacy of waste accumulated at dumpsites.

Bioremediation is a simple mechanical-biological treatment which aerobically composts organic fraction of mixed waste and offers a low-cost solution to reduce the climate impact of landfill sites – the highest GHG generator in the waste sector. It requires aeration of mixed waste in old dumps by formation of windrows and spraying microbial culture that rapidly degrades organic matter aerobically, thus ceasing the production of methane and leachate to nearly zero. For proper aeration, the windrows are mechanically turned weekly multiple times, which ensures faster degeneration. It has been demonstrated to reduce the volume of waste by up to 40 per cent, after 4 turnings. The potential of methane gas generation is theoretically brought down by 90 per cent, compared to merely dumping an equivalent quantity of waste unprocessed (Bogner et al, 2007). Mechanical-biological methods could also be used in combination in upgrading landfill sites (ISWA 2009).

After bioremediation, the stabilised waste can be screened for recovery of organic manure, recyclables (polymers, metals, etc.) and high-calorie materials (textiles, timber, coir, etc.). The remaining non-compostable, non-recyclable and low-calorie materials (mostly inert) can be used as fillers material. The screened material of high-calorific value can be processed into refuse derived fuel (RDF) for incineration with energy recovery or co- combustion in high temperature industrial furnaces like cement kilns, boilers, etc.

Landfill sites currently may be the largest GHG emitter in the waste sector but reducing their emissions and subsequent climate impact is relatively easy to achieve. Bioremediation is an excellent interim solution to quickly save on emissions from such sites,

As regards the large accumulated mixed waste at landfill sites which are used as dumpsites, bioremediation provides a low-cost and expedient solution to the problem of the large accumulated mixed waste at landfill sites. Bio-remediation further makes it possible to extract resources from the stabilised waste and reuse the same productively, while at the same time releasing space for other uses at the landfill sites. It works both towards financial and environmental sustainability.

1.2 Objective

a) The overall objective of this project is Treatment of Legacy Waste dumped at Shivari through Bio-Remediation, Resource Recovery and Scientific Rejects Disposal, RDF as per norms/specifications mentioned in CPCB Guidelines, Solid Waste Management Manual 2016. The sub objectives are as follows:

   a) To comply with Solid Waste Management Rules, 2016 and applicable laws, rules, guidelines in India and best Engineering practices.

PMU (RCUES) * Mohanlalganj * SMW, Lucknow

अधिशासी अभियन्ता
नगर निगम, लखनऊ

b) To improve the existing standards of public health and environmental quality through bioremediation of existing legacy waste including selling of recyclables.
c) Promote and protect the quality and sustainability of overall urban environment in the service area.

1.3 Project Background

The Swachh Bharat Mission (SBM) originates from the vision of the Government articulated in the address of The President of India in his address to the Joint Session of Parliament on 9th June 2014. 'We must not tolerate the indignity of homes without toilets and public spaces littered with garbage'. For ensuring hygiene, waste management and sanitation across the nation, a "Swachh Bharat Mission" was launched. This proposed project aims at reclamation of land from the existing dumpsite at Shivari in Lucknow through the process of Bio-remediation.

Nagar Nigam Lucknow Intends to select interested parties through a competitive bidding process, issues this Bid Document for the selected city to all the interested parties (Bidders). Bidders are required to submit per MT processing and disposal cost as per provisions of this Bid document (Proposals).

1.3.1 The Employer will select the Bidder meeting basic eligibility criteria as mentioned in document and in accordance with the method of selection specified in the bid document.

1.3.2 Detailed scope of the assignment/ job has been described in the document.

1.3.3 The date, time and address for submission of the proposals have been given.

1.3.4 Bidder 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, the Bidder may undertake physical survey of the ULB's.

1.3.5 The Employer will provide at no cost to the Bidder the inputs and facilities specified in the document, assist the Bidder in obtaining licenses and permits needed to carry out the Assignment/ job, and make available relevant project data and reports.

1.3.6 Bidder shall bear all costs associated with the preparation and submission of their proposals. 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 Bidder.

It is hereby clarified that the bidders are required to assess their own project cost. Nagar Nigam Lucknow and / or its officials shall not be responsible to any bidder for any loss on this account.

PMU (RCUFE) * Mission * SMW, Lucknow

पर्यावरण अभियन्ता
नगर निगम, लखनऊ

Current Scenario at Shivari, Dumpsite Lucknow (UP)

Sl. No.	Description	Details
1.	Dumpsite Site Location	Shivari, Lucknow (UP)
2	Dumpsite Site Location Coordinates	Latitude-26.796610 Longitude-80.780003
3.	Approximate Total Legacy Waste at Site (Legacy Waste) to be processed for	1849902.00 MT
4.	Total Area of the Site	38.25 Acre

PMU (RCUES) * Mountain * SMW, Lucknow

पर्यावरण अभियन्ता
नगर निगम, लखनऊ

1.4 Scope of Work

1.4.1 The brief particulars of the work:

a) Treatment of Legacy Waste through **Bio-Remediation, Resource Recovery like RDF, Bio-soil and Scientific Rejects Disposal** as per norms/specifications mentioned in CPCB Guidelines, Solid Waste Management Manual 2016

b) Contractor shall need to do Bio-remediation of 100% legacy waste, re-disposal of maximum 10% residual inert and reclamation of minimum 90% Land at original State as per the guidelines laid down by CPCB including all steps to follow mandatorily under the Schedule J of the said guidelines.

c) Contractor shall take all necessary permissions and NOCs from concerned authorities for the purpose of proposed Bio-remediation works. Contractor will have to do all the legal/pursuance work for this, department will assist contractor whenever and wherever required.

d) Contractor shall have to make own arrangements for the T&P, equipment and all other accessories, temporary electrical connection, water for construction purposes etc. that may be required for proper completion of the work. Equipment with least area requirement, higher output/screening capacity without impairing quality of product shall be given priority.

e) Dumpsite reclamation shall be done by dividing the site into suitable sectors/loops/phases in consultation of the Engineer-in-charge based on the priority of land reclamation.

f) Contractor Shall be responsible for Carrying out the entire project work in accordance with the DPR, Detailed Action Plan and time schedule proposed approved by the Authority and Completing the work within the Contract Period as per the agreed Deployment schedule.

g) Contractor shall have to **deploy sufficient machinery, manpower and required resources** to execute the project scope within the project duration as **mentioned in PIM Option A or Option B** in consultation with the Engineer-in-charge/PMC.

h) Contractor shall have to do the Installation of **plant, machineries, infrastructure facilities and amenities** for excavation, sieving of the excavated MSW, storing the segregated materials, reuse, marketing, selling, and transporting them from the project site.

i) Contractor shall be responsible for construction of temporary shed, platform and creation of facilities for handling, and quantifying the excavated MSW.

j) **Contractor shall have to do the stabilizing waste through application of Bio-Culture,** herbal/biological sanitizers, inoculants or through any suitable scientific method. Odour shall be controlled and minimized through application of herbal/biological sanitizers or other scientific method.

k) Contractor shall be responsible to **Segregate the excavated MSW** into as many kinds and categories as possible of Useful Material such as compost, soil conditioner, recyclables, raw RDF, filler material (Soil, C&D Waste) and Un- useful material such as residual Solid Waste.

l) Contractor shall be responsible for **Packing, storing, stacking, selling, diverting for recycling and marketing of all Useful Material within** Thirty **days of** segregation, without accumulation in the storage facility at the project site beyond Thirty days.

PMU (RCU) * SMW, Lucknow

m) Contractor shall be responsible for **Baling, packing, stacking, storing and sale of non-recyclable fraction of high calorific** as raw material to RDF producer/ user or sale to waste to energy or co-processing in cement plants or to thermal power plants.

n) Contractor shall be responsible for **transporting, spreading and compacting the segregated C&D, Soil and Inert** as filler material in the low-level area or quarry area and depression as approved by LMC with proper compliance to the statutory requirements.

o) The revenue or the income from the sale of the segregated Useful Material such as reusable and recyclable, Compost, soil conditioner, raw RDF, C&D, Soil or any other by-product materials shall go to the Bidder account. The Bidder shall initiate the sale or disposal process of the material by-products only after the intimation to the authority.

p) Contractor shall handover **reclaimed land and scientifically capped residual solid waste disposal site** to the Authority in a good and acceptable condition as per SWM Rules 2016 and CPCB Guidelines etc.

q) Contractor shall use only covered body vehicles for the transportation of materials

r) Contractor shall be responsible for Construction of temporary site office, water, power, sanitation facilities and accommodation facilities of workers for the Project as per statutory standards.

s) Contractor shall be responsible for Providing security arrangement for the project site, machineries, equipment etc. at its own cost

t) Weighment System

The Contractor shall install required weighbridge(s) on its own at the designated sites as approved by the authority (respective ULB represented by LMC, for day-to-day quantification of legacy waste to be processed. This weighment system should meet following conditions:

i. It should be fully online electronic, automatic system equipped with the latest technology along with backup server facility. Data of weighment system shall be maintained properly for the entire contract period with back-up server facility.

ii. It should be operated in CCTV surveillance with data storage of entire contract period.

iii. Weighment system & CCTV Recording data and shall be provided as & when required by LMC/PMC officials and competent authorities.

iv. Any malfunctioning in operation of weighment system will be the responsibility of Contractor and same shall be required to be rectified within period of 24 hrs. During this period weighing of MSW may be carried out at an approved private weighbridge located outside at the cost of contractor.

v. Volumetric analysis of waste to be done each month.

u) Contractor shall carryout **Total Station Survey/DGPS Survey/ Drone Topography Survey** of complete project site including area earmarked in which Bio- remediation is to be done **on monthly basis** to account for the physical progress of land reclamation at the site. The survey report shall be submitted along with each running bill. Successful bidder shall also calculate in-situ density of waste by making sufficient number of sample pits in each vertical lift of 1.5 meter in consultation with the Engineer-in-charge/PMC.

v) Contractor shall be liable to **install weighbridge** and **maintain the records of waste excavated and transported for segregation and the products like Bio-soil, RDF and Inert dispatched from site for disposal.**

PMU (RCUES) * SMW, Lucknow

w) Contractor shall produce a **test certificate** for the waste components as per the norms/provisions from an authorized laboratory approved by the Engineer-in-charge. In addition to this Engineer-in-charge can periodically ask for testing of recovered material from IITs/NITs/ other Government Reputed Institutes, cost of such testing including transportation of testing material from site and/or transportation of machinery for testing on site shall be borne by the contractor.

x) Contractor shall conduct its own due diligence for site investigation, analysing the characteristics, composition and quantum of the waste at the Project site.

y) Successful Bidder/Bidders shall monitor **ground water quality, work zone air quality and ambient air quality monitoring within the site from authorised laboratories/agencies** and submit the report on monthly basis.

z) Successful Bidder/Bidders and LMC shall jointly earmark a land parcel for dumping of fresh waste sufficient for the contract period in case fresh waste processing facility do not start operating at optimum capacity.

aa) Contractor shall be responsible for **ICT based monitoring of project** including but not limited to establish CCTV **cameras, weigh bridge integration** to central server and **web/App based online data entry logbooks** to record the input and output quantity of waste. The bidder to also provide access of all such monitoring paraphernalia to the project authority & PMC.

bb) Successful Bidder/Bidders shall apply all such methods, processes, equipment and resources which would **reduce the impact of dumpsite reclamation activity in the adjacent areas.**

cc) Contractor shall be responsible to **Create facilities and make arrangements for controlling/mitigating the emission, pollution and contamination** (Environment Impact) including air, water and soil including mitigation for of Leachate, dust, odour and noise pollution.

dd) Contractor shall take precaution of **minimizing flies, rodents and bird menace and fire hazards.**

ee) Contractor shall be responsible to provide **fire protection measures and safety equipment.**

ff) Contractor shall be responsible to deploy the technology in accordance with present rules and regulations, norms of Government Authorities like MOEF & CC, CPCB, UPPCB, Solid Waste Management Rules 2016, and National Green Tribunal (NGT) etc.

gg) Contractor shall set up & **operate treatment plant for effluents** etc. if required. All the facilities required by applicable law and to meet scope & conditions of this contract shall be set up by the Contractor.

hh) The legacy waste material that is recovered from the dumpsite and converted into a resource material shall be disposed/sold by the bidder at facilities/site approved by Lucknow Municipal Corporation.

ii) Conducting/providing/arranging testing of materials as desired by Engineer-In-Charge.

jj) Any other activity of work as contractor or Engineer in charge may feel necessary to complete the work as per drawings, specification & contract agreement, which are not included in above mentioned or elsewhere in the tender document, but are necessary for proper completion of work shall be deemed to be incorporated in the scope of work.

kk) The contractors are advised to go through the specifications carefully and acquaint themselves with the nature of work, the difficulties likely to be encountered during the execution of work before quoting their rates. The rates should be comprehensive enough to overcome such difficulties. The percentage rates quoted/offered in schedule G should be inclusive of cost of all materials labour, T&P and all taxes whether levied by Central Govt. or



State Govt. or local Authorities during currency of the contract etc. as no claim or compensation on these accounts shall be entertained.

ll) The bidder must visit the site before quoting the rates and will have to submit (during e- tendering) preliminary bar-chart as per actual site conditions and nature of work.

mm) Supply of completion drawings after completion of work as per requirement of Engineer in charge. No extra payment for this shall be admissible.

nn) Defect Liability Period: 12 months after completion of work satisfactorily.

1.4.2 Detailed Scope of Work

LMC desires to select eligible contractor for Design, Build & Operate the required infrastructure for Dumpsite Land Reclamation through Bio-remediation, resource recovery and 100% clearing of legacy waste site at Shivari, including selling/scientific disposal of recovered material after processing.

Broadly, the Project involves achieving Bio-remediation of 100% legacy waste and re-disposal of maximum 10% of residual inert and reclamation of minimum 90% of the dumpsite land adopting scientific means and mechanism, by Excavating compacted mixed garbage which underwent biological degradation, making onsite windrows, taking all the materials excavated in the assigned land areas, segregating excavated waste into usable fraction like Bio-soil, RDF, inert & C&D waste by using suitable set of Mechanical Sieving Machine or any other equipment and 100% disposal of recovered materials.

Bidder should note that the services under the Project will come under The U.P. Essential Services Maintenance Act, 1966 and Bidder will be allowed to stop the work on only 3 National Holidays (26th January, 15th August and 2nd October)

The brief scope of work to be carried out by the selected Bidder during the execution of the intended project includes, but not limited to, the following component:

i. The estimated quantity of Legacy waste currently laying at site is 18.49 Lacs Metric Tonnes.
ii. Quantity of Legacy Solid Waste mentioned Project Information Memorandum may vary.
iii. The project completion period of work shall be **less than or equal to 275 days.**
iv. Successful Bidder/Bidders shall carryout Total Station Survey/ Drone Topography Survey of complete project site including area earmarked in which Bio- remediation is to be done on monthly basis to account for the physical progress of land reclamation at the site. The survey report shall be submitted along with each running bill.
v. Successful Bidder/Bidders shall also be liable to maintain the records of waste excavated and transported for segregation and the products like Bio-soil, RDF and Inert dispatched from site for disposal.

PMU (RCUES) * MNNIT, Lucknow

vi. Successful Bidder/Bidders need to reclaim the entire dumpsite land through Bio-remediation process as per the guidelines laid down by CPCB including all steps to follow mandatorily under the Schedule J of the said guidelines.

vii. Successful Bidder/Bidders and LMC shall jointly earmark a land parcel for dumping of fresh waste sufficient for the contract period in case fresh waste processing facility do not start operating at optimum capacity.

viii. Successful Bidder/Bidders shall monitor ground water quality, work zone air quality and ambient air quality monitoring within the site from authorized laboratories/agencies and submit the report on monthly basis.

ix. Successful Bidder/Bidders shall conduct its own due diligence for site investigation, analysing the characteristics, composition and quantum of the waste at the Project site.

x. Dumpsite reclamation will be done by dividing the site into suitable sectors/loops/phases in consultation of the Engineer-in-charge based on the priority of land reclamation.

xi. Usually, the top layer has fresh waste, dust and may have several materials in the active biological state. This layer is to be stabilized through application of Bio-Culture, herbal/biological sanitizers, inoculants or through any suitable scientific method as proposed by the Successful Bidder/Bidders and accepted by the Engineer-in-charge. Odour shall be controlled and minimized through application of herbal/biological sanitizers or other scientific method.

xii. The baseline calculation on the volume and density of waste dumped is done by the authority and that shall be treated as baseline to start the work however the monthly analysis of the volume through contour survey. Successful bidder shall also calculate in-situ density of waste by making sufficient number of sample pits in each vertical lift of 1.5 meter in consultation with the Engineer-in-charge/PMC.

xiii. The Bidder shall deploy sufficient machinery, manpower and required resources to execute the project scope within the project duration in consultation with the Engineer-in-charge/PMC.

xiv. Successful Bidder/Bidders shall make provision for installation, operation and maintenance of plant, machineries, infrastructure facilities and amenities for excavation, sieving of the excavated MSW, storing the segregated materials, reuse, marketing, selling, and transporting them from the project site.

xv. Successful Bidder/Bidders shall be responsible for Construction of temporary shed, platform and creation of facilities for handling, separating, segregating, storing and quantifying of the excavated MSW and processing material.

xvi. Successful Bidder/Bidders shall be responsible to Segregate the excavated (if required) MSW in the land portion earmarked into as many kinds and categories as possible of Useful Material such as compost, soil conditioner, recyclables, raw RDF, filler material (Soil, C&D Waste) and Un-useful material such as residual Solid Waste.

PMU (RCUES) * MOHUA * SMW, Lucknow

xvii. Successful Bidder/Bidders shall be responsible for Packing, storing, stacking, selling, diverting for recycling, marketing and recycling of all Useful Material within Thirty days of segregation at the cost of the Bidder, without accumulation in the storage facility at the project site beyond Thirty days.

xviii. Successful Bidder/Bidders shall be responsible for Baling, packing, stacking, storing and sale of non-recyclable fraction of high calorific as raw material to RDF user like waste to energy or co-processing in cement plants or to thermal power plants.

xix. Successful Bidder/Bidders shall be responsible for Stacking, transporting, spreading and compacting the segregated C&D, Soil and Inert as filler material in low level and depression area within the site and prepare well compacted and clear ground for proposed development at site or disposing such material in the low level area or quarry area at the cost of the Bidder with proper compliance to the statutory requirements.

xx. The revenue or the income from the sale of the segregated Useful Material such as reusable and recyclable, Compost, soil conditioner, raw RDF, C&D, Soil or any other by-product materials shall go to the Bidder account. The Bidder shall initiate the sale or disposal process of the material by-products only after the intimation to the authority.

xxi. Successful Bidder shall handover reclaimed land and scientific residual solid waste disposal site to the Authority in a good and acceptable condition as per SWM Rules 2016 and CPCB Guidelines etc.

xxii. Successful Bidder/Bidders shall be responsible for Carrying out the entire project work in accordance with the DPR, Detailed Plan of Action and schedule proposed by Bidder and approved by the Authority at the cost of the Bidder.

xxiii. Successful Bidder/Bidders shall Use only covered body vehicles for the transportation of materials at the cost of the Bidder.

xxiv. Successful Bidder/Bidders shall apply all such methods, processes, equipment and resources which would reduce the impact of dumpsite reclamation activity in the adjacent areas.

xxv. Successful Bidder/Bidders shall be responsible to Create facilities and make arrangements for controlling/mitigating the emission, pollution and contamination (Environment Impact) including air, water and soil including mitigation for of dust, odour and noise pollution at the cost of the Bidder.

xxvi. Successful Bidder/Bidders shall be responsible for Construction of temporary site office, water, power, sanitation facilities and accommodation facilities of workers for the Project as per statutory standards at the cost of the Bidder.

xxvii. Successful Bidder/Bidders shall be responsible for Providing security arrangement for the project site, machineries, equipment etc. at its own cost



xxviii. Successful Bidder/Bidders shall take precaution of minimizing flies, rodents and bird menace and fire hazards.

xxix. Successful Bidder/Bidders shall be responsible to provide fire protection measures and safety equipment.

xxx. Completing the work within the Contract Period as per the agreed Deployment schedule

xxxi. Successful Bidder/Bidders shall be responsible for ICT based monitoring of project including but not limited to establish CCTV cameras, weigh bridge integration to central server, load censors in conveyors to record the input and output quantity of waste. The bidder to also provide access of all such monitoring paraphernalia to the project authority & PMC.

The Contractor shall produce the survey reports on monthly basis to get the volume/quantity of legacy waste processed.

The SCOPE OF WORK as mentioned in above clause of the bid document is to dispose of Legacy Waste at Shivari through scientific processing and in an environmentally sustainable manner. In addition to the contents of above clause it shall also include terms as under;

The Contractor has to set up processing facilities to dispose of Quantity of Legacy waste from the designated site through scientific processing within stipulated time from the date of start/ Work Order in accordance with Solid Waste Management Rules 2016 (SWM Rules 2016) and other applicable rules & norms as amended from time to time. The Contractor shall set up & operate treatment plant for effluents etc. if required. All the facilities required by applicable law and to meet scope & conditions of this contract shall be set up by the Contractor.

The key goal for LMC is to achieve Bio-remediation of 100% legacy waste and re-disposal of maximum 10% of residual inert and reclamation of minimum 90% of the dumpsite land adopting scientific means and mechanism, that too in environment friendly manner. Any fresh waste dumped at similar site, shall also be needed to be managed in scientific manner including control of odour and rapid decomposition of the waste.

Contractor has been given the liberty to undertake the remediation and management of the waste as per any of approved methodology and best available segregation machineries but have to ensure that no foul odour should be released and no menace should take place at the operational site.

The Contractor will have to deploy the technology in accordance with present rules and regulations, norms of Government Authorities like MOEF & CC, CPCB, UPPCB, Solid Waste Management Rules 2016, and National Green Tribunal (NGT) etc.

The technology should be flexible enough to augment the capacity and accommodate environment friendly changes to be imposed by governing authorities & regulatory agencies during the currency of contract.

The Contractor shall set up & operate treatment plant for effluents etc. if required. All the facilities required by applicable law and to meet scope & conditions of this contract shall be set up by the Contractor.

PMU (RCL) * SMW, Luc

No SLF shall be provided for the dumping of the legacy wastes by LMC. Contractor shall arrange inert dumping site.

The legacy waste material that is recovered from the dumpsite and converted into a resource material shall be disposed by the bidder at site approved specified by Lucknow Municipal Corporation.

Contractor has to carry out contour survey every month for monitoring volumetric reduction of existing dump and contour survey reports shall be submitted every month clearly showing monthly volumetric reduction of existing dump.

1.4.3 Record keeping and Reporting:

a. The Contractor on behalf of client will keep the weigh bridge (to be installed by the Contractor) record of processing on daily basis. The Authority is authorized to inspect/audit the accounts. ICT based mechanism should be established to monitor weighbridge activity and measurements.

b. The Contractor shall maintain and submit electronic reports of the above records, using software and formats approved by the Authority, on a monthly basis. All records shall be available to Authority at reasonable times and places throughout the term of any contract resulting from this Bid Document.

1.4.4 LMC shall receive Bids pursuant to this Bid Document in accordance with the terms set forth herein as modified, altered, amended and clarified from time to time by LMC, and all Bids shall be prepared and submitted in accordance with such terms on or before the date specified in NIT/Bid Document for submission of Bid (the "Bid Due Date").

1.4.5 Process of Selection: The lowest price quote for processing per MT of legacy waste will be the L-1 / selected bid price.

1.4.6 Cost of Plant & Machinery: All expenses pertaining to setting up, operation and subsequent removal of required plant & machinery shall be borne by the bidder. The capacity of equipment's to be deployed shall suffice the need to complete the task at hand in stipulated time or as the Authority feels necessary.

1.4.7 The cost of the transportation of RDF or any other product(s) including leachate handling will be borne by the selected bidder.

1.4.8 Cost of Electricity and Water: The Bidder shall bear the cost of bringing power/electricity and water to the work site. The selected bidder shall pay the bill for usage of power and water.

1.4.9 Validity of Rates: The awarded processing rates will be valid till completion of the work.

1.4.10 The bid parameter is the processing cost per MT of the legacy waste. The recyclables will be the property of the selected bidder.

1.4.11 Weighment System

The Contractor shall install required weighbridge(s) on its own at the designated sites as approved by the authority (respective ULB represented by LMC, for day-to-day quantification of legacy waste to be processed. This weighment system should meet following conditions:

a. It should be fully online electronic, automatic system equipped with the latest technology along with backup server facility. Data of weighment system shall be maintained properly for the entire contract period with back-up server facility.

b. It should be operated in CCTV surveillance with data storage of entire contract period.



c. Weighment system & CCTV Recording data and shall be provided as & when required by LMC/PMC officials and competent authorities.

d. Any malfunctioning in operation of weighment system will be the responsibility of Contractor and same shall be required to be rectified within period of 24 hrs. During this period weighing of MSW may be carried out at an approved private weighbridge located outside at the cost of contractor.

e. Volumetric analysis of waste to be done each month.

1.4.12 Land

a Initial land required for setting up processing plant and machineries shall be required to be cleared by the contractor at legacy dump site.

b to meet any additional land required for subsequent expansion of the processing plant, contractor can use the land that is recovered after processing the MSW with prior approval.

c the land area reclaimed by processing will remain with the Authority except as required for setting up of plant which can be used till completion of project period.

1.4.13 Disposal

a It is the sole responsibility of the Contractor to dispose of the rejects/inert generated during the process. By-products from such processing viz. recyclables, enriched soil, compost, gas, energy etc. will be the property of the Contractor. It is expected that e- waste, hazardous waste and recyclables such as the plastic, glass, metal etc. does not any way form the part of inert waste.

b Contractor can temporarily store by-products at waste site but shall clear them on fortnightly basis. Site for disposal of inert shall be arranged by bidder. LMC may direct the contractor to place treated inert at the site or the nearby quarry for the land levelling purpose.

c Comprehensive Aggregate Disposal Plan covering activities like Removal, Segregation, Processing, Transportation, Disposal in a scientific manner will be submitted. Inert for Contractor would mean non bio-degradable, non-recyclable and non-combustible fraction.

d Required permissions for processing & disposal shall be obtained by Contractor.

1.4.14 Payment & Penalty Calculation Module

The payment to the Bidder will be on the basis of the amount finalised in the bid Per Metric Ton and the Bidder has to quote the rates for the same.

The volumetric analysis of the legacy waste is to be done on monthly basis through total station/Drone contour mapping/satellite imagery methods. However the weight of the legacy waste shall also be measured at the weigh bridge (to be installed by the selected bidder) before the sieving process and after the digestion of the waste through suitable Bio-culture solution/ enzymes etc. as prescribed in the guidelines laid down by the Central Pollution Control Board under Schedule-J.

The weight calculation with the help of the Volume (through Contour Survey) X Density measured through pit system/ baseline as per the DPR

OR

PMU (RCUES) * MNNR, Lucknow

The weight obtained through weighment of legacy waste before sieving.

Whichever is the less shall be firmed for making the payments.

The appropriate documents related to the analysis done throughout the month shall be annexed with the bill submitted.

The authority will target to complete the bill payment within 14 days of receiving the invoice. However, in case of any delay on authorities' part on verification beyond 14 days. 75% payment shall be released immediately and the remaining 25% payment after verification by the Authority (if available) However on further delay beyond 7 days on part of authority this 25% shall also be released and if any discrepancies found by the authority during monitoring the penalties may be deducted from future bills (but the same is not valid beyond 60 days' time period- if a valid reason is not specified).

Penalties

f. Non-Compliance Penalties

The following penalties shall be imposed by Authority on the Selected Bidder: -

Sl	Description	Penalty
1	If there is delay in commissioning of processing plant beyond the scheduled date.	Rs.150000 per month (One month will be considered if the delay is more than 21 days but less than 31 days)
2	If the allocated sites are not cleared within the stipulated period	Rs.10000/- on per week basis, till the site is reclaimed and handed over.
3	In case of non-compliance observed by regulatory authority (UPPCB etc) any at site	Rs. 1000/- on per day basis or the penalty imposed by the regulatory authority, whichever is higher, till the compliance is ensured.
4	The Contractor is responsible for storage / transportation / disposal of residual waste safely as per the provisions made in the SWM Rules, 2016. The residual waste should not be dumped on road side or on other's property. If the residual waste is dumped on road side or any other non-designated site penalty will be imposed	Rs. 5,000/- per event will be charged to the Contractor.
5	If the quantity of inert waste to be disposed of in the sanitary landfill is more than the 10% quantity of waste received at site	Rs.500 per ton shall be charged on the extra weight than 10% of the total waste.

Hand Back and Transfer:

Once all the waste is processed and the site is cleared the bidder needs to hand back the reclaimed

PMU (RCUES) SMW, Lucknow

land to authority free from any encumbrances and encroachment. The bidder needs to clear the site of all the vehicles and equipment and transfer the process inert/rejects to the sanitary landfill located in the waste processing site located in the city. The reclaimed land has to be in level condition with all the green belt intact and the bidder has to do basic landscaping (grass and tree plantation) and barbed wire fencing at its own cost (borne by bidder) of the land parcel before handover.

1.4.15 Human Resource:

a. The agency shall, during the contract period, have requisite staff/representatives as required to run the plant and to be responsible for all necessary exchange of information required for performing operations and providing services under this contract.

b. The agency shall be responsible for health safety measures of his workers.

c. The agency shall comply with all the provisions of the laws regarding deployment of labour under the contract. It shall be the liability and responsibility of the agency to implement the provisions of Acts; the Contract Labour (Regulation and Abolition) Act, 1970, the Minimum Wages Act, 1948 and the Workmen's Compensation Act, 1923. In addition to followings:

d. The agency shall not employ in connection with the operations and services under this contract any person of less than 18 years age.

e. At all times during continuance of the contract, the agency shall abide by all existing and future labour enactment and rules made there under, regulations, notifications and bye-laws of the Central, State or Local Government. The agency shall keep the ULB indemnified in case any action is taken against the ULB by any Authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments.

f. The agency shall keep all records desired under the said labour laws, submit periodical returns to the respective statuary Authority. The agency shall in respect of labour employed by him comply with or cost to be complied with provisions of the various labour laws and the Rules and Regulations as applicable to them in regards to matters provided therein.

g. The agency shall obtain the license in accordance with the Rules and Provisions of Contract Labour (Regulation and abolition) Act, 1970 and adhered all terms and condition stipulated therein, if applicable.

h. The agency shall pay the staff deployed by him under this contract as per the minimum wages act in force and amendments.

i. Not with standing anything contained herein, the ULB may take such action as may be necessary for compliance of the various Applicable Labour Laws and to recover the cost thereof from the agency.

1.7.29 Pre-Operational Activities:

The Bidder shall have to complete the following activities before starting production of bye - product. The Bidder shall commence all activities concurrently. The details of activities are as follows:

Sl. No.	Description of Activity	Duration for Completion of Activity (in Days)
1	Issue of Letter of Acceptance (LOA) cum work order from Employer	Start date
2	Acceptance of LOA cum work order from agency	Within two (2) days from the date of issue of LOA cum work order.
3	Deposit of Performance Security	Within seven (7) days from the date of issue of LOA cum work order.
4	Signing of Agreement	Within seven (7) days from the date of issue of LOA cum work order.
5	Submission of plan of action	Within seven (7) days from the date of issue of LOA cum work order to the Agency.
6	Mobilization of the machinery and Manpower/ start of work/ deployment of vehicles	Within fifteen (15) days from the date of issue of LOA cum work order to the Agency.
7	Erection & commissioning of, plant & machinery	Within forty-five (45) Days from the date of issue of LOA cum work order to the
8.1	Completion of 25% Quantity	Within Ninety (90) Days from the date of issue of LOA cum work order to the Agency.
8.2	Completion of 50% Quantity	Within One Hundred Fifty (150) Days from the date of issue of LOA cum work order to the Agency.
8.3	Completion of 75% Quantity	Within Two Hundred Ten (210) Days from the date of issue of LOA cum work order to the Agency.
8.4	Completion of 100% Quantity	Within Two Hundred Seventy-Five (275) Days from the date of issue of LOA cum work order to the Agency.

PMU (RCUES) * SMW, Lucknow

INSTRUCTIONS TO BIDERS FOR PRE-QUALIFICATION

CHAPTER-2

2.1. Throughout these documents, the terms "bid" and "tender" and their derivatives (bidder/ tenderer, bid/ tender, bidding/ tendering, etc.) are synonymous.

2.1.1. The term "Contract", in relation to pre-qualification of bidders, shall mean an Agreement and/or work-orders.

2.2. This document relates to pre-qualification for the work under bid with a defect liability period of 12 months from date of handing over of works. Responsibility for handing over of completed works shall lie with the bidder.

2.3. Prohibition from Bidding:

2.3.1. Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices by the Central Government, the State Government or any public undertaking, autonomous body, authority by whatever name called under Central or the State Government.

2.3.2. Any bidders having criminal record is not allowed to participate in the bidding process. Any person who is having criminal cases against him or involved in the organised crime or gangster activities or Mafia or Goonda or Anti-social activity are strictly prohibited to participate in the bidding process. If it is established that any bidder has criminal record, his bid shall be automatically cancelled.

2.3.3. Any agency / firm against which any investigating authority has instituted any vigilance enquiry or there are criminal proceedings in any Court of law or has been debarred or blacklisted during the last 5 years from the last date of bid submission, by any Govt. / Semi Govt. /Board/ Corporation / private organizations shall not be considered. An affidavit of this effect shall be submitted by the participating agencies / firms.

2.3.4. Any bidder who is an Advocate and/or Registered with any State Bar Council/Bar Council shall not be allowed to participate in the bidding. If it is established that the contractor is registered with the state bar council, his bid shall be treated as automatically cancelled.

2.4. The bidder has to upload and produce for execution of agreement, original copies of Form- I to IX and Capability Statement etc. The above documents shall be retained for execution of Agreement.

2.5. The Pre-qualification of the agencies / firms is confined to invitation of such firms who have earlier demonstrated their capability and capacity in executing similar projects in a time bound, prestigious & professional manner with high standards of workmanship within specified cost. The pre-qualification will be made on basis of the past record and successful completion of such projects in the stipulated time with good quality, proven technical competence, experience of handling works of comparable magnitude and complexity, expertise and know- how in the relevant field, financial resources, technical manpower and construction equipment owned by Bidders and



other requirements laid down in the prescribed Pre-qualification document.

2.6. The Bidder intending to submit pre-qualification documents will have to be experienced in executing similar type of works as defined in Para 3.2.

2.7. Should bidders have any queries regarding the pre-qualification document, this should be submitted to the Tender inviting authority in writing at least 7 days before the scheduled date of bid submission. Any query received after scheduled date would not be entertained and will be treated as void.

2.8. Pre-qualification document contains various formats and the same are to be used for furnishing the required information. The enclosed formats should be filled in completely and legibly and response must be provided for each item included in Appendices. In the event that a Bidder considers it inappropriate to respond to a particular item; this shall be filled as not applicable. If necessary, pages containing additional information may be attached to buttress the eligibility of bidder. Bidder should note that all the formats prescribed, need to be filled even if such information is Nil. It should be clearly indicated, failing which the bid may be treated as non-responsive.

2.9. All information requested shall be provided in English language, type written. Each page of the Pre-qualification document shall be duly signed and page numbered by the Bidder or his authorized representative, over writing should be avoided. Correction, if any, should be made by neatly crossing out, initiating, dating and re-writing.

2.10. Supporting documents shall be uploaded after scanning original or photocopy, as may be applicable, duly attested by a Gazetted Officer / Magistrate/Notary as prescribed in NIT. Document generated by the firm can be self-attested. The Bidder shall have to submit original documents as and when demanded.

2.11. Failure to provide information which is essential to judge Bidder's qualifications or to provide timely clarifications or substantiation of the information supplied may result in disqualification of the Bidder for the particular bid.

2.12. All documents submitted within due time and date, by the Bidders will be treated as Confidential and will not be returned.

2.13. Lucknow Municipal Corporation may not necessarily inform all Bidders of the result of their applications. Lucknow Municipal Corporation reserves the right to accept or reject any or all applications and to annul the pre-qualification process and there by reject all Bidders without incurring any liability to the affected Bidders or any obligation to inform the Bidder of the ground for the action of L M C.

2.14. The intending bidders who desire to see the site may visit at their own cost.

2.15. LMC will not reimburse any costs involved in the preparation and submission of pre-qualification document or in connection with any site visit made.

2.16. Suppression of Facts: Any information furnished by the Bidder found (immediately or at a later stage) to be forged or incorrect or concealment of any information, would render him liable to be debarred from tendering / taking up of works. Further action shall be taken as per tender conditions including forfeiture of earnest money deposited.

2.17. Information regarding litigation in past five years which the bidder is involved in, has to be



submitted in prescribed format. The name of the parties' concerned, and disputed amount, should also be given in the enclosed format.

2.18. Solvency Certificate issued by any Scheduled Commercial Bank shall be accepted, which will be valid for a period of one year from the date of issue unless otherwise mentioned. OR Solvency Certificate issued by District Magistrate will also be accepted, which will have a validity of one year from date of issue unless otherwise mentioned.

2.19. Nature of Firm/Bidder:

2.19.1. The Bidder may be individual, propriety firm, firm in partnership, limited company-public or private or corporation or society. In case of individual/proprietorship firm the bid is required to be signed by sole proprietor with his full name and current address, while in case of partnership firm the bid should be signed by all those partners in the firm with full name and current address, an affidavit to this effect and certified copy of partnership deed (as registered with registering authorities) is required to be attached with bid. However, in case of limited firms / companies, the bid is required to be signed by the authorized signatory, a power of attorney in his favour to submit the tender, sign the agreement, receive money, witness measurements, sign measurement books, compromise, settle, relinquish any claim(s) preferred by the firm and sign "No Claim Certificate" and refer all or any disputes to arbitration along with a copy of Memorandum of Articles of Association (as registered with registering authorities) duly notarized by a Public Notary should be attached with the bid. Employer will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. It may, however recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor.

2.19.2. Deleted

2.20. The Contract shall be for the treatment of legacy waste through bio- remediation, resource recovery and scientific rejects disposal work, as described in Chapter-I based on the priced Bill of Quantities/percentage rates submitted by the Bidder.

2.21. The Bidder shall adopt the Percentage Rate Method and quote the same in e-tender portal as specified in the excel sheet for the purpose; only the same option is allowed to all the Bidders. Percentage Rate Method requires the bidder to quote a percentage above / below/ at par of the schedule of rates.

a. In case the lowest tendered amount (cost of work put to bid + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/below on cost of work put to bid including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on cost of work put to bid or on each sub section/sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.

In case any of such contractors refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.

PMU (RCL) SMW, Lucknow

If the revised tendered amount of two more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of General Manager concerned.

In case all the lowest contractors those who have quoted same tendered amount, refuse to submit revised offers, then tenders will be recalled after forfeiting 50% of EMD of each contractor.

Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.

b. In Percentage Rate Tender, the tenderer shall quote percentage below/above (in figures as well as in words) at which he will be willing to execute the work.

2.22. The Bidder will furnish the following mandatory information on e-tender portal, failing which the bidder may get disqualified. Additional pages can be added to give complete desired information. Nil information is also required to be indicated as such and submitted. Omission of any format shall be taken as 'Nil' information and will be evaluated accordingly.

a. Proof of submission of Tender Fee and EMD. b.

General information in Form-I

c. Declaration on Form - I A. (Earnest Money)
d. Declaration on Form - I B. (Affidavit of Bid Validity)
e. Standard Affidavit on Form- I-C. (Substance of the contents should not be altered)
f. Character Certificate in Form I-D of all partners on approved format of issuing state.
g. Financial information in Form- II (A).
h. Copies of Audited Balance Sheet, Profit and Loss Account for Previous 5 (five) Financial Years duly certified by the Chartered Accountant with UDIN.
i. Bank Solvency Certificate issued by a prescribed Bank on Form II-B or Issued by District Magistrate, which will have validity of one year from date of issue unless otherwise mentioned.
j. List of similar works executed during last 10 years generally as per Form-III along with supporting documents such as performance certificate issued by the client department/construction agency not below the rank of Executive Engineer/ Project Manager. (See clause 3.2 of this section). The performance certificate should be clear and exhaustive enough to establish similarity with the work under Bid.
k. List of all works which have been awarded/ in progress as on date of submitting this application as per Form-IV.
l. Details of technical personnel with bidder in Form-V.
m. Format for performance report in Form-VI (A&B). Ambiguous Performance Certificates will not be considered for evaluation.
n. **Proposed Technology/Methodology** in Form- VI (C)
o. Detailed Bar chart with micro planning in Form- VI (D) for execution of work within stipulated timeline
p. Details of construction plants and equipments with the bidder in Form-VII.
q. Litigation history on Form- VIII (The affidavit is to be typed on stamp paper worth

PMU (RCUES) SMW, Lucknow

Rs. 10/- duly signed and notarized with date, affixing a revenue stamp of Rs. 2/- only)

r. Letter Comprising Bid- Form -IX.
s. Power of Attorney for signing the bid as per format
t. Affidavit on Rs 100.00 stamp paper for Manpower (Engineer/Supervisor), Machinery and Vehicle.
u. All other documents required for Partnership/Limited firms as described in relevant paras.
v. Certificate of registration for GST, PAN etc.
w. Information regarding available bid capacity in Form-IV. x.

Certificate of registration with LMC ,

y. Capability Statement duly filled.
z. Aadhar No. and Certificate (In case of bidding company being an Individual/Sole proprietorship firm.)
aa. Information regarding available bid capacity in Form-IV. (The affidavit is to be typed on the stamp paper worth Rs. 100/- duly signed and notarized with date, affixing a revenue stamp of Rs. 2/- only)
bb. Bar chart for execution of work within timeline to complete the work is mandatory.
cc. Income Tax Returns (ITRs) corresponding to all submitted Balance sheets
dd. Copy of Memorandum and Articles of Association, if the Bidder is a body corporate and a copy of its partnership deed if the Bidder is a Partnership Firm.

2.23. The tender shall be submitted in two bid system in accordance with the procedures detailed.

2.24. It is mandatory that each application shall contain the following:-

a. Technical Bid- Information called for in the "Forms I to IX, Capability Statement" and Declaration I-A, I-B, I-C, I-D and audited balance sheets of Bidder / Contractor for last five consecutive financial years duly certified by Statutory Auditor of the Bidder with UDIN as prescribed in NIT and bid Document must be digitally signed and uploaded on e-Procurement portal.
b. Financial Bid- Must be quoted in excel sheet for financial bid on e-tender portal.

2.25. The bidder must submit acknowledgement of Income Tax return submitted online along with relevant 26AS for the last 3 years ending 31.03.2022. The demand status as displayed on Income Tax portal is to be enclosed for verification of Tax demand.

2.26. Bidders are particularly advised to fill and upload the details strictly as per the enclosed forms. Tenders are liable to rejection if relevant details are not furnished in prescribed formats and also which do not meet the qualification requirement given in the paragraphs that follow. The Bidder may furnish any additional information, along with his application which in his opinion will highlight his capacity to perform.

2.27. Firm should have valid registration in GST, EPFO/ESI etc. (as applicable) and they have to submit attested copies of the registration certificates. Contractor will have to register in labour cess deptt. within a week of award of the works.

2.28. Original copy / attested copy of the partnership deed, if it is a partnership firm and attested copy of registration certificate / MOA (as registered with registering authorities), in case of Company and authorized declaration in case of Sole Proprietorship Firm should be submitted

PMU (RCUES) * SMW, Lucknow

with PQ document.

2.29. General Power of Attorney / Special Power of Attorney substantially in format annexed, revalidated & notarized be submitted by firm /tenderer in favour of the person who has signed the tender/will sign the agreement as the case may be, the tender documents with telephone No. and complete postal address. Affidavit as prescribed should be annexed on non-judicial stamp paper of Rs.100 (or as applicable) duly signed by notary.

2.30. The Bidder shall extend his services free of charge, to the representative of the Lucknow Municipal Corporation to visit the project/works from any of his referred project works, if the LMC desires so. While applications are under consideration, Bidders and their representatives, or other interested parties, are advised to refrain from contacting by any means, any personnel or representative on matters related to the applications under consideration.

2.31. The Employer or his authorized representative, if necessary, will/ may obtain clarification of applications by requesting such information from any or all Bidders in writing. Bidders will not be permitted to change the substance of their applications after submission of tender. Non-compliance with this provision will be a cause of disqualification.

2.32. The Department reserves to itself the power to relax non-essential requirements of the bid which do not have material impact on eligibility of the bidder.

2.33. The credentials submitted in respect of pre-qualification of the bidder particularly that of the lowest evaluated bidder shall be verified before award of work. Any information furnished by the bidder found to be incorrect either immediately or at a later date, suppression of information in forms, statements, enclosure and declarations would render him liable to be disqualified and debarred from tendering of work in LMC and forfeiture of his bid security/security. If such bidder happens to be enlisted contractor of any class in LMC, his name shall also be removed from, the approved list of contractors.

2.34. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer shall be communicated in writing to the Engineer.

2.35. Pre- Bid Meeting

Pre-Bid meeting will be held on scheduled date and time, at Office of Municipal Commissioner, Lalbagh, Lucknow. Bidders shall participate in Pre- Bid Meeting in person at the venue mentioned above.

PMU (RCUES) * Mohkhow * SMN, Lucknow

CHAPTER –3

ELIGIBILITY CRITERIA AND INFORMATION REQUIRED TO BE FURNISHED BY THE BIDDERS

The qualification information is required to be furnished in the enclosed forms. The Bidders should have following minimum qualifying requirements.

3.1.		Eligibility Requirements:
	(a)	Turnover: The average annual financial turnover during the immediate last 3 (three) consecutive financial years ending on 31.03.2023 on construction/solid waste management/bioremediation of legacy waste works should be at least 30% (i.e., 28.96 Crores) of the estimated cost put to tender for i.e. (INR 96.53 Crores).
	(b)	Solvency Certificate: Should have a solvency of minimum 30% of the estimated cost and not older than 6 months.
	(c)	Profit/Loss The firm should not have incurred any losses in more than two years during last five consecutive years balance sheets ending on 31.03.2023 duly certified and audited by Statutory Auditor of the firm. The firm should have positive net worth as certified by its Statutory Auditor.
	(d)	Credit rating: The bidder must submit acknowledgement of Income Tax return submitted online along with relevant 26AS for the last 3 years ending on 31.03.2023.
	(e)	The available bid capacity of the bidder at the expected time of bidding shall be more than the total estimated cost of the work for which the tender is invited. The available Bid Capacity shall be assessed using following formula: Assessed Available Bid Capacity $= 2 \times A \times N - B$ Where, A= Maximum turnover during the last five financial year (corrected to the current level of value). N= Stipulated period of execution of the work for which the tender is invited in years. B= value of existing commitments to be completed during the execution period of bid. The turnover shall be corrected to the current level of value by multiplying with the updating factor given below; S.N. Financial Year Escalation/Enhance factor 1 2022-2023 1.00 2 2021-2022 1.07 3 2020-2021 1.14 4 2019-2020 1.21 5 2018-2019 1.28

PAST EXPERIENCE:

The Bidders should have experience of execution of works of similar nature including projects relating to Scientific Dumpsite Reclamation/ Bioremediation of Dumpsites or have processed MSW through Windrow composting & RDF method and other related associated / allied works as applicable.

a. Three similar works each costing not less than 30% (i.e.,5.55 Lakh MT) of the estimated quantity of work for Phase -I (i.e., 18.5 lakh MT) put to bid or,

b. Two similar works costing not less than 40% (i.e., 7.4 Lakh MT) of the estimated quantity of work Phase-I (i.e., 18.5 lakh MT) put to bid or,

c. One similar completed work costing not less than 60% (i.e., 11.1 Lakh MT) of the estimated quantity of work Phase-I (i.e., 18.5 lakh MT) put to bid,

completed work by single contracts of a single project- satisfactorily completed. This should be certified by an officer not below the rank of Executive Engineer.

(*Ongoing: If the work is ongoing then the Bidder should have completed at least 90% of Quantity of the total ordered quantity.

In case of experience of processing of waste through windrow composting & RDF method, Client certificate of processing such waste in consecutive two years of project in last 10 (ten) years shall be produced.)

3.3 Personnel Capabilities: The Bidders must have qualified employed personnel to fill the following positions. The Bidders shall supply information on a prime candidate and an alternate for each position; both of whom shall meet the minimum experience requirements specified below:

Sl. No.	Technical Personnel	No. of Technical Person Required for Project Cost	Experience in Similar work.
1	Graduate Engg. Civil	5	2
2	Diploma Engg. Civil	10	5
3	Diploma Engg. Electrical	10	5
4	Work Supervisor	12	5

3.4. Equipment Capabilities:

Bidders should own or have assured access (through Hire, Lease, Purchase Agreement, availability of manufacturing equipments or other means) to the equipment/machines listed here under and in full working order and must demonstrate that based on known commitments, they will be available for use in the proposed Contract.

Sl. No.	Equipment Type & Characteristics	Minimum Numbers Required for project cost Rs.
1	Poclain	5
2	JCB	10
4	Hywa	15
5	Power Screen /Trommel Machine	5
6	Tractor with trolley	15
7	DG Set	5

UJ (RCUES) * Moulana Azad Nagar

3.5.		Litigation History: The Bidders shall provide accurate information on any litigation or arbitration resulting from Contracts completed or under its execution over the last 5 years in Form–VIII
3.6.		Special condition for bidding in consortium: 1. Consortium of Maximum Two members are allowed 2. In case of Consortium the Lead member of the Consortium shall meet the required project capacity of similar nature of work in proportion to the partnership in consortium but not less than 51%. The other member shall meet the required project capacity of similar nature of work in proportion to the partnership in consortium but not less than 26%. 3. In case of Consortium the Lead member of the Consortium shall meet the required turnover in last 3 financial year (2020-21, 2021-22 & 2022-23) in proportion to the partnership in consortium but not less than 51%. The other party required turnover in last 3 financial year (2020-21, 2021-22 & 2022-23) in proportion to the partnership in consortium but not less than 26%.
3.7.		Conflict of Interest The Bidder shall not be one of the following: 1. Bidder (or any constituent thereof) and any other Bidder (or any constituent thereof) have common controlling shareholders/ partners/ directors. 2. A Firm or an Organization which has been engaged by the Employer to provide consulting services for preparation related to procurement for or implementation of this Project; 3. Any bidder who is registered with the State Bar Councils is not allowed to participate in the bidding process. 4. No Engineer of Gazetted rank or other gazetted officer employed in Engineering or Administrative duties in an Engineering dept. of the State/ Central government is allowed to work as a contractor for a period of two years after his retirement from govt. services without government permission. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the government as aforesaid before submission of the tender or engagement in the contractor's service. 5. A contractor black listed/debarred by any Govt. body shall not be eligible to bid.
3.8.		Updating Prequalification Information: The Bidders shall be required to update the financial information/capability used for pre-qualification at the time of submitting their Bids and to confirm their continued compliance with the qualification criteria. A Bid shall be rejected if the Bidder's pre-qualification thresholds are no longer met at the time of submission of his Bid.



3.9.	3.9.1	General 1. Only Bidders who have been pre-qualified under this procedure will have their Financial Bids opened. 2. A Firm can submit only one Bid for the Contract. If a Firm submits more than one Bid, all bids which include that firm will be rejected.
	3.9.2	Bid Security/Earnest Money/Bid Validity: a) Bidders shall pay along with their bids, Bid Security/EMD equal to 2% of project cost and shall be deposited only by mechanism as outlined in NIT. Tender Fee and EMD must be submitted by the bidder out of his own resources else his bid shall be disqualified. b) Any bid not uploaded with valid proof of deposit of Earnest Money and required tender fee, shall be rejected forthwith by the Employer as non-responsive. The bidder shall not have any claim in this regard. c) The Earnest Money of unsuccessful bidders will be returned soon after approval of technical bid by the competent authority and latest on or before the 30th day after award of the contract. d) The Earnest Money of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security. e) The Bid shall be kept valid for 120 days after deadline for submission of the Bid document. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. A bidder may refuse the request without forfeiting his Earnest Money.
	3.9.3	The Employer reserves the right to: a) Amend the scope and value of any Contract to be Bid, in which event the Contract will only be Bid among those pre-qualified Bidders who meet the requirements of the Contract as amended; b) Reject or accept any application; and c) Cancel the pre-qualification process and reject all Applications. d) Cancel the entire bid process. The Employer shall neither be liable for any such actions nor be under any obligation to inform the Bidder of the grounds for them.

PMU (RCUES) * Mourchan, Lucknow *

	3.9.4	1. The Bidder will be advised by the Employer or his representative in writing or by fax/e-mail/SMS, within 90 days of the date for submission of bids, of the result of their application and of the names of the pre-qualified Bidders without being assigned any reason for the Employer's decision. 2. If the Bidder feels that technical credentials of his own or other Bidders have been wrongly evaluated/verified, he may raise objections within 2 (Two) working days from the date of uploading of result. Opening of financial bid will be scheduled accordingly. No requests/objections shall be entertained beyond above limit, else it may be treated as an obstruction in tender process and shall be dealt with accordingly.
	3.9.5	The Employer reserves the right to verify and seek clarification of the information furnished by any/all Bidders to make an informed decision.

3.10. QUALIFIED BIDDERS:

Lucknow Municipal Corporation will evaluate which Bidders are qualified and will inform them through e-tender portal. Qualified contractors will be given an invitation to participate in opening of Financial Bid of the tender at the date and time to be specified in the intimation.

3.11. Even though the Bidders are pre-qualified, they are subject to be disqualified if they have:

3.11.1. Made untrue or false representations in the form, statements and attachments submitted in proof of the qualification requirements, and/or

3.11.2. Participated in the previous bidding for the same work and had quoted unreasonably high/low bid prices and could not furnish rational justification to the LMC. and/or

3.11.3. Record of past poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, or financial failures, etc.

PMU (RCUES) ★ MoUD, GoI ★ SIMW, Lucknow

CHAPTER-4

EVALUATION AND QUALIFICATION PROCEDURE

4.1. Evaluation criterion of applications for pre-qualification:

The pre-qualification document shall be examined to ascertain whether the applications:

I. Fulfil responsiveness criteria of the Bid i.e., deposit/uploading of proof of earnest money deposit, tender fees, standard affidavit in prescribed form 'I-C'.
II. Meet the eligibility requirements,
III. Have been properly prepared & signed,
IV. Contain all the details called for and are in proper format.

Assessment of the firms, who have applied for the pre-qualification, will also include the following items:

Applications of the bidders will be evaluated in detail in the second stage, with weightage of each of the following factors.

1. Financial status of the firm including annual turnover, working capital, net worth, and works in hand, financial arrangements proposed viz. own resources/bank credits etc.
2. Resources of the firm in respect of personnel, equipment and plants.
3. The experience of the firms for works of similar nature.

4.2. The bidder should state in detail about the contracts where delay has occurred, the period of delay and the reasons thereof. Details of works that have been abandoned for reasons whatsoever should also be furnished. In case the bidder or any partner was ever black listed the same should be indicated.

4.3. To become eligible for short listing the bidder must secure at least 60 (Sixty) percent marks in each and 70 (Seventy) percent marks in aggregate as per evaluation criteria described in Annexure-I. Such qualified bidders will be called for opening of financial bid.

4.3.1. The department, however, reserves the right to restrict the list of such qualified contractors to any number deemed suitable by it.

4.4. Examination of Bids and Determination of Responsiveness:

4.4.1. During the detailed evaluation of "Technical Bids", the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Chapter-3; (b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the bidding documents. During the detailed evaluation of the "Financial Bids", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications and drawings.

4.4.2. A substantially responsive "Financial Bid" is one that conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance

PMU (RCUES) ★ MoUD ★ SMW, Lucknow

of the Works; (b) which limits in any substantial way, inconsistent with the bidding documents, the LMC 's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

4.4.3. If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

4.4.4. The conditional bids shall be treated as non-responsive forthwith.

4.5. Even though the bidder meets the above qualifying criteria, he can be disqualified if he has made any misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirement and/or record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion and blacklisting or financial failure etc.

4.6. If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. The amount of the increased performance security shall be decided at the sole discretion of the Employer, which shall be final, binding and conclusive on the bidder.

4.7. Stamp duty charges as applicable shall be borne by the tenderer as applicable at the time of award of the contract. The contract agreement will be executed on non-judicial stamp paper of the value of Rs. 100/- along with Rs. 2/- Revenue stamp.

PMU (RCUES) ★ Mowhan ★ SMW, Lucknow

CHAPTER-5

PREPARATION & SUBMISSION OF e-Bids

(For guidance purposes only. The Bidder is advised to familiarize himself with Terms and Conditions of NIT, Bid document and process of bid submission on e-tender portal on their own. The department bears no responsibility for incorrect submission of bid.)

5.1. Documents Constituting the e-Bid

The e-Bids prepared by the Bidder shall comprise the following components:

e-Bids will comprise of:

a) technical proposal submission forms

b) financial proposal submission forms

5.2. Documents Establishing Bidder's Qualification

The Bidder shall furnish, as part of Technical Proposal, documents establishing the qualification to perform the Contract. The documentary evidence in support of the information furnished should be submitted by the Bidder electronically in the PDF format. The Bidder's eligibility criteria and selection procedure are defined in previous Chapters.

It is suggested that the PDF files should be made in gray scale using the minimum readable appropriate resolution so that the size of the files is minimized for fast uploading on the e- Bid portal.

5.3. Format and Signing of e-Bids

The Bidder shall prepare one electronic copy for the e-Bids.

All the pages/ documents of the e-Bid shall also be signed manually by the person authorized to sign the e-Bids before converting them into PDF and uploading them as bidding documents.

5.4. Submission of e-Bids:

The e-Bid Submission module of e-tender portal http://etender.up.nic.in enables the Bidders to submit the e-Bid online against the e-tender published by the Department. Bid Submission can be done only from the Bid Submission start date and time till the e-Bid Submission end date and time given in the e-Bid. Bidders should start the Bid Submission process well in advance so that they can submit their e-Bid in time. The Bidders should submit their Bids considering the server time displayed in the e-tender portal. This server time is the time by which the Bid submission activity will be allowed till the permissible time on the last/end date of submission indicated in the e-tender schedule. Once the Bid submission date and time is over, the Bidders cannot submit their e-Bid. For delay in submission of e-Bids due to any reasons, the Bidders shall only be held responsible.

The Bidders are advised to follow the following instructions for submission of their e- Bids:



For participating in e-tender through the e-Biding system, it is necessary for the Bidders to be the registered users of the e-tender portal http://etender.up.nic.in. For this, the Bidders have to register themselves by depositing a fee of Rs 6000/- (Rupees Six thousands only) or latest applicable rate in the office of U.P. Electronics Corporation Limited, 10, Ashok Marg, Lucknow-226 001 for getting a valid User ID and password and the required training/ assistance etc. on e-tender portal http://etender.up.nic.in. The Bidders may contact U.P. Electronics Corporation Limited for further assistance.

In addition to the normal registration, the Bidder has to register with his/her Digital Signature Certificate (DSC) in the e-Biding system and subsequently he/she will be allowed to carry out his/her e-Bids submission activities. Registering the Digital Signature Certificate (DSC) is a onetime activity till its validity. Before proceeding to register his/her DSC, the Bidder should first log on to the e-Biding system using the User Login option on the home page with the Login Id and Password with which he/ she has registered as enumerated in the preceding paragraph above.

For successful registration of DSC on e-Procurement portal http://etender.up.nic.in the Bidder must ensure that he/she should possess Class-2/ Class-3 DSC issued by any one of certifying authorities approved by Controller of Certifying Authorities, Government of India. The Bidder may also apply to office of U.P. Electronics Corporation Limited, (UPLC) for getting DSC at the address given in the preceding paragraph above on a prescribed form available at UPLC's website www.uplc.in along with the payment of fee of Rs 1704/- or latest rates per person, The Bidder is also advised to register his/her DSC on e-tender portal well in advance before Bid submission end date so that he/she should not face any difficulties while submitting his/her e-Bid against this e-tender. The Bidder can perform User Login registration/creation and DSC registration exercise as described in preceding paragraphs above even before e-Bid submission date starts. The LMC, shall not be held responsible if the Bidder tries to submit his/her e-Bids at the last moment before end date of submission but could not submit due to DSC registration or any other technical problems.

The Bidder can search for active Bids through "Search Active Bids" link, select a Bid in which he/she is interested in and then move it to 'My Bids' folder using the options available in the e-Bid Submission menu. After selecting and viewing the Bid, for which the Bidder intends to e-Bid, from "My Bids" folder, the Bidder can place his/her Bid by clicking "Pay Offline" option available at the end of the view Bid details form. Before this, the Bidder should download the Bid document and study them carefully. The Bidder should keep all the documents ready as per the requirements of e-Bid document in the PDF format.

After clicking the 'Pay Offline' option, the Bidder will be redirected to the Terms and Conditions page. The Bidder should read the Terms & Conditions before proceeding to fill in the Processing Fee offline payment details. After entering and saving the Processing fee details, the Bidder should click "Encrypt & Upload" option given in the offline payment details form so that "Bid Document Preparation and Submission" window appears to upload the required documents Technical Proposal Submission Form etc. of this e-tender document. The details of the Demand Draft or any other accepted instrument which is to



be physically sent in original before Bid submission end date and time, should tally with the details available in the scanned copy and the data entered during e-Bid submission time otherwise the e-Bid submitted will not be accepted.

Before uploading, the Bidder has to select the relevant Digital Signature Certificate. He may be prompted to enter the Digital Signature Certificate password, if necessary. For uploading, the Bidder should click "Browse" button against each document label in Technical schedules/packets and then upload the relevant PDF files already prepared and stored in the Bidder's computer. The required documents for each document label of Technical. Schedules/packets can be clubbed together to make single different files for each label.

The Bidder should click "Encrypt" next for successfully encrypting and uploading of required documents. During the above process, the Bid documents are digitally signed using the DSC of the Bidder and then the documents are encrypted/locked electronically with the DSC's of the Bid openers to ensure that the Bid documents are protected, stored and opened by concerned Bid openers only.

After successful submission of e-Bids, a page giving the summary of e-Bid submission will be displayed confirming end of e-Bid submission process. The Bidder can take a printout of the Bid summary using the "Print" option available in the window as an acknowledgement for future reference.

5.5. Deadline for Submission of e-Bids

e-Bids must be submitted by the Bidders on e-tender portal http://etender.up.nic.in, not later than the date and time specified in this e-tender document.

The LMC may extend this deadline for submission of e-Bids by amending the e-tender document, in which case all rights and obligations of the LMC and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

LMC shall not consider any request for date-extension for e-Bid-submission on account of late downloading of e-tender (RFP) by any prospective Bidder. E-Bids should be uploaded on e-tender portal http://etender.up.nic.in on or before the scheduled date and time.

5.6. Late e-Bids

The server time indicated in the Bid Management window on the e-tender portal http://etender.up.nic.in will be the time by which the e-Bids submission activity will be allowed till the permissible date and time scheduled in the e-tender. Once the e-Bids submission date and time is over, the Bidder cannot submit his/ her Bid. Bidder has to start the e-Bid Submission well in advance so that the submission process passes off smoothly. The Bidder only, will be held responsible if his/ her e-Bids are not submitted in time due to any reasons.

5.7. Withdrawal and Resubmission of e-Bids (Not permitted)

At any point of time, a Bidder can withdraw his/ her e-Bids submitted online before the e- Bids submission end date and time (if allowed). For withdrawing, the Bidder should first



log in using his/ her Login Id and Password and subsequently by his/ her Digital Signature Certificate on the e-procurement portal http://etender.up.nic.in. The Bidder should then select "My Bids" option in the Bid Submission menu. The page listing all the Bids submitted by the Bidder will be displayed. Click "View" to see the details of the Bid to be withdrawn. After selecting the "Bid Withdrawal" option, the Bidder has to click "Yes" to the message "Do you want to withdraw this Bid?" displayed in the Bid Information window for the selected Bid. The Bidder also has to enter the Bid Withdrawing reasons and upload the letter giving the reasons for withdrawing before clicking the "Submit" button. The Bidder has to confirm again by pressing "Ok" button before finally withdrawing his/ her selected Bid. Once the Bidder has withdrawn his /her Bid he/she cannot re-submit this Bid again.

The Bidder has to request the LMC with a letter, attaching the proof of withdrawal and submission of e-Bids Processing Fee in the office of Project Manager to return back the e- Bids Processing Fee as per the procedure.

The Bidder can resubmit his/ her e-Bids as and when required till the Bid submission end date and time. The e-Bids submitted earlier will be replaced by the new one. The payment made by the Bidder earlier will be used for revised e-Bids and the new Bid submission summary generated after the successful submission of the revised e-Bids will be considered for evaluation purposes. For resubmission, the Bidder should first log in using his/ her Login ID and Password and subsequently by his/ her Digital Signature Certificate on the e-procurement portal http://etender.up.nic.in. The Bidder should then select "My Bids" option in the Bid Submission menu. The page listing all the Bids submitted by the Bidder will be displayed. Click "View" to see the details of the Bid to be resubmitted. After selecting the "Bid Resubmission" option, click "Encrypt & Upload" to upload the revised e-Bids documents.

The Bidders can submit their revised Bids as many times as possible by uploading their e- Bids documents within the scheduled date & time for submission of e-Bids.

No e-Bids can be resubmitted subsequently after the deadline for submission of e-Bids.

5.8. Receipt and Opening of e-Bids by the Purchaser/TIA

Bidders are advised to submit their e-bids in 'Two-Bid' system with Technical and Financial bids separately on e-tender portal.

Please note that prices should not be quoted in the Technical Bid. The Prices should be quoted in the Financial Bid only. On receipt on e-tender portal, the technical proposals will be opened first.

LMC will open all e-Bids, in the presence of bidder's authorized representatives who choose to attend at scheduled date and time at designated place. The bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of e-Bid opening being declared a holiday, the e-Bids shall be opened at the appointed time and place on the next working day. The name of such bidders not meeting the qualification requirement shall be notified subsequently.

PMU (RCUES) * MoUD, MoWS * Lucknow

After evaluation of technical e-Bids, LMC shall notify those bidders whose e-Bids were considered non-responsive to the Conditions of the Contract and not meeting the Qualification Requirements indicating that they did not technically qualify for selection. LMC will simultaneously notify the bidders, whose technical e-Bids were considered acceptable and have been short listed for opening of their financial e-bids.

PMU (RCUES) * MoUD * SMW, Lucknow

SECTION-3

ANNEXURE-I

CRITERIA FOR EVALUATION OF THE PERFORMANCE OF CONTRATORS FOR PRE-QUALIFICATION

Technical Evaluation

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:

To become eligible for short listing the bidder must secure at least 50 (Fifty) percent marks in each and 60 (Sixty) percent marks in aggregate as per evaluation criteria described

S. No.	Specific experience of the Bidder firm	Max. Marks (100)	Document Proof
A (i)	Average Annual Turnover of last 3 consecutive years i.e., 2020-21, 2021-22 & 2022-23 (As per the bank / CA statement)	12	
B (ii)	Solvency Certificate	08	
(i) Note: - 60% marks for minimum eligibility criteria (ii) 100% marks for twice the minimum eligibility criteria or more In between (i) & (ii) - on pro- rata basis			
B	Experience of establishing and O&M of Bioremediation Facilities (any technology) or O&M of MSW with any of the Government / Local bodies / (i.e., Municipal Corporation / Local Bodies) or PSU's. (Aggregate of completed/ current running project) within last 10 years, before the date of publishing of this tender. (Cumulative of maximum 3 projects)	25 Marks	Experience certificate of successfully completed works along with Work Order
1	Processed from 11,10,000 MT to 14,80,000 MT of Legacy Waste	15 Marks	
2	Processed more than 14,80,000 MT to 22,20,000 MT of Legacy Waste	20 Marks	
3	Processed more than 22,20,000 MT of Legacy Waste	25 Marks	
C	Experience in sale/dispose of by-products (RDF or Compost) generated from Municipal Solid Waste processing projects in last 5 financial year, cumulatively. Bidder shall submit client certificate showing quantity of sale/dispose in last 5 financial years	10 Marks	client certificate along with Work Order
1	Average of minimum 67,500 MT to 90,000 MT in last 5 years	05 marks	
2	Average of minimum 90,000 MT to 135,000 MT in last 5 years	7.5 marks	

PMU (RCUES) * MoHUA * SWM, Lucknow

3	Average of minimum 135,000 tons in last 5 years	10 marks	
D	Number of established bioremediation Facilities (any technology) or O&M of MSW as sole entity or as a lead partner (>50% share in JV/Consortium) with any of the Government / Local bodies / (i.e., Municipal Corporation / Local Bodies) or PSU's. (Aggregate of completed/ current running project) within last 5 years before the date of publishing of this tender.	10 marks	Self-Certification by the Bidder with Challan copies/ESI/PF
1	Minimum 2 – 3	5	
2	4 and above	10	

	Specific experience of the Bidder firm	Evaluation				
E	Performance of works (time over run) (20 marks)					
	Parameter for calculation of points	Score				Maximum Marks
	If TOR=	1.0	2.0	3.0	>3.5	20
	(i) Without levy of Compensation	20	16	8	0	
	(ii) With levy of Compensation	20	8	4	-4	

TOR= AT/ST, where AT= Actual Time; ST= Stipulated Time.

Note: Marks for value in between the stages indicated above is to be determined by straight line variation basis.

F	Approach & Methodology (By Presentation)	Approach & Methodology for proposed assignment	15
		Understanding of Objectives	3
		Quality of Methodology	5
		Work Program	4
		Innovative Idea	3

PMU (RCUES) * Moulichuru * SMW, Lucknow

FORM–I

GENERAL INFORMATION

1. All Agencies/firms applying for pre-qualification are requested to complete the information in this form. Nationality information to be provided for all owners or Bidders for partnerships or individually owned firms.

1	Name of firm.	
2	Principal Place of business-	
3	Correspondence Address:	
4	Office Telephone:	Mobile:
5	Fax:	E-mail:
6	Place of incorporation/registration: (Attach copy)	Date of incorporation: Registration valid up to:
7	Constitution or Legal status of bidder- a) An individual b) Proprietary firm c) Partnership firm d) Limited company or corporation Another (Pl. specify)	(Attach copy)
8	Power of Attorney of signatory of Bid	(Attach)

Name of the Directors / Partners	Position in the company	Nationality.
1		
2		
3		

Name of persons to be contacted and their contact details			
Name	Address	Phone No. / Mobile	E-mail

PMU (RCUES) * SMW, Lucknow

Signature of Bidder.

DECLARATION FORM- I A
(EARNEST MONEY)

I / We deposit herewith an Earnest Money for (Rs. in words) ..... in the following form as per clause 3.9.2 of Instruction to Bidders/ as well as NIT.

I/We also agree to deposit requisite performance security/ additional performance security/security money as per conditions of this tender document. The details of deposit of Earnest Money are given below:

Sl. No.	Description	Amount Rs.	Period of Validity	Name of Issuing Bank/Post Office	Remarks

DATE

SIGNATURE & SEAL

ADDRESS

NAME

PMU (RCUES) * SMW, Lucknow

DECLARATION FORM-I B

(AFFIDAVIT OF BID VALIDITY)

IMPORTANT:

1- This affidavit is to be furnished positively at the time of submitting the tender.

2- The affidavit is to be typed on stamp paper worth Rs. 100/- duly signed and notarized, affixing a revenue stamp of Rs. 2/- only and the expenditure incurred shall be borne by the tenderer.

AFFIDAVIT FORM

Tender invited by .....

Tender for .....

.....

.....

... Tender Notice No. & Date

..... Name of Tenderer

.....

.....

.....

IN CONSIDERATION of the LUCKNOW MUNICIPAL CORPORATION having treated the bidder to be an eligible person, whose tender may be considered, the bidder hereby agrees to the conditions that the proposal in response to the above invitation shall not be withdrawn within 120 (One hundred and twenty) days from the date of opening the tender, also to the condition that if, the bidder does withdraw his proposal within the said period, the earnest money deposited by him may be forfeited by the LUCKNOW MUNICIPAL CORPORATION and I/we may, in addition to other actions detailed in bid document, be debarred from tendering for a period of one year reckoned from the date of opening of the tender, as per discretion of the later..

Signed this..... day of ..... 202..

Signed by: -

(BIDDER)
Signature & Seal

Witness:-

1.....

2.....

PMU (RCUES) * Mouhkhmo * SMW, Lucknow

FORM-II (A)

FINANCIAL INFORMATION

Details to be furnished duly supported by Audited Balance sheets/profit & loss account for the previous 5 (Five) Financial years ending 31.03.2022 duly certified by the Statutory Auditor as submitted by the Bidder to the Income Tax Department.

Banker

Name of Banker-	
Address of Banker-	
Telephone	Contact name & Title
Fax	Email-

Sl. No.	Particulars	Financial Year				
1	Gross Annual Turnover on Construction works					
2	Profit/Loss					
3	Share Capital / Fixed Assets					
4	Net Worth					
5	Current liabilities: a) Book Cash credit b) Other sundry creditors					
6	Solvency					

Note-

(1) The information provided above shall be certified by the Statutory Auditor of Firm and supported by copies of tax returns.

(2) Permanent Account Number (IT):

(3) Goods &Service Tax Registration Number. (4)

Acknowledgement of Income Tax return:

for the last 3 years. (Enclose copies for the Last Three Years)

Signature of Chartered Accountant with Seal. & UDIN No.

Signature of Bidder

FORMAT (II-B)

SAMPLE FORMAT FOR SOLVENCY CERTIFICATE ON THE LETTER HEAD OF BANK

No. ..... Dated: .....

(On Letter Head of Bank)

This is to certify that to the best of our knowledge and information M/s /Sri ..... address..... a customer of our bank are / is respectable and can be treated as good for any engagement up to a limit of Rs. ..... (Rupees .....). This is also certified that this limit is free for work and is not mortgaged anywhere. This certificate is issued without any guarantee or responsibility on the Bank or any of the officers.

Signature of the Bank Authority

Name of Bank & Seal

Date:

Note:

1. Solvency Certificate issued by any Schedule Commercial Bank shall be accepted, which will be valid for a period of 6 calendar months from the date of issue unless otherwise mentioned.
2. In case of partnership firm, certificate to include names of all partners as recorded with the Bank.
3. Solvency Certificates should be signed, dated and stamped by an authorised signatory of the Bank, else they shall be summarily rejected.
4. Certificates issued more than 365 days prior to last date of bid submission shall not be accepted.

FORM- III

DETAILS OF SIMILAR TYPE OF WORKS COMPLETED (In the same name and style) DURING LAST 10 YEARS.

Sl. No.	Name of Work	Brief Scope of Work	Name of client Department/ Employer	Aggregated value of executed works[1] including cost of material supplied by the department. (Rs. in Lacs)	Scheduled dates of		Reasons of delay, if any
					Start of work	Completion of work	

Note: The attested photocopy of the experience certificate of the Engineer-in- charge not below the rank of Executive Engineer/Project Manager/ Project Head be appended with the detail. In the absence of these documents, the work would not be considered for eligibility criteria.

Signature of Bidder

[1]Certified by an authority not below the rank of Executive Engineer/Project Manager/ Project Head.

(The affidavit is to be typed on stamp paper worth Rs. 100/- duly signed and notarized with date, affixing a revenue stamp of Rs. 2/- only)

FORM-
IV

Information on Bid Capacity

DETAILS OF WORKS WHICH ARE IN PROGRESS/ AWARDEDAS ON THE DATE OF SUBMITTING THIS APPLICATION

Sl No.	Name of work/Place and State	Brief Scope of work	Contract No. and Date	Name and Address of Employer	Value of Contract (Rs. in Lacs)	Stipulated date of start & completion	Value of works remaining to be completed (Rs. in Lacs)	Up to date Physical progress in %age	Anticipated date of completion with reasons of delay, if any.

Certified that all works (with any organisation and of all categories/types) which have either been awarded to us or are in progress on the date of bid submission have been included in the details given above and no work has been left out.

Signature of Bidder

FORM – V. (SAMPLE FORM)

DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED FOR THE WORKS

S. No.	Designation	Total number	Number available for this work	Name	Qualification	Date of Birth	Experience in Yrs.	Remarks
1	2	3	4	5	6	7	8	9
1	Graduate Eng. Civil							
2	Diploma Eng. Civil							
3	Diploma Eng. Electrical							
4	Work Supervisor							

Signature of Bidder

SAMPLE FORM (VI-A)

EXPERIENCE OF WORKS (Govt. Works)

Name of work/project & location:

Nature of work:

Others:

Estimated cost: (Rs. Lacs) .....

Actual completion cost: (Rs. Lacs) .....

Date of start: .....

Date of completion

(i) Scheduled date of completion: ..... (ii)

Actual date of completion: .....

Amount of compensation levied for delayed completion, if any: - ..... (if levy of compensation not yet decided, it may be mentioned accordingly) Performance Report: Very Good/Good/Fair/Poor

Dated: Executive Engineer/ Project Manager or Equivalent

(Seal)

Note: -The performance certificate should be clear and exhaustive enough to establish similarity with the work under Bid.

SAMPLE FORM (VI-B)

(On the letter head of the certificate issuing Firm/Company/Authority)

EXPERIENCE OF WORK (Work of Public Sector)

Certified that M/s .....(Name and address of firm) has executed and completed the following project as detailed below: -

Name of Project & Location:	
Scope of work: (Describe in brief) such as (A) Name of Work (B) Others:	
Cost of Project:	
MOU/Contract No. & date: (Attach copy)	
Contract Value (in Rs. Lacs):	
Date of start:	
Completed Value (in Rs. Lacs):	
Date of Completion:	
Time Over Run (TOR): (if any, with reasons)	
Payments made to the Firm under the Scope of this project:	
Details of TDS against above payment. (Attach form-16A)	
Performance Report:	Very Good/Good/Fair/Poor
Attach copy of final certified Bill.	

Dated: Project Head or Authorised Signatory

(Seal)

Note-

a) The Certificate should contain full address, land line number, e-mail address, fax numbers of Registered office & GSTIN No. of issuing authority on the letter pad of the company.

b) The Certificate should also be supported by final bill (certified).

c) The performance certificate should be clear & exhaustive enough to establish similarity with the work under Bid.

FORM – VI (C)

PROPOSED TECHNOLOGY/METHODOLOGY Please

provide a brief description of:

1. Proposed Technology & Methodology with brief approach for each part of the facility.
2. Description and capacity of plants and equipment's required to accomplish the work within stipulated time frame with desired operational & environmental standards
3. Waste Quantity Split
4. Proposed disposal

Bidders shall refer to the SMW Rules, 2016/CPCB Guidelines for meeting the expected standards desired for Municipal Solid Waste.

Signature of Bidder

FORM – VI (D)

Bar chart for execution of work within timeline to complete the work is mandatory.

Bidders are advised to give the micro-details for completing the bio-remediation work in stipulated time period (as mentioned in NIT).

Signature of Bidder

FORM-(VII) (SAMPLE)

DETAILS OF CONSTRUCTION PLANT AND EQUIPMENT (LIKELY TO BE USED IN CARRYING OUT THE WORK) AVAILABLE WITH THE CONTRACTOR

S.No	Name of equipment	Nos.	Capacity	Remarks
1	2	3	4	5

Signature of Bidder (s)

FORM – VIII (SAMPLE)

(The affidavit is to be typed on stamp paper worth Rs. 10/- duly signed and notarized with date, affixing a revenue stamp of Rs. 2/- only)

LITIGATION HISTORY

Name of Bidder or Partner of a Firm:

Date of Award or filing (if in process)	Name of client, cause of litigation, and matter in dispute and name of claimant party	Contract value (Rs. In Lacs)	Disputed amount (Rs. In Lacs)	Actual awarded amount (Rs. In Lacs)	Award For or against Bidder

Bidders including their partners shall provide information on the history of the litigation or arbitration resulting from contracts executed or under execution during the last five (5) years.

Providing any false or misleading information, or hiding any information, may result in disqualification of the Bidder.

In addition, each of the partners of the bidder shall certify that they are not banned by CPWD/PWD/MES/ OR any other Govt. agency.

Signature of Bidder

SAMPLEFORM

FORM-IX

LETTER COMPRISING BID

To,

.....

Municipal Commissioner,

Lucknow Municipal Corporation.

Sir,

Name of Work: -.....

1. Having examined the Press Note, Notice Inviting Tenders and bid document I/ We offer to execute the works described above and remedy any defects therein in conformity with the Conditions of Contract, specifications, drawings, Bill of Quantities and Addenda for percentage rate below/ percentage above/ at par as in the financial bid, as referred to in relevant clauses of Instructions to Bidder.

2. I/We confirm that our bid is according to the term & conditions and specifications laid down in the bid documents. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.

3. I/we also authorize employer or his representative to approach individuals, employers, firms and corporations to verify our competence and general reputation.

4. I/We undertake to commence the works on receiving the Notice to Proceed with work in accordance with the contract documents.

5. I/We agree to keep the offer in this tender valid for a period of 120 (One hundred and twenty) days as mentioned in the bid documents and not to modify the whole or any part of it for any reason within the above period. If the tender is withdrawn by me/us for any reason what so ever, the Earnest Money deposited by me/us will be forfeited by the Lucknow Municipal corporation and other actions in accordance with bid documents may be taken against me.

6. Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

7. I/we hereby distinctly and expressly declare and acknowledge that before the submission of my/our tender I/we have carefully followed the instructions in the tender document and that I/we have made such examination of the contract documents and of the plans, specifications and quantity, and of the location where the said work is to be done, and such investigation of the work required to be done and in regard to the materials required to be furnished as to enable me/us thoroughly understand the intention of the same and the requirements, covenants, agreements stipulations and restrictions contained in the contract and in

the said plans and specifications and distinctly agree that I/we will not hereafter make any claim or demand upon LMC based upon or arising out of any alleged misunderstanding or misconception, mistake on my/our part of the said requirements, stipulations, restrictions and conditions.

8. I understand that quantities given in Bill of Quantities in Schedule 'G' are liable to change upto any extent. I will not demand any compensation/cost on this account.

9. I/we have deposited and uploaded proof of EMD deposit for Rs. ..... for the work.

10. If my/our tender is not accepted, this sum shall be returned to me/us latest within 30th day of award of contract. If my/our tender is accepted, the earnest money shall be returned to me/us on my/our entering into contract agreement duly furnishing performance/additional performance security deposit. If upon intimation being given to me/us by the Lucknow Municipal Corporation of performance security/additional performance security deposit defined in Tender Document, I/we fail to deposit the same, then I/we agree to the forfeiture of the earnest money.

11. I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back-to-back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee/Additional Performance Guarantee.

12. Any notice required to be served on me/us if delivered to me/us personally or forwarded by post to me/us (registered) or left at my/our address given herein, such notice shall if sent by post, be deemed to have been served on me/us at the time when in due course of post, it would be delivered at the address to which is sent.

13. I/we fully understand that the written agreement (to be entered into between me/us and the Lucknow Municipal Corporation) shall be the foundation of the rights of both the parties and contract shall not be deemed to be complete until agreement has first been signed by me/us and then by the proper officer authorized to enter into contract on behalf of the Lucknow Municipal Corporation.

14. I/we understand that you are not bound to accept the lowest or any bid you receive.

Encl: As above

Address with phone No.

Signature of Contractor/Tenderer
Name-

Dated the ..... day of 2023

Signature of Witnesses:

Name and address :

Statement of Legal Capacity

(To be forwarded on the letterhead of the Bidder)

Ref.

Date:

To,

Municipal Commissioner,
Lucknow Municipal Corporation,
Lucknow – 226010
Uttar Pradesh
Tel.: +91-522-272 8985
Email: gmcdslko@gmail.com

Dear Sir,

We hereby confirm that we satisfy the terms and conditions laid out in the RFP document.

We have agreed that ..... (Insert individual's name) will act as our representative* and has been duly authorized to submit the RFP. Further, the authorized signatory is vested with requisite powers to furnish such letter and authenticate the same.

Thanking you,

Yours faithfully,

(Signature, name and designation of the Authorized Signatory)
For and on behalf of.....

Letter for Blacklisting

[Location, Date]

To,

[Name and address of Employer]

Subject: Letter of Declaration for not have been Blacklisted

We, [Name of Firm] have not been black listed/ debarred/ termination of contract except for reasons of convenience of employer by any Government/ Government board/ Corporation/ Company/ Statutory Body/ PSU Company/ Non-Government/ Government of any sovereign countries/ Private agencies and Funding Agencies in the last 3 years.

For [Name of Firm],

Authorized Signatory [In full and initials]

Name and Title of Signatory:

Name of Firm:

Address:

FORMAT FOR POWER OF ATTORNEY FOR AUTHORISED SIGNATORY

POWER OF ATTORNEY

(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Sta
Act he stamp paper to be in the name of the firm/ company who is issuing the Power of Atto ey).

We, M/s._____ (Name of the firm/company with address of the registered office) hereby constitute, appoint and authorise Mr./Ms._____ (Name and residential address) who is presently ed with us and holding the position of _____, as our Attorney to do in our name and our ll or any of the acts, deeds or things necessary or incidental to our bid for the work ____ of work), including signing and submission of application proposal, participating in the ngs, responding to queries, submission of information / documents and generally to represent us in all the dealings with Lucknow Municipal Corporation or any other Government Agency or any person, in connection with the works including receiving payments, witness measurements, sign measurement books, compromise, settle, relinquish any claim(s) preferred by the firm and sign "No Claim Certificate" and refer all or any disputes to arbitration until culmination of the process of bidding till the Contract Agreement is entered into with Lucknow Municipal Corporation and thereafter till the expiry of the Contract Agreement.

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

Dated this the _____day of _____20

(Signature and name of authorized

signatory)___

(Signature and name in block letters of all the remaining partners of the firm, Signatory for the
Company)

Seal of firm/ Company

Witness 1:
Name:
Address:
Occupation:

Witness 2:
Name:
Address:

Occupation

: Notes:

- To be executed by all the members individually.

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure

2414

LUCKNOW NAGAR NIGAM

Selection of Bidder for the treatment of Legacy Waste through Bio-remediation, Resource Recovery and Scientific Rejects Disposal at Shivari Lucknow (UP)

Volume-2

Contract Agreement

between

Lucknow Municipal Corporation, Lucknow

&

M/s ..... & M/s .....

Address: .....

NIT No: _____; Date: _____

Issued By: -
Municipal Commissioner,
Lucknow Nagar Nigam, Lucknow
Triloknath Road, Lalbagh,
Lucknow, Uttar Pradesh – 226001

1 Instructions to Bidders (Conditions.)

1.1 Documents: Contents of the SBD

In continuation to Vol-I this section of SBD comprises the contents as listed below, and will additionally include any Addenda issued in accordance with Vol-I

1. Instructions to Bidders (Contd.)
2. General Conditions of Contract
3. Specifications
4. Annexures

1.2 Award of Contract

i.) Financial bids of bidders, qualifying technical pre-qualifications (Eligibility and Technical Evaluation) as set out in Vol.-I, shall be opened under intimation on the E-Tendering Portal in presence of representatives of bidders who chose to be present. Date, time and place of financial bid opening shall also be informed on the E-Tendering Portal.

ii.) The selected bidder with the lowest financial offer (L1) will be selected to take up the work

iii.) Initial contour survey for determining the volume and weight of existing dump shall have to be carried out by the respective selected bidder within 7 days from the date of intimation letter. After fair assessment of quantity existing legacy waste LoA(s) shall be issued.

iv.) The selected bidder(s) shall have to enter in to an agreement with **Lucknow Municipal Corporation, Lucknow** for which they shall be required to deposit Performance Security as per Vol.-I.

v.) Proforma for Agreement is annexed in Annexure Part-II of this document. The agreement is to be typed on stamp paper worth Rs. 100/- affixing a revenue stamp of Rs. 2/-. Cost of stamp paper for Agreement and Stamp Duty shall be borne by the selected bidder.

vi.) The selected bidders shall not proceed with the work unless the agreement has been signed and date of start has been notified by LMC.

vii.) Until a formal contract is prepared and executed, notification of award and shall constitute a binding contract.

viii.) RFP Volume – I Would be part of this contract agreement.

1.3 Scope of Work

The SCOPE OF WORK for project is to Process of Legacy Waste & dispose of Municipal Solid Waste at **Shivari Dumpsite, Lucknow under "Lucknow Municipal Corporation, Lucknow"** through scientific processing and in an environmentally sustainable manner.

The detailed scope shall be as mentioned in Vol-I Terms of RFP and the scope, directions and formats as mentioned in Vol-3 i.e. project information memorandum of RFP.

1.4 Weighment System

i.) The Contractor shall install required weighbridge(s) on its own at the designated sites as approved by LMC, for day-to-day quantification of legacy waste to be processed. This weighment system should meet following conditions:

   a. It should be fully online electronic, automatic system equipped with the latest technology along with backup server facility. Data of weighment system shall be maintained properly for the entire contract period with back-up server facility.
   b. It should be operated in CCTV surveillance with data storage of entire contract period.
   c. Weighment system & CCTV Recording data and shall be provided as & when required by LMC, officials and competent authorities.
   d. Any malfunctioning in operation of weighment system will be the responsibility of Contractor and same shall be required to be rectified within period of 24 hrs. During

this period weighing of MSW may be carried out at an approved private weighbridge located outside at the cost of contractor.

1.5 Land

1. Initial land required for setting up processing plant and machineries shall be required to be cleared by the contractor at legacy dump site.
2. To meet any additional land required for subsequent expansion of the processing plant, contractor can use the land that is recovered after processing the MSW with prior approval.
3. The land area reclaimed by processing will remain with the Authority except as required for setting up of plant which can be used till completion of project period.

1.6 Disposal

1. It is the sole responsibility of the Contractor to dispose of the rejects/inert generated during the process. By-products from such processing viz. recyclables, enriched soil, compost, gas, energy etc. will be the property of the Contractor. It is expected that e-waste, hazardous waste and recyclables such as the plastic, glass, metal etc. does not any way form the part of inert waste.
2. Contractor can temporarily store by-products at waste site but shall clear them on fortnightly basis. Authority may direct the contractor to place treated inert at the site or the nearby quarry for the land levelling purpose.
3. A comprehensive Aggregate Disposal Plan covering activities like Removal, Segregation, Processing, Transportation, Disposal in a scientific manner will be submitted in the Vol-I of SBD. Inert for Contractor would mean non bio-degradable, non-recyclable and non-combustible fraction.
4. Required permissions for processing & disposal shall be obtained by Contractor.

1.7 Payment

1. Contractor shall submit required GST bill for payment at contracted rate on the basis of recorded weighment of net quantity of input waste processed at designated site on weekly / fortnightly / monthly basis. Contractor shall submit at least one bill every month.
2. Payment shall be made within 21 days after submission of bill after ensuring that waste is processed as per the applicable rules in force and removed from the site for further disposal.
3. Achievement of required pro-rata Milestones within the bill period shall also be ensured before payment of bill.

1.8 Extension of Contract.

Contract period may be extended subject to standard Force Majeure conditions if required.

1.9 Penal action against non-performance

Sl	Description	Penalty
1	If there is delay in commissioning of processing plant beyond the scheduled date.	Rs.150000 per month (One month will be considered if the delay is more than 21 days but less than 31 days)
2	If the allocated sites are not cleared within the stipulated period	Rs.10000/- on per week basis, till the site is reclaimed and handed over.
3	In case of non-compliance observed by regulatory authority (UPPCB etc) any at site	Rs. 1000/- on per day basis or the penalty imposed by the regulatory authority, whichever is higher, till the compliance is ensured.
4	The Contractor is responsible for storage / transportation / disposal of residual waste	Rs. 5,000/- per event will be charged to the Contractor.

	safely as per the provisions made in the SWM Rules, 2016. The residual waste should not be dumped on road side or on other's property. If the residual waste is dumped on road side or any other non-designated site penalty will be imposed	
5	If the quantity of inert waste to be disposed off in the sanitary landfill is more than the 10% quantity of waste received at site	Rs.500 per ton shall be charged on the extra weight than 10% of the total waste.

2 General Conditions of Contract (GCC)

2.1 General:

1. Definitions

Approved means approved in writing, including subsequent written information of previous verbal approval and **"Approval"** means approval in writing including as aforesaid.

Authority means the **Municipal Commissioner, Lucknow Municipal Commissioner** who will execute the contract agreement with the Contractor to carry out the work. The Authority may delegate any or all functions to a person or body nominated by him for specified functions. Employer is synonym of Authority and carries the same meaning wherever used.

Bill of Quantities / Price Schedule means the priced and completed Bill of Quantities forming part of the Bid.

Completion means completion of the entire contracted work, as certified by the Engineer-in-Charge, in accordance with provisions of agreement. Exhaustion of quantity of any particular item mentioned in the bid document shall not imply completion of work or any component thereof.

Completion Date is the date of completion of the Works as certified by the Engineer, in accordance with Notice to Proceed with the works and The Intended/Stipulated Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the engineer by issuing an extension of time.

Contract is the Contract between the Authority and the Contractor to execute and complete the Works. Agreement is synonym of Contract and carries the same meaning wherever used.

Contract Data defines the documents and other information, which comprise the Contract.

Contractor is a person or a legal entity whose Bid to carry out the Works has been accepted by the Authority.

Contractor's Bid is the complete bid document submitted by the Contractor to the Authority.

Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract. Contract amount means the amount of contract worked out on the basis of accepted bid.

Days are calendar days; months are calendar months.

Defect means any part of work included in the contract not executed in accordance with the specifications and/or terms.

Drawings means the drawings prepared and issued by the Engineer and referred to in the tender and specifications and any modifications of such drawings and such other drawings, calculations and technical information of a like nature as may, from time to time, be issued by the Engineer.

The Employer is the Authority as defined above.

Engineer-in-charge means the person nominated by the Authority for overall execution of works and administering the contract. The Word "Engineer" wherever used, other than mentioned or specified, means the Engineer-in-charge.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site for execution of work at his own cost.

Government means the Government of Uttar Pradesh. or the Department of Urban Development and Housing Department, GoUP as the case may be.

GST shall mean Goods and Service Tax- Central, State and Inter State.

Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.

Market Rate shall be the rate as decided by the Engineer on the basis of the cost of materials and labour at the site where the work is to be executed plus 10% to cover, all overheads and profits etc. Provided that no extra overheads and profits shall be payable on the part(s) of work assigned to other agency(s) by the contractor as per terms of contract

Plant is any integral part of the Works that shall have a mechanical, electrical, electronic, chemical, or biological function.

The Site is the area defined as such in the Contract Data.

Site Investigation Reports are those that are available with the Detailed Project Report (DPR).

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer-in-Charge.

The Start Date is the date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Date.

A Sub-Contractor is a person or corporate body who has a Contract with the Contractor to carry out specialized part of the construction work under the Contract.

Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

Tender / Bid / Bid Document / Standard Bidding Documents (SBD) & Tenderer / Bidder are the synonyms and carry the same meaning where ever used.

A Variation means any change in the work which is instructed or approved as variation under this contract. The Works, as defined in the Contract Data, are what the Contract quires the Contractor to execute.

The Work or **"works"** or **"Project"** where used in these conditions shall unless there be something either in the subject or context repugnant to such work, be construed and taken to mean the work by virtue of contract, contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

Work Plan means the implementation plan, including phasing of works, physical completion milestones and other such details that the Authority shall seek from time to time with respect to tracking progress of the works.

A.) Interpretation: In interpreting these Conditions of Contract, except where the context requires otherwise

i.) Words indicating the singular also include the plural and vice versa. Words indicating one gender include all genders. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about these Conditions of Contract.

i. If component wise completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any component of the Works (other

PMU (RCED) * MoUD, Lucknow * SMW

than references to the Completion Date and Intended Completion Date for whole of the Works).

ii.) The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale. The documents forming the Contract shall be interpreted in the following order of priority:

1. Agreement,
2. SBD
3. Notice to Proceed with the Work,
4. Letter of Acceptance,
5. Contractor's Bid,
6. Contract Data,
7. Special Conditions of Contract Part II,
8. General Conditions of Contract Part I,
9. Specifications,
10. Drawings,
11. Bill of Quantities, and
12. Any other document listed in the Contract Data.

iii.) In the case of discrepancy, the following standards in order of preference shall be observed unless otherwise specified by the Authority: -

i. Environmental Protection Act 1986, and the rules made there under and all notifications of Government of Uttar Pradesh and Government of India in exercise of powers conferred under the Act;
ii. SWM Rules 2016 and amended from time to time;
iii. CPHEEO Municipal Solid Waste Management Manual;
iv. Any other standards specified by statute and Applicable Laws;
v. Indian Standard Specifications of B.I.S.;
vi. Suitable specification/standard devised by Authority, if any;

iv.) If there are varying or conflicting provisions made in any one document forming part of the contract, the Tender Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

v.) Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised there in according to drawings and specifications or from any of his obligations under the contract.

vi.) In case of errors, omissions and / or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications, etc. the following order of precedence shall apply:

i. Between scaled and written dimension (or description) on drawing, written dimension shall be adopted.
ii. Between the written or shown description or dimensions in the drawings and the corresponding one in the specification, the former shall be taken as correct.
iii. Between the written description of the item in the specifications and descriptions in the bill of Quantities of the same item, the latter shall be adopted.
iv. Between the duplicate / subsequent copies of the tender and original tender, the original tender shall be taken as correct.

PMU (RCUES) * Mouyakhan * SMW, Lucknow

B.) All documents forming the Contract are to be taken as mutually explanatory of one another. But in case of ambiguity or discrepancies in conditions or specifications the same shall be explained and adjusted by Engineer. In case the Contractor does not agree with the explanation given by the Engineer, then the matter, on his written notice, will be referred to the Employer and his decision shall be final and binding to the contractor.

C.) In all cases of omissions and for doubts or discrepancies in any of the items or specifications, a reference shall be made to the Engineer. Elucidation, elaboration or decision of the engineer shall be considered as authentic. The Contractor shall be held responsible for any error that may occur in the work through lack of such reference and precaution.

D.) Any dispute arising due to typing mistakes/ omissions in the document shall be mutually discussed between Contractor and Engineer and the decision of the Engineer will be final and binding on the contractor in the matter.

2. Language and Law:

The language of the Contract and the law governing the Contract are stated in the Contract Data.

3. Engineer's Decisions:

Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer. However, if the Engineer is required, under the rules and regulations and orders of the Employer, to obtain approval of some other authorities for specific actions, he will so obtain the approval.

4. Delegation:

The Engineer, with the approval of the Employer, may delegate any of his duties and responsibilities to other people, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

5. Communications:

All Certificate, notices or instructions to be given to the contractor by Employer / Engineer shall be sent on the address or contact details given by the contractor in relevant section of Bid. The address and contact details for communication with the Employer/ Engineer shall be as per the details given Contract Data to GCC. Communications between parties that are referred to in the conditions shall be in writing. The Notice sent by Facsimile (fax) or other electronic means shall be effective on confirmation of the transmission. The Notice sent by Registered post or Speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service.

6. Subcontracting:

a.) The contractor may, on written approval of Engineer, subcontract specialized part of the construction work with the approval of the Engineer in writing, up to total of 25% of the contract price but will not assign the Contract. Subcontracting shall not alter the contractor's obligations. Payments for such sub-contracted works will be made to the Contractor as per terms of the contract.

i.) Beyond what has been stated in clause 6a, if the contractor proposes sub-contracting any part of the work during execution of the works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, the Engineer will consider the following before according approval:

i. The Contractor shall not sub-contract the whole of the works.

ii. The Contractor shall not sub-contract any part of the work without prior consent of the Engineer. Any such consent shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any his sub-contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents and workmen.

iii. The Engineer will satisfy himself before approving sub-contracting of specialized part of the work whether –

1. The nature of specialized work warrants such sub-contracting: and

b.) The sub-contractor so proposed for the work possess the experience, qualification and equipment necessary for the job proposed to be entrusted to him in proportion of the Quantum of works to be sub-contracted.

7. Other Contractors:

i.) If in a particular site more than one contractor is working, the contractor shall, in a most harmonious way, co-operate and share the site with other contractors, public authorities and the employer.

ii.) The contractor should take up the work in a manner as decided by the Engineer to ensure there is least hindrance to the smooth flow of materials including movement of vehicles and equipment of other contractors till the completion of the works.

8. Personnel:

i.) The Contractor shall employ for the work technical personnel named in the Contract Data or other technical persons approved by the Engineer. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel stated in the Contract Data.

ii.) If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Works in the Contract.

iii.) The Contractor shall not employ any retired Govt. officer who has worked in any Engineering Department/PSU/Nigam of the State Government and has either not completed two years after the date of retirement or has not obtained appropriate permission for employment with the Contractor.

iv.) The contractor shall not be permitted to bid for works under supervisory control of General Manager and Project Manager concerned who is responsible for execution of contracts, in which his near relative is posted. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any officer in the LMC. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of LMC and make him liable for black listing.

a. If the contractor fails to employ personnel as specified in the Contract Data, recovery shall be made at the rates specified in the Contract Data.

i. Employer's and Contractor's Risks: The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks that this Contract states are Contractor's risks.

ii. Employer's Risks: The Employer is responsible for the excepted risks which are in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, invasion, act of

PMU (RCU) * SMW, Lucknow

foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees), natural calamities and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive.

iii. Contractor's Risks:

1. All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks, are the responsibility of the Contractor.
2. All risks and consequences arising from the inaccuracies or falseness of the documents and/or information submitted by the contractor shall be the responsibility of the Contractor alone, notwithstanding the fact that designs/drawings or other documents have been approved by the department.
3. Safety: The Contractor shall be responsible for the safety of all materials and activities on the Site. The contractor shall comply to the safety guidelines and best industrial practice to implement safety at work place.
4. Liability for Accidents to Person: The contractor shall be deemed to have indemnified and saved harmless the Government and/or the Authority, against all action, suits, claims, demands, costs etc. arising in connection with injuries suffered by any persons employed by the contractor or his sub-contractor for the works whether under the General law or under workman's compensation Act, or any other statute in force at the time of dealing with the question of the liability of employees for the injuries suffered by employees and to have taken steps properly to ensure against any claim there under.

v.) Insurance: (Applicable for cost of work being more than Rs. 40.00 Lacs)

a. The Contractor at his cost shall provide insurance cover issued by a public sector general insurance company, in the joint names of the Employer and the Contractor, valid from the Start Date to the date of completion, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

i. loss of or damage to the Works, Plant and Materials;
ii. loss of or damage to Equipment;
iii. loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
iv. Personal injury or death.

vi.) Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in Indian Rupees to rectify the loss or damage incurred.

a. The Contractor at his cost shall also provide, in the joint names of the Employer and the Contractor, insurance cover from the date of completion to the end of defect liability period, in the amounts and deductibles stated

PMU (RCUES) * SMW, Lucknow *

in the Contract Data forth following events which are due to the Contractor's risks:

b. Personal injury or death.

c. Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the completion date/ start date. All such insurance shall provide for compensation to be payable in Indian Rupees.

d. Alterations to the terms of insurance shall not be made without the approval of the Engineer.

e. Both parties shall comply with any conditions of the insurance policies.

I. Site Investigation Reports: The Contractor, in preparing the Bid, may rely on any Site Investigation Reports referred to in the Contract Data, supplemented by any other information available to him, before submitting the bid.

II. Queries about the Contract Data: The Engineer will clarify queries on the Contract Data.

III. Contractor to execute/construct the Works:

a. The Contractor shall execute/construct commission & hand over the Works in accordance with the Specifications and Drawings.

b. The contractor shall execute/construct the works by adopting latest and environment friendly technology required to ensure the quality of works as per specifications. The contactor shall deploy the equipment and machinery as given in Contract Data.

c. The contractor shall supply at his own cost all labour, skilled and un-skilled and all things necessary (except such special things, if any, as may in accordance with the specifications be supplied from the Engineer's stores) such as plants, tools, appliance, implements, ladders, cordage, tackle, scaffolding, shoring, strutting, pumps boilers, fuel oils, packing, derricks, boring tools winches and power as well as all other apparatus and temporary works requisite or proper for the proper execution of the work, whether original, altered or substituted and whether included in the specification or other documents forming part of the contract or referred to in those conditions or not which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer as to any matter as of which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage here to for and from the works. The contractor shall also supply without charge the requisite number of persons and things necessary for the purpose of setting out the works, and counting, weighing and assisting in the measurement and examination at any time and from time to time, the work done, or materials, supplied by him. Failing his doing so the same may be provided by the Engineer at the expense and risk of the contractor and the expense (of which the certificate of the Engineer shall be final) may be deducted from any money due to contractor under this contract or from his security deposit. The contractor shall also provide at his own expense all necessary fencing and lights required to protect the public from accident and shall assume all liability for and indemnify the Employer against all actions or suits arising out of or in connection with the carrying out the works whether such actions are brought by members of the public neighbouring owners or workman employed on the works save only actions for permanent interference with casements to which the site may be subject at law or inequity or otherwise arising out of the Employer's title to the site. The contractor shall carry out the works other legal enactments applicable to them and gives all notice and pay all fees payable to local authorities and others in respect of them. The contractor shall be responsible for the adequacy, strength and safety of all shoring, strutting, curbing, bonding, brick work, masonry, concrete, permanent or temporary, appliances, matters and things furnished by him for the purpose of this contract.

PMU (RCUES) * MOUKHOU * SMW, Lucknow

d. The description given in the schedule of quantities shall, unless otherwise stated, be held to include wastage of materials, cartage and carriage, carrying and return of empties, hoisting, shaping, fitting and fixing in position and all other labour necessary in and for the full execution and completion of the works as aforesaid and in accordance with good practice and recognized principles.

9. The Works to Be Completed by the Intended Completion Date:

Time is essence of the Contract. The Contractor shall commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

10. Approval by the Engineer:

a.) The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them.

b.) The Contractor shall be responsible for design of Temporary Works.

c.) The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

d.) The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

e.) All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

11. Discoveries:

Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

12. Possession of the Site:

The Employer shall handover complete or part possession of the site to the Contractor, 7 days in advance of Bio-remediation programme.

13. Access to the Site:

The Contractor shall allow access to the Site and to any place where work in connection with the Contract is being carried out, or is intended to be carried out to the engineer and any person/persons/agency authorized by The Engineer, the Authority or the Government.

14. Instructions:

The Contractor shall carry out all instructions of the Engineer, which comply with the applicable laws where the Site is located.

15. Dispute Redressal System:

a.) If any dispute or difference of any kind what-so-ever shall arise in connection with or arising out of this Contract or the execution of Works there under, whether before its commencement or during the progress of Works or after the termination, abandonment or breach of the Contract, it shall, in the first instance, be referred for settlement to the competent authority, described along with their powers in the Contract Data, above the rank of the Engineer. The competent authority shall, within a period of forty-five days after being requested in writing by the Contractor to do so, convey his decision to the Contractor. Such decision in respect of every matter so referred shall, subject to review as hereinafter provided, be final and binding upon the Contractor. In case the Work is already in progress, the Contractor shall proceed with the execution of the Works

PMU (RCUES) * MOUNTAIN * SMW, Lucknow

pending receipt of the decision of the competent authority as aforesaid, with all due diligence.

b.) Either party will have the right of appeal, against the decision of the competent authority, to the arbitration if the amount appealed exceeds rupees one lakh.

16. Procedure for Resolution of Disputes:

a. The Competent Authority mentioned in clause 15(a) shall give a decision in writing within 45 days of receipt of a notification of a dispute.

b. Either party may refer a decision of the Competent Authority to Arbitration within 28 days of the Competent Authority's written decision. Arbitration shall be under the Arbitration and Conciliation Act 1996. Parties, before or at the time of appointment of Arbitral Tribunal may agree in writing for fast-track arbitration as per the Arbitration and Conciliation Act, 1996 (26 of 1996) as amended in 2015.

c. If neither party refers the dispute to Arbitration within the above 28 days, the Competent Authority's decision will be final and binding.

d. It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed, if any, in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the decision of the Competent Authority.

e. It is also a term of this contract that member (s) of the Arbitration Tribunal shall be a working/retired Chief Engineer Level (II/I) of GoUP with experience in handling public works engineering contracts. This shall be treated as a mandatory qualification to be appointed as arbitrator.

f. The Arbitration shall be conducted in accordance with the following procedure, in case Initial Contract Price is more than Rs. 100.00 Crore: -

i.) In case on a decision of the Competent Authority in a dispute or difference arising between the Employer and a Contractor relating to any matter arising out of or connected with this Agreement, the matter will be referred to an Arbitral Tribunal. The Arbitral Tribunal shall consist of three Arbitrators, one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties and shall act as presiding Arbitrator. In case of failure of the two Arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the Arbitrator appointed subsequently, the presiding Arbitrator shall be appointed by **Municipal Commissioner, Lucknow Municipal Corporation, Lucknow, Uttar Pradesh.**

ii.) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (i) above within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then he shall be appointed **Municipal Commissioner, Lucknow Municipal Corporation, Lucknow, Uttar Pradesh.**

iii.) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the Arbitral Tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.

g. Where the Initial Contract Price as mentioned in the Acceptance Letter is Rs. 100.00 Crore and below, disputes and differences in which an Adjudicator/Competent Authority has given a decision shall be referred to a sole Arbitrator. The sole Arbitrator would be appointed by the agreement between the parties; failing such agreement

PMU (RCUES) * MOUNTAINS * PMU

within 15 days of the reference to arbitration, he shall be appointed by **Municipal Commissioner, Lucknow Municipal Corporation, Lucknow, Uttar Pradesh.**

h. Arbitration proceedings shall be held at Department of UD&HD, Uttar Pradesh, India or such place as may be fixed by the Arbitral Tribunal in consultation with both the parties. Failing any such agreement, the Arbitral Tribunal shall decide the venue. The language of the arbitration proceedings shall be English or as decided by the Arbitrator/ Tribunal. However, language that of all documents and communications between the parties can be English or Hindi.

i. Performance under the contract shall continue even after reference to the arbitration and payments due to the contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.

j. Judicial jurisdiction shall be at Uttar Pradesh High Court, Lucknow, Uttar Pradesh.

17. Programme:

1. Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works, along with monthly cash flow forecasts for the construction of works.
2. The Contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/ equipment's being placed in field laboratory and the location of field laboratory along with the Programme. The Engineer shall cause these details to be verified at each appropriate stage of the programme.
3. An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining works, including any changes to the sequence of the activities.
4. The Contractor shall submit to the Engineer for approval an updated Programme at intervals of 60 Days or no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
5. The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised Programme shall show the effect of Variations and Compensation Events.
    a. Record of Hindrance- Contractor shall be liable to inform within seven day from the event of any hindrance in work due to the circumstances beyond his control, delay in issue of stores with regard to materials needed immediately during the progress of work, or hindrance in work by Client department /any other department. Engineer shall receive and may allow the record of hindrance to the extent as considered justifiable by Engineer in the following form prescribed below which will become the part of agreement.

Letter No. & Date of contractor on starting the hindrance	Date of start of hindrance	Date of end of hindrance	Nature and details of hindrance	Remarks and recommendation	Sign. of P.M. allowing the hindrance

Contractor should note that the above record of hindrance shall not entitle him for any claim or increase in rates but shall only verify and record his eligibility considerations with regard to extension of time if he at all applies.

18. Extension of the Intended Completion Date:

i. The Engineer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining Works, which would cause the Contractor to incur additional cost.

ii. The Engineer shall decide whether and by how much time to extend the Intended Completion Date within 60 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date. Non application by the contractor for extension of time shall not be a bar for giving fair and reasonable extension by the Employer and his decision shall be binding on the contractor.

iii. However, such extension/extensions of the Intended Completion Date may, at the discretion of the Employer, be subject to approval by Client Department.

iv. The time available for completion of work, as determined by such extended completion date shall be of essence and shall be adhered religiously.

19. Delays Ordered by the Engineer:

The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works. Delay/delays totalling more than 30 days will require prior written approval of the Employer.

20. Management Meetings:

i.) The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for the Works.

ii.) The Engineer shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all those who attended the meeting.

2.2 Quality Control:

1. Identifying Defects:

1. The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.
2. If during or after execution/construction, Government orders inspection by TAC or any other agency of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for Employer to recover the same from him in the manner prescribed in this contract or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract

in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Employer to the contractor, without any interest thereon whatsoever.

Provided that the Employer shall not be entitled to recover any sum over paid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Engineer on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Engineer.

3. Contractor Liable for Damages, Defects: If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatsoever arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer may cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. If any amount still remains unrecovered the same shall be treated as a debt due and will be recovered as per law. The security deposit of the contractor shall not be refunded before the repair of defects or after handing over of site after execution of work to Authority/ Government, or till the final bill has been prepared and passed whichever is later.
4. The Contractor shall be responsible for safety of assets so created till the completed work has been duly handed over to the Government.

2. Tests:

1. For Carrying out mandatory tests as prescribed in the specification. The Contractor shall establish field laboratory at the location decided by Engineer. The field laboratory will have minimum equipment as specified in the Contract Data. The contractor shall be solely responsible for:
    a. Carrying out the mandatory tests prescribed in the latest SWM Rules 2016 and other applicable Specifications.
    b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.
        i. If the Engineer instructs the Contractor to carry out a test not specified in the Specification or to carry out these tests from independent laboratories (NABL Accredited / Govt. Technical Institutes or otherwise) to ensure proper quality control, the Contractor shall pay for the test including transportation costs thereon and any samples.
        ii. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.
        iii. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the Engineer. The contractor shall stick to the approved source unless it is absolutely unavoidable.

PMU (RCUES) * MoUD * SMW

Any change shall be done with the prior approval of the Engineer for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials as specified in list of preferred makes and which are proposed to be used for work, for the approval of the Engineer along with samples and once approved, he shall stick to it.

iv. Third Party Quality Control/Assurance: Third part quality control/assurance may be conducted by Employer by IIT/NIT/ Government Engineering College/Government Institutes or any other Selected agency at least once in three months. The contractor has to provide all necessary assistance and has to submit compliance report within targeted time frame. All expenditure for Third part quality control/assurance shall be borne by the contractor unless specifically reimbursed by the Client Department separately.

3. **Correction of Defects noticed:**
   1. The Engineer shall give notice to the Contractor of any Defects
      a. Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice.
      b. The Defect rectification shall be considered as addressed properly subject to Engineer's satisfaction.
   2. The Engineer may at his discretion follow RFI (Request for Inspection) system for execution of work.
4. **Uncorrected Defects:**

If it shall appear to the Engineer or his subordinate in charge of the work that any work or part has been executed with imperfect or unskilled workmanship or with materials of any inferior description or that any materials or articles provided by the contractor for the execution of the works are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract the contractor shall on demand in writing from the Engineer specifying the work, materials or articles complained of, forth-with rectify, remove demolish and reconstruct the work so specified, in whole or in part as the case may require, or as the case may be, remove the materials, or articles so specified and provide other proper and suitable materials or articles at his own proper charge and cost, and in the event of his failing to do so within a period to be specified by the Engineer in his demand aforesaid, then the contractor shall be liable to pay compensation at the rate of one percent or such smaller amount as the Employer (whose decision in writing shall be final) may decide on the amount of the cost of the whole work for every day not exceeding ten days, while his failure to do so shall continue, and in case of any such failure the Engineer may rectify remove, demolish and reconstruct the works, or remove and replace with others, the material or articles complained of as the case may be at the risk and expense in all respects of the contractor and such expenses may be deducted from such sum as may be due to the contractor or may become due to him and from his security deposit. A certificate by the Engineer as to the amount of the expenses incurred shall be final and binding upon the contractor.

2.3 Cost Control:

1. **Bill of Quantities and Measurement of Work Done:**
   A.) The Bill of Quantities shall contain items for the site clearing, construction, installation, execution and removal to be done by the Contractor.
   B.) The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item for the

Works subject to the adjustment as per quoted item rates. The quantities mentioned in this document may vary on either side up to any extent for which no claim whatsoever shall be entertained.

C.) All measurements and levels shall be taken jointly by Engineer or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer and the contractor or their representatives, in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

D.) If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer or his representative, the Engineer and the Department shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer or his representative shall be deemed to be accepted by the Contractor.

E.) The contractor shall, without extra charge, provide all assistance with every appliance, Labour and other things necessary for measurements and recording levels.

F.) Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.

i.) The Engineer or his authorised representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

ii.) It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defect's liability period.

iii.) Notice to be given before work in covered up: The contractor shall give not less than seven days' notice in writing to the Engineer, or his duly authorized person for recording the measurement of any work, in order that the same may be measured, and correct dimensions thereof be taken before the same is so cover up or place beyond the reach of measurement. If any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expenses and no payment or allowance shall be made for such work or the materials with which the same was executed.

2. **Variations:**

The Engineer shall, having regard to the scope of the Works and the sanctioned estimated cost, have power to order, in writing, variations within the scope of the Works he considers necessary or advisable during the progress of the Works. Such Variations shall form part of

the Contract and the Contractor shall carry them out and include them in updated Programmes produced by the Contractor. Oral orders of the Engineer for Variations, unless followed by written confirmation, shall not be taken into account.

3. **Payments for Variations:**
   a. If rates for variation/supplement items are specified in Bill of Quantity, the contactor shall carry out such work at the same rate.
   b. If the rates for Variation/Supplement items are not specified in the Bill of Quantities, the Engineer shall derive the rate from similar items in the Bill of Quantities.
   c. If the rate for Variation/Supplement items cannot be determined manner the in the manner specified in Clause 3a or 3b above, Contractor shall, within 14 days of the issue of order of variation work, inform the Engineer the rate which he proposes to claim, supported by analysis of the rates, which shall include invoices, vouchers etc. and manufacturer's specifications for the work failing which the rate approved by Engineer shall binding. The Engineer shall assess the quotation and determine the rate based on prevailing market rates within one month of the submission of the claim by the Contractor. As far as possible, the rate analysis shall be based on the standard engineering practices and the current schedule of rates of the district public works department/DSR. The decision of the Engineer on the rate so determined shall be final and binding on the Contractor.
   d. Lump Sum Provisions in Tender: When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer capable of measurement, the Engineer may at his discretion pay the lump-sum amount entered in the estimate, and the certificate in writing of the Engineer shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.
4. **Cash Flow Forecasts:**

   When the Programme is updated, the Contractor shall provide the Engineer with an updated cash flow forecast.

5. **Payment Certificates:**

   The payment to the contractor will be as follows for construction work:

   a.) The Contractor shall submit to the Engineer weekly/fortnightly/monthly statements of the value of the work executed less the cumulative amount certified previously supported with detailed measurement of the items of work executed in measurement books authorised by Employer. For the purpose of payment, the Contractor has to submit invoice prescribed under the GST act/rules showing incidence of GST as applicable on the date of invoice separately, failing which the Engineer may refuse to make payment.
   b.) The Engineer shall check the Contractor's weekly/fortnightly/monthly statement within 7 days and certify the amount to be paid to the Contractor.
   c.) The value of work executed shall be determined, based on measurements by the Engineer.
   d.) The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
   e.) The value of work executed shall also include the valuation of Variations and Compensation Events.

f.) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

g.) The Payment of final bill shall be governed by the provisions of Clause 12.49 of GCC.

6. Payments

1. Payments shall be adjusted for deductions for advance payments, security deposit, other recoveries in terms of the Contract and taxes at source, as applicable under the law. The Engineer shall endeavour to pay the Contractor the amounts he has certified within 14 days of the date of each certificate.
2. The Employer may appoint another authority, as specified in the Contract Data (or any other competent person appointed by the Employer and notified to the contractor) to make payment certified by the Engineer.
3. Items of the Works for which no rate or price has been entered in the Bill of Quantities, will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
4. The interim or running account bills shall be submitted by the contractor for the work executed on the basis of recorded measurements on the format as approved by the Engineer in triplicate along with soft copy of the bill on or before the date of every month fixed for the same by the Engineer. Engineer shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer. The amount admissible shall be paid within forty-five days after the day of certification of the bill by the Engineer or his authorized representative together with the account of the material issued by the department, or dismantled materials, if any along with all required supporting documents.
   i.) All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/ are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.
   ii.) Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of work, if the extension of Intended Completion Date is not granted by the competent authority.
   iii.) The contractor shall, after receiving his interim payment, clear all the dues of his labour/ material suppliers & produce a certificate/receipt on this account with next running bill, if the contractor does not clear these dues or unnecessarily

PMU (RCUES) * MWS * PMU, Lucknow

delays the same, the Engineer at his discretion can make payments to these labour/ material suppliers directly. Any such payment shall be recovered from the contractor's bill.

7. Compensation Events:

i.) The following shall be Compensation Events unless they are caused by the Contractor:

a. The Engineer orders a delay or delays exceeding a total of 30 days.
b. The effects on the Contractor of any of the Employer's Risks.

ii.) If a Compensation Event would prevent the Works being completed before the Intended Completion Date, the Intended Completion Date shall be extended. The Engineer shall decide whether and by how much the Intended Completion Date shall be extended.

8. Tax:

i.) The rates quoted by the Contractor shall be deemed to be inclusive of GST and all other levies, duties, royalties, octroi, cess (including labour cess), toll, taxes of Central and State Governments, local bodies and authorities as applicable on last stipulated date of receipt of tender including extensions if any. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

ii.) No adjustment i.e. increase or decrease shall be made for any variation in the rate of Labour Cess, or any other tax, levy or cess applicable on inputs.

a. The contractor shall deposit royalty and obtain necessary permit for supply of earth, sand, stones, kankar etc; from local authorities as per prevalent laws.
b. Conditions for reimbursement of levy taxes if levied after receipt of tenders:

iii.) Effect of variation in rates of Labour Cess or imposition or repeal of any other tax, levy or cess applicable on output of the works contract shall be adjusted on either side, increase or decrease. Provided for Labour Cess, or any other tax, levy or cess varied or imposed after the last date of receipt of tender including extensions if any, any increase shall be reimbursed to the contractor only if the contractor necessarily and properly pays such increased amount of taxes/levies/cess, provides copies of original deposit receipt and such increased amount is received by the Employer from Govt. Provided further that such adjustment including any increase in GST shall not be made in the extended period of contract for which the contractor alone is responsible for delay as determined by the Employer.

iv.) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the Employer and/or the Engineer and further, shall furnish such other information/document as the Engineer may require from time to time.

v.) The contractor shall within a period of 30 days of the imposition of any such further tax or levy or cess give a written notice thereof to the Engineer that the same is given pursuant to this condition, together with all necessary information relating thereto.

vi.) Currencies: All payments will be made in Indian Rupees only.

vii.) Security Deposit/ Retention and Release of Performance Security and Security Deposit/ Retention.

a. Contractor may deposit performance security of 5 % before the execution of Contract Agreement the Balance security shall be deducted from the

PMU (RCUES) * Nagpur Metro Rail Corporation *

running bills @5.5% and the cumulative amount of security so deducted shall be equal to 5% of contract value.

b. On execution of the whole of the work, removal of plants and equipment's from site & handing over of the project site to the Employer the total amount retained as Security Deposit will be repaid to the contractor without interest subject to all the defects having been corrected within one month.

c. The additional performance security, if any, for unbalanced bids will be repaid to the contractor when the execution of work is completed as certified by the Engineer.

d. The contractor may submit the Security Deposit in form of any interest-bearing security (FDR/TDR etc.) of a Public Sector Bank/IDBI/AXIS/ICICI/HDFC Bank in the name of the Employer or National Saving Certificates duly pledged in favour of the Employer or in the shape of Bank Guarantee issued by a Public Sector Bank/IDBI/AXIS/ICICI/HDFC Bank.

9. Liquidated Damages:

i.) The Contractor shall pay liquidated damages to the Employer at the rate per week stated in the Contract Data for the period that the Completion Date is later than the Intended Completion Date. Liquidated damages at the same rate shall be withheld if the Contractor fails to achieve the milestones prescribed in the Contract Data. However, in case the Contractor achieves the next milestone the amount of the liquidated damages already withheld shall be restored to the Contractor by adjustment in the next payment certificate. The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.

ii.) If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.

iii.) In case the contractor fails to make up for the delay even at the time of completion of work all withheld amounts shall be deducted from the bill against work actually done.

iv.) All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor under the terms of this contract, on any account whatsoever and in the event of his Security deposit being reduced by reason of any such deductions or sale as aforesaid the contractor shall within 10 days make good in fixed deposit receipt tendered by a scheduled commercial bank and endorsed in favour of the Employer, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof.

a. Mobilisation Advance Payment (Applicable in case the contract price is more than Rs. 5.00 crores):

b. The Employer will make the following advance payment to the contractor against submission by the Contractor of an unconditional Bank Guarantee substantially as per format provided by Employer @ 110% of the advanced amount in a form and by a Public Sector Bank/IDBI/ AXIS/ICICI/HDFC Bank and such Bank being acceptable to the Employer. Provided sufficient funds, to cover the amount, have been released by the Government.

c. On written request of the Contractor an interest-bearing mobilization advance (interest @ 10%) of amount equals to 10% of the contract price in two equal instalments shall be given.

d. Mobilisation advance shall be payable only after submission of Bank Guarantee and its verification for sum equal to 110% of mobilisation advance requested on prescribed format from designated banks.

e. First instalment of 5% will be payable within 30 days of execution of the agreement and second instalment shall be payable after construction of project office at site and deployment of required plant & machinery and manpower at site.

f. Quarterly monitoring of progress of work for which mobilisation advance is accorded shall essentially be submitted by Engineer-in-charge.

g. Name of work (item/quantity) for which mobilisation advance is given shall be recorded. If the designated work is not completed in 3 months, then simple interest @ 8% from the date of payment of mobilisation advance shall be charged. If the designated work is not completed in next quarter (after 6 months) then the Bank Guarantee submitted shall be encashed for recovery of mobilisation advance and accrued interest.

   If the contractor completes all the designated work in 6 months, balance mobilisation advance shall be recovered in between 7th to 12th month without interest.

h. If the contract is terminated by default of Contractor, all the sum of mobilisation advance shall be recovered with interest @ 8% quarterly compounding.

i. The second instalment shall be released by the Engineer only after:
   i. At least 70% of the first instalment has been utilized and,
   ii. On submission of evidence certifying that the first instalment of the mobilization advance has been utilized on purchase/advances towards procurement of materials/equipment's on payments to vendors/ designers/ lab investigations/ surveyor etc. The Engineer may demand production of such invoices, vouchers etc. to satisfy himself about proper utilisation of the amount so advanced, and
   iii. The work has actually been started and the contractor has submitted his written request.

j. The Bank Guarantee shall remain effective until total mobilisation advances with interest, if any, has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor.

v.) The contractor may submit the Bank Guarantee equivalent to the total mobilization advance in maximum of five instalments, which will be released progressively upon a recovery of equivalent amounts.

vi.) The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor for the construction work, following the schedule of completed percentage of the work on payment basis @ 15 percent of the gross value of the work built in such a way the entire advance is recovered by the time 80% of gross value of the contract is executed and paid, together with interest due to entire outstanding amount up to the date of the recovery of the instalment.

vii.) No account shall be taken of the advance payment or the repayment in assessing valuation of work done, Variations, price adjustments, Compensation events or liquidated damages.

10. Securities including Performance Security:

10.1 Performance Security

i. The Performance Security equal to 5 percent of the contract price is mandatory to be deposited as per Clause 8 vii). The Balance security shall be deducted from the running bills @5.5 % and the cumulative amount of security so deducted shall be equal to 5% of contract value. The Performance Security {other than deposited by NEFT (EMD) or cash deducted from bills} shall be valid until 45 days from the stipulated date of completion and duly extended until 45 days from the date of issue of the certificate of completion. For avoidance of doubt, it is clarified that a performance bank guarantee of a lesser period shall not be accepted.

ii. Further, if the amount of work exceeds the tendered amount, due to change in scope of work or any other reason additional Performance Guarantee of of the excess amount shall be provided by the Contractor.

iii. The performance security as well as security deposit in the shape of N.S.C.s, FD.R.s, Bank Guarantees etc. will be accepted on the conditions that Employer will hold the deposit at the risk of the depositor and will not be liable in the event of the loss of the security due to failure of the bank or to any other cause and that the loss will fall on the depositor who will have to deposit fresh security.

iv. Failure of the successful Bidder to comply with the requirements constitute sufficient grounds for cancellation of the award and forfeiture of the Earnest Money. He will also be debarred from participating in future bids under LMC for one year.

10.2 Additional Performance security for Land reclamation

An additional Performance Security to ensure 90% land reclamation and equal to 5% of contract value shall be deducted from the each running bills @5.5 % and the so that the cumulative amount of security so deducted shall be equal to 5% of contract value.

Lucknow Municipal Corporation shall be free to retain the amount of performance security and additional performance security if contractor fails to achieve the target of 100% Bio-remediation, 100% disposal of by-product and 90% land reclamation.

11. Cost of Repairs:

Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability period shall be remedied by the Contractor at his cost if the loss or damage arises from the Contractor's acts or omissions.

If the contractor or his workmen or servants shall break, deface, injure or destroy any part of a building in which they may be working or any building, road, fence, enclosure or grassland or cultivated ground continuous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work while in progress from any cause whatsoever or any imperfections become apparent in it within defect liability period shall have been given by the Engineer as aforesaid, the contractor shall make the same good at his own expense or in default the Engineer may correct the same and make good by other workmen and deduct the expense (for which the certificate of the Engineer shall be final) from any sums that may be then or at any time thereafter may become due to the contractor or from his security deposit.

2.4 Finishing the Contract:

1. Completion of Works:

The contractor shall request the Engineer to issue a certificate of completion of the construction of the works, and the Engineer will do so upon deciding that the work is fully executed.

2. Inspection & Handing Over:

1. Handing Over: The Contractor shall be responsible for handing over the reclaimed site to the Authority. The Contractor must note that in the process of handing over, the Authority may require the works to be inspected by a committee, by whatever name called. The Contractor shall promptly or within such time as may be communicated by the Engineer, rectify all the defects/ shortcomings pointed out by the said committee to enable speedy handing over.
2. Inspection: All works under or in course of execution or executed in pursuance of this contract shall at all times be open to the inspection of the Engineer or his subordinate and the contractor shall all times during the usual working hours and at all other times of which reasonable notice of the intention of the Engineer or his subordinate to visit the works shall have been given to the contractor, either himself be present to receive instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they have been given to the contractor directly and will be considered as binding on the contractor.

3. Final Account:

1. The contractor shall supply to the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the contract within 21 days of issue of certificate of completion of works or date of handing over of the project site whichever is later. The Engineer shall certify any payment that is due, to be correct and complete. If the account is not correct or complete, the engineer shall issue within 14 days a schedule that states the scope of the corrections or additions that are necessary. If the account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the contractor and issue a payment certificate within 21 days of receiving the Contractor's revised account. The payment of final bill for execution of works will be made within 30 (Thirty) days thereafter.
2. In case the account is not received within the period as provided above, the engineer shall proceed to finalise the account and issue a payment certificate within 28 days. The payment of final bill for construction of works will be made within 30 (Thirty) days thereafter.
    a. The final bill shall be submitted by the contractor in the same manner as specified in interim bills. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of those items of the bill in respect of which there is no dispute for quantities and rates as approved by Engineer will as far as possible be made within the period of six months reckoned from the date of receipt of the bill by the Engineer or his authorised representative, complete with account of materials issued by the Department and dismantled materials along with all supporting documents.
    b. Payment in case Project Cost is more than Rs. 10 Cr: In case cost of Project is more than Rs. 10 Cr, no bill shall be paid to the contractor after the release of 95% payment including 8% deduction from running bills for security deposit & the contractor is bound to complete the 100% work with no further payment or advances. Thereafter, the payment to contractor will be made against full &

(RCUES) * Lucknow * PMU

final bill submitted by the contractor only after completion & successful handing over of the project to client & release of balance withheld fund (against quality assurance) to LMC from the Government. In no case payment will be made in excess of the funds received from client less contingencies and centage charges. Balance payment will be released as described in Para above.

c. Employer shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for Employer to recover the same from him in the manner prescribed in this contract or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Employer to the contractor, without any interest thereon whatsoever.

Provided that the Employer shall not be entitled to recover any sum over paid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Engineer on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Engineer.

4. **As Built Drawings / Executed Photographs & Data of Contour Survey:**
   i. The Contractor shall supply "as built" Drawings / Executed Photographs & Data of Contour Survey monthly or by the dates stated in the Contract Data.
   ii. If the Contractor does not supply the Drawings by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the payments due to the Contractor.
5. **Rights of Breach of Contract:**
   1) The Employer may rescind/determine the Contract if the Contractor causes a fundamental breach of the Contract.
   2) Fundamental breaches of Contract shall include, but shall not be limited to, the following:
      a. if the contactor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer.
      b. the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
      c. the Engineer gives Notice that failure to correct/reconstruct or replace a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
      d. the Contractor does not maintain a Security, which is required;
      e. the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of compensation/ liquidated damages can be paid;
      f. the Contractor fails to provide insurance cover.

PMU (SMW) Lucknow

g. If the Contractor, in the judgment of the Employer, has engaged in the corrupt or fraudulent practice in competing for or in executing the Contract. For the purpose of this clause, "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution. "Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid process at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.

h. If the Contractor has not completed at least thirty percent of the value of construction Work required to be completed after half of the completion period has elapsed;

i. If the Contractor fails to set up a field laboratory with the prescribed equipment, within the period specified in the Contract Data;

j. If the Contractor fails to deploy machinery and equipment or personnel as specified in the contract Data at the appropriate time;

k. If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer;

l. If the Contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer.

m. If the contractor shall offer or give or agree to give to any person in LMC or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract with LMC;

n. If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order;

o. If the contractor assigns, transfers, sublets (engagement of labour on a piece - work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer;

p. Any other fundamental breaches as specified in the Contract Data

   i. Notwithstanding the above, the Employer may determine the Contract for convenience.

   ii. If the Contract is rescinded /determined, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

3) Foreclosure of Contract due to abandonment or reduction in scope of the work: If at any time after acceptance of the tender or during the progress of work, the purpose or object for which the work is being done changes due to any supervening cause and as

a result of which the work has to be abandoned or reduced in scope the Engineer shall give notice in writing to that effect to the contractor stating the decision as well as the cause for such decision and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates, full amount for work executed at site. Nothing extra shall be paid to contractor by the Engineer for any expenditure incurred on preliminary site work e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks which could not be utilised on the work to the full extent in the view of foreclosure;

Employer shall have the option to take over contractor's materials or any part of thereof brought to site. For materials taken over by Employer, cost of such materials as detailed by Engineer shall be paid. The cost shall, however, take in to account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.

Any new item (not covered under this tender document) introduced & sanctioned by Government as new or as replacement of existing item due to technical reason (or any other reason) may or may not be included in the scope of work of this tender/contract. Employer reserves the full right, without being liable for any damages or obligation, to get it executed separately.

4) Termination of Contract on the Death of the Contractor: Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Employer shall have the option of terminating the contract without compensation to the contractor.
5) Without prejudice to any of the rights or remedies under this contract, if the client/ Government withdraw the work from Employer due to any reason, at any stage of construction, the Employer shall have the option of terminating the contract without compensation to the contractor.

6. Payment upon Rescission /Determination of the Contract:

1) If the contract is rescinded (of which rescission notice in writing to the contractor under the hand of the Engineer shall be conclusive evidence) and in which case the security deposit of the contractor together with such sum or sums due to him under the contract shall stand forfeited and be absolutely at the disposal of the Employer.
2) If the Contract is determined at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law.
3) If the contract is Determined due to breach of contract the Engineer may call in other contractor, or employ daily labour to dismantle bad work if necessary (the bad work to be certified by the Engineer whose decision shall be final) and to renew and complete the said works and pay the cost of such contractor for daily labour and price of materials required for such dismantling, renewing and completion out of the said security deposit or such sum or sums as may be due to the contractor under this contract, and if such cost be more than the amount made up the security money and the sum or sums due to the contractor under this contract the difference between it and the sum made up by

the security money and the balance due to the contractor as aforesaid shall be a debt due from the said contractor.

In the event of either of the above courses being adopted by the Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials, or entered into any agreements, or made any advance on account of, or with a view to the execution of the work or the performance of the contract. And in case the contract shall be rescinded under the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work therefore actually performed under this contract, unless and until the Engineer shall have certified in writing the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified.

7. Non-Exercise of Contractor Liability to Pay Compensation:

In any case in which any of the powers conferred upon the Engineer, thereof shall have become exercisable, the same shall not constitute a waiver of any of the conditions hereof, and such power shall notwithstanding be exercisable in the event of any future case of default by the contractor for which by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Engineer putting in force either of the powers vested in him under the preceding clauses, he may, if he so desires, take possession of all or any tools, plant, materials and store in or upon the or site thereof or belonging to the contractor or procured by him intended to be used for the execution of the work or any part thereof, paying or allowing for the same in account at prevailing market rates, such rates to be certified by the Engineer whose certificates thereof shall be final otherwise the Engineer may issue notice in writing to the contractor or his other authorized agents to remove such tools, plants, materials or stores from the premises (within a time to be specified in such notice, and) in the event of the contractor failing to comply with any such requisition, the Engineer may remove them at the contractor's expenses or sell them by auction or private sale on account of the contractor and at his risk in all respects, and the certificate of the Engineer as the expenses of any such removal, and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contractor.

8. Releases from Performance:

a. If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

b. In case, the work cannot be started due to reasons not within the control of the contractor within 1/6th of the stipulated time for completion of work or six months, whichever is later, either party may close the contract. In such eventuality, the Performance Guarantee of the contractor shall be refunded, but no payment on account of interest, loss or damages or any compensation for the work remaining unexecuted etc. shall be payable at all.

9. Escalation:

a. Payments shall be made subject to revision of the project and availability of funds received from the Govt. (funds may be released in a phased manner) in no case expenditure will be made in the excess of 95% of funds received from Govt. less contingencies, centage and other charges (till balance 5% fund withheld on account of completion of project is released by the Govt.). However, in case of non-availability of

PMU (RCUES) ★ SMW, Lucknow

fund from Govt, if the completion of the project is delayed beyond the date as specified in the contract and due to this reason, the cost revision is sanctioned and released by the government to LMC, the claim of contractor (if any) may be considered by Engineer on work done/work to be done basis. Such compensation for escalation shall not be more than sanctioned by the government.

b. However, if such escalation is not found to be justified by the Govt. the contractor shall be liable to complete the whole work without any compensation whatsoever.

2.5 Other Conditions of Contract:

1. **Labour:**
   a. The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.
   b. The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.
2. **Compliance with Labour Regulations**
   a. During continuance of the Contract, the Contractor and his Sub Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in Appendix to Part I General Condition of Contract. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/ regulations including amendments, if any, on the part of the Contractor, the Engineer/ Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.
      i. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.
      ii. Security Deposit of the work shall not be refunded till the contractor produces a clearance certificate from the Labour Officer. As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer. The Engineer on receipt of the said communication shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit may be released if otherwise due.
3. **Drawings and Photographs of the Works:**

a. The contractor shall do photography/video photography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work and lastly after the completion of the work. No separate payment will be made to the contractor for this.

b. The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the works or any part thereof or plant employed thereon, except those permitted shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his sub-Contractors without the prior approval of the Engineer in writing. No photographs/ Video photography shall be published or otherwise circulated without the approval of the Engineer in writing.

4. The Apprentices Act 1961:

The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all liabilities and penalties provided by the said Act and said Rules.

5. Criminals are prohibited from bidding:

a. Any bidders having criminal record are not allowed to participate in the bidding process. Any person who is having criminal cases against him or involved in the organised crime or gangster activities or Mafia or Goonda or Anti-social activity is strictly prohibited to participate in the bidding process. If it is established that any bidder has criminal record, his bid shall be automatically cancelled.

   i. The bidder has to produce self-declaration affidavit (on the prescribed proforma which is attached with the bid document) with bid document and if required later Character certificate/Solvency certificate issued by the competent authority in original.

   ii. Any bidder who is an Advocate and Registered with any State Bar Council shall not be allowed to participate in the bidding. If it is established that the contractor is registered with the state bar council, his bid shall be automatically cancelled.

3 Special Conditions of Contract

3.1 Contractor to indemnify Employer against Patent Rights:

The contractor shall fully indemnify and keep indemnified the Employer against any action, claim or proceedings relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against Department/Government in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the Employer if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer in this behalf.

3.2 Electrical power & unfiltered Water Supply:

The Department shall provide Electrical power and Municipal Water Supply connection from the nearest source to the site of work and contractor shall make payment for its usage for execution of the work. Nothing extra will be paid for the same. This will be subject to the following conditions

i.) The contractor(s) shall make his/their own arrangement for lying of electric/pipelines within site.

ii.) The Department does not guarantee to maintain uninterrupted supply of electricity and water and it will be incumbent on the contractor(s) to make alternative arrangements for electricity/water at his/their own cost in the event of any temporary break down in the water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.

iii.) That the responsibility of providing water fit for human consumption for workmen shall rest the contractor(s).

3.3 Changes in firm's Constitution to be intimated:

Where the contractor is a partnership firm, the prior approval in writing of the Engineer shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of the terms of the agreement and action may be taken at the risk and the cost of the Contractor.

3.4 Recovery of Compensation paid to workmen:

In every case in which by virtue of the provision sub-section (1) of Section 12, of the Workmen's Compensation Act.1 923, Employer is obliged to pay compensation to a workman employed by the contractor, in execution of the works, Employer will recover from the contractor, the amount of the compensation so paid, and, without prejudice to the rights of the Employer under sub-section (2) of Section 12, of the said Act, Employer shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by

Employer to the contractor whether under this contract or otherwise. Employer shall not be bound to contest any claim made against it under sub-section (1) of Section 12, of the said Act, except on the written request of the contractor and upon his giving to Employer full security for all costs for which Employer might become liable in consequence of contesting such claim.

In respect of all labour directly or indirectly employed in the work for the performance of the contractors part of this contract, the contractor shall at his own expense arrange for the safety provisions as per Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid,

he shall be liable to pay a penalty of Rs. 2000/- for each default and in addition, the Engineer shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor. The contractor shall be completely held responsible for any mishap at site due to insufficient safety measures.

3.5 Site to Remain free from unauthorised Occupation:

It shall be the responsibility of the contractor to see that the work site is not occupied by anybody unauthorised during execution, and is handed over to the Authority with vacant possession of complete site. If such site is occupied illegally, then the Engineer shall have the option to refuse to accept the said site in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy up to 5% of tendered value of work may be imposed by the Employer whose decision shall be final both with regard to the justification and quantum and be binding on the contractor. However, Engineer, through a notice, may require the contractor to remove the illegal occupation any time on or before execution and handing over.

3.6 Engagement of agency for specialised works:

Contractor can engage specialised agencies, having sufficient experience, for specialised items of works.

Approval of the specialised agencies for each specialised work shall be obtained from the Engineer within one month of award of work. Even if, such specialised items of work shall be executed by the specialised agencies, the work shall be deemed to be executed by the Contractor for all purposes and the responsibility of the quality of items of works executed shall continue to be that of the Contractor only.

3.7 Security of Assets:

The contractor shall place a private security agency on the site of work for safety & security of materials, personnel's, vehicles and machinery etc. at his own cost. The security agency shall also regulate movement of materials, personnel's, vehicles and machinery. This agency shall follow the guidelines given by the Engineer. Nothing extra shall be paid on this account.

3.8 Site Office:

i.) For projects of above Rs. 50.00 Cr tender cost:

a. The contractor has to provide free of cost Five office rooms with three toilets as per drawing provided by Engineer for the purpose of site office for field staff of Employer (Approx. 135 sqm) and one conference hall of capacity of fifteen (15) persons (Minimum Size 8.00mX4.50m) with one toilet for the purpose of holding meetings during the inspection of senior officers of Employer/third party/client department etc.

b. The contractor has to also make arrangement for furnishing of this site office as well as the conference hall with appropriate numbers of tables, chairs, conference table, ceiling fans, electric fittings, six nos. air conditioners, telephone, internet, photocopier, and computer with printer and operator, regular electric and purified drinking water facility and other furniture as per direction of Engineer. No extra payment on account of this shall be made to the contractor.

c. One room for storage of samples, of minimum area of 40 sqm. must also be constructed at site for keeping various material brought by the contractor at site and approved by the Engineer. No extra payment on account of this shall be made to the contractor.

d. All the above structures should be decent looking and shall be constructed as per direction of Engineer.

e. All the above structure shall be demolished after completion of work and the dismantled material shall be the property of the contractor.

ii.) For projects of between Rs. 5.00 Cr to Rs. 50 Cr tender cost:

PMU (RCUES) * Mowaiya, Lucknow *

a. The contractor has to provide free of cost Three office rooms with attached toilets as per drawing provided by Engineer for the purpose of site office for field staff of Employer (Approx.95 sqm).
b. The contractor has to also make arrangement for furnishing of this site office with appropriate numbers of tables, chairs, ceiling fans, electric fittings, three nos. air conditioners, telephone, internet, regular electric and purified drinking water facility and other furniture as per direction of Engineer. The contractor has to provide 01 no. i7 Laptop and o1 no. Desktop with printer with scanner. No extra payment on account of this shall be made to the contractor.
c. One room for storage of samples, of minimum area of 40 sqm. must also be constructed at site keeping various material brought by the contractor at site and approved by the Engineer. No extra payment on account of this shall be made to the contractor.
d. All the above structures should be decent looking and shall be constructed as per direction of Engineer.
e. All the above structure shall be demolished after completion of work and the dismantled material shall be the property of the contractor.

iii.) For Projects of less than Rs. 5.00 Cr tendered cost above requirements/facilities will be decided by the Engineer on case-to-case basis whose decision shall be final and binding on the Contractor.

3.9 Vehicles:

i.) For projects of above Rs. 50 crores tender cost:

The Contractor shall provide, establish and maintain two Diesel/CNG powered taxi registered vehicles with fuel, maintenance & driver holding commercial license (such as Innova or equivalent as per satisfaction of Engineer) not older than two years, for Employer's site staff use on this project within 15 days of acceptance of tender. The average running of each vehicle will be 3000 km/ month. In case of non-compliance of the same, a penalty/recovery @ Rs. 60,000/- per month per vehicle on pro rata daily basis may be made from the contractor on prorate daily basis. In addition, the vehicle to be used by Engineer shall be adjusted from the contractor as per the Employer taxi charges.

ii.) For Projects between Rs. 5.0 Cr to Rs.50.00 Cr tender cost:

The contractor shall, will 15 days of acceptance of tender, provide one Diesel/CNG powered taxi registered vehicles with fuel, maintenance & driver holding commercial license, not older than 2 years (Sedan Vehicle such as Maruti Dzire, Honda Amaze or equivalent as per satisfaction of Engineer) for use of Employer's staff. The average running of the vehicle will be 3000 km/ month.

In case of non-compliance of the same penalty/ recovery @ Rs. 50,000/- per month may be made from the contractor on prorate daily basis. In addition, the vehicle to be used by Engineer shall be adjusted from the contractor as per the Employer taxi charges. However, this recovery shall be limited to maximum of 10 days in a month.

a. The contractor shall produce all original documents of Custom & other clearances of all the materials imported (if any) up to the quantity to be used for tendered work before use.
b. The Contractor shall ensure approaches to the site. In case any approach from main road is required, the same shall be made good, improved and maintained by the contractor at his own cost. No payment shall be made on this account.
c. The contractor shall give all necessary notices etc. that may be required by law to the Municipality, Police and other relevant authorities and obtain all requisite Licenses for

temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be leviable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain light and other for cautioning the public at night.

d. Contractor shall provide permanent bench marks and other reference points required for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the drawings.

e. The contractor shall make his own arrangement for obtaining electric connection and make necessary payments directly to the department concerned.

f. Other agencies doing works related with this project may also simultaneously execute their works and the contractor shall afford necessary facilities for the same. Nothing extra over the Agreement rates shall be paid for doing these.

g. The execution work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations or as directed by the Engineer and nothing extra shall be paid on this account.

h. The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted by making his own arrangements for other required amenities and nothing extra whatsoever shall be payable for the same.

i. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.

j. The drawings provided, if any, shall at all times be properly co-related before executing any work. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and Architectural drawings relating to the relevant item, the former shall prevail unless otherwise given in writing by the Engineer.

k. The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase

l. If the work is carried out in more than one shift or during night no claim on this account shall be entertained.

m. The contractor shall be responsible for the watch and ward/guard of the site, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the site is physically handed over to the department. No extra payment shall be made on this account.

n. The contractor shall take instructions from the Engineer for stacking of materials. Any trenching and digging shall be commenced by the contractor only when all men, machinery and materials have been arranged for proper completion of activity.

o. The works shall be carried out in accordance with the Architectural drawings and structural drawings, issued from time to time by the Engineer, if any. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work and satisfy himself that the information available thereof is complete and unambiguous. The discrepancy, if any shall be brought to the notice of the Engineer before execution of the work. The contractor alone shall be responsible for any loss or damage executing by the commencement of work on the basis of any erroneous and or incomplete information.

p. The contractor shall take all precautions to avoid accidents, exhibiting caution boards day and night, speed limit boards, red flags, red light and providing necessary barriers

and other measures required from time to time. The contractor shall be responsible for all damages and accidents due to negligence on his part.

q. Other agencies may also simultaneously execute some activities at the site and the contractor shall provide necessary facilities for the same and nothing extra shall be payable on this account.

r. The contractor shall conduct work so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer and shall as far as possible arrange his work and shall place and dispose of the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.

s. Drawings given in the tender, If any, other than those indicated in nomenclature of items are only indicative. However, the work shall be executed in accordance with the drawings duly approved by the Engineer.

t. Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be got approved from the Engineer, and shall be preserved till the completion of the work. Articles bearing BIS certifications mark shall only be used unless no manufacturer has got BIS mark for the particular material. Any material/fitting whose sample has not been approved and any other unapproved material brought by the contractor shall be immediately removed as soon as directed.

Unless otherwise specified in the schedule of quantities the rates for all items shall be considered as inclusive of pumping/baling out water, if necessary, for which no extra payment shall be made. Those conditions shall be considered to include water from any source such as inflow of flood, surface and sub-soil water etc. and shall apply to the execution in any season.

3.10 Environmental Compliance:

All essential environmental measures including but not limited to the following are to be taken to control pollution.

I. Construction Vehicles, Equipment and Machinery:
   a. All vehicles, equipment and machinery to be procured for construction shall conform to the relevant Bureau of India Standard (BIS) norms.
   b. Emission from the vehicles must conform to environmental norms.
   c. Dust produced from the vehicular movement and other site activities is to be mitigated by sprinkling of water.
   d. Noise limits for construction equipment's shall not exceed 75dB(A), measured at one meter from the edge of the equipment in free area, as specified in the Environment Protection Act, 1986, schedule VI part E, as amended till date, The maximum noise levels near the construction site should be limited to 65dB (A) Leq (5 min) in project area.

II. Construction Wastes Disposal:
   a. The pre-identified dump locations will be a part of solid waste management plan to be prepared by the Contractor in consultation with Engineer.
   b. Contractor shall get approved the location of disposal site prior to commencement of the excavation on any section of the project location.
   c. Contractor shall ensure that any spoils of material/construction waste will not be disposed of in any municipality solid waste collection bins.

III. Procurement of Construction Materials:
   a. All vehicles delivering construction materials to the site shall be covered to avoid spillage of materials and maintain cleanliness of the roads.
   b. Wheel Tires of all vehicles used by of the contractor, or any of his subcontractor or materials suppliers shall be cleaned and washed clear of all dust/mud before leaving

PMU (RCUES) * Mountain * SMWS

the project premises. This shall be done by routing the vehicles through tire washing tracks.

c. Contractor shall arrange for regular water sprinkling at least twice a day (i.e. morning and evening) for dust suppression of the construction sites and unpaved roads used by his construction vehicles.

IV. Water Pollution:

a. The Contractor shall take all precautionary measures to prevent the wastewater during construction to accumulate anywhere.

b. The wastewater arising from the project is to be disposed of in the manner that is acceptable to the Engineer.

V. Air and Noise Pollution

Contractor shall use dust screens and sprinkle water around the construction site to arrest spreading of dust in the air and surrounding areas.

a. Contractor shall ensure that all vehicles, equipment and machinery used for construction are regularly maintained and confirm that emission levels comply with environmental emission standards/norms.

b. For controlling the noise from Vehicles, Plants and Equipment's, the Contractor shall confirm the following:

i. All vehicles and equipment used in construction will be fitted with exhaust silencers.

ii. Servicing of all construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective must be replaced by the contractor immediately.

iii. Noise emission from compactors (rollers) front loaders, concrete mixers, cranes (movable), vibrators and saws should be less than 75 dB(A).

iv. As per the standards/guidelines for control of Noise Pollution from Stationary Diesel Generator (DG) sets, noise emission in dB(A) from DG Set (15-500 KVA) should be less than 94+10 log 10 (KVA).

1. Adequate drinking water facility should be provided at site, adequate number of decentralized latrines and urinals to be provided for construction workers.
2. Full time workers residing on site should be provided with clean and adequate temporary hutment.
3. Adopt measures to prevent air pollution in the vicinity of the site due to execution activities. The best practices should be followed (as adopted from international best practice documents and codes).
4. Identify roads on-site that would be used for vehicular traffic. Update vehicular roads (if these are unpaved) by increasing the surface strength by improving particle size, shape and mineral type that make up the surface base. Add surface gravel to reduce source of dust emission. Limit amount of fine particles (smaller than 0.075mm) to 10-20%. Limit vehicular speed on site 10 km/h. Nothing extra will be payable for this.
5. All material storages should be adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust/particulate emissions.
6. Spills of dirt or dusty materials shall be cleaned up promptly so the spilled material does not become a source of fugitive dust and also to prevent seepage of pollutant laden water into the ground aquifers. When cleaning up the spill, ensure that the clean - up process does not

PMU (RCUES) MOUD, Lucknow

generate additional dust. Similarly, spilled concrete slurries or liquid wastes should be contained/cleaned up immediately before they can infiltrate into the soil/ground or runoff in nearby areas.

7. Ensure that water spraying is carried out by wetting the surface by spraying water on:
    a. Any dusty material.
    b. Areas where demolition work is carried out.
    c. Any unpaved main-haul road and.
    d. Areas where excavation or earth moving activities are to be carried out.
8. The contractor shall ensure the following:
    a. Cover and enclose the site by providing dust screen, sheeting or netting to scaffold along the perimeter of a building.
    b. Covering stockpiles of dusty material with impervious sheeting.
    c. Covering dusty load on vehicles by impervious sheeting before they leave the site.
    d. Transferring, handling/storing dry loose materials like bulk cement and dry pulverized fly ash inside a totally enclosed system.
9. Clear vegetation, if any, only from areas where work will start right away.
10. Provide sheet covering/barricading of site of not less than 3m height along the site boundary, next to a road or other public area. Nothing extra will be paid for this.
11. The contractor shall provide experienced personnel with suitable training to ensure that these methods are implemented. Prior to the commencement of any work, the method of working, plant equipment and air pollution control system to be used on -site should be made available for the inspection and approval of the Engineer to ensure that these are suitable for the project.
12. Employ measures to segregate the waste on-site into inert, chemical or hazardous wastes. Recycle the unused chemical/hazardous wastes such as oil, paint, batteries and asbestos. The inert waste is to be disposed of to Municipal Corporation/local bodies dump yard and landfill sites.
13. To preserve the existing landscape and protect it from degradation during the process of construction. Select proper timing for construction activity to minimize the disturbance such as soil pollution due to spilling of the construction material and its mixing with rainwater. The construction management plan including soil erosion control management plan shall be prepared accordingly. The application of soil erosion control measures includes construction of gravel pits and tire washing bays of approved size and specification for all vehicular site entry/exits, protection of slopes greater than 10%. Sedimentation Collection System and run-off diversion systems shall be in place before the commencement of construction activity. Preserve and protect the existing vegetation by not-disturbing or damaging the specified site areas during construction.
14. The Contractor should follow the construction plan as proposed by the Engineer/landscape consultant to minimize the site disturbance such as

PMU (RC... SMW, Lucknow

soil pollution due to spilling. Use staging and spill prevention and control plan to restrict the spilling of the contaminating material on site.

15. Spill prevention and control plans should clearly state measures to stop the source of the spill, measures to contain the spill and measures to dispose the contaminated material and hazardous wastes. It should also state the designation of personnel trained to prevent and control spills, hazardous wastes include pesticides, paints, cleaners and petroleum products.
16. A soil Erosion and Sedimentation Control Plan (ESCP) should be prepared prior to construction and should be applied effectively.
17. Hazardous wastes include pesticides, paints, cleaners, and petroleum products.
18. The contractor shall ensure that no leaches is allowed to percolate into the ground. Adequate precautions are to be taken to safeguard against this including reduction of wasteful curing processes, collection, basic filtering and reuse. The contractor shall follow requisite measures for collecting drainage water run-off from construction areas and material storage sites and diverting water flow away from such polluted areas. Temporary drainage channels, perimeter dike/swale, etc. shall be constructed to carry the pollutant-laden water directly to the treatment device or facility (municipal sewer line).
19. All lighting installed by the contractor around the site and at the labour quarters during construction shall be LED bLMCs of the appropriate illumination levels. This condition is a must, unless specifically prescribed otherwise.

3.11 Safety Measures to be followed:

I. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1/4 to 1.

II. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in 37.2 above.

III. Every opening in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm. (3ft.)

IV. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. for ladder up to and including 3 m. (10 ft.) in length.

V. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.

PMU (RC ... SIWM, Lu...

VI. Demolition - Before any demolition work is commenced and also during the progress of the work,

a. All roads and open areas adjacent to the work site shall either be closed or suitably protected.

b. No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.

c. All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

d. All necessary personal safety equipment as considered adequate by the Engineer should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned: such as the workers employed on waste handling shall be provided with protective footwear and protective goggles.

e. When the work is done near any place where there is risk of drowning, all necessary equipment's should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.

f. Use of earth movers, hoisting machines and tackle including their attachments, anchorage and supports shall conform to the standards or conditions:-

i. These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.

ii. Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.

iii. Use of durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.

iv. Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.

v. In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

vi. The contractors shall notify the safe working load of the machine to the Engineer whenever he brings any machinery to site of work and get it verified by Engineer.

vii. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves,

PMU (RCUES) SIMW, Lucknow

sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

viii. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

ix. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

x. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer or their representatives.

xi. Notwithstanding the above clauses as above there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

3.12 First-Aid Facilities

I. At every work place, there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.

II. The first-aid box shall be distinctly marked with a red cross on white back ground and shall contain the following equipment:-

a. For work places in which the number of contract labour employed does not exceed 50- Each first-aid box shall contain the following equipments :-
b. 6 small sterilised dressings.
c. 3 medium size sterilised dressings.
d. 3 large size sterilised dressings.
e. 3 large sterilised burn dressings.
f. 1 (30 ml.) bottle containing a two per cent alcoholic solution of iodine.
g. 1 (30 ml.) bottle containing Sal volatile having the dose and mode of administration indicated on the label.
h. 1 snakebite lancet.
i. 1 (30 gms.) bottle of potassium permanganate crystals.
j. 1 pair scissors.
k. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
l. 1 bottle containing 100 tablets (each of 5 gms.) of aspirin.
m. Ointment for burns.
n. A bottle of suitable surgical antiseptic solution.

III. For work places in which the number of contract labour exceed 50. Each first-aid box shall contain the following equipment's.

a. 12 small sterilised dressings.
b. 6 medium size sterilised dressings.
c. 6 large size sterilised dressings.
d. 6 large size sterilised burn dressings.
e. 6 (15 gms.) packets sterilised cotton wool.
f. 1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
g. 1 (60 ml.) bottle containing Sal volatile having the dose and mode of

PMU (RCUES) Lucknow

h. administration indicated on the label.
i. 1 roll of adhesive plaster.
j. 1 snake bite lancet.
k. 1 (30 gms.) bottle of potassium permanganate crystals.
l. 1 pair scissors.

i. 1 copy of the first-aid leaflet issued by the Director General Factory Advice Service and Labour Institutes /Government of India.
ii. A bottle containing 100 tablets (each of 5 gms.) of aspirin.
iii. Ointment for burns.
iv. A bottle of suitable surgical antiseptic solution.

1. Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.
2. Nothing except the prescribed contents shall be kept in the First-aid box.
3. The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
4. A person in charge of the First-aid box shall be a person trained in First-aid treatment in the work places where the number of contract labour employed is 150 or more.
5. In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.
6. Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

PMU (RCU) SIMW, Lucknow

4 Specifications

4.1 Specifications

The specifications provided in SWM Rules 2016 are the minimum conditions/ requirements, accordingly the Old/ Legacy Waste shall be processed and residual solid waste shall be disposed in a scientific manner. The Contractor shall have the option to enhance the facilities and offerings in the Project in line with Applicable Laws.

4.2 Environmental Standards

I. Contractor has to follow the Environmental Standards as mentioned below:
   a. Air Quality Monitoring: As per Solid Waste Management Rules 2016 (SWM Rules 2016) or amendments thereafter with respect to baseline site parameters.
   b. Noise Monitoring: As per Noise Pollution Rules 2000 or amendments thereafter with respect to baseline site parameters.

II. Leachate Treatment: As per Solid Waste Management Rules 2016 (SWM Rules 2016) or amendments thereafter with respect to baseline site parameters.
   a. Odour Monitoring: As per CPCB guidelines 'Odour Pollution & Its Control May 2008' or amendments thereafter with respect to baseline site parameters.
   b. Water Quality Monitoring: As per Solid Waste Management Rules 2016 (SWM Rules 2016) or amendments thereafter with respect to baseline site parameters.
   c. Aggregate Disposal: As per Solid Waste Management Rules 2016 (SWM Rules 2016) or amendments thereafter with respect to baseline site parameters.

III. Contractor has to make all the necessary arrangement for periodical monitoring of environmental standards to the extent possible.

IV. Contractor may appoint a Professional Consultant/ Company approved by MoEF/NABET to achieve these standards.

4.3 Hazardous waste

a. The Contractor will ensure separate means to remove hazardous waste, if any, and the disposal of this waste shall be his liability as per Hazardous Waste (Management & Handling) Rules, 2016. Biomedical waste if existing inside the site he shall dispose of the same in accordance with Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 or amendments thereafter.

b. If any heavy metals or hazardous components are detected in the inert then disposal of such aggregates would be the responsibility of Contractor.

   i.) After completion of contract period (12 (twelve) months or extended period as the case may be), within 1 month, Contractor has to completely remove the plant, machineries and equipment from the site and clear the project area. Performance security of the Contractor will be released only after the entire project site has been handed over to LMC without encumbrances.

   ii.) It is the sole responsibility of the operator to abate the odour and flies nuisance on site. Operator has to use enzyme/herbal based products which will help to abate the odour and flies nuisance. Necessary fire fighting vehicles shall be arranged to abate the fire nuisance.

   iii.) Necessary safety gears shall be provided by the Contractor to all staff working as per the good industry practice. To prevent nuisance at the site during the contract period.

   iv.) Contractor shall ensure that material which is to be transported for disposal after scientific processing is not dumped at any site that may lead to violation os rules.

   v.) Management of the project and methodology required to be adopted for handling existing solid waste at various sites shall include the following:

PMU (RCUES) SWM, Lucknow

vi.) The Contractor should ensure regulated and continuous removal of waste from dump site with utmost safety and under standard hygienic conditions.

vii.) The waste removed from the dump sites is to be safely transferred to the treatment facility erected at the site. The Contractor will prepare a layout clearly showing the area required for treatment of the garbage along with allied activities.

viii.) The treatment plant should be provided with necessary infrastructure like security and access control/s, camera monitoring and recording features etc. by the Contractor.

ix.) Contractor may plan work in multiple shifts.

x.) The Contractor will ensure that the land will be cleared to the natural ground level. If any waste is found below the ground level, the Contractor at his discretion can accept to go ahead with the processing upon mutual consent.

4.4 Excavation of dumping site

i.) The area to be excavated shall be cleared off all trees and bushes and rubbish and other objectionable materials shall be disposed-off as directives of engineer-in-charge. The cost of clearing shall be deemed to have been included in the quoted price.

ii.) Before starting excavation of dumping site it shall be properly examined. As the old waste dump contains various gases and odour causing substance and leachate and they both are harmful to human life causing serious disease it shall tackled by scientifically manner. Proper ventilation system for such situations shall be provided by contactor.

iii.) Leachate (if any) shall be collected by using pump in separate covered tank for disposal.

iv.) Spraying of inoculants shall be properly done over the dump waste to make the waste pathogen free.

v.) After taking above necessary steps, the excavation of dump site can be started using machinery. A frontend loader or similar machinery shall be use to excavate the dump site. Excavated material shall be kept in the manageable stock piles and separates oversized or bulky materials.

vi.) The excavated waste shall be segregated by deploying any technology/method.

vii.) After segregation of inert, RDF, recyclable material the Bio-degradable, organic material which can be treated and transformed into Compost, soil conditioner, shall be treated and processed by the Contractor by adopting any scientific technology/method.

PMU (RCUE) MNIS, Lucknow

ARTICLE 5

1 PROJECT MONITORING CONSULTANT

2 Appointment

AUTHORITY shall appoint a project monitoring consultant (PMC). The scope of work of PMC is project monitoring during construction phase and O&M phase of project.

3 Payments to Project Monitoring Consultant

All fees, costs, charges and expenses payable to the Project Monitoring Consultant shall be paid by AUTHORITY in accordance with the terms of its appointment within 15 days of receiving an invoice from Independent Consultant.

4 PROJECT MONITORING CONSULTANT - SCOPE OF WORK

5 The Project Monitoring Consultant is expected to play a positive and independent role in discharging its functions, thereby facilitating the smooth implementation and operation of the Project. Broadly, the role of the Project Monitoring Consultant shall encompass:

6 Verification and random checks of work.

7 Verification and random checks of weighment and Testing of the legacy waste and products derived after Processing.

8 Independently review, monitor and where ever required by the Agreement, to approve the design, construction, operation and maintenance of the Project Facilities to ensure compliance by the bidder with the Operations Plan, Design Requirements, Construction Requirements and O&M Requirements,

9 Report to the Parties on the various physical, technical and financial aspects of the Project based on inspections, site visits and Tests,

10 Assist the Parties in arriving at an amicable settlement of disputes, should the need arise, and

11 Review matters related to safety and environment management measures adopted by the bidder for the Project.

12 Scope of Services of the Project Monitoring Consultant

The services to be provided by the Project Monitoring Consultant shall be in accordance with the applicable provisions of agreement made between AUTHORITY and PMC and also as per the general obligations of this Agreement are specified in this section.

13 Obligations during Implementation Period

The Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the progress in implementation of the Bio-remediation work and ensure compliance with the scope of work and other project requirements. For this purpose the Project Monitoring Consultant shall undertake, *interalia*, the following activities and where appropriate make suitable suggestions:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and check the quality of vehicles and material procured;

PMU (RCUES) SVVV, Lucknow

(e) Review and approve test results and materials and/or equipment used in the Construction Works;

(f) Interpret the requirements of the contract and make decisions regarding performance of the Concessionaire. The PMC shall inform and advise the AUTHORITY, in a timely manner all matters relating to the execution, progress, and completeness of the Construction Works;

(g) Reject work which fails to comply with the specifications and requirements of the Agreement. Whenever considered necessary or advisable to ensure correction of defective work, the PMC may require inspection or testing of such work, whether or not such work be then fabricated, installed, or completed;

(h) Review, approve or disapprove drawings, samples, and other submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(i) Provide the services of a full time resident project representative during the period commencing from 7 (seven) days from the date of appointment of the PE until the expiry of the PMC's appointment;

(j) Provide the services of experts to check the quality of materials and the workmanship during the procurement & commissioning phase

(k) Provide the services of experts to check the quality of materials and the workmanship during the procurement/installation/construction phase of waste processing facility, including the following:

(i) weigh bridge at the Project Facility entry gate;

(ii) windrows;

(iii) drainage system;

(iv) leachate collection and treatment system;

(v) water supply system;

(vi) sieving machines & mechanism;

(vii) quality control laboratory and associated equipment;

(viii) Electrical systems.

(l) Address issues relating to specific site conditions, design modifications, or Concessionaire disputes.

The PMC shall prepare and submit to AUTHORITY, Fortnightly Progress Reports including the following:

(a) Daily progress of works;

(b) Slippages, if any, in the construction vis-à-vis planned construction schedule and the reasons thereof;

(c) Construction schedule for the succeeding week;

(i) Report on Tests

(ii) Report on notices issued

PMU (RCU)
Lucknow

(d) Issues, if any, with regard to the works along with the details of the action taken for the resolution of the same;

(e) Photographic record of progress of works over the previous week.

The PMC shall provide all other services as normally provided by an engineer in charge.

14 Active Operations Period

During this period the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by the Concessionaire so as to ensure compliance with the O&M Requirements. The specific activities to be undertaken would include the following:

(a) Provide administration of the contract in full and in complete accordance with applicable laws;

(b) Act on the AUTHORITY's behalf as the AUTHORITY's representative regarding all contact with the Concessionaire unless expressly indicated otherwise;

(c) Designate tests on materials and/or equipment;

(d) Review and approve test results and materials and/or equipment used;

(e) Interpret the requirements of the contract and make decisions regarding performance of the Concessionaire. The PMC shall inform and advise the AUTHORITY, in a timely manner all matters relating to the execution, progress, and completeness of works;

(f) Reject work which fails to comply with the specifications and requirements of the Agreement. Whenever considered necessary or advisable to ensure correction of defective work, the PMC may require inspection or testing of such work, whether or not such work be then fabricated, installed, or completed;

(g) Review, approve or disapprove drawings, samples, and other submissions of the Concessionaire to determine compliance and conformance with the requirements of the Agreement;

(h) Provide the services of a full time resident project representative during the period commencing from 7 seven days from the date of appointment of the PE until the expiry of the PMC's appointment;

(i) In addition to the daily responsibilities, conduct a general inspection of the Project Facilities at least once a month and as and when exigencies require to ascertain conformity with Construction Requirements and O&M Requirements;

(j) Provide the services of experts to check the quality of materials and the workmanship during the construction of the Landfill Facility

(k) Inspect the quality of compost being sold or otherwise disposed outside the Site

(l) Inspect and certify composition of the Residual Inert Matter

(m) Address issues relating to specific site conditions, design modifications, or Concessionaire disputes.

(n) Review the O&M Plans submitted by the Concessionaire from time to time and assist the Concessionaire in finalising the same. The Project Monitoring Consultant shall also consult AUTHORITY prior to finalisation of the O&M Plans;

(o) Periodically review the O&M Manual for adequacy;

PMU (RCUES)

(p) Monitor Operation and Maintenance activities (including maintenance of Project Facilities and equipment, standards of service, safety and environmental issues) and the overall quality of O&M activities so as to ensure compliance by the Concessionaire with the O&M Requirements, O&M Plan and O&M Manual;

(q) Review and ascertain the cost variation arising as a result of Change in Law and determine the Additional Cost;

(r) Undertake a quarterly review of the various records and registers to be maintained by the Concessionaire and suggest suitable remedial measures/ procedures, where necessary.

15 The PMC shall attend regular meetings ("Project Review Meetings" or "PRMs") with the AUTHORITY and the Concessionaire, to be held at least once in every month during the Active Operations Period to report on progress and quality of work performed by the Concessionaire and to discuss problems or other pertinent matters relating to the work. The IC shall take notes at the meetings and provide a copy of the PRM minutes to each person who attended the meeting.

16 The PMC shall prepare and submit to AUTHORITY, Monthly Project Reports including the following:

(a) Report on Tests

(b) Report on notices issued

(c) Issues, if any, with regard to the works along with the details of the action taken for the resolution of the same;

(f) Photographic record of progress of works over the previous week.

17 Attend meetings with the AUTHORITY and the Concessionaire, to be held at intervals as mutually decided upon by the Parties, to discuss problems or other pertinent matters relating to the Project. The PMC shall take notes at the meetings and provide a copy of the minutes of such meetings to each person who attended the meeting.

a) Review of the Operations Plan submitted by the Concessionaire in accordance with of the Agreement.

b) Monitoring and reporting to AUTHORITY on whether the bidder has complied with the timelines for activities as specified in the Operations Plan in (a) above;

c) Verify and report to AUTHORITY whether (i) the New Project Facilities comply with the Design Requirements (ii) Existing Project Facilities comply with the Construction Requirements and (iii) the Project Facilities comply with all Applicable Laws including SWM Rules 2016.

d) Issue Provisional/Readiness Certificate in accordance with the of this Agreement;

e) The Project Monitoring Consultant shall undertake, interalia, the following activities and where appropriate:

(i) Require suspension of whole or any part of the Construction Works if in its reasonable opinion the same does not conform to the Construction Requirements;

(ii) Require clearing of any construction site of all construction equipment, surplus materials, debris and temporary installations as per applicable provisions of this Agreement.

(iii) Review the monthly progress report submitted by the bidder during the Implementation Period and its conformity with the Operations Plan, report on the same to the AUTHORITY and suggest corrective measures, if any.

(iv) If during the course or upon review / inspection undertaken by the Independent Consultant, it transpires that either of the Parties is in breach/ default of any of its obligations under

PMU (RCUES) SWM, Lucknow

the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/ default within time frame as may be felt suitable by the Independent Consultant.

18 Obligations during Operations Period

19 Monitoring of Bio-remediation work of legacy waste

The Project Monitoring Consultant's prime responsibility would be to monitor the operations at the weighbridge and waste inspection area. For this purpose, the Project Monitoring Consultant shall undertake, inter alia, the following activities:

a) Verification of the weighment;

b) Verification of the Testing of the MSW.

c) Verification of the records generated at the weighbridge and Waste Inspection Area.

d) Issue "Notice to Remedy" in event of observing non-compliance to O&M Requirements;

e) If during the course or upon review/inspection undertaken by the Project Monitoring Consultant or otherwise, it transpires that either of the Parties is in breach/default of any of its obligations under the Agreement, the Project Monitoring Consultant shall, under intimation to both the Parties, require the defaulting Party to remedy such breach/default within such time and in such manner as the Project Monitoring Consultant may deem fit and in each case the same shall be recorded.

20 Conducting Random Inspections

The Project Monitoring Consultant shall conduct random inspections of the Project Facilities as well as the operations as follows:

a) The random inspections may be carried out by visual assessment with careful observation of the specific object/item for identification and for quantification of the deficiencies or damages of the Project Facilities and operation and maintenance of the Project Facilities. For this purpose the Project Monitoring Consultant can use photographs with time and place record.

b) During the random inspections, the Project Monitoring Consultant would monitor, in accordance with Good Industry Practice, the operations and maintenance activities undertaken by the Contractor so as to ensure compliance with the O&M Requirements;

c) Issue "Notice to Remedy" in the event of non-compliance to O&M Requirements and recording the same.

d) Record and report to the AUTHORITY on the incidents of Material Breach or Persistent Breach of O&M Requirements;

21 Hand back and Transfer of Project Facilities to AUTHORITY

At the time of hand back and transfer of the Project Facilities to AUTHORITY at the end of Concession Period, the Project Monitoring Consultant shall:

a) Monitor the compliance with the Hand back and Transfer Requirements and

b) Issue a certificate of compliance on satisfactory completion of Hand back and Transfer Requirements by the bidder.

22 Maintenance of Records

a) The Project Monitoring Consultant would be required to participate in the Project review meetings held from time to time by the Parties, which are ordinarily expected to be held once a month during the Implementation Period and once every two months during the Operations Period as also to participate in emergency

PMU (RCUES) Lucknow

or extra-ordinary meetings of the Parties held to deal with any Emergency, Force Majeure Event or other exigencies.

23 The Project Monitoring Consultant shall maintain record of the activities undertaken by it in discharge of its functions and responsibilities. This would include records in respect of the following:

a. Manpower deployed and other organizational arrangements of the Project Monitoring Consultant;

b. Inspections undertaken and notices/instructions issued to the bidder;

c. Review compliance by the bidder with the Agreement;

d. Force Majeure Events;

e. Material and Persistent Breach of O&M Requirements and Events of Default by the Parties; and

f. Compliance by the bidder with Hand back and Transfer Requirements

24 Material and Persistent Breach of O&M Requirements

The Project Monitoring Consultant shall monitor the performance of the Contractor and report on incidence of material and persistent breach of O&M requirements with reference to the compliance and tolerance criteria as laid out in of the O&M Requirements:

25 Awareness Campaign

The Project Monitoring Consultant shall review the Awareness Campaign programme conducted by the bidder.

26 Certification of concessionaire Monthly Bill

A Project evaluation and monitoring committee (PEMC) comprising of officials designated by Authority and Project Monitoring Consultant (PMC) shall jointly evaluate the concessionaire performance on the basis of performance indicators and penalty to be imposed if any.

PMU (RCUES) Lucknow

ANNEXURES

STANDARD FORM OF AGREEMENT

{Notes on Standard Form of Agreement: The Agreement should incorporate any corrections or modifications to the Bid resulting from corrections of errors as mentioned in Instructions to Bidders.}

Standard Form: Agreement

Agreement

This agreement, made the ..... day of ..... of 20. Between....., (hereinafter called "the Employer") of the one part, and ..... [name and address of Contractor] (hereinafter called "the Contractor" of the other part).

Whereas the Employer is desirous that the Contractor execute the Work of Construction of .....at .....District- ..... (Hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein at a cost of Rupees .....(Rs.....only)

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects within the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
   - i.) Letter of Acceptance;
   - ii.) Notice to proceed with the works;
   - iii.) Contractor's Bid;
   - iv.) Contract Data;
   - v.) Special Conditions of contract and General Conditions of Contract;
   - vi.) Specifications;
   - vii.) Drawings& Schedules;
   - viii.) Bill of Quantities; and
   - ix.) Any other document listed in the Contract Data as forming part of the contract.
   - x.) In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of
.....
.....
was hereinto affixed in the presence of:
Signed, Sealed and Delivered by the said to,
.....

PMU (RCUES) SMW, Lucknow

.....

.....

In the presence of:

Binding Signature of Employer's authorised representative.

.....

.....

Binding Signature of Contractor

.....

.....

.....

Project Information Memorandum of Bioremediation of Legacy Waste Dumped at Shivari, Dumpsite at Lucknow Municipal Corporation

Volume-3

1 City Profile

ULB Population (2011): 28,17,105 Nos
Present Households : 5,69,898 Nos.
No. of Zone : 8 Nos.
No of Wards : 110 Wards
Door to Door Collection: 110 Wards
Total Waste Generation: 1950 MTD (approx.)
Plants Operational : No
Waste Disposal: Dumpsite at Shivari, Lucknow

Lucknow is the capital city of the state of Uttar Pradesh in India. It is the largest and most developed city in North India after Delhi. This metro city is the administrative headquarters of Lucknow District and Lucknow Division. Lucknow has always been known as a multicultural city and flourished as a cultural and artistic capital of North India. The city is spread on both the banks of River Gomti over an area of 350 Sq. Km with a population of over 2.8 million. Lucknow city contributes 6.33% of urban population of the state's urban population. The city is famous for its heritage character and popularly known as seat of Nawabs. The city is now among the fastest growing cities of India and as rapidly emerging as commercial and retailing hub. Being the capital city, it is the seat of government and also the trading hub for nearby towns, Lucknow is also referred as "Golden City of the East".

Lucknow is situated 123 meters above sea level and is located on 26030" and 27010" North latitude and 80030" and 81013" East longitude. On its eastern side, city is bounded by Barabanki District; on the western side is Unnao District; on the southern side Raibareli District and on the northern side the Sitapur and Hardoi districts.

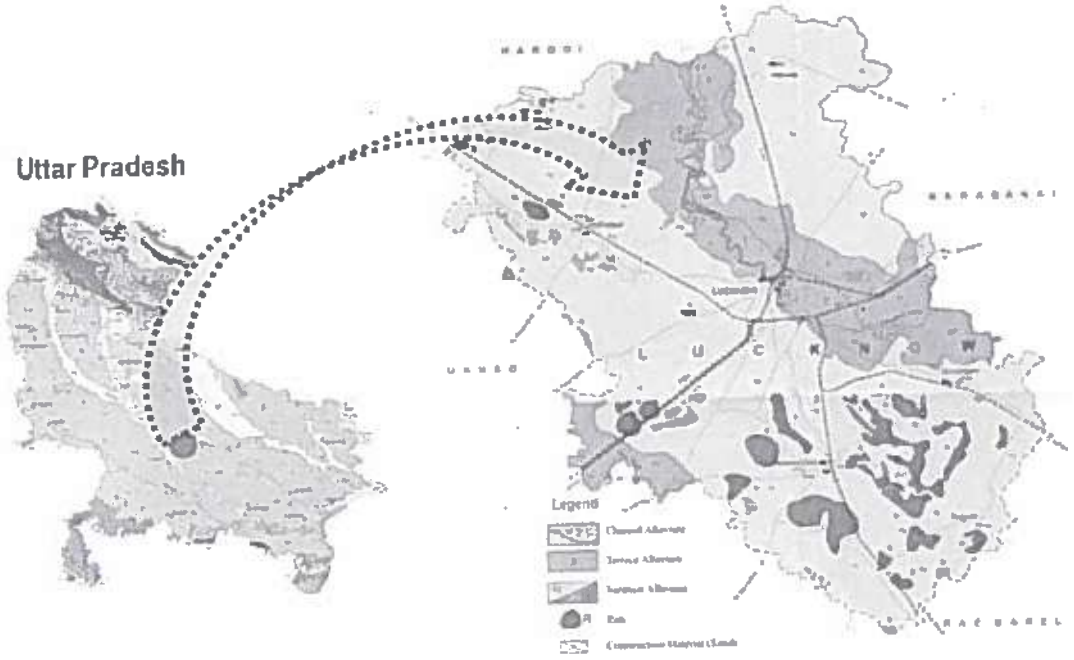


FIGURE 1-1 LOCATION OF LUCKNOW CITY

Lucknow lies in Ganga basin with flat alluvial terrain and is covered with thick pile of Quaternary sediments uncomfortably overlying the basement of Bundelkhand Granitoids and sedimentary rocks of the Vindhyan Supergroup. The Quaternary

PMU (RCUES) SMW, Lucknow

sediments have been classified into Older and Newer Alluvium. The Older Alluvium is represented by Varanasi Alluvium of Middle to Late Pleistocene age and comprises grey to brown coloured silt-clay and sand with or without kankar. Lucknow has been placed in the zone of moderate intensity earthquake (zone III). Seasonally, it has to face natural hazards which include flooding, water logging along channels and canal banks, besides, river bank erosion.

Gomti River, the chief geographical feature, meanders through the city, dividing it into the Trans-Gomti and CisGomti regions. Apart from Gomti, Sai and their tributaries are other surface water source. Network of Sarda canal system and its distributaries also partly serve as the surface water potential. Gomti River is the major source of water supply to Lucknow City.

Till the year 1884, Lucknow was administered as Municipal Committee however in the same year it was upgraded to Municipal Board and continued working till 1995. Lucknow Nagar Mahapalika was constituted in the year 1959 under Uttar Pradesh Nagar Mahapalika Act 1959. At the time of constitution total area under its jurisdiction was 48 sq. km which was expanded four times to 101 sq. km, 107 sq. km, 118 sq. km and 350 sq. km till the year 1987. Under 74th constitution amendment act Lucknow Nagar Mahapalika was again reconstituted on 31.05.94 and given the status of Municipal Corporation. Currently, population of LMC is 28.17 lakh spread over an area of 350 sq. km with density of 8049 persons/sq.km

1.1 Population

As per the provisional census data for the year 2011, Lucknow City"s total population is 28.17 lakh. There is a growth of almost six times in the city population in the last six decades, from 5 lakh in the year 1951 to 28 lakh in the year 2011. Lucknow city"s decadal population growth rate of 28.87% for the last decade is less than the country urban population growth rate (31.80%) and is at a little higher side from state urban population growth rate i.e. 28.75%.

1.2 Topography, Climate and Rainfall

Gomti River, the chief geographical feature, meanders through the city, dividing it into the Trans-Gomti and CisGomti regions. Apart from Gomti, Sai and their tributaries are other surface water source. Network of Sarda canal system and its distributaries also partly serve as the surface water potential. Gomti River is the major source of water supply to Lucknow City. Location of Lucknow city in the Gomti River basin.

Lucknow has a warm humid subtropical climate with cool, dry winters from December to February and dry, hot summers from April to June. In winter the maximum temperature is around 25 °C (77 °F) and the minimum is in the 3 °C (37 °F) to 7 °C (45 °F) range. Fog is quite common from late December to late January. Summers are extremely hot with temperatures ranging from 40 °C (104 °F) to 45 °C (113 °F)

The rainy season is from mid-June to mid-September, when Lucknow gets an average rainfall of 896.2 millimeters (35.28 in) from the south-west monsoon winds, and occasionally frontal rainfall will occur in January.

PMU (RCUES) MJPRU, Lucknow

Lucknow city has very low proportion of area under forest. Even in the Lucknow district the forest area is negligible. At district level; Shisham, Dhak, Mahua, Babul, Neem, Peepal, Ashok, Khajur, Mango and Gular trees are grown. The main crops are wheat, paddy, sugarcane, mustard, potatoes, cauliflower, cabbage, tomato and brinjals. Similarly sunflowers, roses, and marigold are cultivated on quite a large area of the land in whole of the district. Apart from this, many medicinal and herbal plants are also grown.

The city is located at the confluence of the national highways and state highways

National Highways crossing through the city are:

- NH 24: leading towards Delhi
- NH 24B: leading towards Raibareli
- NH 25: leading towards Jhansi in Uttar Pradesh and Shivpuri in Madhya Pradesh
- NH 28: leading towards Barauni in Bihar
- NH 56: leading towards Varanasi
- State Highways crossing through the city are:
- SH 40: leading towards Etawah
- SH 25: leading towards Hardoi

Lucknow provides rail connectivity to major towns across India. Lucknow has two major railway stations, first Charbagh main station (broad gauge) providing connectivity to Delhi, Kolkata, Bhopal, Jaisalmer etc. and Charbagh Junction (meter gauge) for Kanpur, Mumbai, Pune, Bangalore, Ernakulam etc. Apart from these two major stations, there are fourteen sub stations in the city area and in the surroundings.

Chaudhary Charan Singh International Airport located 11 km from the center of the city provides air connectivity to major urban centers in India name a few Ahmedabad, Bangalore, Chennai, Bhubaneswar, Bhopal, Delhi, Indore, Hyderabad, Kolkata, Mumbai Patna etc. It has both domestic as well international terminals. Apart from daily domestic flights Lucknow airport provides direct flights to Dubai, Jeddah, Muscat and Riyad.

PMU (RCUE)

2 Solid Waste Management Scenario

2.1 Waste Profile in Lucknow City

Door to Door Primary Collection of waste started by ULB in 110 Wards in eight zones. Primary Collection is being done in double shifts to improve the collection efficiency with available vehicles. Door to door primary collection of waste is in practice. Collection is done by Waste collectors. To get maximum primary collection efficiency, door to door collection is being done in two times from morning 0600 hrs to 1800 hrs. About 1950.0 MT/day of garbage is being generated in the city.

2.2 Quantification of MSW in Lucknow

As information given by the Nagar Nigam, Lucknow City officials the quantity of waste generated is 1950.0 MT/day.

2.3 Present Status of the Disposal Site

Presently, mixed waste from all over the town, (except the segregated waste collected from the residential areas) is transported and dumped at dumpsite at Shivari, Lucknow Uttar Pradesh. Pre-processing section have Two Ballistic separators and Three Trommels of 150 mm hole size. The processing capacity of Each unit is 20 TPH with a combined capacity of 100 TPH and 800 Tons in a shift of 8 Hrs. However, the plant is seldom operated by the concessionaire appointed for it.

The solid waste is transported to designated disposal sites identified by Municipal Corporation Lucknow. None of the landfill sites is lined and waste is directly dumped (without segregation) into the dump site. Municipal Corporation, Lucknow employs use JCBs to spread waste at the disposal sites. Details of disposal sites are given in Table.



FIGURE 2-1 PHOTOGRAPHS OF LUCKNOW DUMPSITE

PMU (RCUE)

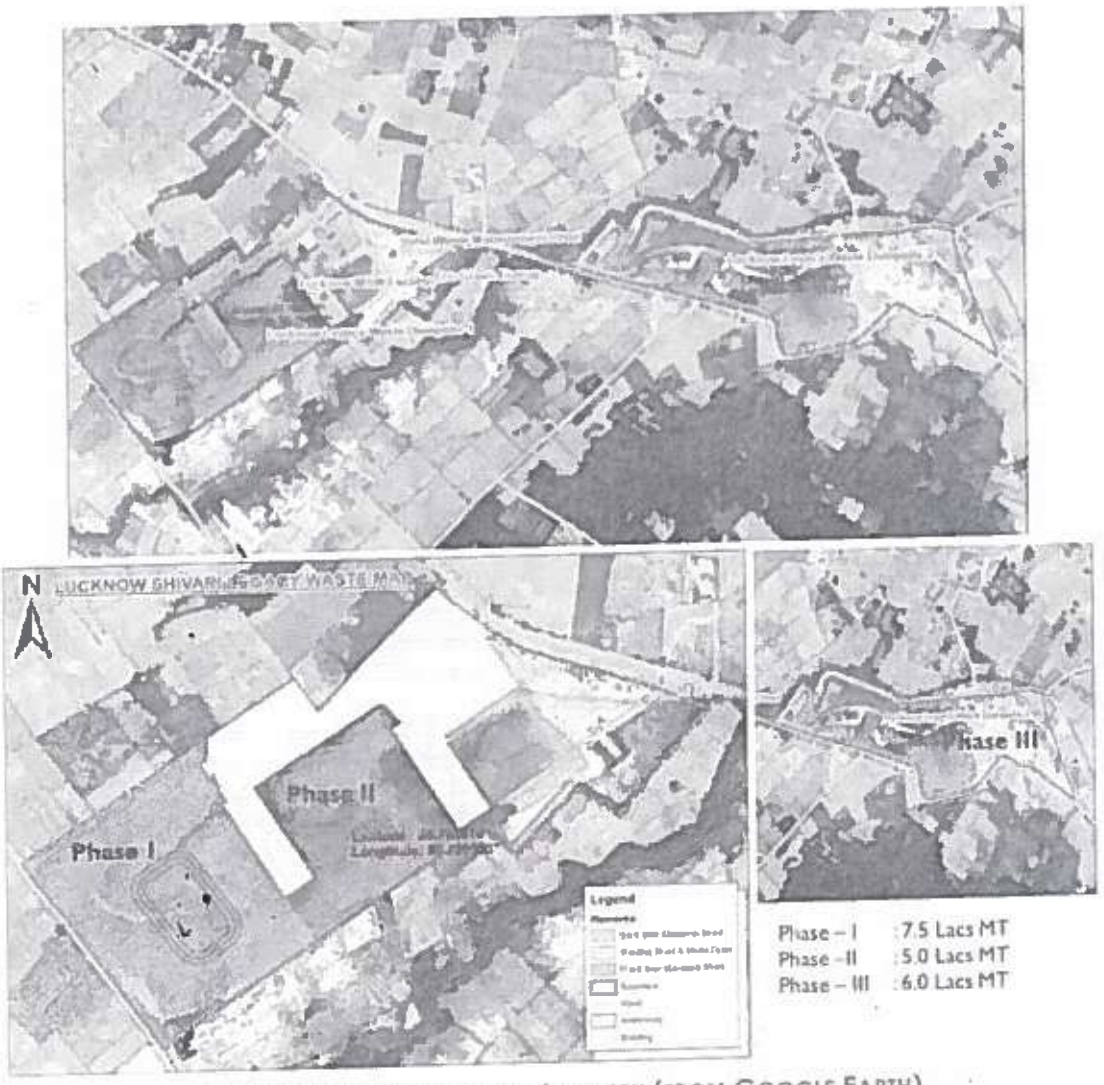


FIGURE 2-2 DUMPSITE SATELLITE IMAGERY (FROM GOOGLE EARTH)

TABLE 2-1 DUMPSITE DETAILS

S. No.	Description	Details
1.	Dumpsite Name	**Dumpsite at Shivari, Lucknow, Uttar Pradesh**
2.	Total Area (Acre)	**Area of dumpsite: 38.25 acre**
3.	Dumpsite Site Location Coordinates	**Latitude 26.796610 N, Longitude 80.780003 E**
4.	Total Old Waste (Legacy Waste) at site to be processed for Dumpsite reclamation	**1849902 Metric Ton**
5.	**Road Distance from Nagar Nigam Office to the Dumpsite**	**25.8 km**

The 3D map of dumpsite on satellite imagery/google earth view and elevation map of dumpsite at Lucknow is shown below in figures under.

PMU (RCUES) SNNN, Luck

A look of the dumpsite in Google View changed over the period starting from the year 2013.



Google Image of the Dumpsite area in year 2013

PMU (RCU



Google Image of the Dumpsite area in year 2014



Google Image of the Dumpsite area in year 2015



Google Image of the Dumpsite area in year 2016



Google Image of the Dumpsite area in year 2017

PMU (RCI)



Google Image of the Dumpsite area in year 2018



Google Image of the Dumpsite area in year 2019



Google Image of the Dumpsite in the Year 2020



Google Image of the Dumpsite in the Year 2021

PMU (RCU)

2476



FIGURE 3-5 GOOGLE IMAGE SHOWING CHANGE OF THE DUMPSITE AREA FROM THE YEAR 2013 TO 2022

PMU (RC

3 Selection of Technology

3.1 Clearing vs. Capping of Legacy Waste

The SWM Rules 2016 clearly mandate clearing of sites as a first option, by bio-mining and bioremediation. Still, capping is often proposed or considered an option in India merely because it is done in the West. But clearing a dumpsite almost to ground level rather than capping it is a far better option for permanent pollution prevention, as well as for the following additional reasons:

Clearing by bio-mining recovers the entire base area of a dump at almost ground level. Capping gives only one-third of the base area as usable area at an inconvenient height for future use.

Cleared sites require no after-care. Capping requires at least 15 years of continuous leachate pump-out and treatment in a dedicated effluent treatment plant nearby. Gas extraction is very difficult and inefficient when attempts are made to insert suction pipes into dumped waste instead of before dumping begins. Poor success at Gorai capping led to the forced refund by Mumbai city of Rs 15 crore advance carbon credits.

Capping of open dumps (wrongly called SLFs or Sanitary Landfills) requires intake of fresh waste to be stopped and permanently diverted to a fresh site before capping begins. With increasing protests against fresh waste disposal sites, getting started elsewhere can often delay capping plans indefinitely. Bioremediation and Bio-mining to clear a site can start immediately at one part of an actively used dump while fresh waste continues to be received and stabilized at another part. Clearing can be done in phases to match available funds.

In the USA, only grass is permitted to be grown on the soil cover of a capped site. It must be regularly mowed for 15 years to prevent the growth of herbs or shrubs or trees whose roots may penetrate the plastic layer below the soil cover. If trees are planted over soil capping, they die in a few years as soon as their roots enter the hot airless waste below. Capped sites are closed to the public for 15 years. But if a dump is cleared to near ground level, it can be easily converted to a public tree park or garden if desired, unless below-ground waste remains untreated on the site

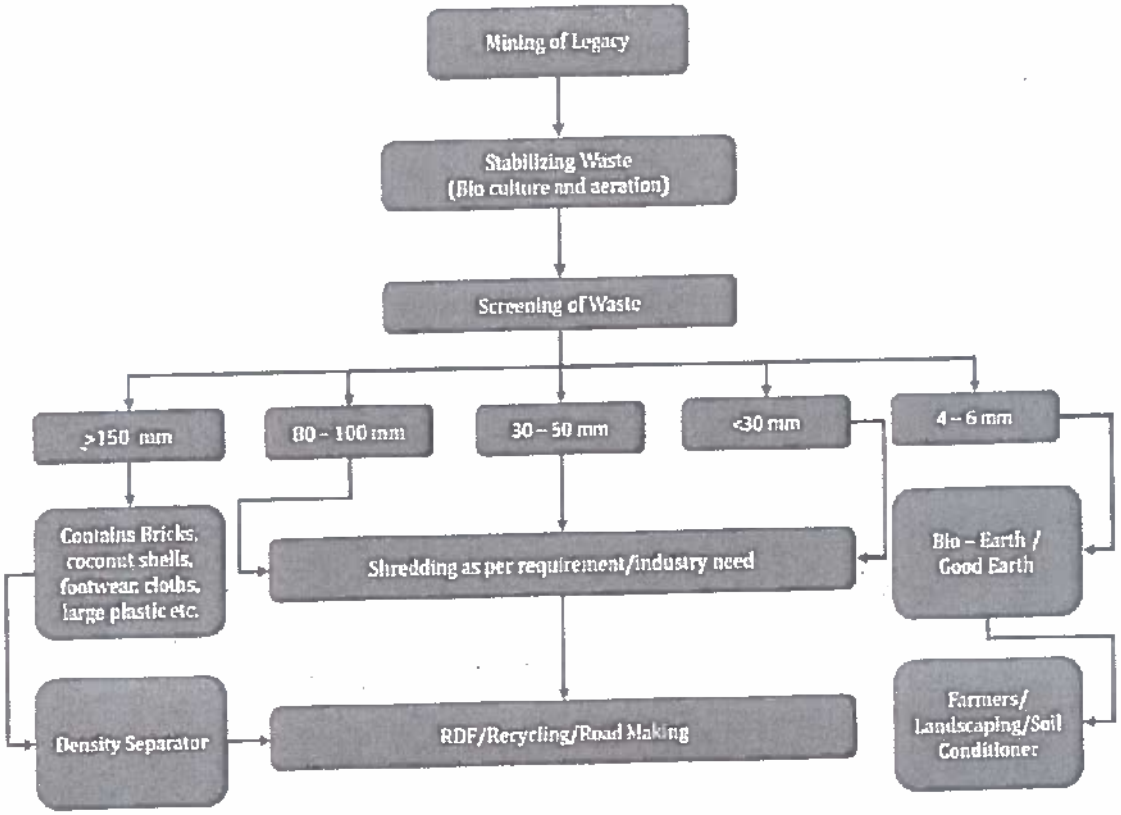
Thus, capping of dumpsites is not advisable and bioremediation and biomining of the legacy waste has been selected as the preferred option for legacy waste management of these two sites.

3.2 Bioremediation and Biomining of Old Municipal Dumpsites

It refers to the excavation of old dumped waste and make windrow of legacy waste thereafter stabilization of the waste through bio-remediation i.e. exposure of all the waste to air along with use of composting bio-cultures, i.e. screening of the stabilized waste to recover all valuable resources (like organic fines, bricks, stones, plastics,

PMU (RCL)

metals, clothes, rags etc.) followed by its sustainable management through recycling, co-processing, road making etc.



The first step is to excavate legacy waste, loosen it and make windrows so as the leachate can be dried of through solar exposure and all the entrapped methane is removed from the heap. All biodegradable waste, like discarded food, fruit, flower and garden waste, needs air to decompose it in an odourless way without producing leachate. So the first step in stabilizing and bringing down airless legacy waste is to expose as much of it as possible to air.

Addition of composting bio-cultures speeds up decomposition and rapidly creates biological heat within the waste that helps to dry it out and reduce its volume by 35-40%. This happens through loss of moisture and by decomposition of some of the aerated waste to carbon dioxide and water vapour. This is called bioremediation and makes the waste dry enough for screening. Waste is called stabilized when there is no more generation of heat or landfill gas or leachate, and seeds are able to germinate in it.

It means the screening of such stabilized waste into different size fractions that can be usefully used off-site or disposed of without affecting the environment. Screen sizes commonly used are one or more of the following: 150 mm. 80 to 100 mm, 24 to 50mm, 12- 16 mm and 4-6. The finest fraction is called bio-earth or good earth. It contains a mixture of humus-rich organics which improve soil fertility along with a high proportion of soil or sand, which is why it cannot meet FCO standards for compost. The coarsest fraction contains bricks, stones, coconut shells, footwear, cloth and larger plastics.

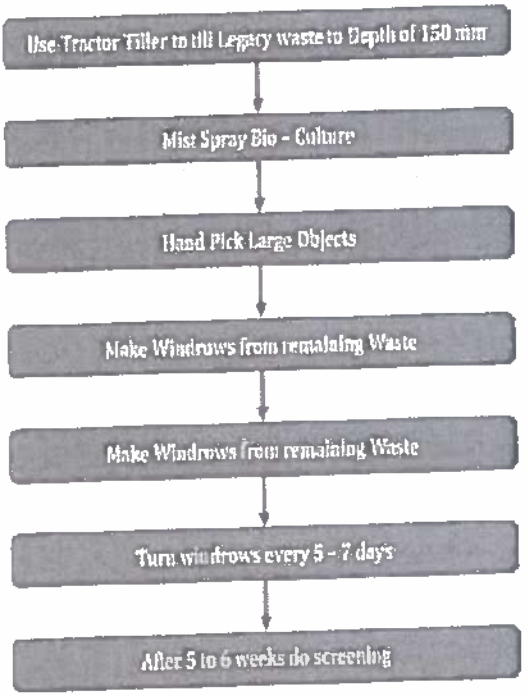
PMU (RCU)
SMWM, Luc

Density separation helps recover combustibles which can be used (usually up to 5-10%) as fuel replacement after supplying it to customer requirements. The lighter mid-fractions are mostly plastics and can be shredded as per industry requirement for use in bitumen hot mix plants to make so called Plastic Roads or as refuse derived fuel for co-processing in cement kilns. Fractions up to 50mm do not require shredding for use as RDF. The heavier mid-fractions are mostly stony inert which can be used in the lowest layers of roadmaking or plinth-filling or in low-lying areas but should not contain more than 3-5% plastics by weight. Less than 10% of the original waste remains as totally unusable residual rejects and may remain onsite, either in a small heap or spread to raise the ground level by a couple of meters. The land which was hosting waste dumps is now fully recovered for alternate uses. Biomining and Bio-remediation processes should be adopted as early as possible to ensure holistic solid waste management

3.3 Process of Bioremediation and Biomining

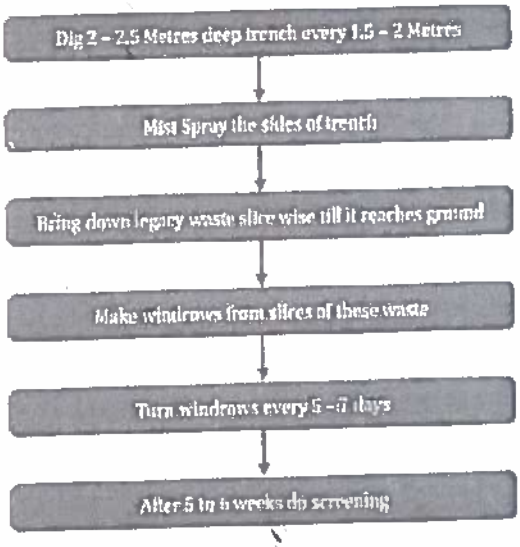
Exposing the legacy waste to air to stabilize it has been done since 1998 in many ways. Almost all of them involve forming the waste into long low heaps of about 2-meter height called windrows, to get maximum surface area to volume. Repeated turning is necessary to ensure that the innermost waste in windrows also gets exposed to air. Usually 3-4 turnings of legacy waste are necessary to stabilize it.

1. Use a tractor-tiller to repeatedly loosen the topmost 150 mm layer of legacy waste. Mist- spray the waste lightly with bio-cultures to control odour and get the decomposing microbes dispersed into the waste. Hand-pick out large objects like rocks or coconut-shells or long pieces of cloth. Form the waste into windrows using a Bobcat or JCB or similar earth- moving equipment. Turn these windrows every 5 days. After 2-3 weeks when the heaps are free flowing enough for screening, move the material to multi-deck vibrating screens or to trommels (rotating cylinders with different size perforations) to get fractions of different size and weight.

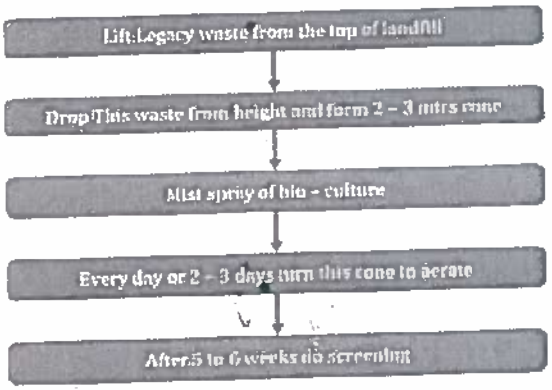


PMU (RCUES) SMVV, Lucknow

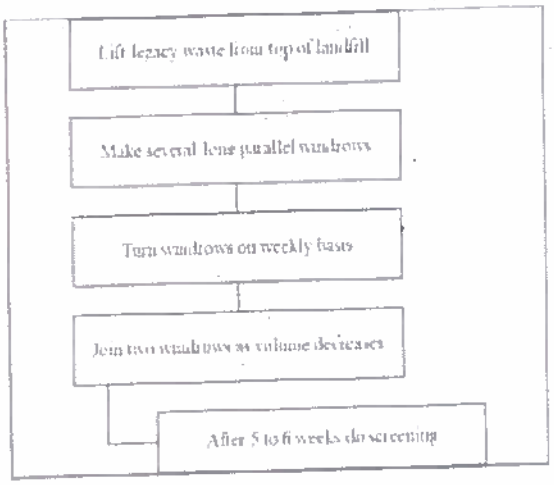
2. Use a JCB to dig 2-2.5 meters deep trenches downwards from the top of a legacy waste heap at 1.5to2 meters intervals. This is a rapid and cost-effective way to slice the uppermost layer into in-situ windrows. Mist-spray the sides of the trenches to get microbes to reach exposed waste surfaces. Bring down these slices to form terraces and turn one aerated windrow onto another weekly before repeating the process until almost ground level is reached. Start screening when waste moisture is low enough



3. Use a JCB to lift legacy waste off the top of a heap and drop it from a height to aerate and loosen the waste and form 2-3 meters high cones. Mist-spray bio culture on the cones. Every day or 2-3 days use the JCB to lift waste from the cones and drop it back to the same or a nearby location, to aerate the waste. This is rather fuel intensive.

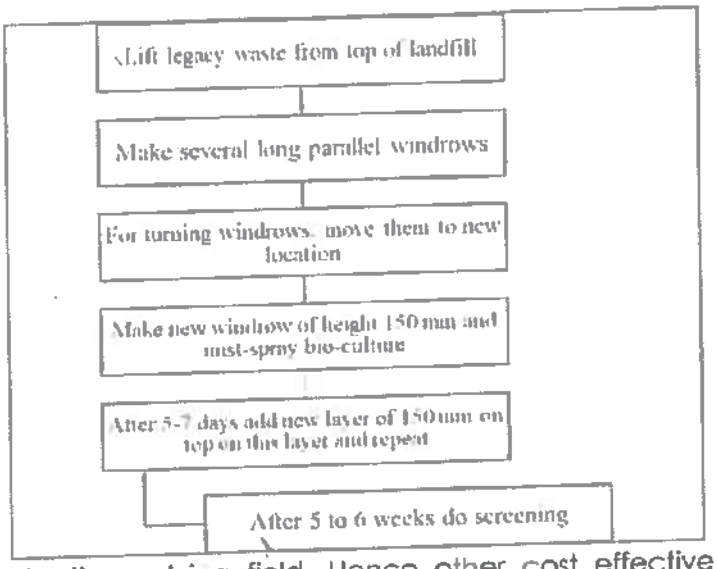


4. Where space permits, move the waste to form several long parallel windrows. Turn these weekly with a JCB. Often at the second or third turning, one heap can be combined with a second one as their volumes decrease. Windrows can be aerated either by moving all the waste to form a new parallel windrow, with the innermost waste on the outside for aeration, or by moving all the waste forward in small steps while dropping it from a height for aeration.



5. If waste needs to be moved from one location to another part of the same site, usually the perimeter, place it in thin 150 mm layers and mist-spray bio cultures. Allow 5 days to aerate one layer before adding the next one and mist-spraying bio cultures on that also. Turning may not be necessary when waste is spread thin like this, to decompose like leaves on a forest floor.

PMU (RCUES) Lucknow



6. This is a constantly evolving field. Hence other cost effective and space effective methods can also be applied.

3.4 Processing Equipment's for Processing of Legacy Waste

The major equipment that would come in use would fall under the following heads of processes like excavation, shredding, screening, air classification and ferrous separation. As per suitability and requirement the appropriate choices should be made.

1. Screening
   - Trommel
   - Vibrating Screen
   - Disc/ Star
2. Handling Equipment
   - Loader (Front Load)
   - Conveyers
   - Fork-Lifts
3. Screening
   - Trommel
   - Vibrating Screen
   - Disc/ Star
4. Handling Equipment
   - Loader (Front Load)
   - Conveyers
   - Fork-Lifts

PMU (RCUE)

4 Treatment Process

Processing of accumulated waste shall be done in following manner as given below:



1. Local Body (LB) shall make a time bound plan to execute the bio-mining process to clear the old waste.
2. Volume of waste to be determined through contour survey (Total Station Survey) and site measurements. Drone mapping of heap volumes at different stages is most cost-effective and fast. Weighment of heaps is difficult and problematic as payment would be collected for heavy fractions, leaving behind the more pollution-prone lighter fractions.
3. Initial Contour level survey of the site shall be done on start of work and Final Contour level survey shall be done on final completion of the work.
4. Do an initial baseline survey of surface and subsurface soils and waters and also leachate present, to check for heavy metals and toxics if any. Samples should be drawn by an NABL or MOEF certified lab, also at the final stage. During operations, the operator should collect and keep daily samples of the finest fractions, to be pooled and analyzed monthly or at random by an NABL lab. This is to ensure that unsterilized rotted waste is not simply moved from one location to another by mining without bioremediation.
5. Sprinkle the newly exposed surfaces with a composting bio culture solution or a dilute solution of 5% fresh cow dung in water. This will control smell and speed up decomposition. With the help of Backhoe loader, the waste in the demarcated area should be loosened up.
6. Usually, the top layer has several materials in the active biological state. This layer shall be stabilized through composting bio-cultures, as well as herbal/biological sanitizers if found necessary for odour control.
7. Raking of garbage layers by a long spike harrow operating in cross directions may be done as needed to pull out large rags, plastic, rubber, textiles etc.

PMU (RCU

8. Waste pickers or labour should manually pick out bulky waste like coconut shells, banana stems, tyres and rocks prior to screening for bio-mining. Store in separate heaps for sale or use.
9. Turn these windrow heaps once a week until no more volume reduction is observed in the heaps and no more heat is generated. If the garbage is stabilized, there will be no smell or leachate formation and the material will be dry enough for sieving.
10. ULB or its agency may deploy Trommels and/or Horizontal Screens or other types of screens for the purpose of screening. Screen the stabilized waste in a rotary screen or gravity screens of different size openings, preferably 35mm and 8mm. A fan can blow out the plastic fraction for use by recyclers. Compost
11. Appropriate numbers of excavators, backhoe loaders and workers will be required to execute the work.
12. The recyclables recovered from the bio-mining process should be sent for recycling as per the quality of the material, which should also be randomly sampled by an NABL lab and tested for heavy metals, salinity/electrical conductivity and leachability to ensure no environmental harm during use. FCO standards for pH and contaminants could be provisionally used as a benchmark. Non-Recyclable plastic material shall be sent for road making or to RDF units or cement plants. Initial cleaning of recyclable waste shall be done before it is transported for sale or disposal.
13. The recovered earthy fines shall preferably be used for landscaping or gardening or road medians within the Local Body or the site. The recovered soil can also be used as "Soil enricher" to develop green areas or by farmers.
14. The recyclables like plastic, glass, metals, rags and cloth recovered from the waste during screening shall be sorted out and preferably cleaned before sending to recycling industries or as RDF.
15. The heavy fractions may be sand and gravel usable for road shoulders or for plinth filling. Stones and concrete if any can be used for road sub-grade, or for crushing. Recycling and reuse in the construction industry. The recovered construction and demolition waste recovered from the bio-mining process may be sent to a C&D processing facility if suitable for production of building materials.
16. In very old garbage layers with high debris content, most of the organic matter may have already been decomposed. Do a seed germination test to ensure it is stabilized. Add bio-cultures to fully stabilize it if heat is still generated in windrow heaps or volume reduction is observed. After 7-10 days of stabilization the waste can be taken up for screening.
17. Usually, the finest fraction will be organic matter plus fine soil, called 'bio-earth', which can be used as soil improver, especially for restoring alkaline or saline soils to fertility, or to grow some vegetation for erosion control. It is also useful as a lawn subgrade cum drainage layer, or it can be used as organic manure in tree pits. The next coarser fraction will be gravel and coarse organics, which can be used for road and railway embankments the coarsest fraction may

MU (RCU

have a lot of combustibles (cloth etc.) which can be baled and supplied as Alternate Fuel Resources in cement kilns or boilers.

18. There may be some (maximum 5-10% of total) left over waste including lumps of heterogeneous nature. The waste may be soaked with leachate or hard and difficult to disintegrate. This waste can be sent to scientific landfill for disposal (near zero residues).
19. The recovered land from the bio-mining process shall be utilized for any purpose deemed appropriate. Ideally reclaimed space should be reused for waste processing, otherwise for alternate non-habitation uses.

PMU (RCUE)

W, Luck

5 Standard Procedures for Operations

5.1 Use of Screened Fractions

When planning for bio-remediation and bio-mining, it is important at the same time to identify where the screened fractions will go, in order to bring down the heap of mixed waste to fractions that would each have been usable if unmixed. None of these fractions will bring in income. In fact, their transport offsite is a cost to be budgeted for. Look for the nearest industries using solid fuel. Look for the nearest bitumen hot-mix plants and also specify Plastic Roads in road tenders to ensure offtake of the thin-film plastic fractions. Start a dialogue with all kabadi walas within the local body to see who will be willing to pick up or accept which items. Plan for offsite aggregation space for different fractions and types of waste that will result from screening. Identify aggregation and storage sheds for use by waste-picker groups or kabadi walas. Identify transporters who can transport different fractions out on their return trips.

For the bio-earth or good earth finest fraction, test periodically for heavy metals, then look for farmers willing to accept it. It is excellent for reclaiming salt-affected soils and for restoration of mining overburden areas if any are nearby. There is a cess for restoration of mined areas, which is normally unspent as forest departments are supposed to revegetate them. But this is unviable in barren rocky soil by planting and watering saplings. Revegetation is instead possible and effective by mixing grass seed with the good earth fraction and spreading it on the overburden to start a natural succession of grasses, herbs, and shrubs.

5.2 Process Management

There are several factors that must be kept in mind during implementation of the project.

5.3 Space Management

For all waste-stabilizing methods, management of space is the biggest challenge, as aeration, stabilizing and screening mostly needs to be done within the boundaries of an already overloaded dumpsite. This is achieved mainly by experience and creative common -sense. Onsite earthmover operators often come up with the best solutions, so seek their opinions. Every dumpsite poses a case-by-case challenge, but there is no above ground dumps that cannot be successfully bio-remediated and bio-mined.

5.4 Leachate Management

Most high heaps of legacy waste are water logged with leachate even near the topmost layers and all the way to the bottom, like a dhokla. This is not just from rainwater entering the heap but is produced by airless rotting within the entire waste heap. So, when legacy waste heaps are opened up, some leachate almost always

MU (RCUES)

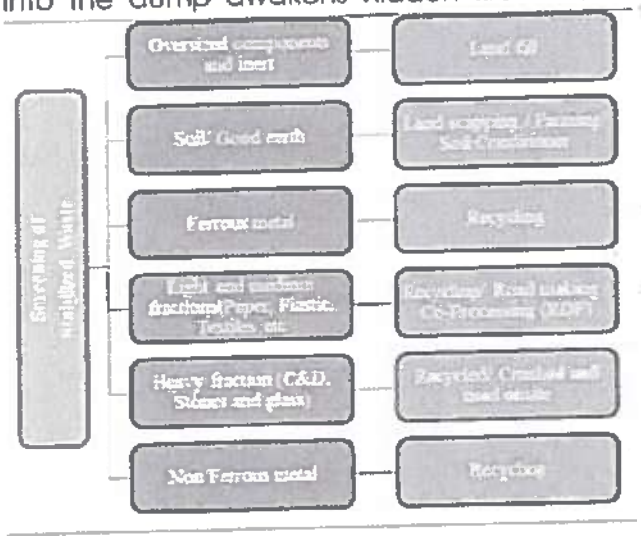
trickles out. This is not produced by the formation of windrows or cones, which in fact help to dry out the waste by aerated decomposition.
Channels must be created to lead the oozing leachate rivulets to a lined depression or pond for treatment or for leachate recirculation onto windrows as a type of bio-culture (test to see if heaps generate enough heat with its use). Leachate can also be treated in collection ponds by underwater composting. Bio-cultures that have been proved successful at other locations can be sprinkled onto the leachate pools. But intermittent aeration is a must, using small compressor pumps or aerators or airlift aeration or even simple manual or mechanical agitation. Aeration is necessary for the added microbes to do their work of digesting the polluting solids suspended in the dark and turbid leachate.



Success is noticed by a progressive change in color from dark to light, by reduction or absence of odour and by fine bubbles rising to the surface from digested solids.

5.5 Fire Control and Safety

Most large dumpsites are smoldering from hidden fires. Methane itself is flammable with a blue flame and supports the yellow flame burning of combustible plastics, cloth, and oily rags. Sometimes flammable industrial waste finds its way onto dumpsites, aggravating the problem.
It is difficult to begin bio-remediation work on a smoking dump. Sometimes digging into the dump awakens hidden fires. So, fire control is important. Adding water increases the generation of both methane and leachate and is counter-productive, not a long-term solution, adding soil cover to smother the flames adds more material to a heap that one is trying to bring down.



There is a better way, again requiring creative common-sense and experience and training of earth-mover drivers. Most fires within heaps have a point source – a bag of textile discards or plastic waste or a ball of oily rags. Earthmover drivers must learn to dig in and pluck out these burning balls of fire. These should be laid nearby on the surface of the dump and then rubbed out with the back of the excavator shovel to extinguish the flames and smoke. Wet soil should be kept handy to immediately plug the excavated hole. Adding

MWS * PMU (RGUES) * Lucknow

composting bio-cultures can be tried, to counter the anaerobic conditions around the burning spots. Smoking points must be tackled patiently and systematically, one by one, till the dump is smoke-free to begin stabilizing operations by bioremediation. It is important to do the risk assessment and an onsite emergency plan should be kept handy prior to commencement of dumpsite bioremediation & bio-mining.

5.6 Use of Recovered Space

The benefit of bio-mining lies in abatement of ongoing and future pollution and ill health and in the recovery and re-use of valuable space. This is ideally for continued long-term waste management since public consent for new waste sites is increasingly difficult because of earlier visible mismanagement of a virgin site. Ensure advance demarcation and declaration of a buffer zone of no new habitation for up to 500 meters around the cleared site to prevent real-estate activity from encroaching the buffer as soon as the dump is removed.

If a dump is engulfed within a growing city and its continued use for waste management is unsuitable, identify in advance the planned future use of that site and put up a signboard indicating that use, to ensure public acceptance of the biomining operations which will be temporarily noisy and dusty. This will also protect the site from land-grabbers.

Cleared dumps are not permitted for habitation for at least 15 years (SWM Rules Schedule I, H (2)). This is because of unhealthy leachate below the site and formation of flammable and offensive landfill gases from waste pockets that may remain unexcavated.

Permissible options are reuse for SWM, open stadia, sports grounds, parks and gardens, parking lots, container yards, warehouses of non-flammables and similar facilities where people are not living or working all day and night.

5.7 Bio-mining Below-Ground Waste

Many cities and towns chose abandoned quarry-pits to dump untreated waste, without realizing the permanently harmful effects of this. Leachate oozing out at the bottom of the pit cannot be seen or captured or treated and enters both shallow and deep groundwater through fissures in the rock. The hydrostatic pressure in deep quarries, as divers experience at increasing depths, forces the leachate even more forcefully into the cracks. Dark and smelly water pollution begins to show up in nearby wells and bore wells after a year or further away even after 3-4 years, after which the damage is irreversible.

But leachate in an airless rotting mass continues to form for up to 30 years, so further damage can be prevented by bio-mining the quarry-pits. This has also been ordered by the NGT (in OA 179 of 2017). The waste needs to be excavated in descending layers like any open-cast mining and unloaded on the surface in windrows or conical heaps which can be turned weekly for 5- 6 weeks before screening. Use of bio cultures is most important here, to control odour and the leachate which will run out while placing excavated material. Adding bio-cultures into the pit without excavation will not give the waste and the digesting microbes the air needed for stabilizing the waste. Immediate stoppage of further quarry-dumping of untreated waste is the most important action. The excavated quarry-pit, or any other quarry-pits that are planned for waste disposal, must first be filled to ground level with only debris and construction and demolition waste up to slightly above surrounding ground level. The newly

created space can then be used for waste stabilizing by unloading fresh waste in windrows here and turning them regularly. Any small quantity of leachate produced will be visible as it runs out from the edges of the heaps. Bio- mining /screening may have to be interrupted during monsoons, both above grounds and below ground.

5.8 Environmental Risks and Environmental Management Plan

There are several potential environmental risks associated with bio-mining projects and therefore a plan addressing these potential risks should be kept ready. Most of the conditions present at the landfill and its surroundings will be unique to the specific landfill, and specific to the age of the waste being excavated.

Majorly the risks would be associated with proper management of hazardous waste that may be uncovered during the operations of reclamation, managing the releases of gases, odours, its associated risks to human health and controlling any fire, subsidence or collapse.

Environmental risks can be managed well if considered in advance of the operations and appropriate mitigation measures have been designed by the executing agency.

5.9 Environment Management Plan

In consideration to the prevailing site features and the proposed Solid Waste Management Facilities, it is necessary to ensure that the proposed plant and facilities would be adequately designed with necessary environment protection measures. This Chapter accordingly outlines the environment protection measures for the proposed dumpsite remediation for Lucknow City dumpsites. During project implementation period special emphasis would be made on measures to minimize leachate/ effluent generation and dust control at source. The sources and types of pollution with broad level mitigation measures is outlined in the following sections.

5.9.1 Air Pollution Measures

Air environment including Ambient Air Quality and odour generation due to the proposed project during construction and operational phases would be accounted. The principal sources of air pollution are construction activities, truck movement with construction materials and municipal solid waste, loading and unloading of materials, vehicular exhaust. The impact is generally confined to the project area and is expected to be negligible outside the project site boundaries. The pollutants their sources and mitigation measures to be adopted are presented in Table 9-1.

Table 5-1 Pollutants & Mitigation Measures

S No.	Pollution Source	Pollution Emitted	Mitigation Measures
		Air Pollution Mitigation Measures	
1	Construction activities	SO2, NOX, Particulates, Odour etc.,	**Dust suppression by water sprinkling. Bitumen covered internal roads.**
2	Vehicular Movement		**Wheel Washing Bay at the entry point. Vehicles carrying of**

SWM, Lucknow * PMU (RCUES) *

3	Loading and unloading of trucks		**construction materials and waste to be covered with tarpaulin / plastic sheet.**
4	Processing of waste		**waste handling area rest to be covered Provision of green belt**
	Water Pollution Mitigation Measures		
5	Domestic Waste	Suspended solids, BOD, etc.	**Septic Tank/Soak Pit.**
6	Leachate from windrow area		**LTP for recycling. Storm water drainage system.**
	Solid Waste Management		
7	**Construction**	**Construction materials e.g. coarse aggregate, fines aggregate, bricks, steel etc.**	**Recycled or used for filing/ levelling of low-lying areas within the site or transported outside.**

5.9.2 Water Pollution Measures

The water demand for the project which would be in the range of 3 KLD. No surface water would be tapped. The source of water would be the Ground water. The main wastewater generation sources during construction phases would be equipment washed water and other surface run-off with suspended solids loading and sewage from temporary sanitary facilities with BOD loading. During construction activity the surface run-off would be diverted to working pit to arrest the suspended solids if any and the settled water would be reused for construction purposes, and for sprinkling on roads to control the dust emission, etc. During operation phase, the wastewater would be from drinking and sanitary use, leachate from bioremediation/windrows area. The domestic wastewater would be treated in septic tank followed by Soak pit. Maximum leachate generation from the windrows and other areas would be treated.

The Leachate generated at various places in the plant would be collected and properly treated in an LTP. The treated leachate would be sprayed on windrow to maintain suitable temperature and moisture. Leachate generated during precipitation period would be stored in evaporation pond. Based on the rainfall intensity of the plant area, separate storm water drainage system would be properly designed. Storm water would be collected in a centralized pit to arrest the silt particulates and clear water would be used locally for landscaping and fountains. Surplus water would be released into public drains or adjacent nala. The pollutants their sources and mitigation measures to be adopted are given below.

5.9.3 Noise

Noise pollution would be resulted from transportation, construction phase and processing phase. To reduce noise pollution, high-grade machinery would be used. There would not be any major noise-causing activity during operational phase

MWS * PMU (FCUES) * Lucknow

5.9.4 Ecology of area

Site clearing or operational activities would not impact the ecology of the area adversely, since there are no known rare, endangered, or ecologically significant animal and plant species in the area. The scientific processing would have a beneficial impact on the surrounding terrestrial and aquatic ecology

5.9.5 Green Belt Development

In order to arrest wind borne fugitive dusts around the plant boundary with about 3-5 m wide green coverage based on locally available plant species. The green belt developed would help to capture the fugitive emissions, attenuate the noise generation and improve the aesthetics. All open spaces, where tree plantation may not be possible, would be covered with shrubs and grass to prevent erosion of topsoil.

5.9.6 Solid Waste Disposal

During the construction phase, the solid waste would be different types of raw materials such as coarse aggregate, fines aggregate, bricks, steel etc. being used during construction stage. The solid waste generated during this period would be predominantly inert in nature. During operation phase appropriate management of solid rejects from different processing activity would be undertaken. Sanitary landfilling would be adopted for rejects generated from processing. The pollutants, their sources and mitigation measures are to be adopted.

MWS * PMU (R.C.) Lucknow (S.E.)

6 Management Plans

6.1 Reporting Formats during Active Operation period

6.1.1 Weighment / Volume, Acceptance and Rejection of SWM

Following data will be recorded to record the weighment of legacy waste processed:

i.) Date of operation
ii.) Registration number of the truck supplying SWM / Lorry number
iii.) Total volume of the truck trolley
iv.) Total laden weight
v.) Total un-laden weight
vi.) Net weight of waste
vii.) In-situ volume of waste excavated (Net weight of waste/ In-situ density)
viii.) Time of entry of the truck
ix.) Area of dumpsite (phase) from where waste has been collected
x.) Trip Number
xi.) Time of Trip and material unloading

6.1.2 Leachate Collection and Removal System ("LCRS")

i.) No overflow of Leachate from the LCRS.
ii.) No untreated Leachate to be let out from the Site, unless it meets the standards

6.1.3 Environment Monitoring System

- A standard protocol will be prepared for environmental Monitoring to be carried out in the following zones:

i.) On and within and surrounding area as well as from 500 m radius outside from the project and project facilities.
ii.) On and within the Scientific disposal area
iii.) Leachate Collection and treatment facilities in the project site as well as in the Scientific disposal area
iv.) Upstream and downstream ground water
v.) In the atmosphere/local air above and around the Scientific disposal area

6.1.4 Reporting

i.) The following data should form part of the reports to be submitted by the Contractor and monitored by PMC and Authority:
   a. Daily excavated weight and volume of compacted waste with extent of area and volume in cubic meter.
   b. Quantity of waste segregated in each day in Metric Ton and cubic meter.
   c. Quantity (in cubic meter) of waste taken out in each day including RDF, eco bricks, soil, C&D and residual Solid Waste to facility for Scientific disposal etc. as far as category wise.
   d. Leachate generation and treatment reports
   e. Rainfall days
   f. Quality test reports as and when made.

SWM * PMU (KCDCL) * MORNI

g. All "as-built" Drawings of any Development undertaken after COD.
h. Residual Solid Waste Matter quality test reports (including moisture content)
i. Leachate generation
j. Ground Water quality (both within and outside the Site)

6.1.5 Report scheduling

Following events would be verified and reports will be submitted to client:

Period/Event	Verification	Applicable report to be issued by the Project Monitoring Consultant
1. Implementation Period	• Review Weekly progress report submitted by the Contractor • Issue "Notice to Remedy" in event of non-compliance by the Contractor • Issue provisional/Readiness	- As per requirement.
2.Monitoring at Weighbridge	• Verify weighment slip • Verify monthly Tipping Fee Statement	- As per requirement.
3.Monitoring at Waste Inspection Area	• Verify recording of Test results • Verify monthly Tipping Fee Statement and penalties (if	As per requirement.
4. Random Inspections of Project facilities	• Advise ULB/Dept. on penalties payable by the Contractor	As per requirement.
6. Force Majeure/ Material and Persistent Breach of O&M Requirements /Events of Default.	• Issue "Notice to Remedy" in event on non-compliance • Record Events of Default, Material/Persistent Breach of O&M Requirements, Force	
7. Hand back and Transfer of Project Facilities	• Specify list of works/jobs to be carried out by the Contractor. • Specify list of items to be handed back and transferred back to ULB by the Contractor. • Verify compliance by the Contractor with Hand back and	As per requirement.

6.2 Log Book Formats as part of Standard Operating Procedures

This operation manual details out the logbooks to be followed for Bioremediation and Biomining Project of Legacy Waste by producing soil enricher (Bio Earth), SCF, C&D Waste and Inert.

A. Data Sheet of Proposed Equipment's

1. List of Equipment's

Name of Equipment	Nos.	Make Model

2. Daily Inspection Equipment/Machinery

Name of Equipment	Nos.	Make Model

3. Name and Designation of Key Experts

Domain	Name of Expert	Contact Details

SWM * PMU (RCUES)

B. Security

It is imperative that landfill sites are secure from unauthorised access. Only vehicle related to waste, construction material, Recovered and engaged resource and visitor will be permitted.

A. REJECTS – OUT FORMATE

S. No	Date	Type of	Vehicle	Gross weight	Tear weight	Net Weigh	Time In	Time Out	Driver Nam	Sign Securit

B. GOODS ENTRY – FORMATE

S.NO	DATE	PARTY	ITEM	BILL	QTY.	CARRIED BY	TIME	SIGNSECURITY

C. VISITORS REGISTER FORMATE

S.NO	DATE	PERSONS NAME	PURPOSE	MEET TO WHOM	IN TIME	OUT TIME

D. WORKSHOP AND MACHINERY STORAGE AREA

The list of Machinery, equipment and materials will be recorded every day and will be enlisted for their monitoring and supervision. The activity of same shall be as follows: -

S. No.	Machinery/Material/Equipment	Date of Inspection	Status
1			
2			
Checked by:		Inspected By:	

PMU (R

LOG BOOK FORMATS

A. WINDROW FORMATION

Log Book of Windrow

Name of Project Site-

Contact Details-

Windrow Identification No.- Date- Shape

of Windrow:

Date of Formation: No. of Windrow Formed:

Dimension of Windrow: Avg.
Length:
Avg. Width: Top Bottom
Avg. Height:

Remarks:

Submitted By Checked By Approved By

SNMS * PMU (RCD

B. WINDROW TURNING

Log Book of Windrow

Name of Project

Site- Contact

Details-

Windrow Identification No.-

Date

	Date	Colour	Deployed
1st Turning:			
2nd Turning			
3rd Turning			
4th Turning			
5th Turning			

Remarks:

Submitted By
Approved By

Checked By



C. ADDITION OF INOCULUM

Log Book of Inoculum

Name of Project Site- Contact

Details-

Date of Formation: Qty. of Inoculum: Date of

Preparation of Inoculum-

	Windrow Identification No.	Date	Mode of Spraying

Remarks:

Submitted By
Approved By

Checked By



D. DUTY SLIP OF VEHICLE

DUTY SLIP OF VEHICLE

Name of Project Site:	Date:
Vehicle No.:	Driver's Name:
Reporting Site:	
Time Leaving Garage:	K.M
Time at Reporting Site	K.M
Time of Release	K.M
Time of Garaging	K.M
Releasing Place:	Date:
Remarks:	

Submitted By Checked By Approved By

E. TROMELLING

Log Book of Screening Machine

Name of Project Site- Date-

Contact Details of Operator-

Site Identification No.- Shift No.-

Source of Stabilised Waste:

windrow Identification

No.: Excavator Engaged

	Trommel	Trommel	Trommel I≤6
Starting Time			
Closure Time			
Remarks			
Starting Time			
Closure Time			
Remarks			
Starting Time			
Closure Time			
Remarks			

Submitted By Checked By Approved By



F. REJECTS MANAGEMENT

Log Book of Rejects

Name of Project Site-

Dat

e:- Contact Details of Operator-

Site Identification No:- Shift No:- 1 2 3

	Vehicle Engaged for	Vehicle Engaged for Transportatio	No. of Trips	Weight Per Trip	Location of Storage
Rejects (>125					
Rejects (>35					
Trommel (>6					
Trommel (<6					

Remarks:

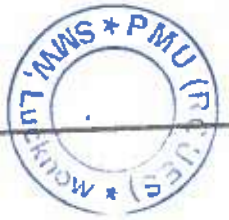
Submitted By Checked By Approved By

SMW, LUCK ★ PMU (RC

6.3 Environment Management and Monitoring Plan

6.3.1 Pollution Mitigation Measures

S. No.	Pollution Sources	Pollutants Emitted	Mitigation Measures
Air Pollution Mitigation Measures			
1.	Construction activities	SO2, NOX, Particulates, Odour etc.	• Dust suppression by water sprinkling. • Bitumen covered internal roads. • Wheel Washing Bay at the entry point. • Vehicles carrying of excavated materials, construction materials and waste to be covered with tarpaulin or plastic sheet. • Proper ventilation and moisture in the compost plant and windrow area to be maintained and herbal insecticides to be sprayed around odour generation areas at regular intervals. • Covered landfill by polyethylene sheets except the active waste laying area • Greenbelt would be provided along the internal roads and plant boundary
2.	Vehicular Movement		
3.	Loading and unloading of Trucks		
4.	DG Set		
5.	Processing of waste		
Water Pollution Mitigation Measures			
6.	Domestic Waste Leachate from	Suspended Solids, BOD etc	Septic Tank with Soak Pit. LEP for recycling.
7.	Windrow		
8.	Leachate from landfill		Storm water drainage system
Waste Management			
9.	Construction	Construction materials e.g. coarse aggregate, fine aggregate, bricks, steel etc	Recycled or used for filling or levelling of low-lying areas within the site or transported outside to locations as identified by the Municipality.
10.	LTP sludge or evaporation pond	ETP sludge or evaporation pond	Sanitary Landfilling



6.3.2 Environment Monitoring

Monitoring for air quality parameters as per CPCB ambient air quality standards and surface water quality would be carried out on a regular basis or as and when required.

Environmental Component	Locations	Frequency	Parameters to be Monitored
Ambient Air Quality	Nearby habitations, upwind, downwind, crosswind	Quarterly	**PM10, PM2.5, SO2, NOx, CH4, CO, Ammonia, H2S, Odour**
Noise	Within site (DG set, Compost yard, Sanitary Landfilling area) and nearest habitation	Quarterly	**Noise Levels (Leq)**
Groundwater / surface water	Water samples from piezometric monitoring wells at 5-6 locations within 50 meters of periphery of landfill site, ground water from the nearest tube well, stream and River	Quarterly	**IS 10500:2012 drinking water parameters**
Leachate	Windrow of compost plant, Secured landfill, (active area)	Quarterly (TCLP Test)	**SS, TDS, pH, BOD, COD, As, CN, Cl,heavy metals**
Landfill gas	Landfill area	Quarterly	**Methane & CO2**
Compost	Final product	Monthly once	**As, Cd, Cr, Cu, Hg, Ni, Zn, C/N ratio, pH**
Pathogens and Fly test	**Within 200 m of Facility**	**Once in 6 months**	**As applicable**

6.3.3 Design Environmental Targets

The proposed project shall abide by the following design environmental norms and prevailing environmental quality but not limited

6.3.4 Ambient Air Quality

It shall be as per National Ambient Air Quality Standards, CPCB, GoI.



6.4 Technical Specification for 50 TPH Capacity

S. No.	Parameters	Units	Nos required
1	Machineries- 1 set		
1.1	Belt Conveyors (Roller Belts) along with supporting structure along with cabe tray and electrical panels		
1.1.1	Feeding Conveyor for Trommals (12.0 M long, 1.2 M wide))	Nos	2
1.1.2	Discharge Conveyor for Trommals (10.0 M long, 1.0 M wide)	Nos	2
1.1.3	Discharge Conveyor for Trommals (8.0 M long, 1.0 M wide)	Nos	4
1.1.4	Feeding Conveyor for VADS (15.0 M long, 1.0 M wide))	Nos	1
1.1.5	Discharge Conveyor for VADS (7.0 M long, 0.8 M wide)	Nos	1
1.1.6	Feeding Conveyor for Destoner (9.0 M long, 1.0 M wide))	Nos	1
1.1.7	Discharge Conveyor for Destoner (7.0 M long, 0.8 M wide)	Nos	1
1.2	Trommel Screen with Anti Clogging device		
1.2.1	Trommel Screen with 120 mm & 80 mm Hole , size 9.0 m LongX2.0 m dia	Nos	1
1.2.2	Trommel Screen with 35 mm & 16 mm Hole , size 9.0 m Long X 1.5 m dia	Nos	1
1.3	Volumetric Air Density Separators with Cyclone (10 TPH)	Nos	2
1.4	Destoner (10 TPH)	Nos	2
1.5	Magnetic Separator		1
1.6	Offline Shredder (10 TPH)	1 Set	1
2	PLC & SCADA System	Nos	1
3	Main Panel	LS	1
4	Cables		

Note:

1. Selected Bidder shall supply and install sufficient sets of machineries to meet the Project timeline.
2. Type of machineries and technical specifications are indicative. Concessionaire shall be free to adopt machineries of better quality and better output provided the product quality meets the desired standards as specified in CPCB guideline, CPHEEO manual etc.

1. **Pre segregation Trommel**

Description	Details
Trommal	Capacity 50 TPH, Coarse (150 mm) segregation
Screen Drum dia	2000mm
Screen Drum Length	9000mm
Screen/Trommel Speed	13-14 r.p.m
Screening perforation	150 mm & 80 mm dia Perforated sheet
Main Tyre Rings	Tyre Rings: 2 Nos. Fabricated with 25 mm plate, dia 2250 mm x 120 mm wide
Roller/Wheel assemble	6 Nos. Rubber friction roller Rubber roller 530mm dia x 140mm wide
Guide Roller	Bearing size: 70mm, UCP – 214 Guide Rollers: 2 Nos. will be provided
Central Ring	Will be provided for strength
Screen Shell	Drum 6mm thk, IS 2062
Supporting Structure	ISMC/ISMB of sufficient thickness Base Plate – 20mm thk, IS 2062
Screen cover	Bottom half will be covered
Drive Unit	1 x 7.5 k.w Motor, 1440 RPM flange mounted, gear box M-0722 – 14, actual ratio 14.34:1, SF – 1.49 output RPM-101 Final Drive through Chain & Sprocket –1" pitch duplex 21 teeth & 41 teeth
Quantity	1 No.



2. **Trommel 2 (35 mm & 16 mm)**

Description	Details
Trommal	Capacity 15 TPH, Fine (16 mm) segregation
Screen Drum dia	1500mm
Screen Drum Length	9000mm
Screen/Trommel Speed	14-15 r.p.m
Screening perforation	35 mm & 16 mm dia Perforated sheet,
Main Tyre Rings	Tyre Rings: 2 Nos. Fabricated dia 1750 mm x 120 mm x 25 mm thk.
Roller/Wheel assemble	6 Nos. Rubber friction roller
Guide Roller	Rubber roller 530mm dia x 140mm wide
Central Ring	Will be provided for strength
Screen Shell	Drum thk 6mm thk, IS 2062
Supporting Structure	ISMC./ISMB of sufficient thickness Base Plate – 20mm thk, IS 2062
Screen cover	Bottom half will be covered
Drive Unit	1 x 7.5 k.w motor, 140 RPM flange mounted, Gear box M- 0622 – 14, actual ratio15.52:1, SF – 1.43, output
Quantity	1 no.

3. Volumetric Air Density Separator

Technical Data sheet VADS

Description	Specification
Material to be handled	MSW
Bulk density	0.6 - 0.8 T/M3
Feed Capacity	10 TPH
Inclination Angle	7 - 17 degree
Ballaster Size	4800 mm x 2050 mm x 3000 mm
Deck & paddles	Double deck with 5 paddles
Deck mesh size	Mesh opening top Deck 80 mm & bottom deck 20 mm
Deck size	3620 mm x 405 mm Approx. (5 + 5) = 10 nos.
Material of construction	MS, IS: 2062
Drive arrangement	Electro Mechanical
Geared Motor	Motor 7.5 Kw/ 1500 RPM x 2 nos. & Gear box K-632-8, RPM 182 – 2 nos.
Final drive	Direct coupled
Material of Construction	Screen body 5 mm thk, with stiffner, IS:2062
Inlet Chute	Inlet chute 5 mm thk, IS:2062
Oversize chute	Oversize chute 5 mm thk, IS:2062
Body	Frame shall be fabricated from rolled steel sections
Drive Shaft material	EN-8
Air Blower	Centrifugal type
Capacity	
Pressure	18" WG
Blower Motor	5.5 Kw/ 3000 RPM

SMW, LUCKNOW * PMU (RC)

4. Fine Screening Trommel (6 mm)

Description	Details
Trommal	Capacity 15 TPH, Fine (16 mm) segregation
Screen Drum dia	1500mm
Screen Drum Length	5500mm
Screen/Trommel Speed	14-15 r.p.m
Screening perforation	6 mm dia Perforated sheet,
Main Tyre Rings	Tyre Rings: 2 Nos. Fabricated dia 1750 mm x 120 mm x 25 mm thk.
Roller/Wheel assemble	4 Nos. Rubber friction roller
Guide Roller	Rubber roller 530mm dia x 140mm wide
Central Ring	Will be provided for strength
Screen Shell	Drum thk 6mm thk, IS 2062
Supporting Structure	ISMC/ISMB of sufficient thickness Base Plate – 20mm thk, IS 2062
Screen cover	Bottom half will be covered
Drive Unit	1 x 5.5 k.w motor, 140 RPM flange mounted, Gear box M-0622 – 14, actual ratio15.52:1, SF – 1.43, output RPM-93.
Quantity	1 no.



5. Single Shaft Shredder

Specification	Details	Remark
Equipment	Shredder two Roll type	
Capacity	10 TPH	
Material to be Shredded	MSW	
Shredder Speed	35 rpm	
Blade size	dia 500 mm x 1500 mm rotor length	
Blade material	EN-19	
Blade thickness	30 mm	
Shaft	Hexagonal 190 mm and 150 mm dia at bearing	
Shaft material	EN-9	
Body	fabricated	
Feed Hopper	1600 x 1600 x 750 mm	
Discharge	Open type	
Drive Unit		
Motor	30 Kw/1500 RPM flange mounted	
Gear Box	K-1032 – 41.49:1, output RPM- 35, SF-1.91	
Final drive	Direct coupled	
Quantity	1 no.	

MNNIT Allahabad ★ SWM, Lucknow ★

DETAIL SPECIFICATION OF SUSPENDED PERMANENT MAGNET FOR 1000 mm WIDE BELT

Type type)	Suspension Magnet (Permanent magnetic
Installation	To Right angle of Belt Conveyor
Type of Magnet	High intensity magnet
Operating Height	250 mm approx.
Magnet Size	1000 mm W x 800 mm L x 250 mm Ht.
Quantity	01 no.

MCC			
S. No	**Description**	**Unit**	**Data**
	MCC Panel		
1	Applicable standards		IS
2	Rated voltage		415V
3	Type of execution		Fixed
	For ACB modules		Fixed
	For rest of the modules		Fixed
4	Panel Construction		
	Material (cold rolled / hot rolled)		CRCA sheet
	Thickness	mm	2
5	Short time thermal rating & duration	kA /Sec	50kA for 1 Sec.
6	One minute P.F voltage withstan	kV	2.5 (For main circuit)
7	Degree of protection for enclosure		IP 42
8	Material of busbar		Aluminium
	MCCB		
1	Make		L&T/ Schneider/ ABB/ GE
2	Applicable standard		IS
3	Rated voltage		415 V
4	Rated Current		As required
5	Rated symmetrical breaking current	kA rms	50kA for 1 Sec.
3	Contactors		
1	Make		ABB/GE/L&T/ Schneider
2	Rated Voltage of Coil		110V AC

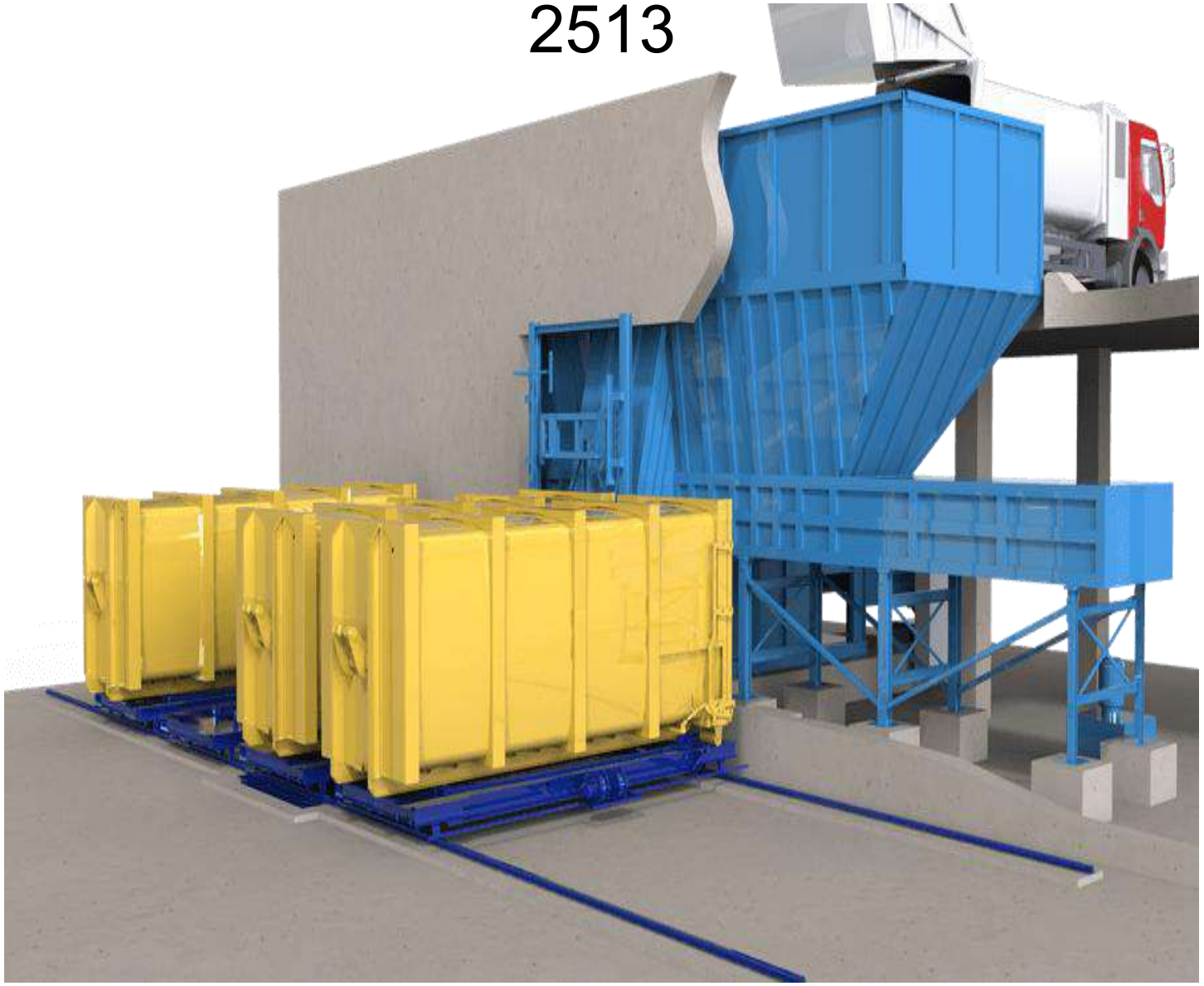
SMW, Lucknow

3	Rated utilization category	AC3 for non-reversible
4	Rated Current	As required
4	Current Transformer	
4.1	Make	AE/KAPPA/Eq.
4.2	Applicable standard	IEC
4.3	Type	Cast resin

PMU (RCUES)

Annexure -11

2513



MRF cum Transfer Station Facility for Part of Zone – 1, Zone – 4 & Zone 7 of Lucknow

Contents

1. MRF CUM Transfer Stations 1
1.1 Introduction 1
1.2 Waste Transfer Station 1
1.3 Working of Waste MRF CUM Transfer Station 1
1.4 Benefits of Waste Transfer Stations 2
1.5 Criticism of Waste Transfer Stations 3
1.6 Types of Transfer Stations 3
1.6.1 Direct dumping transfer station. 3
1.6.2 Tipping floor dumping transfer station. 3
1.6.3 Pit-dumping station. 3
1.6.4 Compactor station. 3
1.6.5 Roll-off box station. 3
1.6.6 Drop-off box station. 3
1.6.7 Transfer Station cum MRF Facility 4
1.7 Proposed Methodology for Transfer Station 6
2. Material Recovery Facility 8
2.1 Need of Material Recovery Facility (MRF) 8
2.2 Advantages of MRF 8
2.3 Materials Recovery Facility Siting Criteria 9
2.4 Types of Material Recovery Facility by Ownership and Operations 9
2.4.1 Mixed MRF 9
2.4.2 Dry MRF or Clean MRF 9
2.4.3 Manual MRF 10
2.4.4 Semiautomatic MRF 10
2.5 Parameters Considered in Planning, Design, and Operation of MRF 10
2.5.1 Nature of Waste Generators 10
2.6 Proposed Material Recovery Facilities for Lucknow 11
2.7 Constituents of MRF 12
2.8 Unit processes in MRF 13
2.9 Proposed Design of MRF 15
2.9.1 Belt Conveyors & Accessories 15

2.9.2 Feeding Conveyor & Magnetic Separator 15
2.9.3 Trommel 100mm 16
2.9.4 Manual Sorting conveyor 16
2.9.5 Bailing Press Machine 17
2.10 Requirement of Civil Structures for MRF at Existing Plant 18
2.10.1 Waste Receiving Platform 18
2.10.2 Segregation Shed 18
2.11 Design capacity of MRF Facility at Transfer Station 18
2.12 Technical Specification and Capacity of Machinery and Equipment for MRF 20
2.12.1 Feeding Conveyor 20
2.12.2 Magnetic Separator 21
2.12.3 Rotary Trommel with 100mm sieve 21
2.12.4 Cross/Extension/Reversible Conveyor to carry <100 mm 23
2.12.5 Feeding Conveyor to carry < 100mm to MSC 1 24
2.12.6 Feeding Conveyor to carry > 100mm to MSC 2 25
2.12.7 Manual Sorting Conveyor 1 & 2 for <100mm fraction >100mm fraction 26
2.12.8 Conveyor for Baling section 26
2.12.9 Baling Press 27
2.12.10 Electrical Control Panel 28
2.13 Technical Specification of Static Refuse Compactor with Top Loading Receiving Hopper (Model: Tps-Scts-3000) 28
2.13.1 General: - 28
2.13.2 Static Compactor 29
2.13.3 Receiving Hopper 30
2.14 TECHNICAL SPECIFICATION OF CONTAINER TRAVERSING/CHANGE OVER SYSTEM (TPS-CTS) 30
2.15 TECHNICAL SPECIFICATIONS OF TRUCK MOUNTED HOOK LOADER MOUNTED ON 28 T GVW TRUCK CHASSIS (MODEL: TPS-HL-28 (6X2)) 30
2.16 Recommendations and Considerations for Feasible Facilities 33
2.17 General Abstract of Cost 34
2.18 Income & Expenditure Statement for Operation and Maintenance 35
2.18.1 Expenditure Statement for Operation and Maintenance for Semi Mechanised 35

List of Tables

Table 1-1 Required design capacity of Transfer Station cum MRF Facility 5
Table 2-1 Machineries for MRF at Glance at Transfer Stations 18
Table 2-2 Technical Specification of Feeding Conveyor 20
Table 2-3 Technical Specification of Magnetic Separator 21
Table 2-4 Technical Specification of Rotary Trommel 22
Table 2-5 Technical Specification of Cross/Extension/Reversible Conveyor 23
Table 2-6 Technical Specification of Feeding Conveyor to carry < 100mm to MSC 1 24
Table 2-7 Technical Specification of Feeding Conveyor to carry > 100mm to MSC 2 25
Table 2-8 Technical Specification of Manual Sorting Conveyor 1 & 2 for <100mm fraction >100mm fraction 26
Table 2-9 Technical Specification of Conveyor for Baling section 26
Table 2-10 Technical Specification of Bailing Press Machine 27
Table 2-11 Technical Specification of Electrical Control Panel 28

List of Figures

Figure 1-1 Waste Transfer Process 6
Figure 2-1 Waste Composition 11
Figure 1-2 Pictorial Representation of MRF Facilities 12
Figure 2-3 Process flow of MRF Facilities 13
Figure 2-4 Image representing feeding conveyor & magnetic separator 16
Figure 2-5 Trommel for Screening 16
Figure 2-6 Manual Sorting Conveyor & Blower 17
Figure 2-7 Process flow for Material Recovery Facilities 17

1. MRF CUM Transfer Stations

1.1 Introduction

A waste transfer station cum resource recovery centre is a light industrial facility where municipal solid waste is temporarily stored, recyclables are recovered and finally compressed and transported to the waste-processing and disposal facility.

Transfer stations vary significantly in size and function. Some transfer stations allow residents and businesses to drop off small loads of waste and recycling, and may perform some preliminary sorting of material. Other transfer stations are places where local waste collection vehicles will deposit their waste cargo prior to aggregation and loading into larger vehicles. These larger vehicles will transport the waste to the end point of disposal in an incinerator, landfill, or hazardous waste facility, or for recycling. Transfer stations can be publicly or privately owned. They vary in size, from small regional site.

Transfer stations are sometimes co-located with material recovery facilities, landfills, resale shops, and with localized mechanical biological treatment facilities.

Waste transfer stations are a necessary part of municipal waste management. However, their locations and operations can sometimes be controversial within communities where they are located.

1.2 Waste Transfer Station

The transfer station is the central location where municipal solid waste is brought by small collection vehicles. Once there, it is unloaded from smaller vehicles for material recovery and loaded into larger ones, such as:

- Long-haul trucks
- Compactor mounted vehicles/containers
- Trains
- Barges

The larger vehicles will then take the waste to the final processing and disposal sites.

Transferring waste from local collection vehicles onto larger trailers or other transport modes reduces the cost of transportation to distant disposal sites. This frees collection-specific vehicles and crews to devote their time to actual collection activities within the community.

Waste transfer stations are a key component of cost-effective solid waste transportation.

1.3 Working of Waste MRF CUM Transfer Station

Typical activities at the waste transfer station involve the unloading of garbage trucks, screening and segregation of recyclable and/or inappropriate items (such as automobile batteries), compacting loads, and reloading onto larger vehicles. The facility typically includes a scale location and an enclosed building where tipping and transfer take place. The property requires adequate space to facilitate the queuing of vehicles at the scale and the main building.

Waste transfer stations also need space to accommodate the parking of outbound transfer trailers and for staging unacceptable garbage. In addition to scales, transfer stations typically use equipment such as front-end loaders, cranes, conveyors, walking floors, and compactors.

In urban areas, the location of waste transfer stations can be very controversial. Such facilities are therefore typically fully enclosed. They may be co-located with a material recovery centre.

The day-to-day operations of a transfer station generally include:

- ✓ ***Arrivals and scale:*** Inbound commercial vehicles are first directed to the scale house. Loads are weighed, and tipping fees are assessed as applicable.
- ✓ ***Public drop off:*** If a transfer station allows the public also to drop off solid waste, there may be a separate queue and scale for this purpose. Some waste transfer stations provide space for the public to drop off green waste or other approved recyclables.
- ✓ ***Tipping:*** Vehicles are unloaded at the main transfer building. Solid waste may be dropped onto the floor, into a pit, or immediately onto another vehicle.
- ✓ ***Processing:*** Transfer station employees will screen and manually/mechanically sort the waste for any recyclables and/or unauthorized materials. Compactors are used at some transfer stations to compact waste and thereby increase the payload of outbound trailers.

Waste transfer stations require customer service and scale house operators, traffic controllers, equipment operators, maintenance mechanics, as well as other technical and management staff.

1.4 Benefits of Waste Transfer Stations

Waste transfer stations are a critical part of the waste management process. They provide a variety of benefits to the community, including:

- ➢ Fuel savings, reduction in road wear, and less air pollution due to fewer vehicles being on the road
- ➢ Trash, green waste, and recyclable material drop-off location for residents
- ➢ Reduced traffic congestion in the community by consolidating loads onto larger vehicles
- ➢ Reduced total truck traffic and improves safety at the landfill or waste-to-energy facility.
- ➢ Removing hazardous waste or recovering recyclables

Additional reasons for incorporating a transfer station into a solid waste management system include:

- to assist in the separation of recyclable materials,
- to assist in the inspection for hazardous waste, and
- to keep small vehicles out of the landfill.

1.5 Criticism of Waste Transfer Stations

Although waste transfer stations are a vital component of modern waste management programs, the location of such stations can be a flashpoint for local communities.

Residents may have a variety of concerns about the construction of a nearby transfer station. Many of these can be addressed through careful facility design.

1.6 Types of Transfer Stations

Six common types of transfer stations include:

1.6.1 Direct dumping transfer station.

This allows the waste collection trucks (packer trucks) and other vehicles to dump directly into a transfer trailer. Transfer trailers typically hold about 100 cubic yards and thus can accommodate three to five packer loads or many pickup loads. Although some transfer stations of this type are not enclosed in a building, strong winds make an enclosure desirable.

1.6.2 Tipping floor dumping transfer station.

This is similar to a direct dumping station except it has additional space for trucks to discharge their waste on a concrete tipping floor for inspection and emergency storage. A front loader with a bucket is required to push the waste from the floor into the transfer trailer.

1.6.3 Pit-dumping station.

This has a large pit into which several trucks can unload simultaneously. Some stations have tractors in the pit to push the waste into transfer trailers. Others have a pit with a walking floor in the bottom of the pit.

1.6.4 Compactor station.

In this type of station, the waste is unloaded or pushed into the hopper of a stationary compactor and then into a completely enclosed transfer trailer or roll-off container.

1.6.5 Roll-off box station.

This is a relatively low-capital-cost transfer station and can service communities of up to about 1,000 people. Major components consist of a 40 cubic yard steel box, an unloading ramp that slopes up to the top of the box and a concrete pad to support the box. To reduce windblown litter, the boxes can be covered with lids and hatches. A truck with a special hydraulic hoist is required to remove the box and haul it to a landfill.

1.6.6 Drop-off box station.

This is similar to the roll-off box transfer station except that it has one or several six or eight cubic yard boxes. The boxes can be lifted and emptied by a large packer truck. Boxes are generally located on a surfaced parking area. A contract hauler normally provides the boxes and hauling services.

1.6.7 Transfer Station cum MRF Facility

This is a type of transfer station where waste is been collected by small vehicle (Auto Tippers/ E – Rickshaw/ Manual Rickshaw etc.) and soring of waste is done by manual segregation. The Recyclables would be segregated and compacted for further process. The rest of waste is sent to processing site in Portable compactors.

This type facility for secondary transfer of waste is being adopted at Lucknow Nagar Nigam. The details of capacity, sizes, waste from wards at Transfer Stations and MRF Facility is listed below.

Table 1-1 Required design capacity of Transfer Station cum MRF Facility

Zone	No. Of Wards	Unit Count				Waste Generation		Required Design Capacity	
		Total Of HH	Individual HH (DTDC In Shift 1) @ 85% (Assumption)	HH In Highrise Building @ 15% (Assumption)	Commercials	Ist half of Ist Shift (Mt/Day)	IInd half of Ist Shift (Mt/Day)	Ist half of Ist Shift (Mt/Day) Add 20% In Generation	IInd half of Ist Shift (Mt/Day) Add 20% In Generation
1	2	3	4 = 3X85%	5 = 3X 15%	5	6 = '4' X (2.2/1000)	7=("5"X2.2+"6"X10)/ 1000	8	9
1	14	52169	44344	7825	9103	97.56	108.25	117.07	129.9
2	12	53043	45087	7956	3315	99.19	50.65	119.03	60.78
3	19	105726	89867	15859	4500	197.71	79.89	237.25	95.87
4	8	53772	45706	8066	6000	100.55	77.75	120.66	93.3
5	10	47850	40672	7178	1976	89.48	35.55	107.38	42.66
6	22	112190	95361	16829	3022	209.79	67.24	251.75	80.69
7	13	78411	66649	11762	4030	146.63	66.18	175.96	79.42
8	12	66737	56726	10011	2350	124.8	45.52	149.76	54.62
Total	**110**	**569898**	**484412**	**85486**	**34296**	**1065.71**	**531.03**	**1278.86**	**637.24**

The total required capacity of MRF cum transfer stations in zone-1, Zone-4, Zone 7 is 246.97 MT/day, 213.96 MT/day and 255.38 MT/day respectively with combined requirement of 716 MT/day. Zone 1 have 10 PCTS location while Zone 4 have one mechanised transfer station and 5 PCTS location and Zone 7 have 5 PCTS at 3 locations.

Combined transfer capacity of all the PCTS and transfer station of zone 1, Zone 4, Zone 7 is 464 MT/day against the required capacity of 716 MT/day hence a MRF cum Transfer station of 20 TPH capacity is proposed to receive waste partially from Zone 1, Zone 4, Zone 7.

1.7 Proposed Methodology for Transfer Station

It is proposed to collect the waste from domestic & commercial sources by means of primary collection vehicles. The waste will be collected at transfer point and will be segregated. The recyclable waste will be packed and transferred for recycling. Other than recycled waste shall be transferred by secondary collection vehicles such as Portable compactor, dumper placer etc.

The below depicted image shows the process flow of transfer station for waste transfer. Since, the distance of secondary transportation is very far, it is proposed that the secondary collection vehicles like PCV and RCV will only transfer the waste transfer station to landfill site. From bins of major and dual carriage road the RCV will directly collect waste and it will directly go to proposed integrated facility.

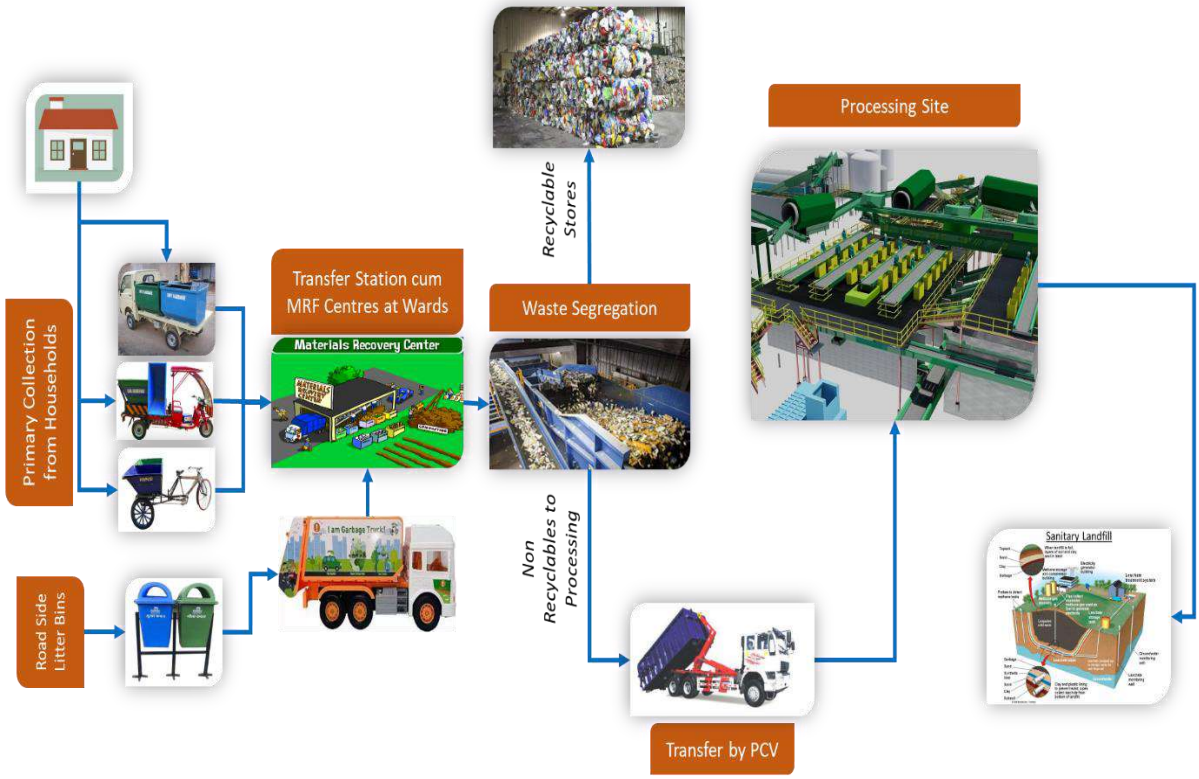
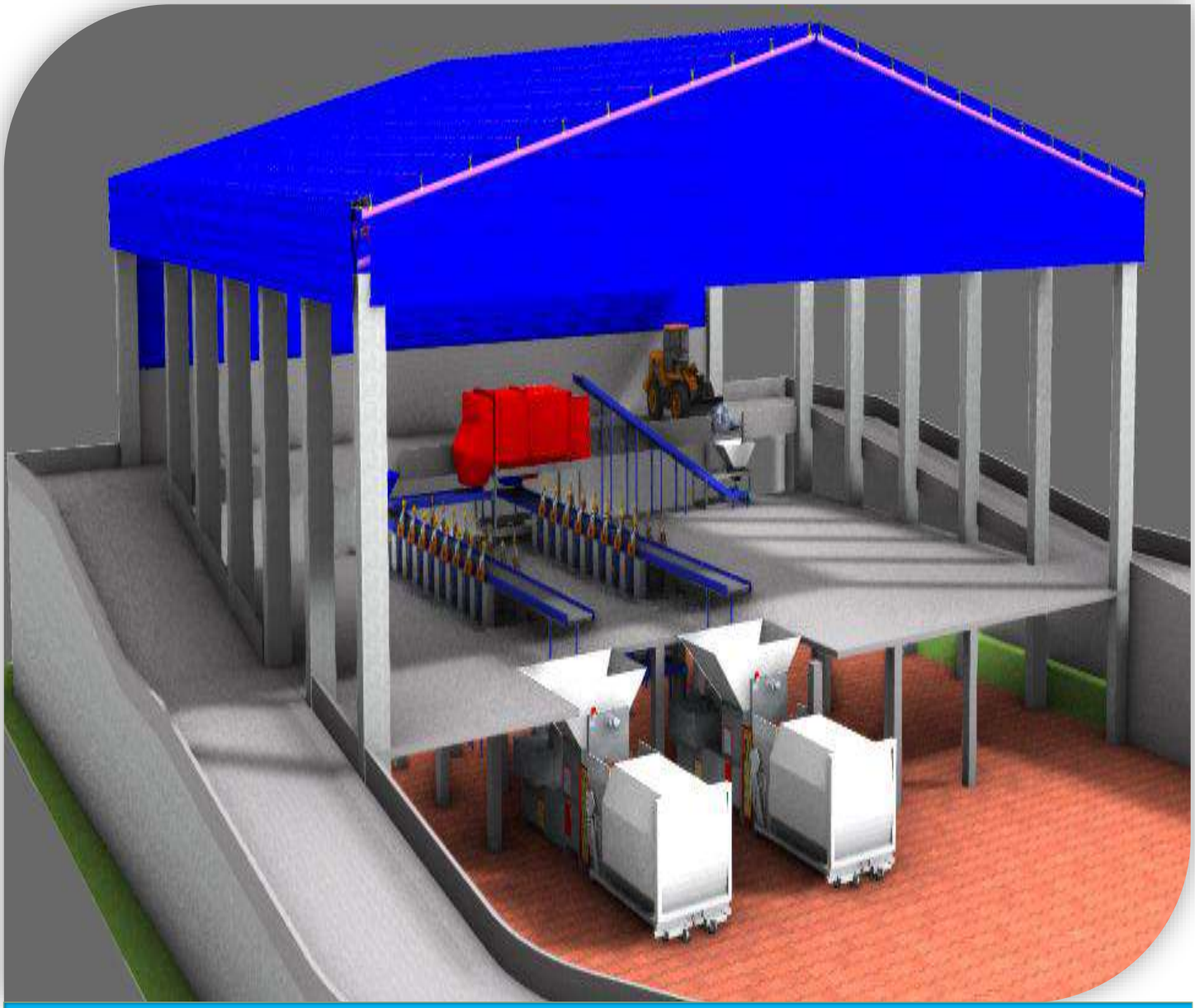


Figure 1-1 Waste Transfer Process

The overall plan of secondary storage and transportation is designed keeping in view the following facts

- In due course of time making the city bin less
- Appropriateness to the place and its use
- Available vehicles with JUA
- Year of purchase of vehicle and its durability



Proposed Material Recovery Facility at Transfer Stations

2. Material Recovery Facility

A material recovery facility (MRF) accepts waste materials, whether source segregated or mixed, and further separates, processes and stores them for later use as raw materials for remanufacturing, reusing and reprocessing Material Recovery Facility (MRF) is also known as Material Reclamation Facility or Material Recycling Facility. An MRF is a place where waste collected from the doorstep in a segregated manner is further segregated and various components of recyclable waste recovered from it for recycle or resale. The waste material is basically segregated into different streams of waste fractions (paper, plastic, packaging paper, bottles etc.) which is sold to intermediaries who supply bulk material to the recycling industries. MRFs require medium to large storage spaces depending on their capacity to temporarily store sorted recyclables which can be made available to recyclers in bulk at higher resale value.

In mechanized MRFs, the entire process is carried out with sophisticated systems and equipment that enable efficient separation of large quantity of material into different fractions.

The main function of the MRF is to maximize the quantity of recyclables processed, while segregating materials that will generate the highest possible revenues from the recycling market. MRF also helps in segregating combustible fraction (RDF), non-recyclables and inert from the dry waste stream. These fractions may be utilize/reused as –

- Recyclables – Reuse/ reprocessed
- Non-recyclables - Road making/ plastic to oil
- RDF - Waste to Energy/ Cement Industries
- Inert - C&D plant/ daily cover of SLF

2.1 Need of Material Recovery Facility (MRF)

Municipal Solid Waste (MSW) is the trash or garbage that is discarded from various sources i.e., Domestic, Commercial, Institutional, Industrial/Trade etc. in day-to-day activities. Aforementioned waste management hierarchy indicates that the least preferred option of ISWM is disposal of waste in landfills. SWM 2016 rules do not permit disposal of organic matter into sanitary landfills and mandate that only inert rejects (residual waste) from processing facilities, inert street sweepings, etc. can be landfilled. All options of waste minimization should be utilized before appropriate treatment technologies are selected and implemented. With the aim to reduce the amount of waste being finally disposed, and maximizing resource recovery and efficiency, Material Recovery Facilities (MRFs) need to be established within the ULBs.

2.2 Advantages of MRF

Recycling prevents a significant fraction of municipal, institutional and bulk waste from being dumped or disposed in landfills. It results in the availability of scarce resources as well as reducing environmental impacts and the burden of waste management on public authorities. If the necessary market mechanisms are established, recycling can generate revenue, contributing to the cost recovery in the municipal solid waste service provision.

It helps the ULB by reducing waste volumes and results in cost savings in the collection, transportation and disposal infrastructure, longer life span for landfills/reduced requirement of land, reduced environmental management efforts and generates livelihood opportunities for informal, local vendors/recyclers in the recycling industry.

2.3 Materials Recovery Facility Siting Criteria

Accessibility, land use, and geology need to be considered when siting MRFs.

a) MRFs need to be located close to existing roads, but traffic resulting from the movement of waste collection trucks should be considered. These facilities must be near or within urban areas that generate the inputs to be processed for recyclables.
b) A minimum buffer zone of 100 meters is used for sensitive receptors such as schools, hospitals, parks, and residential areas. If the area is zoned, MRFs are preferably located in an industrial zone or close to a sanitary landfill to facilitate efficient movement of waste from various generators and disposal of residual or biodegradable materials.
c) MRFs should be sited in flat or gently sloping, stable areas to reduce excavation cost and avoid problems of slope stability.3 Flood-prone areas should be avoided.

2.4 Types of Material Recovery Facility by Ownership and Operations

MRFs may be publicly owned and operated, publicly owned and privately operated, or privately owned and operated. Jointly owned and jointly operated MRFs are also possible. There are basically two types of MRFs: Mixed and Dry/Clean, based on waste received.

2.4.1 Mixed MRF

Unsegregated, mixed waste with biodegradable and non-biodegradable material is collected and sent to the MRF processing facility. At the mixed MRF, the mixed waste stream may be segregated manually or mechanically to separate recyclable material from compostable and inert wastes.

Compostable matter and recyclable materials may then be processed separately, and residual inert wastes are sent to the landfill. Receiving mixed waste (recyclable materials combined with other municipal solid waste) that requires labor intensive sorting activities to separate recyclables from the mixed waste. The MRF unit can use a combination of manual, hybrid and machine-based sorting.

2.4.2 Dry MRF or Clean MRF

A facility that receives source segregated or commingled recyclable materials (recyclable materials that are already separated from other main solid waste or wet waste). A "clean" MRF reduces the material contamination and can recycle more materials than mixed MRFs. Dry segregated material is received in a commingled form consisting of a combination of paper, cardboard, magazines, plastics etc. and commingled containers (plastic, glass, metal, etc.), among other materials. The first stage of processing typically uses manual labor or equipment that separate waste materials into

various streams (metal, paper, plastic, containers, etc.). These recyclables are also sorted by using automated machines when quantities to be handled are large.

Depending on the scale of operations, type of operations and the level of mechanization in the facility, MRFs may be classified as manual, semiautomatic or mechanized.

2.4.3 Manual MRF

In manual MRFs, sorting process is carried out manually. This type of MRFs are suitable for small quantities of MSW like 5 – 10 TPD only. Sometimes, these Material recovery facilities are also termed as Solid Liquid Resource Management (SLRM) centers. These SLRM centers received waste either in mixed form or in wet and dry waste streams. In SLRM centres processing of wet waste can also be carried out depending upon the land availability and location.

2.4.4 Semiautomatic MRF

This type of Material Recovery Facilities has combination of manual and mechanized operations. Semi-automated MRF can cater for 10- 100/200 plus TPD of segregated waste. Semi-automated MRFs also work as secondary collection points in which after segregation of wet & dry streams, further transportation of MSW is carried out in compacted manner to save on transportation cost.

2.5 Parameters Considered in Planning, Design, and Operation of MRF

2.5.1 Nature of Waste Generators

The nature of waste generators should be considered when planning MRFs. Residential areas discard newspaper, mixed paper, plastics, clothing, food packaging, cans and bottles, food scraps, and yard trimmings. Commercial and institutional establishments dispose of cardboard, off ce paper and mixed paper, newspaper, packaging materials, and food waste. Schools and off ces produce predominantly paper waste. Industrial facilities produce more packaging materials than most waste generators. Hotel and restaurants generate a large amount of plastic bottles and tin cans.

Urban areas tend to generate more paper and plastic materials than rural areas. Low- to medium-income residential areas segregate more recyclable materials than high-income residences.

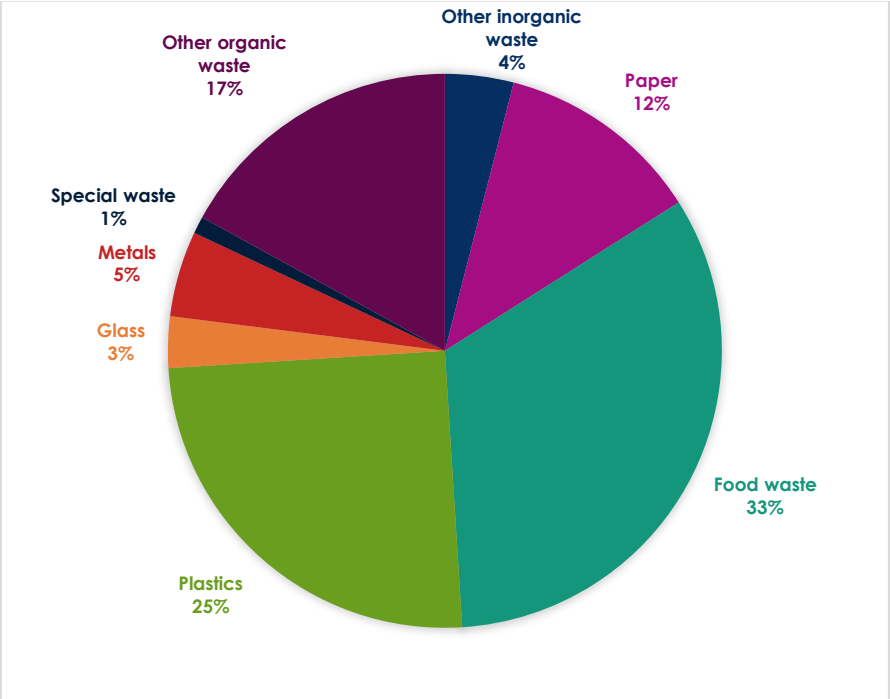


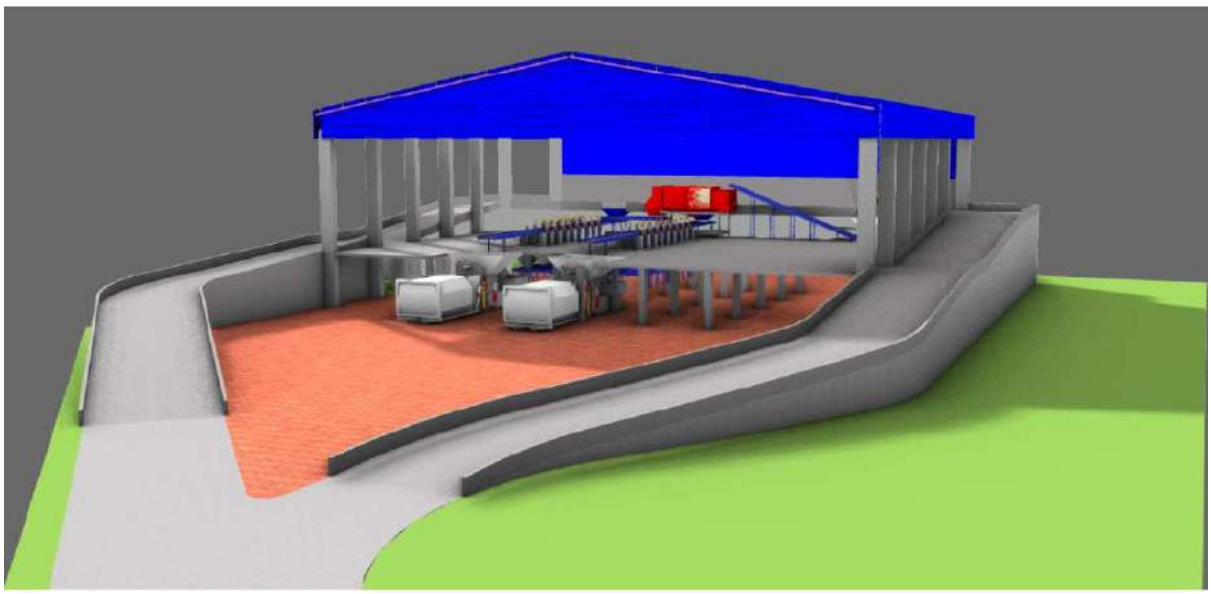
Figure 2-1 Waste Composition

2.6 Proposed Material Recovery Facilities for Lucknow

Semi-automated MRF is sustainable solution for Lucknow City. It is proposed to setup f MRF facility of 20 TPH capacity at Transfer Stations.

MRF selection shall be as per their specific requirement depending upon the following aspects:

- Waste Quantity
- Waste characterization
- Availability of land
- Capital and Operational cost of facility (including cost of Manpower)
- Provisions/ Linkages for sale of recyclables and by products
- Type and linkage of final treatment/disposal facility



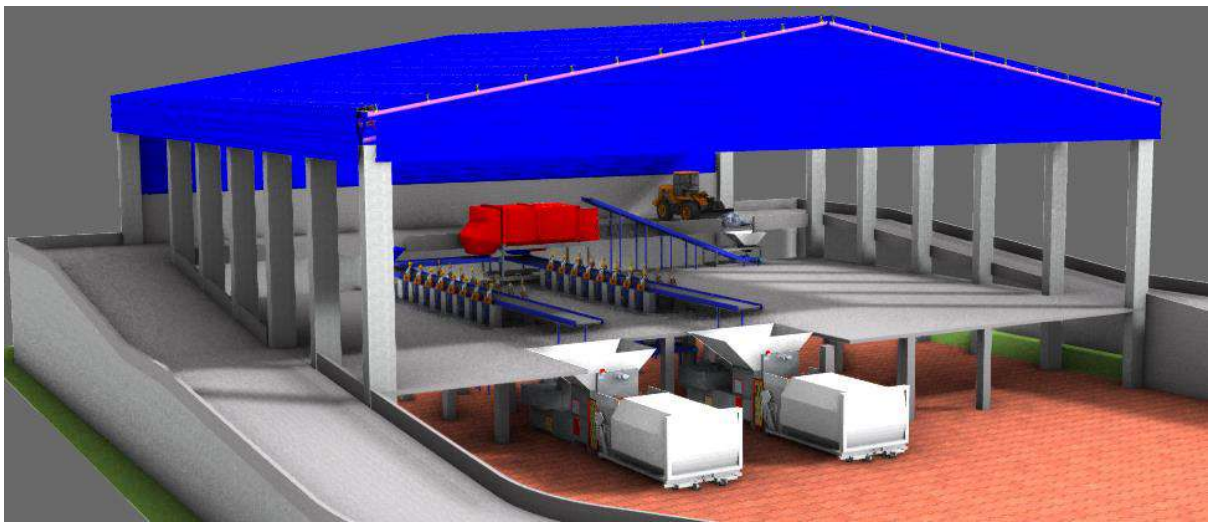


Figure 1-2 Pictorial Representation of MRF Facilities

2.7 Constituents of MRF

MRF is situated within a warehouse-type building with concrete flooring and enclosed by a perimeter fence for security. It should have the following components:

- ✓ Weighing scale / Weighbridge
- ✓ Changing/Washroom/Rest rooms and creche, as required
- ✓ Receiving or tipping area
- ✓ Sorting/processing area
- ✓ Storage area for recyclables
- ✓ Residual storage area
- ✓ Admin/ Record room/First Aid Room
- ✓ Fire Extinguishing facilities
- ✓ Basic connections for water and electricity and with adequate space for the entry and exit of waste transporting vehicles. Provisions for toilet/ change/washrooms must be included.

- ✓ Receiving areas capable to receive at least 2 days' waste storage space.

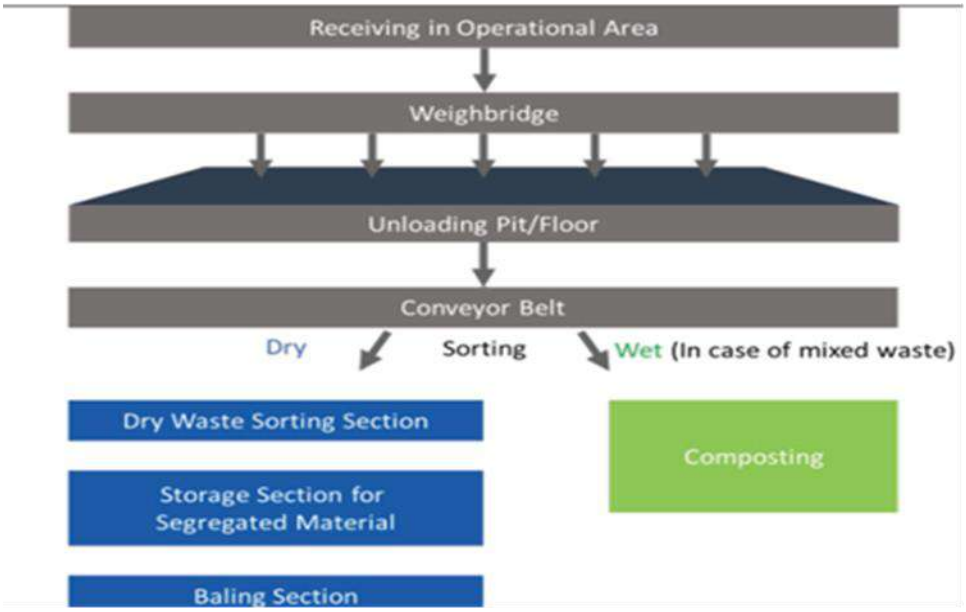


Figure 2-3 Process flow of MRF Facilities

2.8 Unit processes in MRF

The MRFs employ varying combinations of manual and mechanical processes, based on the type of facility, availability of equipment and labour, and associated cost implications. MRFs employing manual labour for sorting operations have relatively lower costs but may operate at lower efficiencies compared with mechanical sorting facilities. An MRF, depending on the level of complexity, consists of a combination of processing units in varying degrees of mechanization:

a) Pre-sorting: Waste sorting or processing in the facility through manual or mechanical pre-sorting is essential to separate out these bulky/ large pieces and packets of wastes. Manual sorting results in higher labour costs and lower processing rates. Manual sorters remove bulky waste as the waste passes along a conveyor belt, which carries the pre-sorted waste to the mechanized sorting unit of the facility. Mechanical, bulky waste sorters are also used in semi-automated and automated MRFs.

b) Mechanical sorting: Mechanical processes based on principles of electromagnetics, fluid mechanics, pneumatics, etc. are used to segregate the different waste streams in the pre-sorted waste. Mechanical processes require specialized equipment for segregation of commingled municipal waste. Mechanical sorting typically employs the following processes:

1. **Screening:** Screening achieves an efficient separation of wastes into two or more size distributions. Two types of screens are used in MRFs- disc screens and trommels.
2. **Ferrous metal separation:** In the second stage, electromagnets are used for separating ferrous metals from mixed waste.
3. **Air classification:** The residual waste stream is passed through an air stream with sufficient velocity to separate light materials from heavy material,

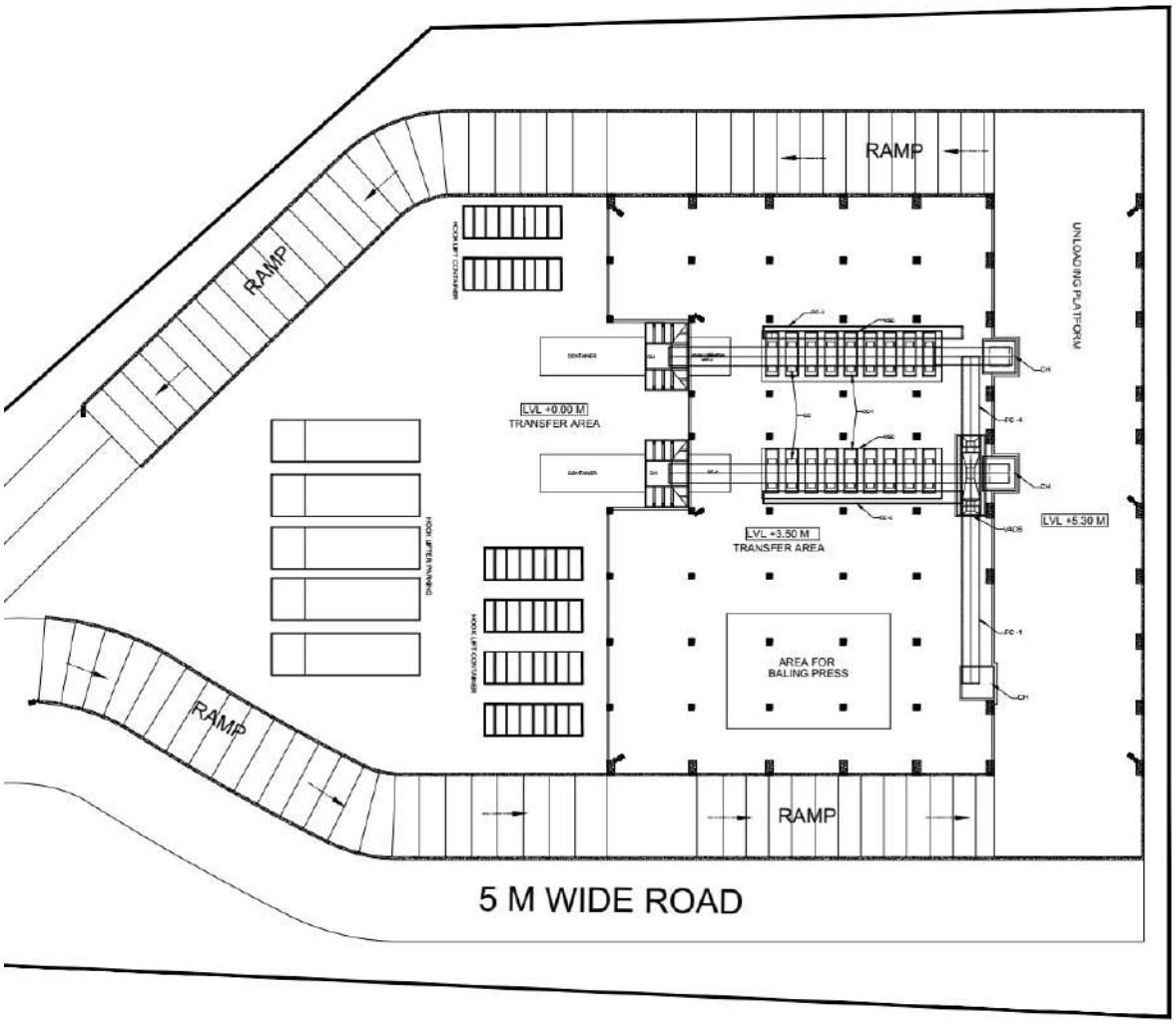
specifically for separating out lightweight plastics and paper from the mixed stream. Three types of air classifiers may be employed:

i. Horizontal air classifier,
ii. Vibrating incline air classifier, and
iii. Incline air classifier.

Heavy or bulky plastics are sorted out either in the pre-processing line (manually) or in the "detect and routing" systems, employed at later stages of material recovery.

4. **Segregation of non-recyclables and Combustibles:** Segregation of non-recyclables and combustibles fractions can be done manually / mechanically to enhance the efficiency and earning of facilities.
5. **Optical system (sensor based):** This system separates various grades of paper, plastics, and glass, which are not sorted out in the air classifier. This system works in two stages. The first stage employs programmed optical sensors to determine the nature of different materials. In the second stage, based on information received from the sensor, sorted material is routed to appropriate bins by directional air jets.
6. **Size reduction:** Sorted materials after segregation, if large for further use or processing and should be reduced to smaller sizes.
7. **Baling:** Sorted & sized materials are baled for further processing or use.

2.9 Proposed Design of MRF



2.9.1 Belt Conveyors & Accessories

A belt conveyor system consists of two or more pulleys (sometimes referred to as drums), with a closed loop of carrying medium—the conveyor belt—that rotates about them. One or both of the pulleys are powered, moving the belt and the material on the belt forward.

2.9.2 Feeding Conveyor & Magnetic Separator

The Pre- segregated of MSW will be feeded to reactor through 1.2 m width inclined belt conveyor system. Magnetic separation is a method of waste management where magnets are used to separate metal from refuse. This is most common in single and mixed streams of recycling as the materials are collected together and separated before processing.



Figure 2-4 Image representing feeding conveyor & magnetic separator

2.9.3 Trommel 100mm

A trommel is a screen that is curved into a cylinder. The machine spins the cylindrical screen in order to sort through the material as it is fed through. During this process, the wet material tumbles around. Air is added and the soil, mulch, or sand becomes lighter and drier.



Figure 2-5 Trommel for Screening

2.9.4 Manual Sorting conveyor

Mixed waste or segregated waste will be placed on a horizontal pre-sorting conveyor belt for manual sorting. Waste will be feed through a 1.2 m wide inclined belt conveyor of length approximately 15-20 m meters. Manual sorting conveyor will be about one-meter-wide and 20-meter-long to accommodate 16 numbers of waste pickers.

A blower is proposed below the end of manual sorting conveyor to separate plastic and other low density material by gravity.



Figure 2-6 Manual Sorting Conveyor & Blower

2.9.5 Bailing Press Machine

A Baling press is a dedicated waste management machine that compresses recyclable materials such as paper, cardboard, and plastic, into dense, manageable bundles (bales). Also called a baler or baling machine, a baling press is a large steel chamber with a pressing plate that runs up and down to press the material inside.

The press creates thick compressed bales which are then collected by waste collection companies who send them to recycling companies for resale and reuse.

A baling press is typically only used for recyclable materials: paper & cardboard, plastic, polystyrene, cans and drums, metal, and glass, though they can be used to press unorthodox material such as car bumpers or clothes.

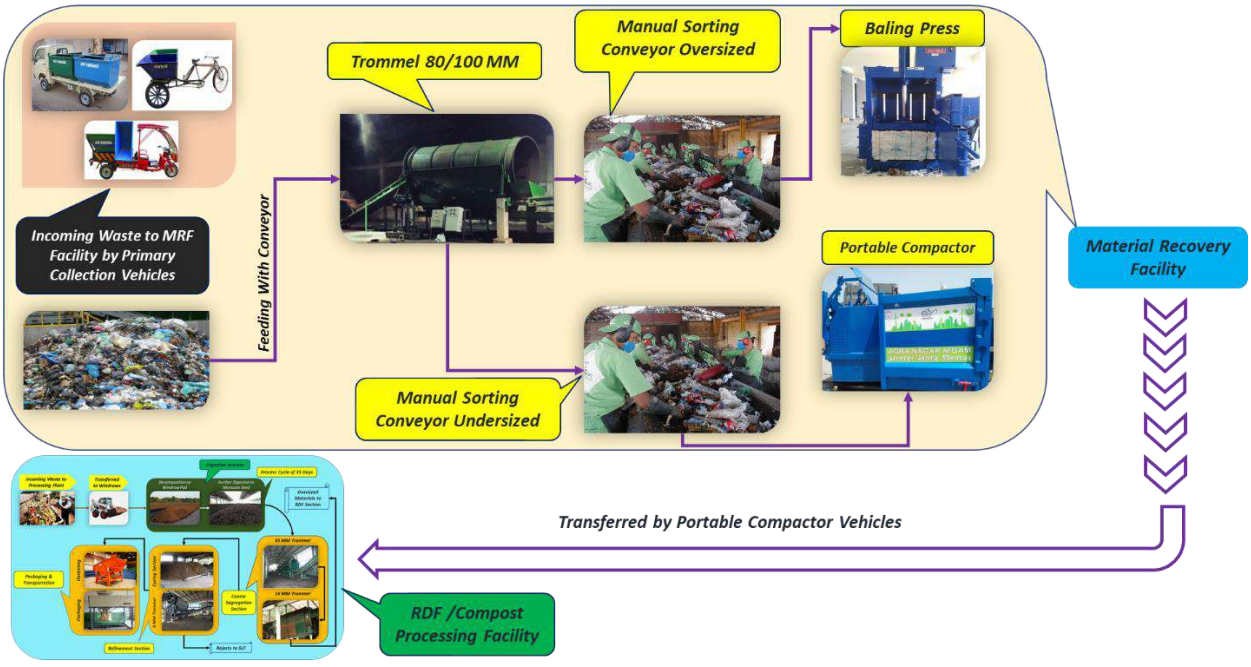


Figure 2-7 Process flow for Material Recovery Facilities

2.10 Requirement of Civil Structures for MRF at Existing Plant

2.10.1 Waste Receiving Platform

Requirement for inspection, waste receiving and Pre-sorting of waste is RCC platform with 0.3 m height from GL.

2.10.2 Segregation Shed

A Segregation shed of 9.0 metre height is required to sort, process and store recyclable/ non recyclables/ RDF and inert materials, with the aim to maximize the quantity of recyclables processed, while producing materials that will generate the highest possible revenues in the market and maximize the reuse of other segregated fraction in different processes/ industries.



2.11 Design capacity of MRF Facility at Transfer Station

The Material Recovery Plant is designed for waste generation in Zone-1, Zone-4 and Zone-7 of 20 MT/Hr. However, the Screening Trommel is provided of capacity 40 TPH, keeping in view of compaction process of 320 TPD of segregated waste.

Table 2-1 Machineries for MRF at Glance at Transfer Stations

A	List of MRF Equipment's	Req. Qty	Unit
1	Hopper (Receiving Chamber)	1	Each
2	Feeding Conveyor to VADS (FC - 1)	1	Each
3	Trommel (40 TPH)	1	Each
4	Discharge and Manual Sorting Conveyor (+) Size	1	Each
5	Discharge Conveyor to Manual Sorting Conveyor (-) Size	1	Each
6	Manual Sorting Conveyor (-) Size	1	Each

7	Hopper (Receiving Chamber)	2	Each
8	Collection Chutes/Hopper	2	Each
9	Discharge Conveyors from Collection Chutes	18	Each
10	Discharge Conveyors to Storage	2	Each
14	Bailing Press	1	Each
15	Fatka Machine for Dust Removal	1	Each
15	Weigh Bridge	1	Each
16	Sets of CCTV Camera with Scada	1	Each
17	Vehicle Washing Equipment's	1	Each
18	Leachate Treatment Plant & Accessories	1	Each

ITEM NO.	DESCRIPTION	QTY	UOM
1.0	**Static Compactor with Top Loading Receiving Hopper (Model: TPS-SCTS-3000) comprising of:-**		
1.1	Stationary Compactor		
1.2	Garbage Storage Hopper (20 Cum)		
1.3	Hydraulic Compaction Container Coupling		
1.4	Hydraulic Vertical Locking Mechanism		
1.5	Hydraulic Push-Pull Cylinder	2	Nos.
2.0	Truck Mounted Hook Loader suitable for handling 20 Cu.M skips suitable to be mounted on 28 T GVW BS-VI (6X2) Truck Chasis with driver's cabin and PTO (Model: TPS-HL-28(6X2).	2	Nos.
3.0	20 Cu.M Capacity Roll-On Roll-Off Containers compatible for Handling with above Hook Loaders Model: TPS-RORO-20)	6	Nos.

2.12 Technical Specification and Capacity of Machinery and Equipment for MRF

2.12.1 Feeding Conveyor

The types of conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

The location of idlers shall be carefully decided so as to limit sags and at feed and collection points so as to achieve minimum loss of power and easy flow of materials. A belt cleaning device is to be provided either by rubber scraper blades or taut wire.

The drive mechanism including the chain/belt drive/reduction gear box as the case may be will be located at a convenient place taking into account operational safety and maintenance.

The entire belt conveyor will be housed in sheet steel enclosure of minimum sheet thickness of 1mm. Necessary bracing's supports etc. made in structural steel angles, channels and R.S. Joists will be provided. Necessary windows with gaskets and locking arrangements will be provided.

Table 2-2 Technical Specification of Feeding Conveyor

Sl. No.	Particulars	Specification/Remarks
1.	Name of the equipment	Feeding Conveyor
2.	Profile	Horizontal - Inclined - Horizontal
3.	Length of conveyor C/C	6 M
4.	Inclination	18°
5.	Material to be handled	Dry Waste
6.	Belt specification	800 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/ Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079

Sl. No.	Particulars	Specification/Remarks
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

2.12.2 Magnetic Separator

Magnetic separation is the process of separating components of mixtures by using a magnet to attract ferrous materials. The process that is used for magnetic separation separates non-magnetic materials from those that are magnetic. This technique is useful for the select few minerals which are ferromagnetic (iron-, nickel-, and cobalt-containing minerals) and paramagnetic.

Table 2-3 Technical Specification of Magnetic Separator

Sl. No.	Particulars	Specification/Remarks
1.	Name of Equipment	Magnetic Separator
2.	Type	Over Band Magnetic Separator
3.	Magnet Size	1500 x 1000x 300 mm
4.	Gauss	1500-1600 G
5.	Drive	1 HP Geared Motor
6.	Operating height	400 mm
7.	Min. Tramp iron to be lifted	M24 x 100mm
8.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

2.12.3 Rotary Trommel with 100mm sieve

A Trommel screen, also known as a rotary screen, is a mechanical screening machine used to separate materials, mainly in the mineral and solid-waste processing industries. It consists of a perforated cylindrical drum that is normally elevated at an angle at the feed end. Physical size separation is achieved as the feed material spirals down the rotating drum, where the undersized material smaller than the screen apertures passes through the screen, while the oversized material exits at the other end of the drum.

- ✓ The Trommel Screen shall be integrated in the municipal solid waste sorting line with a maximum carrying capacity of 40 tons per hour at maximum 19 rpm rotational speed.
- ✓ The Trommel Screen must be supplied by a handbook for its usage and maintenance, a workshop manual and parts catalogue.
- ✓ The Trommel Screen will be unused and un-refurbished the year model is 2022 or newer.
- ✓ It must be manufactured of Indian make and must be provided with a 1-year guarantee.

- ✓ The Trommel Screen shall consist of a drum with 100 mm openings throughout the cylindrical body of the Trommel.

Table 2-4 Technical Specification of Rotary Trommel

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of Equipment	Trommel Screen
2.	Size	Ø 1800 mm x 6000 mm
3.	Mounting	Inclined
4.	Inclination	7°
5.	Material to be handled	Dry Waste
6.	Screen opening	Ø 100 x 5 mm Thk. M.S Sheet conforming to IS 2062
7.	Guards & Chutes	16G,10G,14G M.S Sheet
8.	Bearing	Self-aligning ball bearings
9.	Drive	Duel
10.	Motor	Hydraulic. Radial piston type
11.	Coupling	Chain
12.	Speed	8-10 RPM
13.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

- ✓ **Frame –** The Mounting and support frame and maintenance platform shall be included with the Trommel Screen made of at least 3-4 mm thick steel plates and at least 10 mm thick steel I beams for columns, beams and bracing. The steel of the frame, walls, and platform shall be coated with anti-corrosive coating being sand blasted; a double coat primer should be applied. Then a final coat of the required colour then finished Epoxy coat is applied.

Varnishing:

Primer: *2 component polyurethane primer*
Layer thickness: *40 µm dry layer thickness*
Top coat: *2 component polyurethane primer*
Layer thickness: *40 µm dry layer thickness*
Total layer thickness: *min. 80 µm dry layer thickness*

- ✓ The screen drum will be powered by two (1 x 7.5 KW geared AC motors) electrically driven motors 50 HZ, 3 phase. The motor type and frequency converter will be very good quality with endurance guaranteed. The platform (1-meter-wide) shall provide access on both sides and both ends of the drum within the body of the machine to facilitate maintenance. The walls of the body shall contain 2 access doors for each side to facilitate the maintenance process.
- ✓ The screen drum shall be supported on minimum 4 Nos high-grade heavy duty supporting wheels (minimum diameter 250 mm & min thickness 150 mm).
- ✓ The bearings for all supporting wheels shall be maintenance-free and need no additional lubrication over the duration of their operational life. The Trommel screen shall be equipped with outlet hopper with very steep walls to direct the organic waste to the collection conveyor located underneath the machine.

- ✓ **Control Panel –** The Trommel Screen Unit shall be equipped with an electrical control panel to allow manual control and an emergency stop switch and can be operated in either **"Manual"** or **"Auto"** mode.
- ✓ Complete Electrical control system with controls PLC (durable)
- ✓ **Motor protection:** by a temperature control and over-current trip, IP 54 or equivalent.
- ✓ The necessary cables between the machine, the switch cabinet, and the MDB shall be included in the offer.
- ✓ **HOPPERS –** The feeding, collection and connection hoppers shall be designed with a solid frame construction of profile steel. The hoppers walls shall be made at least of 4 mm steel sheets and minimum 10 mm thickness of beams with necessary stiffeners.

2.12.4 Cross/Extension/Reversible Conveyor to carry <100 mm

The Cross/Extension/Reversible Conveyor will be used for carrying <100 mm size particles to further processing of waste. The conveyors will be chain/belt type. The conveyor slopes will be limited to a maximum of 150. The material of belt will be selected so that it will not be affected by the chemical composition/properties of the municipal waste being handled. In any case, natural rubber will not be used. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

Table 2-5 Technical Specification of Cross/Extension/Reversible Conveyor

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Under
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	8 M
4.	Inclination	18°
5.	Material to be handled	Dry Waste
6.	Belt specification	600 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	Self-aligning ball bearings
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	600 mm
18.	Thickness	3.15 mm MS confirming to IS 1079

Sl. No.	Name of Equipment	Specification/Remarks
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

2.12.5 Feeding Conveyor to carry < 100mm to MSC 1

The Feeding Conveyor will be used for carrying <100 mm to Manual Sorting Conveyor – 1 further manual sorting of lager size of waste. The conveyors will be chain/belt type. The conveyor horizontally fitted. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

Table 2-6 Technical Specification of Feeding Conveyor to carry < 100mm to MSC 1

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	5 M
4.	Inclination	18°
5.	Material to be handled	Dry Waste
6.	Belt specification	600 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
11.	***Conveyor Sprockets***	
12.	Teeth	Flame Hardened
13.	Pitch	76.2 mm pitch
14.	Material	C-45
15.	Bearings	Self-aligning ball bearings
16.	MOC of Drive/Driven shaft	EN8
	Side Wall	
17.	Length	On both sides at inclined portion
18.	Height	600 mm
19.	Thickness	3.15 mm MS confirming to IS 1079
20.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
21.	Take-up	Screw take – up
	Drive	
22.	Motor	Hydraulic. Radial piston type
23.	Gear box	Worm Reducer (Elecon/Shanti)

Sl. No.	Name of Equipment	Specification/Remarks
24.	Coupling	Chain Coupling
25.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

2.12.6 Feeding Conveyor to carry > 100mm to MSC 2

The Feeding Conveyor will be used for carrying > 100 mm to Manual Sorting Conveyor – 2 further manual sorting of lager size of waste. The conveyors will be chain/belt type. The conveyor horizontally fitted. Idlers will be located suitably as per relevant standards and best professional practices/as referred in standard handbooks.

Table 2-7 Technical Specification of Feeding Conveyor to carry > 100mm to MSC 2

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	5 M
4.	Inclination	18°
5.	Material to be handled	Dry Waste
6.	Belt specification	600 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
11.	***Conveyor Sprockets***	
12.	Teeth	Flame Hardened
13.	Pitch	76.2 mm pitch
14.	Material	C-45
15.	Bearings	Self-aligning ball bearings
16.	MOC of Drive/Driven shaft	EN8
	Side Wall	
17.	Length	On both sides at inclined portion
18.	Height	600 mm
19.	Thickness	3.15 mm MS confirming to IS 1079
20.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
21.	Take-up	Screw take – up
	Drive	
22.	Motor	Hydraulic. Radial piston type
23.	Gear box	Worm Reducer (Elecon/Shanti)
24.	Coupling	Chain Coupling
25.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

2.12.7 Manual Sorting Conveyor 1 & 2 for <100mm fraction >100mm fraction

Two number of manual sorting conveyors one for -80 mm fraction and one for + 80 mm fraction separated from Trommal will be provided for manual sorting of recyclables. Waste will be feed through a 1000 mm wide inclined belt conveyor of length approximately 8 meters. Manual sorting conveyor will be one-meter-wide and 20-meter-long to accommodate 16 numbers of waste pickers.

Table 2-8 Technical Specification of Manual Sorting Conveyor 1 & 2 for <100mm fraction >100mm fraction

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Manual Sorting Conveyor
2.	Profile	Horizontal
3.	Length of conveyor C/C	8 M
4.	Inclination	NA
5.	Material to be handled	Dry Waste
6.	Belt specification	1000 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
	Conveyor Sprockets	
11.	Teeth	Flame Hardened
12.	Pitch	76.2 mm pitch
13.	Material	C-45
14.	Bearings	C-45
15.	MOC of Drive/Driven shaft	EN8
	Side Wall	
16.	Length	On both sides at inclined portion
17.	Height	300mm
18.	Thickness	3.15 mm MS confirming to IS 1079
19.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
20.	Take-up	Screw take – up
	Drive	
21.	Motor	Hydraulic. Radial piston type
22.	Gear box	Worm Reducer (Elecon/Shanti)
23.	Coupling	Chain Coupling
24.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

2.12.8 Conveyor for Baling section

Table 2-9 Technical Specification of Conveyor for Baling section

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Conveyor – Over
2.	Profile	Horizontal – Inclined
3.	Length of conveyor C/C	11 M
4.	Inclination	18°
5.	Material to be handled	Dry Waste
6.	Belt specification	600 mm x 315/3, 3mm Top, 1.5mm Bottom Cover, M 24-Nylon/Nylon.
7.	Skirt Rubber	200 x 6 mm Thk. Fitted all along the length of the Conveyor
	Conveyor Chain	
8.	Type of chain	A2 Attachment bush roller
9.	Pitch	76.2 mm (3")
10.	Material	EN19/C-45/ 20 Mn Cr 5
11.	***Conveyor Sprockets***	
12.	Teeth	Flame Hardened
13.	Pitch	76.2 mm pitch
14.	Material	C-45
15.	Bearings	Self-aligning ball bearings
16.	MOC of Drive/Driven shaft	EN8
	Side Wall	
17.	Length	On both sides at inclined portion
18.	Height	600 mm
19.	Thickness	3.15 mm MS confirming to IS 1079
20.	Supporting structure	Fabricated from suitable MS Channels & Angles confirming to IS 2062
21.	Take-up	Screw take – up
	Drive	
22.	Motor	Hydraulic. Radial piston type
23.	Gear box	Worm Reducer (Elecon/Shanti)
24.	Coupling	Chain Coupling
25.	Painting Specifications	One coat of Epoxy Primer and two coats of Epoxy Paint

2.12.9 Baling Press

A Baling press is a dedicated waste management machine that compresses recyclable materials such as paper, cardboard, and plastic, into dense, manageable bundles (bales). Also called a baler or baling machine, a baling press is a large steel chamber with a pressing plate that runs up and down to press the material inside.

The press creates thick compressed bales which are then collected by waste collection companies who send them to recycling companies for resale and reuse.

A baling press is typically only used for recyclable materials: paper & cardboard, plastic, polystyrene, cans and drums, metal, and glass, though they can be used to press unorthodox material such as car bumpers or clothes.

Table 2-10 Technical Specification of Bailing Press Machine

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Plastic Bailing Machine
2.	Capacity	3 Tonne
3.	Material	RDF/ Plastic
4.	Brick Size	425 x 425 x 425mm
5.	Bale Weight	12 - 15 Kg
6.	Production Capacity	1500 Kg / hr
7.	Bricks / hr	50 Bales / hr
8.	Compression ratio	3 : 1
9.	Supporting Structure & Hopper	MS as per IS 2062
10.	Motor for Hydraulic Power Pack	*15 HP, 1440 rpm, Foot cum Flange Mounting, 3PH, Continuous Rated, 415V AC +/- 10%, 50 HZ +/- 5%, S1 Duty Class F Insulation, Fan Cooled, IP 55 degree of protection*
11.	Hydraulic Cylinder Pipe	ST 52 Honed finish
12.	Piston Rod	EN 8 hard chrome plated & grounded
13.	Seal Kit	Polyurethene- Bushak shampon/Parker
14.	Pump	Dowty
15.	Direction Control Valve	Yuken
16.	Check Valve	Polyhydron
17.	Accessories	Demcon
18.	Controls	Electrical Panel

2.12.10 Electrical Control Panel

Table 2-11 Technical Specification of Electrical Control Panel

Sl. No.	Name of Equipment	Specification/Remarks
1.	Name of the equipment	Electrical Control Panel
2.	Material of construction	1.6mm thick CRCA sheet
3.	Degree of protection	IP54 /IP65
4.	Earth bus	25 x 6 mm aluminium earth flat
5.	Gasket	Neoprene for dust and vermin proofing
6.	Canopy	Provided only for outdoor panels
7.	Power Indications	RYB indication lamps provided
8.	Isolation of panel	Provided with MCCB/SDF
9.	Operation modes	Local
10.	Status Indications	Provided with lamps for ON/OFF/TRIP
11.	Operating Push Buttons	Start/Stop PB's provided
12.	Mounting Arrangement	75mm base frame provided with holes
13.	Gland Plate	3mm thick GI gland plate provided
14.	Certifications	CPRI and IP54/IP65

2.13 Technical Specification of Static Refuse Compactor with Top Loading Receiving Hopper (Model: Tps-Scts-3000)

2.13.1 General: -

The Transfer Station Static Compactor is suitable for receiving municipal Solid Waste from Waste Collection Vehicles into a storage hopper installed on a concrete platform on top of the compactor unit through gravity, compacting and loading into Roll-on-Roll off containers for further handling through Hook Loaders. The offered System Consists of the following:-

- Static Compactor with Hydraulic Compaction Container Coupling, Hydraulic Vertical Container Gate Opening/Closing Mechanism and a Hydraulic Push-Pull Cylinder.
- Receiving Hopper 20 Cum as per the specification given below:-

2.13.2 Static Compactor

- Compactor in heavy duty design with extra strong sheet thickness with horizontally operating straight single cylinder system
- Hydraulic System comes with regenerative control for faster cycle time
- Fail safe hydraulic ram control without limit switches, press plate comes in low maintenance plastic guides
- Container 75% full warning as standard
- Extra pressure boost and automatically plate positioning for closure operation
- Control Panel with main switch, emergency stop button, function button and function lights
- All, hydraulic functions are controlled via a central, maintenance free valve Hydraulic Unit with oil filter and oil level gauge.

Charge box volume approx. 3 m3

Compaction cycle time 45 sec

Theoretical volumetric capacity 240 m3/hr

Normal compaction force 330 kN

Max compaction force 380 kN

Compaction Density 0.75 – 0.8 T/ m3

Motor Power 15 kW

Power Supply 440 V

7.1.1.1 Hydraulic Compaction Container Coupling

The Hydraulic Container Coupling consists of a pair of hydraulically operated Hook with lever which pulls, align and attaches the container to the compactor unit before loading the garbage into the container. After the container is loaded the Hydraulic Coupling releases the container which is detached from the compactor before lifting by the Hook Loader.

7.1.1.2 Hydraulic Vertical Container Gate Opening/Closing Mechanism

The Container opening is provided with a sliding steel gate. The Gate is lifted by a hydraulic vertical mechanism before loading the garbage into the container. After the container is loaded, the hydraulic vertical mechanism pushes the container sliding gate

downward and closes the opening. The complete Operation is controlled by means of push buttons.

7.1.1.3 Hydraulic Push Pull Cylinder

A hydraulic Push-pull cylinder is provided for pulling the empty Roll-on-Roll off container towards the compactor unit and pushing it back after the container is full.

2.13.3 Receiving Hopper

Each compactor unit is provided with a 4 mm thick mild steel hopper with stiffeners having a garbage holding capacity of 20 Cum. The hopper opening area at the top is 4200 mm X 3200 mm (approx.) and is designed is such a way that a Truck Mounted Refuse Compactor vehicle can discharge the garbage into the hopper. The hopper is supported on a concreate platform constructed at a height of 4500 mm approximately and is attached to the charge box opening of the compactor unit.

2.14 TECHNICAL SPECIFICATION OF CONTAINER TRAVERSING/CHANGE OVER SYSTEM (TPS-CTS)

Each Stationary Compactor should be provided with a Rail Mounted Container Traversing System/change over system. Each traversing system is designed to handle two number Roll-on-Roll Off Containers and shall consist of two numbers electrically operated shuttle cars (transfer car) moving on Rails for placing empty containers and shifting loaded containers when detached from the static refuse compactor.

The Traversing System for each Static Compactor shall include the following:-

1. Rail Track of minimum length 9 mtrs.
2. Shuttle cars (transfer car) – 2 Nos. suitable for carrying and moving a loaded Container.
3. 04 Nos. Electric Motor (02 Nos. 3 phase 415 V 1 HP for each transfer car) with all control systems including electric cables suitable for operation of the Shuttle cars (transfer car).

2.15 TECHNICAL SPECIFICATIONS OF TRUCK MOUNTED HOOK LOADER MOUNTED ON 28 T GVW TRUCK CHASSIS (MODEL: TPS-HL-28 (6X2))

Product Description:

Truck Mounted Hook Loader , suitable for lifting 20 M^3 capacity container is designed to pick up the loaded or empty Roll on – Roll off containers, transport, dumping of material and thereafter unload the skip containers safely and faster.

The telescopic Jib enables proper load distribution on the chassis.

Technical Features:

Designed to handle containers of 20 M^3 capacity. The dumping mode is achieved by operating the main rams, actuating arm and tilting frame, with jib extended, pivoting around the rear shaft.

- A sub-frame made out of bend steel plates and cross members is mounted on the truck chassis frame.

- A tilting frame hinged to the sub frame with a steel shaft carry the rear centering rollers.

- A main arm hinged on the tilting frame with a mechanical locking mechanism allows the dumping mode.

- A telescopic jib, sliding in the arm, supporting a wide-open lifting hook enables loading of container.

Hydraulic Specifications:

Hydraulic Pump - Gear/Vane Type Pump

Controls - low pressure hydraulic – Manual

Filter - 10 micron, return line with replaceable cartridge

Arm cylinders (lift cylinders) - 2 Nos., double acting, equipped with counter balance valves and built in by pass valves.

Jib cylinder (slide cylinders) – 1 No. Double acting, equipped with built in counter balance valve Hoses, tubes & fittings.

Container Locking Cylinder - 1 No., Double Acting

Boom Locking Cylinder - 1 No., Double Acting

Stabilizers are provided at suitable locations along the rear of the vehicle to ensure vehicle stability during the loading & unloading cycle of operation.

All Hydraulic Cylinders, allied components and all hydraulic pumps shall be supplied from manufacturer of ISO 9001:2008 certified company.

SAFETY DEVICES
- Safety valve prevents jib operation during dump Mode
- Automatic locks on arm
- Slide through container catches

Truck Chassis

The hook loader is suitable to be mounted on 3 Axle Truck Chassis of 28 T GVW, BS-IV of TATA/Ashok Leyland /Eicher or equivalent. The Chassis shall be with Non-Sleeper Driver Cabin fitted with PTO and Hydraulic Pump.

Welding

Structure welding confirming to relevant IS standards.

Hook for Lifting

The hook for lifting the Compactor Unit would be integral to the structure. It shall be provided with the necessary reinforcement to handle the design weight for lifting with adequate factor of safety. The shape and size would as per design of the lifting tackle.

CONTAINERS OF 20 CU.M VOLUMETRIC CAPACITY
COMPATIBLE WITH THE HOOK LOADER (MODEL: TPS-RORO-20)

1. GENERAL DESCRIPTION: -

The closed type containers will be compatible with Hook loader, and the stationary compactor to be installed at transfer stations. The container will have rear door opening by ratcheting arrangement for loading refuse at the Transfer Station. They will also have mechanical locking arrangement to lock them with stationery/portable compactor while loading the refuse

2. TECHNICAL SPECIFICATION:-

- Volumetric Capacity — 20 Cu.M
- Floor Plate — 5 mm reinforced with hollow section
- Side Panels — 3 mm reinforced with hollow section
- Rollers — 2 Nos. rear side
- Material — As per BIS 2062

The design of container shall be compatible to the Hook Loader with all safety arrangement i.e. locking while tipping etc.

Proper sealing arrangement shall be provided to the container to avoid spillage of garbage & leachate during transportation.

The container shall have arrangement to collect leachate formed during compaction and the same shall not spill on road during transportation.

The container shall be painted with anti-corrosive paint from inside & outside. All the containers shall be numbered for an identification & record purpose.

2.16 Recommendations and Considerations for Feasible Facilities

The key parameter to be considered for the feasible operation of an MRF is the number of recyclables that can be recovered from either the source-segregated or mixed waste. This is controlled by the extent of waste segregation and diversion that take place at the source, waste bins, and collection trucks.

The following should be accomplished for a reasonable estimate of the extent of waste diversion:

1. Conduct an assessment of the solid waste management condition at the target project area. Low-income residential areas have a high degree of segregation of recyclable materials. Medium- to high-income groups have a comparatively lower level of waste diversion. Indicators of the high degree of waste diversion include the large number and size of junk shops and the presence of waste pickers near bins.
2. Undertake an end-of-pipe waste characterization for target sectors such as residential areas and commercial and institutional establishments. The results will provide indications of the potential recyclable materials that can be realistically recovered from the collected waste and those segregated by the waste collection crew.
3. Prepare a mass balance based on the results of the WACS and assessment of the prevailing waste management condition. Figures 6 and 7, respectively, show typical waste diversion estimates and mass balance of waste from an economic zone in the Philippines. In addition to the indicated figures, the percentages of the recyclables should be presented, e.g., 3.1% plastic bottles, 6.2% paper and carton, 2.1% aluminium cans, and 5.3% metal.

2.17 General Abstract of Cost

Sl. No.	Particulars	Total Cost in RS.
A	**Site Development Works**	
1	Road Work	9,10,681.00
2	Drainage Work	6,54,075.00
3	Entry Gate(2Nos.)	1,93,722.00
4	Toilet Block	6,45,854.00
5	MRF cum TS Facility	3,71,44,015.00
6	Water Supply Facility	12,31,200.00
7	Electrification	24,64,408.00
8	Parking and working floor	9,19,050.86
9	Horticulture	2,73,570.00
B	**Machine & Vehicles**	
1	Machine	1,81,34,500.00
2	Static Compactor Assembly	3,54,25,960.00
	Total (a)	**97997036.00**
	Add Contingencies 2% on Total (a)	19,59,941.00
	Total (b)	**9,99,56,977.00**
	Add GST 18% on Total B(excluding item B-1 & B-2)	79,98,584.00
	Add Labour cess 1% on Total (b)	9,99,570.00
	Sub total	**10,89,55,131.00**
	Say In Lacs	**1089.55**

2.18 Income & Expenditure Statement for Operation and Maintenance

2.18.1 Expenditure Statement for Operation and Maintenance for Semi Mechanised

Expenditure Statement					
A	**Expenditure for Manpower**				
Sr. No.	**Particulars**	**No of Man Power**	**Per day Cost**	**Per day Expenditure**	**Yearly Expenditure**
1	Labour (Skilled)	30.0	365.00	10,950.00	39,96,750.00
2	Supervisor	2.0	650.00	1,300.00	4,74,500.00
3	Electrical & Mechanical Fitter	2.0	420.00	840.00	3,06,600.00
4	Site In charge	1.0	1,000.00	1,000.00	3,65,000.00
Total					**51,42,850.00**

B	**Expenditure for Electric/Fuel Consumption**				
Sl. No.	**Particulars**	**Unit**	**Work Hour's**	**Per day Expenditure**	**Yearly Expenditure**
1	Electric Consumption (7.0 per Unit for 10 Hour's Working)	100 KV	10:00	7,000.00	25,55,000.00
2	Fuel Consumption	8 Ltr. Per Hour's	03:00	2399.04	8,75,650.00
3	Maintenance Cost @10%				1,05,70,000.00
	Office Work Cost @ 2%				21,14,000.00
	Miscellaneous Cost of Work @ 5%				52,85,000.00
Total					**2,13,99,650.00**
Total Expenditure (A+B)					**2,65,42,500.00**

Income Statement						
Sl .No.	**Particulars**	**Percentage of Saleable Material**	**Weight in Tonne**	**Unit Income Per Ton/Rupees**	**Total Income Per Day**	**Total Income Per Yearly**

1	**Saving Secondary Transportation (15% per Ton)**	15.00%	24	450.00	10,800.00	39,42,000.00
2	**Saleable Recyclables**					-
2.1	Plastic	9.60%	15.4	1,600.00	24,576.00	89,70,240.00
2.2	Paper	6.80%	10.9	2,200.00	23,936.00	87,36,640.00
2.3	Card Board	2.10%	3.4	1,800.00	6,048.00	22,07,520.00
2.4	Metal	2.55%	4.1	2,300.00	9,384.00	34,25,160.00
2.5	Glass	3.3%	5.3	750.00	3,960.00	14,45,400.00
2.6	Other Recyclable Material	2.50%	4.0	400.00	1,600.00	5,84,000.00
	Total Income					**2,93,10,960.00**

2553

MRF CUM TRANSFER STATION SWM LUCKNOW

GENERAL ABSTRACT OF COST

Sl. No.	Particulars	Total Cost in RS.
A	**Site Development Works**	
1	Road Work	9,10,681.00
2	Drainage Work	6,54,075.00
3	Entry Gate(2Nos.)	1,93,722.00
4	Toilet Block	6,45,854.00
5	MRF cum TS Facility	3,71,44,015.00
6	Water Supply Facility	12,31,200.00
7	Electrification	24,64,408.00
8	Parking and working floor	9,19,050.86
9	Horticulture	2,73,570.00
B	**Machine & Vehicles**	
1	Machine	1,81,34,500.00
2	Static Compactor Assembly	3,54,25,960.00
	Total (a)	**97997036.00**
	Add Contigencies 2% on Total (a)	19,59,941.00
	Total (b)	**9,99,56,977.00**
	Add GST 18% on Total B(excluding item B-1 & B-2)	79,98,584.00
	Add Labour cess 1% on Total (b)	9,99,570.00
	Sub total	**10,89,55,131.00**
	Say In Lacs	**1089.55**

2554

MRF CUM TRANSFER STATION SWM LUCKNOW List of Machinerires & Equipment required at MRF centre of 300 TPD Capacity					
A	**List of MRF Equipments**	**Req. Qty**	**Unit**	**Unit Price**	**Total**
1	Hopper (Receiving Chamber)	1	Each	1,25,000.00	1,25,000.00
2	Feeding Conveyor to VADS (FC - 1)	1	Each	9,77,500.00	9,77,500.00
3	Trommel Screen (40 TPH)	1	Each	35,00,000.00	35,00,000.00
4	Discharge and Manual Sorting Conveyor (+) Size	1	Each	15,67,500.00	15,67,500.00
5	Discharge Conveyor to Manual Sorting Conveyor (-) Size	1	Each	5,32,000.00	5,32,000.00
6	Manual Sorting Conveyor (-) Size	1	Each	15,67,500.00	15,67,500.00
7	Hopper (Receiving Chamber)	2	Each	1,50,000.00	3,00,000.00
8	Collection Chutes/Hopper	2	Each	3,10,000.00	6,20,000.00
9	Discharge Conveyors from Collection Chutes	18	Each	2,10,000.00	37,80,000.00
10	Discharge Conveyors to Storage	2	Each	9,15,000.00	18,30,000.00
11	Fatka Machine	3	Each	2,50,000.00	7,50,000.00
12	Bailing Press	1	Each	10,50,000.00	10,50,000.00
13	Weigh Bridge	1	Each	6,50,000.00	6,50,000.00
14	Sets of CCTV Camera with Scada	1	Each	1,85,000.00	1,85,000.00
15	Vehicle Washing Equipments	1	Each	2,00,000.00	2,00,000.00
16	Leachete Treatment Plant & Accessories	1	Each	5,00,000.00	5,00,000.00
				Total	**1,81,34,500.00**

2555

MRF CUM TRANSFER STATION SWM LUCKNOW
List of Machinerires & Equipment required at Transfer Station

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE TOTAL UNIT PRICE (FOR)	AMOUNT (RS.)
1.0	**Static Compactor with Top Loading Receiving Hopper (Model: TPS-SCTS-3000) comprising of:-**				
1.1	Stationary Compactor				
1.2	Garbage Storage Hopper (20 Cum)				
1.3	Hydraulic Compaction Container Coupling				
1.4	Hydraulic Vertical Locking Mechanism				
1.5	Hydraulic Push-Pull Cylinder	2	Nos.	**70,09,200.00**	**1,40,18,400.00**
2.0	Truck Mounted Hook Loader suitable for handling 20 Cu.M skips suitable to be mounted on 28 T GVW BS-VI (6X2) Truck Chasis with driver's cabin and PTO (Model: TPS-HL-28(6X2).	2	Nos.	**65,37,200.00**	**1,30,74,400.00**
3.0	20 Cu.M Capacity Roll-On Roll-Off Containers compatible for Handling with above Hook Loaders Model: TPS-RORO-20)	6	Nos.	**13,88,860.00**	**83,33,160.00**
	GRAND TOTAL				**3,54,25,960.00**

MRF CUM TRANSFER STATION SWM LUCKNOW

Abstract of cost of Road

Sl. No.	DSR 2021	Description of work	QTY.	UNIT	RATE IN Rs.	AMOUNT IN Rs.
1	2	3	4	5	6	7
1	2.3.1	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc., lead upto 50 m and lift upto 1.5 m				
		All kinds of soil	72.00	Cum	470.96	33909.12
2	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.				
			540.00	Sqm	156.44	84477.60
3	16.2	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).				
			4416.00		17.81	78648.96
4	16.3	Supplying and stacking at site.				
	16.3.1	90 mm to 45 mm	112.50	Cum	1679.32	188923.50
	16.3.2	63 mm to 45 mm	67.50	Cum	1407.95	95036.63
	16.3.3	53 mm to 22.4 mm	45.00	Cum	1592.34	71655.30

Sl. No.	DSR 2021	Description of work	QTY.	UNIT	RATE IN Rs.	AMOUNT IN Rs.
1	2	3	4	5	6	7
5	16.4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .				
	(i)	Subbase with stone aggregate 90 mm to 45 mm including stone screening 13.2 mm size.	112.50	Cum	750.39	84418.88
	(ii)	Base course with 63 mm to 45 mm size including stone screeing 13.2 mm size.	67.50	Cum	750.39	50651.33
	(iii)	Base course with 53 mm to 22.4 mm size including stone screeing 11.2 mm size.	45.00	Cum	750.39	33767.55
6	16.7.1	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres. With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	180.00	M	155.57	28002.60
7	16.9	Scarifying metalled (water-bound) road surface including disposal of rubbish, lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity	450.00	Sqm	23.88	10746.00
8	16.25	Surface dressing on new surface with paving bitumen of grade VG - 10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete:	450.00	Sqm	154.40	69480.00

Sl. No.	DSR 2021	Description of work	QTY.	UNIT	RATE IN Rs.	AMOUNT IN Rs.
1	2	3	4	5	6	7
9	16.31.1	Providing and applying tack coat using bitumen emulsion conforming to IS:8887, using emulsion pressure distributer including preparing the surface & cleaning with mechanical broom. With rapid setting bitumen emulsion On W.B.M / W.M.M. @ 0.4kg/sqm	450.00	Sqm	10.05	4522.50
10	16.32.3	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately). With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53	450.00	Sqm	169.87	76441.50
					Total Rs.	**910681.46**
					Say Rs.(in lacs)	**9.11**

MRF CUM TRANSFER STATION SWM LUCKNOW

Detailed Measurement of Road

Sl. No.	DSR 2021	Description Of Work	No	L	B	H	Qty.	Unit
1	2	3	4	5	6	7	8	9
1	2.3	Banking excavated earth in layers not exceeding 20 cm. In depth, breaking clods, watering, rolling each layer with 1/2 tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, floods banks, marginal banks, and guide banks etc., lead upto 50 m and lift upto 1.5 m.						
		Earth available from excavation of SLF.		90	8.00	0.1	72.00	Cum
2	16.1	Preparation of subgrade by excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and disposal of surplus earth lead upto 50 meteres.						
				90.00	6.00		540.00	Sqm
3	16.2	Extra for compaction of earth work in in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density)						
							4416.00	Cum
4	N.S	Supplying and stacking of graded stone aggregate at site of size range.						
	a)	90 mm to 45 mm		90.00	5.00	0.25	112.50	Cum
	b)	63 mm to 45 mm		90.00	5.00	0.15	67.50	Cum
	c)	53 mm to 22.4 mm		90.00	5.00	0.10	45.00	Cum
5	16.4	Laying water bound macadam with specified stone aggregate stone screening and blinding material including screening screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete (payment for stone aggregate, screenings, kankar, moorum and red bajri etc. to be made separately).						

Sl. No.	DSR 2021	Description Of Work	No	L	B	H	Qty.	Unit
1	2	3	4	5	6	7	8	9
	(i)	Subbase with stone aggregate 90 mm to 45 mm including stone screening 13.2 mm size.		90.00	5.00	0.25	112.50	Cum
	(ii)	Base course with 63 mm to 45 mm size including stone screeing 13.2 mm size.		90.00	5.00	0.15	67.50	Cum
	(iii)	Base course with 53 mm to 22.4 mm size including stone screeing 11.2 mm size.		90.00	5.00	0.10	45.00	Cum
6	16.7.1	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.	2	90.00			180.00	M
7	16.9	Scarifying metalled (water-bound) road surface including disposal of rubbish lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.		90.00	5.00		450.00	Sqm
8	16.25	Surface dressing on new surface with paving of grade A-90/S-90 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8 ton capacity etc. complete.		90.00	5.00		450.00	Sqm
9	16.31.1	Providing and applying tack coat using bitumen emulsion (Rapid setting) complying with IS 8887-1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specifications on W.B.M @ 0.40 kg/sqm.		90.00	5.00		450.00	Sqm
10	16.32.3	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 ton capacity etc. complete with refinery modified bitumen CRMB 55 conforming to IRC : SP : 53-1999.		90.00	5.00		450.00	Sqm

MRF CUM TRANSFER STATION SWM LUCKNOW

Estimate of Drains

Sl. No.	UP PWD /DSR	Description Of Work	No	L	B	H	Qty.	Unit	Rate In Rs.	Amount In Rs.
1	2	3	4	5	6	7	8	9	10	11
1	251	Excavation in foundation in ordinary soil (loamclay or sand) including lift up to 1.5m and lead up to 30m. and including filling watering and ramming of excavated earth into the space between the building and the sides of foundation trenches or into the plinth and removal and disposal of surplus earth ad directed by the Engineer in charge up to a distance of 30m. from the foundation trenches including all T&P phowarah and basket etc. complete.								
		250 x 300mm size		180.00	0.75	0.62	83.70			
				180.00			83.70	Cum	160.00	13392.00
2	255	Sand filling in plinth including supply of necessary quantity of sand from a distance not exceeding 8 Kms. From the site of work and including watering, dressing etc. Rate to include cost of all materials labour T&P etc. required for proper completion of work								
		250 x 300mm size		536.00	0.75	0.10	40.20			
							40.20	Sqm	760.00	30552.00
3	619	Same as item no. 615 above but bricks laid flat								
		250 x 300mm size		180.00	0.75		135.00			
							135.00	Sqm	440.00	59400.00
4	281	As in item 279 above but in proportions of 8: 4: 1								
		250 x 300mm size		180.00	0.75	0.10	13.50			
							13.50	Cum	7060.00	95310.00
5	305	Same as above item 303 but in 1:4 (one cement and four coarse sand								
			2	180.00	0.25	0.30	27.00			
							27.00	Cum	5070.00	136890.00

Sl. No.	UP PWD /DSR	Description Of Work	No	L	B	H	Qty.	Unit	Rate In Rs.	Amount In Rs.
1	2	3	4	5	6	7	8	9	10	11
6	279	Concrete with 4 cm(1.5") gauge approved stone, ballast, approved coarse sand and cement in the proportion of 4:2:1 including supply of all materials , labours and T&P etc. required for proper completion of work.								
		over brick work	2	180.00	0.25	0.05	4.50	Cum	7600.00	34200.00
7	283A	As in item no 283 above but in prportion of 1:1.5:3								
			0.6	180.00	0.75	0.08	6.08			
							6.08	Cum	8150.00	49552.00
8	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in binding all complete upto plinth level.								
			1%	of item no 7			4.77	Per / Qtl	8757.22	41798.00
9	586	As in item 579 above but with cement and fine sand of 1.25 F.M. Mortar in 1:6								
			2	180.00	0.85		306.00			
							306.00	Sqm	155.00	47430.00
10	DSR 13.18	Neat cement punning.								
			2	180.00	0.85		306.00			
							306.00	Sqm	58.76	17981.00

Sl. No.	UP PWD /DSR	Description Of Work	No	L	B	H	Qty.	Unit	Rate In Rs.	Amount In Rs.
1	2	3	4	5	6	7	8	9	10	11
11	DSR 18.33.1	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :								
			12				12.00	Nos.	8755.84	105070.00
12	615	First class brick on edge floor laid dry joints sand filled including preparation of base to proper slope and its ramming and including supply of all materials labours & T & P etc. required for proper completion of work.								
			180		0.25		45.00	sqm	500.00	22500.00
									Total Rs.	**6,54,075.00**

MRF CUM TRANSFER STATION SWM LUCKNOW

Estimate of Entry Gate

Sl.No	UP PWD / DSR	Description of work	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
1	251	Excavation in foundation in ordinary soil (loamclay or sand) including lift up to 1.5m and lead up to 30m. and including filling watering and ramming of excavated earth into the space between the building and the sides of foundation trenches or into the plinth and removal and disposal of surplus earth ad directed by the Engineer in charge up to a distance of 30m. from the foundation trenches including all T&P phowarah and basket etc. complete.								
			2	2.00	1.00	1.200	4.80			
			1	0.88	0.88	0.875	0.67			
							5.47	M^3	160.00	875.00
2	303	First class brick work in 1:6 cement and coarse sand mortar in foundation and plinth including supply of all materails, labour and T&P etc. requiered for proper complection of the work.								
			2	2.00	1.00		4.00			
			1	0.875	0.875		0.77			
							4.77	M^2	4890.00	23325.00
3	255	Sand filling in plinth including supply of necessary quantity of sand from a distance not exceeding 8 km. from the site of work & including watering dressing etc. Rate including cost of alll materials, labour and T& P etc. required for proper complection of the work (including royalty)								
			2	2.00	1.00	0.10	0.40			
			1	0.88	0.88	0.10	0.08			
							0.48	M^3	760.00	365.00
4	281	As in item 279 above but in proportions of 8: 4: 1								
			2	2.00	1.00	0.15	0.60			
			1	0.88	0.88	0.10	0.08			
							0.68	M^3	7060.00	4801.00
5	283 A	Same as above item No. 283 but in propertion of 1:1.5:3	2	0.20	0.20	2.375	0.19	M^3	8535.00	1622.00
6	303	First class brick work in 1:6 cement and coarse sand mortar in foundation & Plinth including supply of all materials , labour and T&P etc. required for proper completion of work.								

Sl.No	UP PWD / DSR	Description of work	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
		Main Gate								
		Ist offset	2	1.75	0.875	0.25	0.77			
		IIst offset	2	1.63	0.750	0.25	0.61			
		IIIst offset	2	1.50	0.625	0.375	0.70			
		Wicket Gate								
		Ist offset	1	0.63	0.625	0.300	0.12			
		IIst offset	1	0.50	0.500	0.375	0.09			
						Total	2.29	M^3	4890.00	11198.00
7	305	Same as above item no. 303 but with coarse sand mortar in proportion of 1:4	2	1.50	0.625	1.50	2.81			
			1	0.375	0.375	1.500	0.21			
							3.02	M^3	5070.00	15311.00
8	586	As in item 579 above but with cement and fine sand of 1.25 F.M. Mortar in 1:6	2 x 2	1.50	1.65		9.90			
			2 x 2	0.375	1.65		2.48			
			2 x 2	0.625	1.65		4.13			
							16.51	M^2	155.00	2559.00
9	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in binding all complete upto plinth level.					0.149	per/qtl	8757.22	1305.00
10	502	Same as item no 502 above but in m.s grill ----do-----								
		Entry gate 4M wide and 1.5M height and wicket gate 1 M wide and 1.5 M height.	1				5.00	per/qtl	7100.00	35500.00
									Total Rs.	**96861.00**
									For 2 nos	**193722.00**

MRF CUM TRANSFER STATION SWM LUCKNOW

Estimate of Toilet Block

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
1 (a)	251	Excavation in foundation in ordinary soil (loamclay or sand) including lift up to 1.5m and lead up to 30m. and including filling watering and ramming of excavated earth into the space between the building and the sides of foundation trenches or into the plinth and removal and disposal of surplus earth ad directed by the Engineer in charge up to a distance of 30m. from the foundation trenches including all T&P phowarah and basket etc. complete.				
		For Walls	Cum	29.36	160.00	4698.00
1(b)	DSR 2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	9.79	220.10	2154.00
2	255	Sand filling in plinth including supply of necessary quantity of sand from a distance not exceeding 8 km. from the site of work & including watering, dressing etc. rates includes cost of all materials labour & T&P etc. required for proper completion of work.(including royalty)	Cum	7.31	760.00	5556.00
3	615	First class brick on edge floor laid dry joints sand filled including preparation of base to proper slope and its ramming and including supply of all materials labours & T & P etc. required for proper completion of work.				
	619	As in item (615) above but brick flat.	Sqm	28.67	440.00	12615.00
4	279	Concrete with 4 cm(1.5") gauge approved stone, ballast, approved coarse sand and cement in the proportion of 4:2:1 including supply of all materials , labours and T&P etc. required for proper completion of work.				
	281	As in item no 279 above but in proortion 8: 4: 1	Cum	4.63	7060.00	32688.00

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
5	303	First class brick work in 1:6 cement and coarse sand mortar in foundation & Plinth including supply of all materials , labour and T&P etc. required for proper completion of work.	Cum	14.83	4890.00	72519.00
6	DSR 4.10	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 12.5mm nominal size derived from natural sources)	Sqm	7.60	321.42	2443.00
	309	As in item no 303 to 307 above but in superstructure including necessary cutting and moulding of bricks as required and including honey comb brickwork thickness of wall not be less than 1.5 brick thick add for extra labour of above items				
7	305	Same as item 303 above but 1:4 cement & Coarse sand	Cum	16.09	5070.00	81576.00
7 (b)	310(a)	as in item no. 309 above but wall of half brick (4.5") thick. Add for Extra labour over item 305	Cum	0.22	5600.00	1232.00
8	283	RCC work with cemente approved coarse sand and 2 cm (3/4") gauge approved stone ballast in proportion of 1:2:4 in lintel of doors & windows excluding cost of reinforcemnet & its bending but including its fixing and binding the same with 24 B.W.G.G.I. binding wire and including necessary shuttering etc. and also including supply of all other materials ,labour and tools plants etc. reqiured for proper completion of the work . Binding wire cost included in items.				
	283 A	As in item no 283 but in proportion of 1:1.5:3	sqm	0.50	7250.00	3625.00
8 (a)	282	Cast cement concrete door sills chaukhat boundary post ,shelves and similar small work with cement approved coarse sand and 2 cm gauge stone grit proportion of 1:2:4 excluding cost of reinforcemnet & its bending but including its fixing and binding wire moulds all other materials ,labour and tools plants etc. reqiured for proper completion of the work .	sqm	0.24	8615.00	2068.00

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
9	284 A	As in item 283 but for slab in proportion of 1:1.5:3	Cum	2.69	8535.00	22959.00
10	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in binding all complete upto plinth level.	Qtls.	3.15	8757.22	27585.00
11	586	As in item 579 above but with cement and fine sand of 1.25 F.M. Mortar in 1:6	Sqm	168.24	155.00	26077.00
	582	As in item 579 above but with cement & fine sand of 1.25 F.M. Mortar in 1:3				
12	587	Add for extra labour to in items 581 & 582 of plaster if done in ceiling.**(for Maintenance Purpose)**	Sqm	9.59	199.00	1908.00
13	New Item 1	Laying of 25 mm thick Kota stone of size 45cmX45cm and above flooring over previously prepared base with 2cm thick 1:3 cement and sand mortar including filling of joints with cement mixed with pigment required for matching of shade of floor as per direction of E/I including cutting polishing with Wax polish including supply of all materials T&P etc. required for proper completion of work.				
		In Lobby	Sqm	7.98	1110.00	8858.00
14	DSR 11.39	Providing and laying rectified Glazed Ceramic floor tiles 300 x 300 mm or more (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours White, lvory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand) including grouting the joints with white cement and matching pigment etc., complete.	Sqm	9.59	990.46	9499.00
15	628	Supply & fixing 6 mm (1/4") china white glazzed tiles in flooring or in skirting or dado laid with 1:3 bcement and approved coarse sand mortar finished with white cement slurry of all materials labour and tools & plants etc required for proper completion of the work.	Sqm	39.45	1090.00	43001.00

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
16	New item 2	Laying of 25 mm thick Kota stone of size 45cmX45cm and in skirting & Dado over previously prepared base with 2cm thick 1:3 cement and sand mortar including filling of joints with cement mixed with pigment required for matching of shade of floor as per direction of E/I including cutting polishing with Wax polish including supply of all materials T&P etc. required for proper completion of work.	Sqm	2.25	1015.00	2284.00
17	660	Finishing wall with water proof cement paint of approved make and quality on new work with two coats to give an even shade including supply of all materials, labour tools and plant etc. required for proper completion of the work.	Sqm	66.28	65.00	4308.00
18	671	White washing three coat including supply off all materials, labour and T&P etc. required for proper completion of the work.				
	673	As in item 671 above but 3 coats white washing 2 coats as per item 672	Sqm	9.59	19.00	182.00
19	DSR 13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	75.45	107.34	8099.00
20	D.S.R 4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cemnt: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	Sqm	17.71	590.79	10463.00
21	DSR 12.41.2	Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A. 110 mm dia	No.	3.30	277.13	915.00

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
22	DSR 12.42.6.2	Providing and fixing on wall face unplasticised - PVC moulded fittings / accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A. 110 mm shoe.	No.	1.00	100.49	100.00
23	DSR 12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter.	No.	1.00	41.51	42.00
24	DSR 9.59.3	Providing and fixing ISI marked oxidised M.S. single acting spring hinges with necessary screws etc. complete : 100 mm	Nos	4.00	170.48	682.00
25	470	Supply & fixing of flush doors commercial quality confirming to I.S. 2202 Part I (1983)including fixing of wooden cleats & stoppers, hinges, bolt locks, handles, springs fitting with necessary screws to be supplied departmentally. **B) 35 mm Thick**	Sqm	6.30	1420.00	8946.00
26	DSR 10.10	Fixing standard steel glazed doors, windows and ventilators in walls, including fixing of float glass panes with glazing clips and special metal sash putty of approved make, or metal beading with screws, (only steel windows, glass panes cut to size and glazing clips or metal beading with screws, shall be supplied by department free of cost.				
	10.10.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Sqm	129.23	60.11	7768.00
28	DSR 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).				
	9.1.2	Sal Wood Door Frame	cum	0.15	92494.96	13874.00

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
29	518	Providing & Fixing in position collapsible steel shutters with vertical channels 20x1.0 mm (1.5"x1.5"x1/4") with 38 mm dia steel pulley with bolts, nuts locking arrangement, stoppers handles complete including applying a priming coat of approved lead paint.				
		At Entrance Gate	Sqm	3.15	4500.00	14175.00
30	DSR 5.18.3	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits. **5.18.3** 25 mm thick				
			Sqm	2.10	1119.30	2351.00
31	DSR 13.53	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :				
	13.53.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution				
		For Door & Window Frame	Sqm	1.50	130.18	195.00
32	DSR 13.68.1	French spirit polishing : Two or more coats on new works including a coat of wood filler	Sqm	6.30	319.21	2011.00

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
33	DSR 22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around. d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately. For the purpose of measurement the entire treated surface will be measured.	Sqm	27.55	507.50	13982.00
34	DSR 17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:				
	DSR 17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	Nos	2.00	5010.70	10021.00
35	DSR 17.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :				

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
	DSR 17.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern (a) flat back or standing corner	Nos	2.00	4566.51	9133.00
36	DSR 17.7.4	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap	Nos	1.00	2367.35	2367.00
37	DSR 17.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Nos.	1.00	1223.04	1223.00
38	DSR 17.37.1	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10 x 10 x 10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone sggregate 20 mm nominal size) including cost of cutting holes and making good the walls etc.				
		100 mm dia Pipe	Nos	4.00	267.33	1069.00
39	DSR 18.11	Providing and fixing G.I.pipes complete with G.I.fittings and clamps,including cutting and making good the walls etc. (Internal work): Concealed pipe including painting with anti corrosive bitumastic paint,cutting chases and making good the wall.				
	18.11.1	15 mm dia nominal bore	M	7.50	420.52	3154.00
	18.11.2	20 mm dia nominal bore	M	10.00	468.97	4690.00
40	DSR 18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :				
	18.13.2	50 to 80 mm nominal bore	No.	1.00	1311.92	1312.00
41	DSR 18.16.1	Providing and fixing brass stop cock of approved quality : 15 mm nominal bore	No	2.00	263.35	527.00

Sl. No.	UP PWD / DSR	Description of Work	Unit	Qty.	Rate	Amount
1	2	3	4	5	6	7
42	DSR 18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISi : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	ltr.	1000.00	8.41	8410.00
44	DSR 18.49.1	Providing and fixing C.P. brass bib cock of approved quality conforming to IS : 8931. 15 mm nominal bore	No.	6.00	376.32	2258.00
45	DSR 18.65	Providing and fixing PTMT soap Dish Holder having length of 138 mm, breadth 102mm, height of 75mm with concealed fitting arrangements. Weighing not less than 106 gms.	Nos.	3.00	83.85	252.00
46	NS	R.O. Water Cooler	Nos	1.00	150000.00	150000.00
					Total Rs.	**6,45,854.00**

MRF CUM TRANSFER STATION SWM LUCKNOW

Detailed measurement of Toilet Block

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
1	251	Excavation in foundation in ordinary soil (loamclay or sand) including lift up to 1.5m and lead up to 30m. and including filling watering and ramming of excavated earth into the space between the building and the sides of foundation trenches or into the plinth and removal and disposal of surplus earth ad directed by the Engineer in charge up to a distance of 30m. from the foundation trenches including all T&P phowarah and basket etc. complete.						
		For Walls	1.00	30.41	0.88	1.08	28.60	
			1.00	1.75	0.38	0.58	0.38	
		step	1.00	2.00	0.40	0.48	0.38	
						Total	29.36	Cum
2	DSR 2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.					9.79	cum
3	255	Sand filling in plinth including supply of necessary quantity of sand from a distance not exceeding 8 km. from the site of work & including watering, dressing etc. rates includes cost of all materials labour & T&P etc. required for proper completion of work.(including royalty)						
	i)	Below lean concrete.	1.00	30.41	0.88	0.15	3.99	
	ii)	Below flooring	1.00	1.75	0.38	0.10	0.07	
		In Bath Room	2.00	1.50	1.50	0.19	0.84	
		In W.C	1.00	2.58	1.50	0.19	0.72	
		In Lobby Area 7.98 Sq M	1.00		7.98	0.19	1.48	
	iii)	In Steps	1.00	2.00	0.70	0.15	0.21	
						Total	7.31	Cum

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
	615	First class brick on edge floor laid dry joints sand filled including preparation of base to proper slope and its ramming and including supply of all materials labours & T & P etc. required for proper completion of work.						
4	619	As in item (615) above but brick flat.						
		Below wall foundation	1.00	30.41	0.88		26.61	
			1.00	1.75	0.38		0.66	
		In Steps foundation	1.00	2.00	0.70		1.40	
							28.67	Sqm
	273	Concrete with 4 cm(1.5") gauge approved stone, ballast, approved coarse sand and cement in the proportion of 4:2:1 including supply of all materials , labours and T&P etc. required for proper completion of work.						
5	281	As in item no 279 above but in proortion 8: 4: 1						
	i)	In lean concrete	1.00	30.41	0.88	0.10	2.66	
			1.00	1.75	0.38	0.10	0.07	
	ii)	Below flooring						
		In Bath Room	2.00	1.50	1.50	0.10	0.45	
		In W.C	1.00	2.58	1.50	0.10	0.39	
		In Urinal	1.00	1.40	0.85	0.10	0.12	
		In Lobby	1.00		7.98	0.10	0.80	
	iii)	In Steps	1.00	2.00	0.70	0.10	0.14	
						Total	4.63	Cum
6	303	First class brick work in 1:6 cement and coarse sand mortar in foundation & Plinth including supply of all materials , labour and T&P etc. required for proper completion of work.						
		In Walls	1.00	30.41	0.75	0.15	3.42	
		In Walls	1.00	30.41	0.63	0.15	2.85	
		In Walls	1.00	30.41	0.50	0.15	2.28	
		In Walls	1.00	30.41	0.38	0.30	3.42	
		In Walls	1.00	30.41	0.25	0.30	2.28	
		In Walls	1.00	1.75	0.25	0.30	0.13	
		In Steps	1.00	2.00	0.60	0.30	0.36	
		In Steps	1.00	2.00	0.30	0.15	0.09	
						Total	14.83	Cum

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
7	DSR 4.10	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 12.5mm nominal size derived from natural sources)	1.00	30.41	0.25		7.60	
			1.00	1.75	0.25		0.44	
						Total	8.04	Sqm
8	305	Same as item 303 above but 1:4 cement & Coarse sand						
		In Walls	1.00	30.41	0.25	2.50	19.01	
		In parapet wall in C.M. (1:6)	1.00	17.86	0.25	0.15	0.67	
						Total	19.68	Cum
		Deduct for						
		Door	4.00	0.75	0.25	2.10	1.58	
		RCC Jali	1.00	1.00	0.25	2.10	0.53	
		Entrance Gate	1.00	1.50	0.25	2.10	0.79	
		Window 'W'	1.00	1.03	0.25	1.20	0.31	
		Ventilator 'V'	4.00	0.75	0.25	0.50	0.38	
						Total	3.59	Cum
		Net Brick Work					16.09	Cum
9	310(a)	as in item no. 309 above but wall of half brick (4.5") thick.						
		Add for Extra labour over item 305	1.00	1.75	0.125	2.50	0.22	Cum
	283	RCC work with cemente approved coarse sand and 2 cm (3/4") gauge approved stone ballast in proportion of 1:2:4 in lintel of doors & windows excluding cost of reinforcemnet & its bending but including its fixing and binding the same with 24 B.W.G.G.I. binding wire and including necessary shuttering etc. and also including supply of all other materials ,labour and tools plants etc. reqiured for proper completion of the work . Binding wire cost included in items.						
10	283 A	As in item no 283 but in proportion of 1:1.5:3						
		In lintel Beam at entrance	1.00	1.80	0.25	0.15	0.07	
		In lintel Beam for window opening W	1.00	1.54	0.25	0.15	0.06	
		For Door D	4.00	1.05	0.25	0.15	0.16	
		For Jali	1.00	1.30	0.25	0.15	0.05	
		In Ventilation V	4.00	1.05	0.25	0.15	0.16	
							0.50	cum

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
11	282	Cast cement concrete door sills chaukhat boundary post ,shelves and similar small work with cement approved coarse sand and 2 cm gauge stone grit proportion of 1:2:4 excluding cost of reinforcemnet & its bending but including its fixing and binding wire moulds all other materials ,labour and tools plants etc. reqiured for proper completion of the work .						
			4.00	1.05	0.50	0.06	0.13	
		W	1.00	1.54	0.50	0.06	0.05	
		Sun Shade at entrance	1.00	2.00	0.50	0.06	0.06	
							0.24	sqm
12	284 A	As in item 283 but for slab in proportion of 1:1.5:3						
		In Roof Slab area 26.93 Sqm	1.00		26.93	0.10	2.69	Cum
13	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in binding all complete upto plinth level.		1.25%		of 12	3.15	Qtls.
14	586	As in item 579 above but with cement and fine sand of 1.25 F.M. Mortar in 1:6						
		In Walls outerface	1.00	20.96		3.20	67.07	
		In Parepet Walls	1.00	20.96		0.40	8.38	
		In Walls innerface	1.00	42.29		2.50	105.73	
		In Steps	1.00	2.00		0.45	0.90	
		In Steps	2.00	0.60		0.30	0.36	
		In Steps	2.00	0.30		0.15	0.09	
						Total	182.53	Sqm
		Deduction for						
		Door	4.00	0.75		2.10	6.30	
		RCC Jali	1.00	1.00		2.10	2.10	
		Entrance Gate	1.00	1.50		2.10	3.15	
		Window 'W'	1.00	1.03		1.20	1.24	
		Ventilator 'V'	4.00	0.75		0.50	1.50	
						Total	14.29	Sqm
		Net Plaster					168.24	Sqm
15	587	Add for extra labour to in items 581 & 582 of plaster if done in ceiling.(for Maintenance Purpose)						
		In Bath Room	2.00	1.50	1.50		4.50	
		In Toilet	2.00	1.50	1.30		3.90	
		In Lobby	1.00		7.98		0.00	

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
		In Urinal	1.00	1.40	0.85		1.19	
						Total	9.59	Sqm
16	New Item 1	Laying of 25 mm thick Kota stone of size 45cmX45cm and above flooring over previously prepared base with 2cm thick 1:3 cement and sand mortar including filling of joints with cement mixed with pigment required for matching of shade of floor as per direction of E/I including cutting polishing with Wax polish including supply of all materials T&P etc. required for proper completion of work.						
		In Lobby					7.98	Sqm
17	DSR 11.39	Providing and laying rectified Glazed Ceramic floor tiles 300 x 300 mm or more (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours White, lvory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand) including grouting the joints with white cement and matching pigment etc., complete.						
		In Bath Room	2.00	1.50	1.50		4.50	
		In Toilet	2.00	1.50	1.30		3.90	
		In Urinal	1.00	1.40	0.85		1.19	
							9.59	Sqm
18	628	Supply & fixing 6 mm (1/4") china white glazzed tiles in flooring or in skirting or dado laid with 1:3 bcement and approved coarse sand mortar finished with white cement slurry of all materials labour and tools & plants etc required for proper completion of the work.						
		With commercial grade colour 15x15 cms tiles						
		In Bath Room	2 x4	1.50		1.50	18.00	
		In Toilet	4.00	1.50		1.50	9.00	
			4.00	1.30		1.50	7.80	
		In Urinal	1.00	1.40		1.50	2.10	
			2.00	0.85		1.50	2.55	
						Total	39.45	Sqm

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
19	New item 2	Laying of 25 mm thick Kota stone of size 45cmX45cm and in skirting & Dado over previously prepared base with 2cm thick 1:3 cement and sand mortar including filling of joints with cement mixed with pigment required for matching of shade of floor as per direction of E/I including cutting polishing with Wax polish including supply of all materials T&P etc. required for proper completion of work.						
		In Steps	2.00	2.00		0.45	1.80	
		In Steps	2.00	0.60		0.30	0.36	
		In Steps	2.00	0.30		0.15	0.09	
							2.25	Sqm
20	660	Finishing wall with water proof cement paint of approved make and quality on new work with two coats to give an even shade including supply of all materials, labour tools and plant etc. required for proper completion of the work.						
		Inner Walls	1.00	42.29		2.50	105.73	
		Deduct for tiles				-	39.45	
						Total	66.28	Sqm
21	673	As in item 671 above but 3 coats white washing 2 coats as per item 672						
		Qty. Same as plaster in ceiling.					9.59	Sqm
22	DSR 13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.						
		Outer Walls						
		Qty.Same as plaster in outer surface					67.07	
		Parepet Walls					8.38	
						Total	75.45	Sqm
23	D.S.R 4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cemnt: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.						
			2.00	7.70	0.75		11.55	
			2.00	4.11	0.75		6.16	
						Total	17.71	Sqm

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
24	DSR 12.41.2	Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A. 110 mm dia	1.00				3.30	m
25	DSR 12.42.6.2	Providing and fixing on wall face unplasticised - PVC moulded fittings / accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A. 110 mm shoe.	1.00				1.00	No.
26	DSR 12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter.	1.00				1.00	No.
27	DSR 9.59.3	Providing and fixing ISI marked oxidised M.S. single acting spring hinges with necessary screws etc. complete : 100 mm	4.00				4.00	Nos
28	470	Supply & fixing of flush doors commercial quality confirming to I.S. 2202 Part I (1983)including fixing of wooden cleats & stoppers, hinges, bolt locks, handles, springs fitting with necessary screws to be supplied departmentally. B) 35 mm Thick	4.00		0.75	2.10	6.30	Sqm
	DSR 10.10	Fixing standard steel glazed doors, windows and ventilators in walls, including fixing of float glass panes with glazing clips and special metal sash putty of approved make, or metal beading with screws, (only steel windows, glass panes cut to size and glazing clips or metal beading with screws, shall be supplied by department free of cost.						
29	10.10.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	4.00		0.75	0.50	1.50	
			1.00		1.03	1.20	1.24	
						Total	2.74	Sqm
							129.23	

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
	DSR 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).						
30	9.1.2	Sal Wood						
		Door Frame	4.00	5.10	0.10	0.08	0.15	
						=	0.15	cum
31	518	Providing & Fixing in position collapsible steel shutters with vertical channels 20x1.0 mm (1.5"x1.5"x1/4") with 38 mm dia steel pulley with bolts, nuts locking arrangement, stoppers handles complete including applying a priming coat of approved lead paint.						
		At Entrance Gate	1.00	1.50		2.10	3.15	Sqm
32	DSR 5.18.3	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits.						
		5.18.3 25 mm thick						
			1.00	1.00		2.10	2.10	Sqm
33	13.53.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution						
		For Door & Window Frame					1.50	Sqm
34	DSR 13.68.1	French spirit polishing : Two or more coats on new works including a coat of wood filler	4.00		0.75	2.10	6.30	Sqm

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
33	DSR 22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around. d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately. For the purpose of measurement the entire treated surface will be measured.						
			1.00	6.40	4.31		27.55	
			1.00	1.75	0.36		0.62	
							26.93	Sqm
35	DSR 17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests						
		A- 510mm long with 12.5 ltr. Low level PVC cistem	2.00				2.00	Nos
36	DSR 17.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern						
		Flat back or standing corner (600mm x 350mm)	2.00				2.00	Nos
37	DSR 17.7.4	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap						
			1.00				1.00	Nos
38	DSR 17.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.						
			1.00				1.00	Nos.

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
39	DSR 17.37.1	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10 x 10 x 10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone sggregate 20 mm nominal size) including cost of cutting holes and making good the walls etc.						
		100 mm dia Pipe	4.00				4.00	Nos
40	DSR 18.11	Providing and fixing G.I.pipes complete with G.I.fittings and clamps,including cutting and making good the walls etc. (Internal work): Concealed pipe including painting with anti corrosive bitumastic paint,cutting chases and making good the wall.						
	18.11.1	15 mm dia piles					7.50	
	18.11.2	20 mm dia piles					10.00	
						Total	17.50	M
	DSR 18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :						
41	18.13.2	50 to 80 mm nominal bore						
		50mm dia.	1.00				1.00	No.
42	DSR 18.16	Providing and fixing brass stop cock of approved quality :						
	18.16.1	15 mm nominal bore	2.00				2.00	No
43	DSR 18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISi : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.						
			2.00	500.00			1000.00	ltr.
44	DSR 18.49.1	Providing and fixing C.P. brass bib cock of approved quality conforming to IS : 8931.						
		15 mm nominal bore	6.00				6.00	No.

Sl. No.	UP PWD / DSR	Description of Work	No	L (m)	B (m)	H (m)	Qty.	Unit
1	2	3	4	5	6	7	8	9
45	DSR 18.65	Providing and fixing PTMT soap Dish Holder having length of 138 mm, breadth 102mm, height of 75mm with concealed fitting arrangements. Weighing not less than 106 gms.	3.00				3.00	Nos.
46	NS	R.O. Water Cooler	1.00				1.00	Nos.

MRF CUM TRANSFER STATION SWM LUCKNOW

Detailed Measurement of MRF cum TS

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
1	2.6.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in- Charge:								
		0.30 M & Above								
		For Floor								
			1	34.60	32.35	0.10	111.93			
		In Foundation								
		For Footing F-1	26	2.00	2.00	1.70	176.80			
		For Footing F-2	38	1.50	1.50	1.70	145.35			
		For Footing F-3	2	4.60	2.00	1.70	31.28			
						Total	**465.36**	M^3	161.00	74922.96
2	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. In layers not exceeding 20 cm in depth consolidating each deposited layerby ramming and watering, lead upto 50 m and lift upto 1.5 M.								
		30% of above item no 1					**139.61**	M^3	110.00	15357.10
3	2.27	Supply and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing Complete.								

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
		For Floor								
			1	34.60	32.35	0.10	111.93			
		In Foundation								
		For Footing F-1	26	2.00	2.00	0.10	10.40			
		For Footing F-2	38	1.50	1.50	0.10	8.55			
		For Footing F-3	2	4.60	2.00	0.10	1.84			
						Total	**132.72**	M^3	843.00	111882.96
4	4.1.8	Providing and laying position cement concrete of specified grade Excluding the cost of centering and shuttering -all work upto plinth level with 1:4:8 (1 cement: 4 coarse sand (Zone-III):8 graded stone aggregate 40 mm nominal size in foundation and plinth.								
		In Foundation								
		For Footing F-1	26	2.00	2.00	0.10	10.40			
		For Footing F-2	38	1.50	1.50	0.10	8.55			
		For Footing F-3	2	4.60	2.00	0.10	1.84			
						Total	**20.79**	M^3	6099.00	126798.21
5	5.1.2	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : with 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)								
		In Foundation								

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
		For Footing F-1	26	1.85	1.85	0.30	26.70			
		For Footing F-1 Pedestal Trapezoidal	26		1.08		28.07			
		For Column C-1	26	0.90	0.50	0.90	10.53			
		For Footing F-2	38	1.50	1.50	0.30	25.65			
		For Footing F-2 Pedestal Trapezoidal	38		0.42		15.87			
		For Column C-2	38	0.45	0.45	0.90	6.93			
		For Footing F-3	2	4.45	1.85	0.20	3.29			
		For Column C-3	4	0.90	0.50	0.90	1.62			
						Total	**90.34**	M^3	7664.00	692365.76
6	5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).								
		For Plinth Beam(PB-1)								
		For (A-1 to A-10)	1	23.50	0.30	0.6	4.23			
		For (B-1 to B-10 to (G-1 to G-10)	6	34.60	0.30	0.60	37.37			
			9	32.35	0.30	0.60	52.41			
		For 1st Floor Beam(FB-1)								
			1	23.50	0.30	0.6	4.23			
			6	34.60	0.30	0.60	37.37			
			9	32.35	0.30	0.60	52.41			

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
		For Floor Beam(FB-2)								
			1	23.50	0.30	0.6	4.23			
			6	34.60	0.30	0.60	37.37			
			9	32.35	0.30	0.60	52.41			
		For Beam(FB-3)								
			1	23.50	0.30	0.6	4.23			
			6	34.60	0.30	0.60	37.37			
			9	32.35	0.30	0.60	52.41			
		Floor Slab(PB-1, FB-1 & FB-2)								
			3	34.60	32.35	0.20	671.59			
							1047.63	M^3	8623.00	9033713.49
7	5.2.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natu ral sources : 3 graded stone aggregate 20 mm nominal sizederived from natural sources)								
		RCC Wall for Ramp	4	70.00	0.15	2	84.00			
		Ramp	2	70.00	5.30	0.25	185.50			
		For Column C-1	26	0.90	0.50	11.3	132.21			
		For Column C-2	38	0.45	0.45	11.3	86.95			

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
		For Column C-3	4	0.90	0.50	11.3	20.34			
							509.00	M^3	8536.00	4344824.00
						Total RCC	**1646.97**			
8	DSR 5.22.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more.								
			1.50%	of Total RCC			193.93	MT		
							193931.00	Kg.	77.70	15068438.70
9	5.9	Centering and shuttering including strutting, propping etc. and removal of form for								
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete								
		For Footing F-1	104	1.85		0.30	57.72			
		For Footing F-1 Pedestal Trapezoidal	156	1.53		0.30	71.37			
		For Footing F-2	152	1.50		0.30	68.40			
		For Footing F-2 Pedestal Trapezoidal	38	1.18		0.30	13.40			
		For Footing F-3	4	4.45		0.30	5.34			
			4		1.85	0.30	2.22			
							218.45	Sqm	169.00	36918.05
10	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc								
		RCC Wall for Ramp	8	70.00		2.00	1120.00			

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
		Ramp	4	70.00		0.25	70.00			
							1190.00	Sqm	328.00	390320.00
11	5.9.3	Suspended floors, roofs, landings, balconies and access platform								
		Floor Slab(PB-1, FB-1 & FB-2)								
			6	34.60		0.20	41.52			
			6		32.35	0.20	38.82			
							80.34	Sqm	368.00	29565.12
12	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers								
		For Plinth Beam(PB-1)								
		For (A-1 to A-10)	2	23.50		0.6	28.20			
			1	23.50	0.30		7.05			
		For (B-1 to B-10 to (G-1 to G-10)	12	34.60		0.60	249.12			
			6	34.60	0.30		62.28			
			18	32.35		0.60	349.38			
			9	32.35	0.30		87.35			
		For 1st Floor Beam(FB-1)								
			2	23.50		0.6	28.20			
			1	23.50	0.30		7.05			
			12	34.60		0.60	249.12			
			6	34.60	0.30		62.28			
			18	32.35		0.60	349.38			
			9	32.35	0.30		87.35			

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
		For Floor Beam(FB-2)								
			2	23.50		0.6	28.20			
			1	23.50	0.30		7.05			
			12	34.60		0.60	249.12			
			6	34.60	0.30		62.28			
			18	32.35		0.60	349.38			
			9	32.35	0.30		87.35			
		For Beam(FB-3)								
			2	23.50		0.6	28.20			
			1	23.50	0.30		7.05			
			12	34.60		0.60	249.12			
			6	34.60	0.30		62.28			
			18	32.35		0.60	349.38			
			9	32.35	0.30		87.35			
							3133.52	Sqm	301.00	943189.52
13	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts								
		For Column C-1	52	0.90		12.2	570.96			
			52		0.50	12.2	317.20			
		For Column C-2	76	0.45		12.2	417.24			
			76		0.45	12.2	417.24			
		For Column C-3	8	0.90		12.2	87.84			
			8		0.50	12.2	48.80			
							1859.28	Sqm	390.00	725119.20

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
14	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in								
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)								
		For Brick Wall								
			1	34.60	0.25	7.80	67.47			
			1	34.60	0.25	1.70	14.71			
			1	58.05	0.25	0.90	13.06			
							95.24	Cum	7273.00	692680.52
15	13.1	12 mm cement plaster of mix :								
	13.1.2	1:6 (1 cement: 6 fine sand)	2	34.60		7.80	539.76			
			2	34.60		1.70	117.64			
			2	58.05		0.90	104.49			
							761.89	Sqm	148.00	112759.72
16	DSR 13.41	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade								
	13.41.1	New work (two or more coats) over and including water thinnable priming coat with cement primer								
		Over Brick Work	2	34.60		7.80	539.76			
			2	34.60		1.70	117.64			
			2	58.05		0.90	104.49			
		Over RCC Walls								
		RCC Wall for Ramp	4	70.00		2.00	560.00			
							1321.89	Sqm	140.88	186227.86

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
17	12.50	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.								
	(I)	Work Shop Shed.	1	33.70	37.80		1273.86			
		for cladding	1	32.50	1.30		42.25			
							1316.11	m^2	547.00	719912.17
18	12.51	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete :								
	12.51.1	Ridges plain (500 - 600mm)	1	34.00			**34.00**	M	360.00	12240.00

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
	12.51.6	Gutter (600 mm over all girth)	2	34.00			**68.00**	M	835.00	56780.00
19	10.2	Structural steel work welded in builtup sections, trusses & framed work including cutting, hoisting fixing in position and appying a priming coat of approved steel primer all complete.								
		For Truss					10324.52			
		For Purlin					11520.22			
		Top Bracing					7411.20			
		Bottom Chord Bracing					12198.99			
		Tie Runner					2053.81			
						Total	**43508.74**	**Kg**	75.00	3263155.81
20	DSR 12.41.2	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.								
		110 MM dia	28	11.00			308.00	M	277.13	85356.04
21	DSR 17.59.1	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :								
		100 mm dia	28	4.00			112.00	Nos	111.50	12488.00

Sl. No.	LPWD/ CPWD	Description	No.	L	B	H	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7	8	9	10	11
22	2.25(a)	Excavating, supplying and filling of local earth (including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation etc. complete.	2	5.00	70.00	2.50	1750.00	Cum	103.00	180250.00
23	NS	Prefabricated Control room	1.0	2.5	2.5		1.00	Nos.		150000.00
24	NS	Supplying Fitting & Fixing of Stainless Steel Direct Roof Top Air Ventilation, Automation Grade: Semi-automatic Usage/Application Ventilation Material Stainless Steel Driven Type Direct Automation Grade Semi-automatic	10.0				10.00	Nos	7875.00	78750.00
									Total	**37144015.19**

MRF CUM TRANSFER STATION SWM LUCKNOW

ESTIMATE OF WATER SUPPLY FACILITY IN CAMPUS

Sl. No.	Description of work	QTY.	UNIT	RATE IN Rs.	AMOUNT IN Rs.
1	2	3	4	5	6
1	Providing and fixing G.I. Pipes complete with G.I. Fittings including tranching and refilling etc. 50mm dia				
	50 mm dia.	70.00	M	250.00	17500.00
	32 mm dia.	180.00	M	150.00	27000.00
2	Providing and fixing gun metel gate valve with C.I. Wheel of approved quality (screwed end)				
	50 mm dia.	2.00	Nos.	650.00	1300.00
	32 mm dia.	4.00	Nos.	350.00	1400.00
3	Construction of elevated service reservoir (ESR) of 30 KL capacity with 8 m staging as per drawing and specification including piping and painting etc. complete.				
		1.00	No.	360000.00	360000.00
4	Boring 150 mm dia Bore hole for tube well, upto 120 m depth lowering PVC casing pipe and tube well assembly such as strainess, blind pipe etc. including supply of all materials, T & p for construction of tube well.				
		1.00	No.	650000.00	650000.00
5	Providing and laying 100 mm dia G.I. Heavy duty pipe for rising main upto ESR.	20.00	M	600.00	12000.00
6	providing and fixing C.I. Sluice Valve with cap complete with bolts nuts rubber etc.				
	100 mm dia class II	2.00	Nos.	8500.00	17000.00
7	Supply, installation testing and commissioning of 10 HP water submersible pump to lift ground water to ESR including making electric connection with all necessary accessories, such as starter, switch, box, AMP and volt meter, pressure guage, air line etc. all complete job.				
		1.00	No.	125000.00	125000.00

Sl. No.	Description of work	QTY.	UNIT	RATE IN Rs.	AMOUNT IN Rs.
1	2	3	4	5	6
9	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked indicating the BIS license no. with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank (Sintex, Electroplast, Star, Lotus or equivalent having valid ISI license).	1000.00	Ltrs.	10.00	10000.00
10	Providing and fixing C.I. Double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (the tail pieces, tapers etc. if required will be paid separately).				
	50 mm dia.	2.00	Nos.	5000.00	10000.00
				Total Rs.	**1231200.00**
				Say Rs.(in lacs)	**12.31**

MRF Cum TRANSFER STATION SWM LUCKNOW

ESTIMATE OF ELECTRIFICATION

Sl. No.		Description	Qty.	Unit	Rate In Rs.	Amount In Rs.
1	2	3	4	5	6	7
1		**Campus Electrification**				
1.(i)	N.S	Erection of Metallic Pole of following length in cement concrete 1:3:6 foundation including excavation and refilling etc. as required.	11	Nos	7087.01	77957.11
1 (ii)	N.S	Supply and fixing of factory wired sodium vapour street lighting lummeries single piece cast Al body suitable for 250 W S V lamp on pole with integral control gear with lamp complete in all respects.	11	Nos	9552.40	105076.40
1 (iii)	NS	Supply and fixing of junction box of size 280 x 170 x 130 mm with hinges and locking arrangement & MS clamp made of 50 x 6 mm flat complete in all respects.	11	Nos	1080.30	11883.30
1 (iv)	NS	Supply and laying of following sizes Al. conductor PVC insulated armoured seathed cable of 1100 V grade at a depth of 750 mm B.G.L.				
	a)	3.5 core, 35 sqm	90.00	M	345.80	31122.00
	b)	2 core 16 sqm	1200.00	M	227.50	273000.00
1 (v)	NS	Supply and fixing of GI pipe 75 mm dia 'B' class JINDAL/HISSAR make complete in all respects.	18.00	M	364.00	6552.00
1 (vi)	NS	Supply and fixing of 600 mm x 600 mm x 6.0 mm GI plate vertically for earthing with its top at least 3 meters below ground level complete with 20 mm GI pipe and funnel for watering and one earthing lead of one No. 8 to 10 SWG GI wire in 15 mm dia GI pipe to switch board 30 cm square CI frame with hinged cover masonary housing laternate layers of charcoal/coke and salt at least 150 cm thick alround etc. as per directions of Enginner In Charge complete in all respects.	4	Nos	2476.50	9906.00

Sl. No.		Description	Qty.	Unit	Rate In Rs.	Amount In Rs.
1	2	3	4	5	6	7
1 (vii)	NS	Supply and fixing Al. unarmored cable 6 mm 2 core flat PVC insulated used for connection of sodium fitting to junction box.	11	Nos	55.90	614.90
1 (viii)	NS	Supply and fixing of feeder pillar of M.S cubicla box of size 100 x 75 x 40 cm made from 2 mm M.S sheet using angle of size 40 x 40 x 6 mm duly hinged and locking arrangement, painting two coats of enameled paint over red oxide primer providing aluminium Bus-bar or suitable size with 100 A/415 V TPN rewirable type main swithc with cement concrete foundation providing 1 Mtr GI pipe on 100 mm dia complete in all respects as per direction of E/I.	3	Nos	9369.10	28107.30
	a)	Painting of street light pole	11	Nos	196.30	2159.30
	b)	Supply and making of earth main hole of size 1' x 1' and 2' deep with 1' x 1' CI chamber brick work etc.	4	Nos	520.00	2080.00
					Sub. Total (A)	**548458.31**
2		**Estimate of Transformer** Cost of 100 KVA transformer of GEC or equivalent make	1	No	500000.00	500000.00
		Supply and laying of 3.5 x 50 mm^2 Al. armoured cable.	70.00	M	585.00	40950.00
					Sub. Total (B)	**540950.00**
3		**Estimate of LT panel** LT panel having one no incoming panel, 5 nos, outgoing panel and one number change over switch for DG set.	1	No	325000.00	325000.00
4		Provision for payment to State Electricity Board for connection	1	No	500000.00	500000.00
5		125 KVA DG Set	1	No	550000.00	550000.00
					Sub. Total (C)	**1375000.00**
					Grand Total Rs.(A)+(B)+(C)	**2464408.31**

2601

Sl. No.		Description	Qty.	Unit	Rate In Rs.	Amount In Rs.
1	2	3	4	5	6	7
				Say Rs.(in lacs)		24.64

2602

MRF CUM TRANSFER STATION SWM LUCKNOW

Abstract of cost of Parking and working floor

Sl. No.	LPWD/CPWD	Description of work	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7
1	2.6.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in- Charge:				
		For Paver Area (902 Sqm.)	270.60	Cum	161.00	43566.60
2	2.27	Supply and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing Complete.				
		For Paver Area (902 Sqm.)	90.20	Cum	843.00	76038.60
3	DSR Pg No-338 16.68	Providing and laying 60mm thick faciory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge	902.00	Sqm	824.23	743455.46
4	DSR Pg No-338 16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	7.50	Sqm	7465.36	55990.20
					Total Amount(in Rs.)	**9,19,050.86**

MRF CUM TRANSFER STATION SWM LUCKNOW

Detailed Measurement of Parking and working floor

Sl. No.	LPWD/CPWD	Description Of Work	No	L(m)	B(m)	H(m)	Qty	Unit
1	2	3	4	5	6	7	8	9
1	2.6.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in- Charge:						
		For Paver Area (902 Sqm.)	1	902.00		0.3	270.60	Cum
							270.60	Cum
2	2.27	Supply and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing Complete.						
		For Paver Area (902 Sqm.)	1	902.00		0.1	90.20	Cum
							90.20	Cum
3	DSR Pg No-338 16.68	Providing and laying 60mm thick faciory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge						
			1	902.00			902.00	Sqm
4	DSR Pg No-338 16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).						
			1	125	0.2	0.3	7.50	Sqm

MRF CUM TRANSFER STATION SWM LUCKNOW
Abstract of cost of Horticulture Works

Sl. No.	DSR /Hort. 2021	Description of work	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7
1	DSR/Hor. Pg No-85 2.12	Uprooting rank vegetation and weeds by digging the area to a depth of 60 cm, removing all weeds and other growth with roots by forking repeatedly,breaking clods, rough dressing, flooding with water, uprooting fresh growths after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts	500.00	Sqm	60.95	30475.00
2	DSR/Hor. Pg No-85 2.13	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately	500.000	Cum	222.85	111425.00
3	DSR/Hor. Pg No 83 2.2	Supplying and stacking of good earth at site including royalty and carriage upto 5 km lead complete (earth measured in stacks will be reduced by 20% for payment For Lawn Area	150.00	Cum	515.60	77340.00
4	DSR/Hor. Pg No 83 2.10	Grassing with selection No. 1 Doob grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the grass and good earth shall be paid for separately				

Sl. No.	DSR /Hort. 2021	Description of work	Qty.	Unit	Rate	Amount
1	2	3	4	5	6	7
	2.10.2	With grass Turf(Lawn Area)	500.00	Sqm	13.30	6650.00
5	DSR/Hor. Pg No101 2.57	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserveiceable material's as per direction of officer in charge (excluding cast of plant & water)				
	2.57.1	Trees Plant	400.00	Each	7.30	2920.00
	2.57.2	Shrubs Plant	400.00	Each	3.65	1460.00
	2.57.3	Hedge Plant /Ground cover	1200	Each	2.45	2940.00
6	DSR/Hor. Pg No 141 4.89	Providing and stacking of plant Canna dwarf of height 25 to 30 cm., 2 to 3 suckers in earthen pots of size 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge	400.00	Each	35.90	14360.00
7	DSR/Hor. Pg No 161 7.5	Providing and stacking of Azadirachta indica (Neem) of height 120-130cm in big polybag of size 25 cm as per direction of the officer-in-charge	400.00	Each	65.00	26000.00
				Total Amount(In Rs.)		**2,73,570.00**

MRF CUM TRANSFER STATION SWM LUCKNOW

Detailed measurement of Horticulture works

Sl. No.	DSR /Hort. 2021	Description of work	No	L(m)	B(m)	H(m)	Qty	Unit
1	2	3	4	5	6	7	8	9
1	DSR/Hor. Pg No-85 2.12	Uprooting rank vegetation and weeds by digging the area to a depth of 60 cm, removing all weeds and other growth with roots by forking repeatedly,breaking clods, rough dressing, flooding with water, uprooting fresh growths after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts						
			1	500.00			500.00	Sqm
2	DSR/Hor. Pg No-85 2.13	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared	1	500.00			500.00	M^3
3	DSR/Hor. Pg No 83 2.2	Supplying and stacking of good earth at site including royalty and carriage upto 5 km lead complete (earth measured in stacks will be reduced by 20% for payment						
		For Lawn Area	1	500.00		0.30	150.00	M^3
						Total	150.00	M^3
4	DSR/Hor. Pg No 83 2.10	Grassing with selection No. 1 Doob grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the grass and good earth shall be paid for separately						
	2.10.2	With grass Turf(Lawn Area)	1	500.00			500.00	M^2
						Total	500.00	M^2
5	DSR/Hor. Pg No101 2.57	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserveiceable material's as per direction of officer in charge (excluding cast of						
	2.57.1	Trees Plant	400.00				400.00	Each
	2.57.2	Shrubs Plant	400.00				400.00	Each

Sl. No.	DSR /Hort. 2021	Description of work	No	L(m)	B(m)	H(m)	Qty	Unit
1	2	3	4	5	6	7	8	9
	2.57.3	Hedge Plant /Ground cover	1200				1200.00	Each
6	DSR/Hor. Pg No 141 4.89	Providing and stacking of plant Canna dwarf of height 25 to 30 cm., 2 to 3 suckers in earthen pots of size 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge	400.00				400.00	Each
7	DSR/Hor. Pg No 161 7.5	Providing and stacking of Azadirachta indica (Neem) of height 120-130cm in big polybag of size 25 cm as per direction of the officer-in-charge	400.00				400.00	Each

2608

QUOTATIONS

2609

NATURE GREEN TOOLS & MACHINE PRIVATE LIMITED

GSTIN: 09AACCV6083B1ZC

Khasra No - 963, 965, Dhoom Manikpur, Dadri, Gautambudh Nagar
Greater Noida - 203207, Uttar Pradesh, India

Quotation

Client Name : **Md. Kashif, Aditya Construction, Ranchi**
Address : **Ranchi Jharkhand**
GSTIN :

Date : 25-10-2022
Qtn No : 76/2022-23

S.No	Description	HSN Code	Qty	Rate	Amount
	Machineries- 1 set				
	Belt Conveyors (Roller Belts) along with supporting structure along with cabe tray and electrical panels				
1	Hopper (Receiving Chamber)	8428	1	1,25,000.00	1,25,000.00
2	Feeding Conveyor to VADS (FC - 1)	8428	1	9,77,500.00	9,77,500.00
3	Trommel Screen (40 TPH)	8428	1	42,50,000.00	42,50,000.00
4	Discharge and Manual Sorting Conveyor (+) Size	8428	1	15,67,500.00	15,67,500.00
5	Discharge Conveyor to Manual Sorting Convevor (-) Size	8428	1	5,32,000.00	5,32,000.00
6	Manual Sorting Conveyor (-) Size	8428	1	15,67,500.00	15,67,500.00
7	Hopper (Receiving Chamber)	8428	2	1,50,000.00	3,00,000.00
8	Collection Chutes/Hopper	8428	2	3,10,000.00	6,20,000.00
9	Discharge Conveyors from Collection Chutes	8428	18	2,10,000.00	37,80,000.00
10	Discharge Conveyors to Storage	8428	2	9,15,000.00	18,30,000.00
11	Fatka Machine	8428	3	2,50,000.00	7,50,000.00
12	Bailing Press	8428	1	10,50,000.00	10,50,000.00
13	Weigh Bridge	8428	1	6,50,000.00	6,50,000.00
14	Sets of CCTV Camera with Scada	8428	1	1,85,000.00	1,85,000.00
15	Vehicle Washing Equipments	8428	1	2,00,000.00	2,00,000.00
16	Leachete Treatment Plant & Accessories	8428	1	5,00,000.00	5,00,000.00
				Total Value	**1,88,84,500.00**
		Add : CGST		9%	
		Add : SGST		9%	
				Grand Total	**1,88,84,500.00**

Amount in Words: One Crore Eighty Eight Lacs Eighty Four Thousand Five Hundred Only

GST extra as Applicable

For NATURE GREEN TOOLS & MACHINE PRIVATE LIMITED

Authorised Signature

2610

Orbit Machines

No:47, Maruthamalaigounder layout,
R.K.Puram, Ganapathy Coimbatore 641006 Tamilnadu India
Phone: 0422 3570991

sales.orbitmachines@gmail.com

QUOTATION

QUOTE #	DATE
	15-09-2022
CUSTOMER ID	**VALID UNTIL**
158/68/450	15-10-2022

CUSTOMER INFO

MD. Kashif
Aditya Construction
Ashok Nagar
Ranchi Jharkhand
8269572128

Prepared By: Shayamli Reddy

DESCRIPTION OF WORK

Supply and Installation of Segregation machine for dumpsite at jhiri, Ranchi Jharkhand

S.No.	ITEMS	QTY	UNIT PRICE	AMOUNT
	Belt Conveyors (Roller Belts) along with supporting structure along with cabe tray and electrical panels			
1	Hopper (Receiving Chamber)	1	1,31,250.00	1,31,250.00
2	Feeding Conveyor to VADS (FC - 1)	1	10,26,375.00	10,26,375.00
3	Trommel Screen (40 TPH)	1	44,62,500.00	44,62,500.00
4	Discharge and Manual Sorting Conveyor (+) Size	1	16,45,875.00	16,45,875.00
5	Discharge Conveyor to Manual Sorting Conveyor (-) Size	1	5,58,600.00	5,58,600.00
6	Manual Sorting Conveyor (-) Size	1	16,45,875.00	16,45,875.00
7	Hopper (Receiving Chamber)	2	1,57,500.00	3,15,000.00
8	Collection Chutes/Hopper	2	3,25,500.00	
9	Discharge Conveyors from Collection Chutes	18	2,20,500.00	39,69,000.00
10	Discharge Conveyors to Storage	2	9,60,750.00	19,21,500.00
11	Fatka Machine	3	2,62,500.00	7,87,500.00
12	Bailing Press	1	11,02,500.00	11,02,500.00
13	Weigh Bridge	1	6,82,500.00	6,82,500.00
14	Sets of CCTV Camera with Scada	1	1,94,250.00	1,94,250.00
15	Vehicle Washing Equipments	1	2,10,000.00	2,10,000.00
16	Leachete Treatment Plant & Accessories	1	5,25,000.00	5,25,000.00

Thank you for your business!

SUBTOTAL	**1,91,77,725.00**
SGST @ 9%	
CGST @ 9%	
TOTAL QUOTE	**₹ 1,91,77,725.00**

This quotation is not a contract or a bill. It is our best guess at the total price for the service and goods described above. The customer will be billed after indicating acceptance of this quote. Payment will be due prior to the delivery of service and goods. Please fax or mail the signed quote to the address listed above. GST will be charges as applicable.

Customer Acceptance

Signature	Printed Name	Date 15-02-2022

2611

Continental Belting & Machines Pvt. Ltd.

Udyog Bhavan, Sonawala Road
Goregaon (East), Mumbai
400 063

[Price Quote]

DATE 11-10-2022
Quotation # 100/45/SMC
Customer ID DLA/4595

Quotation valid until: 15-12-2022
Prepared by: Rehman

Quotation For:
Md. Kashif
Aditya Construction
Ashok Nagar
Ranchi, Jharkhand
834002

QUANTITY	DESCRIPTION	UNIT PRICE	Taxable?	AMOUNT
1	Hopper (Receiving Chamber)	1,34,531.00	T	₹ 1,34,531
1	Feeding Conveyor to VADS (FC - 1)	10,52,034.00	T	₹ 10,52,034
1	Trommel Screen (40 TPH)	45,74,063.00	T	₹ 45,74,063
1	Discharge and Manual Sorting Conveyor (+) Size	16,87,022.00	T	₹ 16,87,022
1	Discharge Conveyor to Manual Sorting Conveyor (-) Size	5,72,565.00	T	₹ 5,72,565
1	Manual Sorting Conveyor (-) Size	16,87,022.00	T	₹ 16,87,022
2	Hopper (Receiving Chamber)	1,61,438.00	T	₹ 3,22,876
2	Collection Chutes/Hopper	3,33,638.00	T	₹ 6,67,276
18	Discharge Conveyors from Collection Chutes	2,26,013.00	T	₹ 40,68,234
2	Discharge Conveyors to Storage	9,84,769.00	T	₹ 19,69,538
3	Fatka Machine	2,69,063.00	T	₹ 8,07,189
1	Bailing Press	11,30,063.00	T	₹ 11,30,063
1	Weigh Bridge	6,99,563.00	T	₹ 6,99,563
1	Sets of CCTV Camera with Scada	1,99,106.00	T	₹ 1,99,106
1	Vehicle Washing Equipments	2,15,250.00	T	₹ 2,15,250
1	Leachete Treatment Plant & Accessories	5,38,125.00	T	₹ 5,38,125
			SUBTOTAL	₹ 2,03,24,457
			GST Extra	
			GST VALUE	₹ 0
			TOTAL	₹ 2,03,24,457

If you have any questions concerning this quotation, contact name, phone number, e-mail.

THANK YOU FOR YOUR BUSINESS!

ANNEXURE-I

TECHNICAL SPECIFICATION OF STATIC REFUSE COMPACTOR WITH TOP LOADING RECEIVING HOPPER (MODEL: TPS-SCTS-3000)

1.0 General:-

The Transfer Station Static Compactor is suitable for receiving municipal Solid Waste from Waste Collection Vehicles into a storage hopper installed on a concrete platform on top of the compactor unit through gravity, compacting and loading into Roll-on-Roll off containers for further handling through Hook Loaders. The offered System Consists of the following:-

- Static Compactor with Hydraulic Compaction Container Coupling, Hydraulic Vertical Container Gate Opening/Closing Mechanism and a Hydraulic Push-Pull Cylinder.
- Receiving Hopper 20 Cum

as per the specification given below:-

1.1 Static Compactor

- Compactor in heavy duty design with extra strong sheet thickness with horizontally operating straight single cylinder system
- Hydraulic System comes with regenerative control for faster cycle time
- Fail safe hydraulic ram control without limit switches, press plate comes in low maintenance plastic guides
- Container 75% full warning as standard
- Extra pressure boost and automatically plate positioning for closure operation
- Control Panel with main switch, emergency stop button, function button and function lights
- All, hydraulic functions are controlled via a central, maintenance free valve Hydraulic Unit with oil filter and oil level gauge.

Charge box volume approx.	3 m^3
Compaction cycle time	45 sec
Theoretical volumetric capacity	240 m^3/hr
Normal compaction force	330 kN
Max compaction force	380 kN
Compaction Density	0.75 – 0.8 T/ m^3
Motor Power	15 kW
Power Supply	440 V

Hydraulic Compaction Container Coupling

	The Hydraulic Container Coupling consists of a pair of hydraulically operated Hook with lever which pulls, align and attaches the container to the compactor unit before loading the garbage into the container. After the container is loaded the Hydraulic Coupling releases the container which is detached from the compactor before lifting by the Hook Loader.
	Hydraulic Vertical Container Gate Opening/Closing Mechanism The Container opening is provided with a sliding steel gate. The Gate is lifted by a hydraulic vertical mechanism before loading the garbage into the container. After the container is loaded, the hydraulic vertical mechanism pushes the container sliding gate downward and closes the opening. The complete Operation is controlled by means of push buttons.
	Hydraulic Push Pull Cylinder A hydraulic Push-pull cylinder is provided for pulling the empty Roll-on-Roll off container towards the compactor unit and pushing it back after the container is full.
1.2	**Receiving Hopper** Each compactor unit is provided with a 4 mm thick mild steel hopper with stiffeners having a garbage holding capacity of 20 Cum. The hopper opening area at the top is 4200 mm X 3200 mm (approx.) and is designed is such a way that a Truck Mounted Refuse Compactor vehicle can discharge the garbage into the hopper. The hopper is supported on a concreate platform constructed at a height of 4500 mm approximately and is attached to the charge box opening of the compactor unit.

Note: A typical drawing indicating the above system under two option i.e. with and without container traversing system is enclosed.

ANNEXURE-II

TECHNICAL SPECIFICATION OF CONTAINER TRAVERSING/CHANGE OVER SYSTEM (TPS-CTS)

	Each Stationary Compactor should be provided with a Rail Mounted Container Traversing System/change over system. Each traversing system is designed to handle two number Roll-on-Roll Off Containers and shall consist of two numbers electrically operated shuttle cars (transfer car) moving on Rails for placing empty containers and shifting loaded containers when detached from the static refuse compactor. The Traversing System for each Static Compactor shall include the following:- 1. Rail Track of minimum length 9 mtrs. 2. Shuttle cars (transfer car) – 2 Nos. suitable for carrying and moving a loaded Container. 3. 04 Nos. Electric Motor (02 Nos. 3 phase 415 V 1 HP for each transfer car) with all control systems including electric cables suitable for operation of the Shuttle cars (transfer car).

ANNEXURE-VI

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE TOTAL UNIT PRICE (FOR)	AMOUNT (RS.)
1	2	3	4	11=8+10	12= 3 X 11
1.0	**Static Compactor with Top Loading Receiving Hopper (Model: TPS-SCTS-3000) comprising of:-**	2	Nos.	**70,09,200.00**	**1,40,18,400.00**
1.1	Stationary Compactor				
1.2	Garbage Storage Hopper (20 Cum)				
1.3	Hydraulic Compaction Container Coupling				
1.4	Hydraulic Vertical Locking Mechanism				
1.5	Hydraulic Push-Pull Cylinder				
3.0	Truck Mounted Hook Loader suitable for handling 20 Cu.M skips suitable to be mounted on 28 T GVW BS-VI (6X2) Truck Chasis with driver's cabin and PTO (Model: TPS-HL-28(6X2).	3	Nos.	**65,37,200.00**	**1,96,11,600.00**
4.0	20 Cu.M Capacity Roll-On Roll-Off Containers compatible for Handling with above Hook Loaders Model: TPS-RORO-20)	6	Nos.	**13,88,860.00**	**83,33,160.00**

Note: The above Prices are based on Terms and Conditions enclosed as Annexure – III.

ANNEXURE-VII

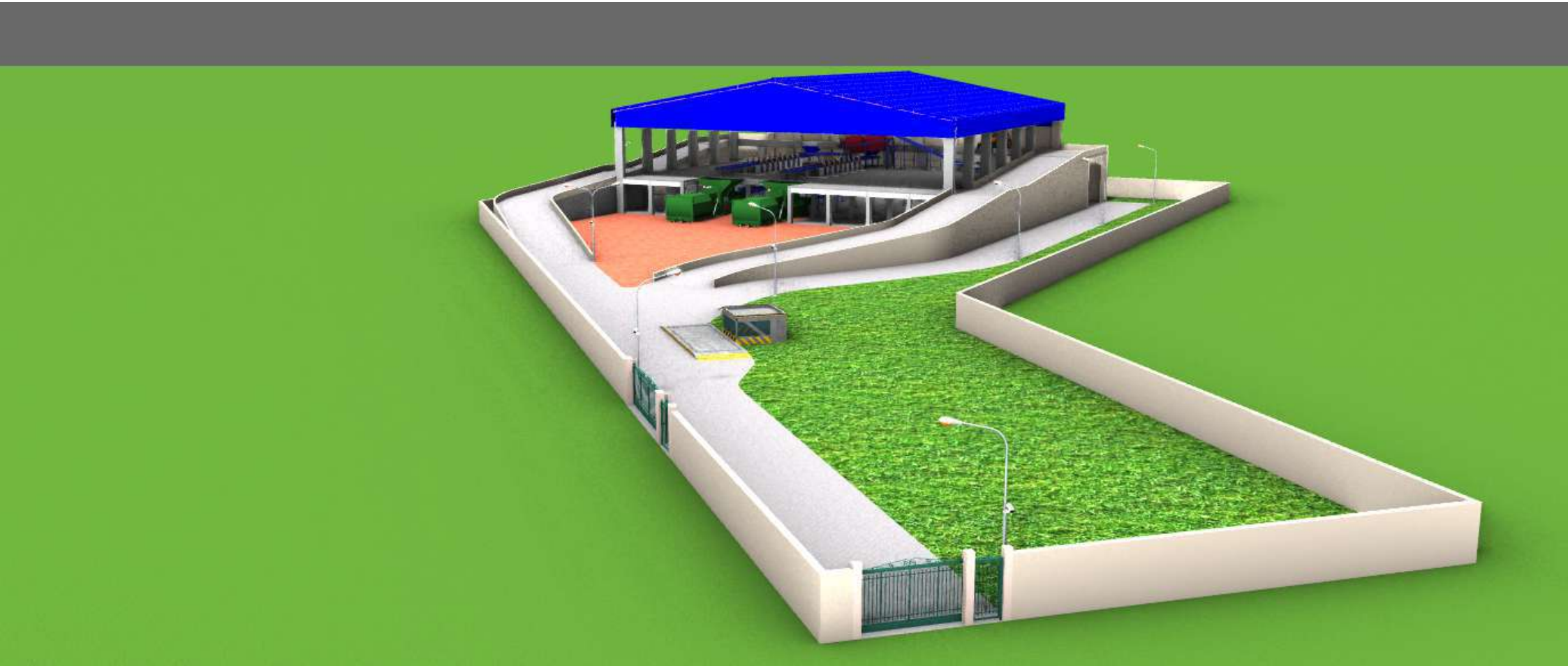
TERMS AND CONDITIONS

1	Price Basis	Ex-Works Bhiwadi – Rajasthan
2	Truck Chassis	The Hook Loaders shall be mounted on suitable Truck Chassis as specified in the Technical Specification of Ashok Leyland/Tata/Eicher Motors with OEM factory built Non-Sleeper Driver's Cabin with PTO.
3	Goods and Service Tax	The GST shall be payable extra at the rates applicable at the time of delivery and execution of work. The GST depends upon the HSN code of the items and is indicated in the price schedule. Any variation (+ / -) from the above rates due to statutory chages in the rate to GST shall be to the account of the client.
4	Packaging and Forwarding	Included
5	Transportation / Freight	As Quoted
6	Transit Insurance	As Quoted
7	Registration of Vehicle	As Quoted
8	Comprehensive Insurance	As Quoted
9	Validity	60 days from the date of this offer.
10	Delivery	3~4 months Ex-works, Bhiwadi from the date of receipt of your technically and commercially clear and acceptable order along with advance.
11	Payment Terms	a) For Truck Chassis:- 100% Advance against submission of Proforma Invoice. b) For Equipment:- a) 30% of the Basic cost of equipment as advance along with Order. b) 70% of basic cost of equipment with 100% Taxes and Duties, Transportation / Insurance against inspection at the time of delivery in our plant.
12	Guarantee	The equipment shall be under warranty against defects in material and workmanship for a period of 18 months from the date of dispatch or 12 months from the date of commissioning whichever is earlier.
13	Commissioning	We shall depute our Commissioning Engineers for a period of 2 – 3 days for commissioning of the Machine and for Training 2 - 3 personnel of the Client in Operation and Maintenance of the Machine. The Client has to provide all the Consumables such as Diesel, Oil etc. for commissioning of the Machine and shall provide boarding, lodging and local conveyance to our Commissioning Engineer during his stay at site.

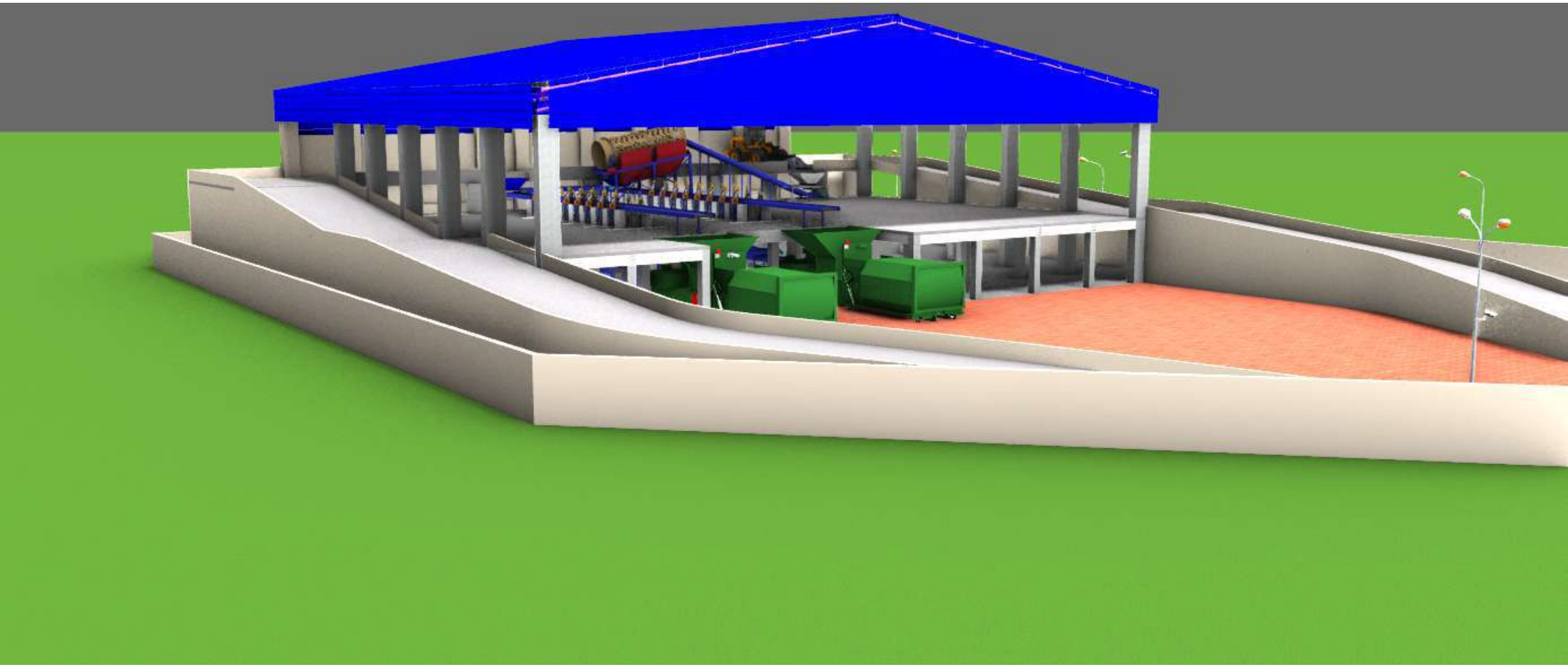
2617



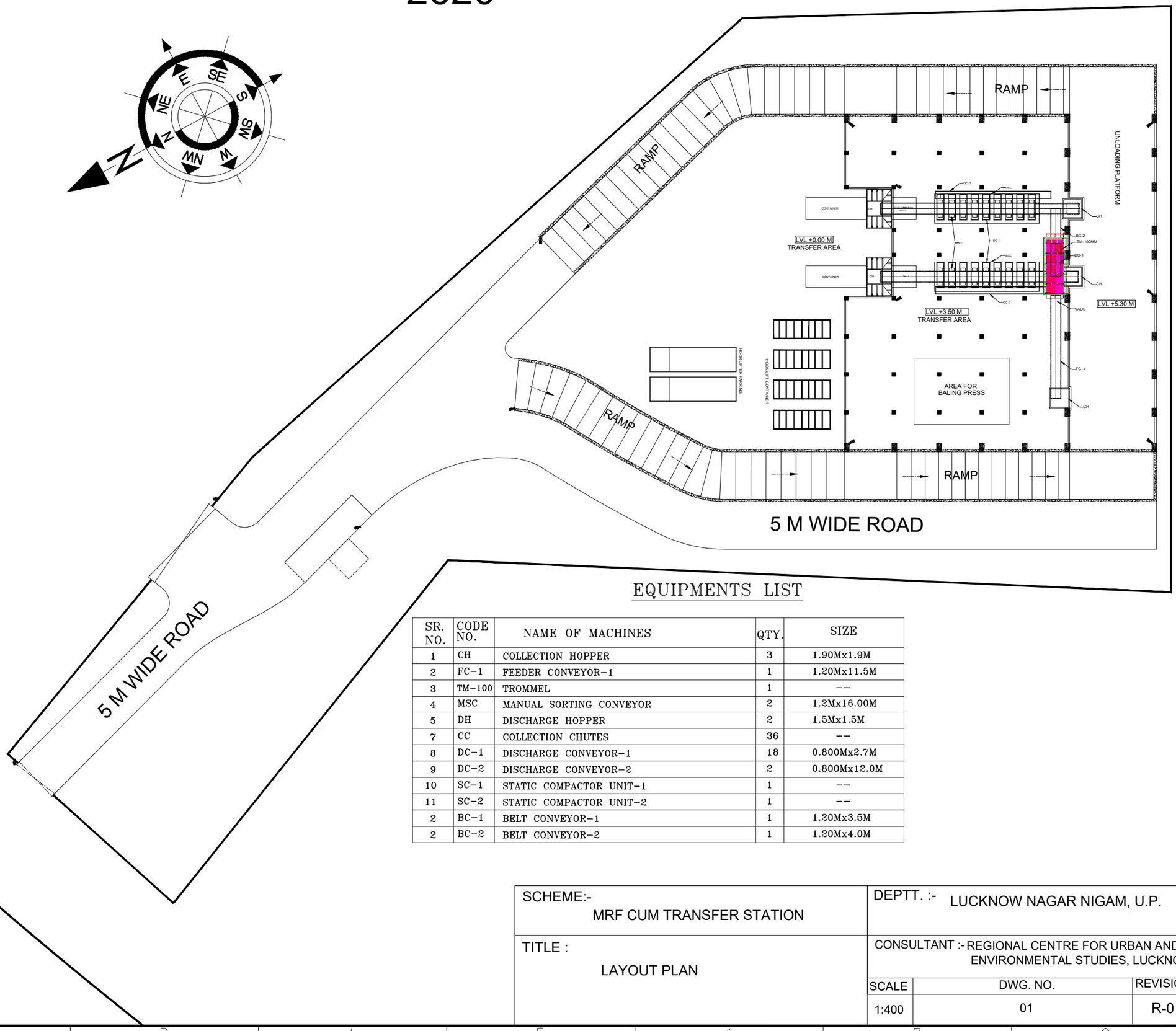
2618



2619



2620



EQUIPMENTS LIST

SR. NO.	CODE NO.	NAME OF MACHINES	QTY.	SIZE
1	CH	COLLECTION HOPPER	3	1.90Mx1.9M
2	FC-1	FEEDER CONVEYOR-1	1	1.20Mx11.5M
3	TM-100	TROMMEL	1	--
4	MSC	MANUAL SORTING CONVEYOR	2	1.2Mx16.00M
5	DH	DISCHARGE HOPPER	2	1.5Mx1.5M
7	CC	COLLECTION CHUTES	36	--
8	DC-1	DISCHARGE CONVEYOR-1	18	0.800Mx2.7M
9	DC-2	DISCHARGE CONVEYOR-2	2	0.800Mx12.0M
10	SC-1	STATIC COMPACTOR UNIT-1	1	--
11	SC-2	STATIC COMPACTOR UNIT-2	1	--
2	BC-1	BELT CONVEYOR-1	1	1.20Mx3.5M
2	BC-2	BELT CONVEYOR-2	1	1.20Mx4.0M

SCHEME:-
MRF CUM TRANSFER STATION

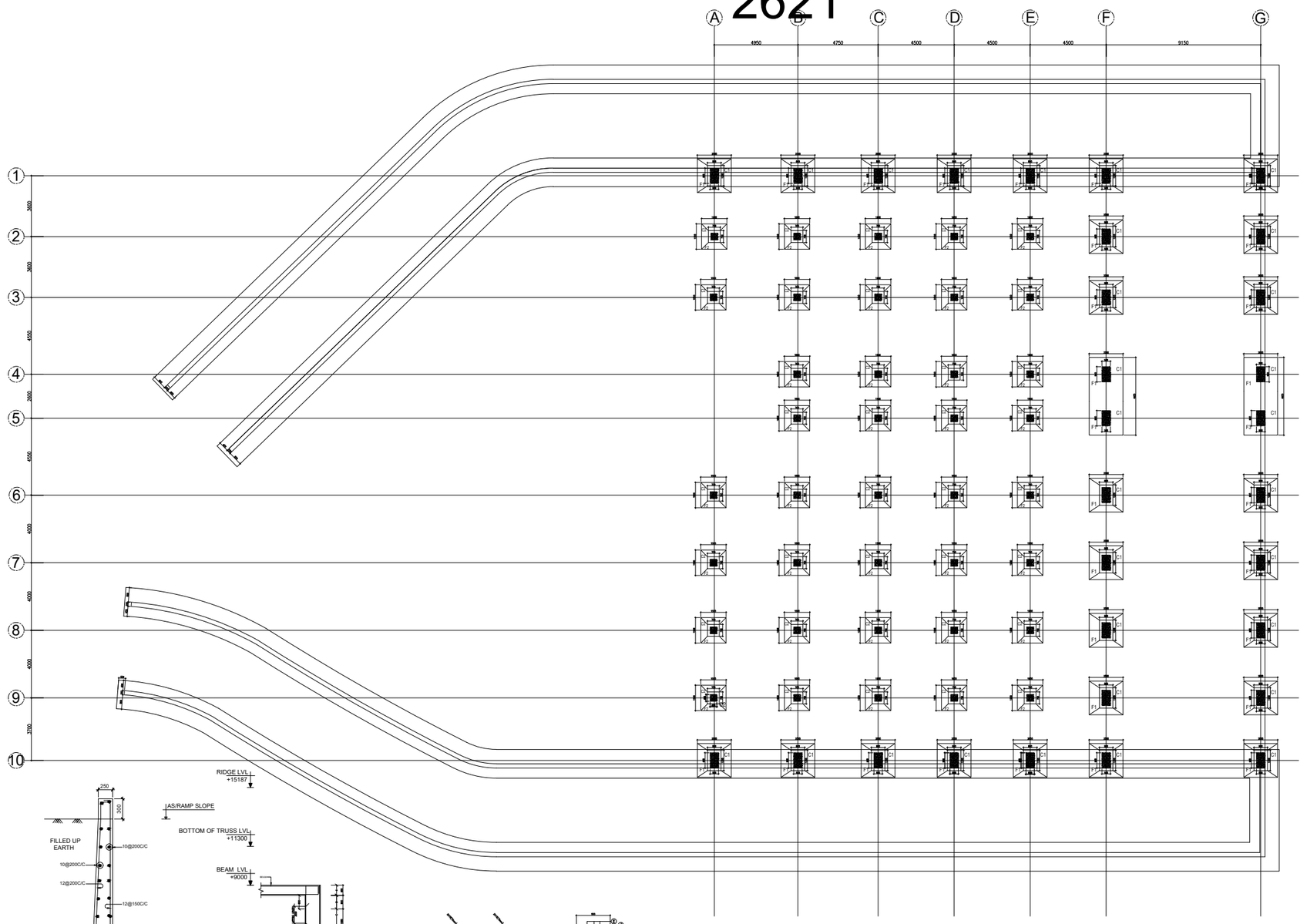
DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.

TITLE :
LAYOUT PLAN

CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

SCALE	DWG. NO.	REVISION
1:400	01	R-0

2621



COLUMN SCHEDULE.

+9000 BEAM LVL	COLUMN SIZE CONC. GRADE VERT. BARS TIES ZONE A-600 ZONE B-800 ZONE C-2300 REFER SEC.	500X900 C-25/35 16Ø-20 10@100 10@100 10@100 (1)	
+5300 SECOND FLOOR LVL	COLUMN SIZE CONC. GRADE VERT. BARS TIES ZONE A-600 ZONE B-800 ZONE C-1200 REFER SEC.	500X900 C-25/35 16Ø-20 10@100 10@100 10@100 (1)	
+3500 FIRST FLOOR LVL	COLUMN SIZE CONC. GRADE VERT. BARS TIES ZONE A-600 ZONE B-800 ZONE C-1300 REFER SEC.	500X900 C-25/35 16Ø-20 10@100 10@100 10@100 (1)	400X400 C-25/35 16Ø-12 10@100 10@100 10@100 (2)
±0.00(NGL FOUNFDATION LEVEL	COLUMN SIZE CONC. GRADE VERT. BARS TIES ZONE A-2000 ZONE B-800 REFER SEC.	500X900 C-25/35 16Ø-20 10@100 10@100 10@100 (1)	400X400 C-25/35 16Ø-12 10@100 10@100 10@100 (2)
	COLUMN MKD	C1	C2

FOOTING SCHEDULE

FOOTING MARK	FOOTING SIZE (AxB)	DEPTH 'D1'	DEPTH 'D2'	BOTTOM REINFORCEMENT		TOP REINFORCEMENT	
				II TO A	II TO B	II TO A	II TO B
F1	2000X2000	600	300	∯12@125	∯12@125	–	–
F2	1500X1500	500	300	∯12@125	∯12@125	–	–

PLACEMENT OF VERTICAL BAR

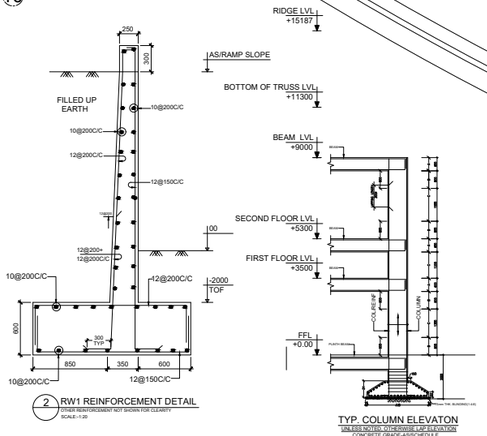
1). SEQUENCE OF HEAVIER BAR:-
HEAVIER TO LIGHTER BAR SHALL BE PLACED IN SEQUENCE FROM (I) TO (III) i.e. HEAVIER BAR DIA SHALL BE PLACED AT (I) AND

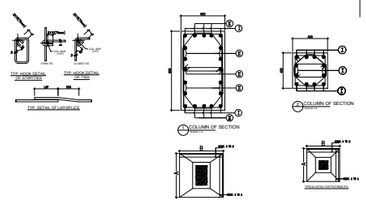
LIGHTER BAR DIA. AT(II) AND THEN AT(III) IN DESCENDING ORDER.

SPECIAL NOTES OF COLUMN

1. COLUMN SCHEDULE SHALL BE READ ALONG WITH COLUMN LAYOUT, TYP. COLUMN ELEVATION &COLUMN SECTION.
2. DOWELS SHALL BE LEFT IN All PERIPHERAL COLUMNS AND BEAM AT TERRACE LEVEL FOR PARAPET WALL AS ARCH. DWG.
3. DOWELS SHALL BE LEFT FOR INTERMEDIATE LINTELS IF ANY, AS ARCH. DWG.

NOTES:-
1. CO-ORDINATE THIS DRAWING ALONG WITH RELEVANT ARCHITECTURAL & SERVICES DWG. ARCHITECTURAL & SERVICES DWG.
2. ALL LEVEL ARE SHOWN TOP OF SLAB, OTHERWISE MARKED
3. UNLESS OTHERWISE SPECIFIED, SPACER BARS OF NOT LESS THAN 20mm NOR LESS THAN LARGEST DIA OF BARS SPACED IN CONSECUTIVE LAYERS OF REINFORCEMENT SHALL BE PROVIDED SO AS TO MAINTAIN CONSTANT SPACING BETWEEN LAYERS EFFECTIVELY.
4. READ THIS DWG. ALONG WITH FOLLOWING DRAWINGS
   4.1 S-GN-01 GENERAL NOTES SHEET
   4.2 S -FT-01 FOOTING PLAN

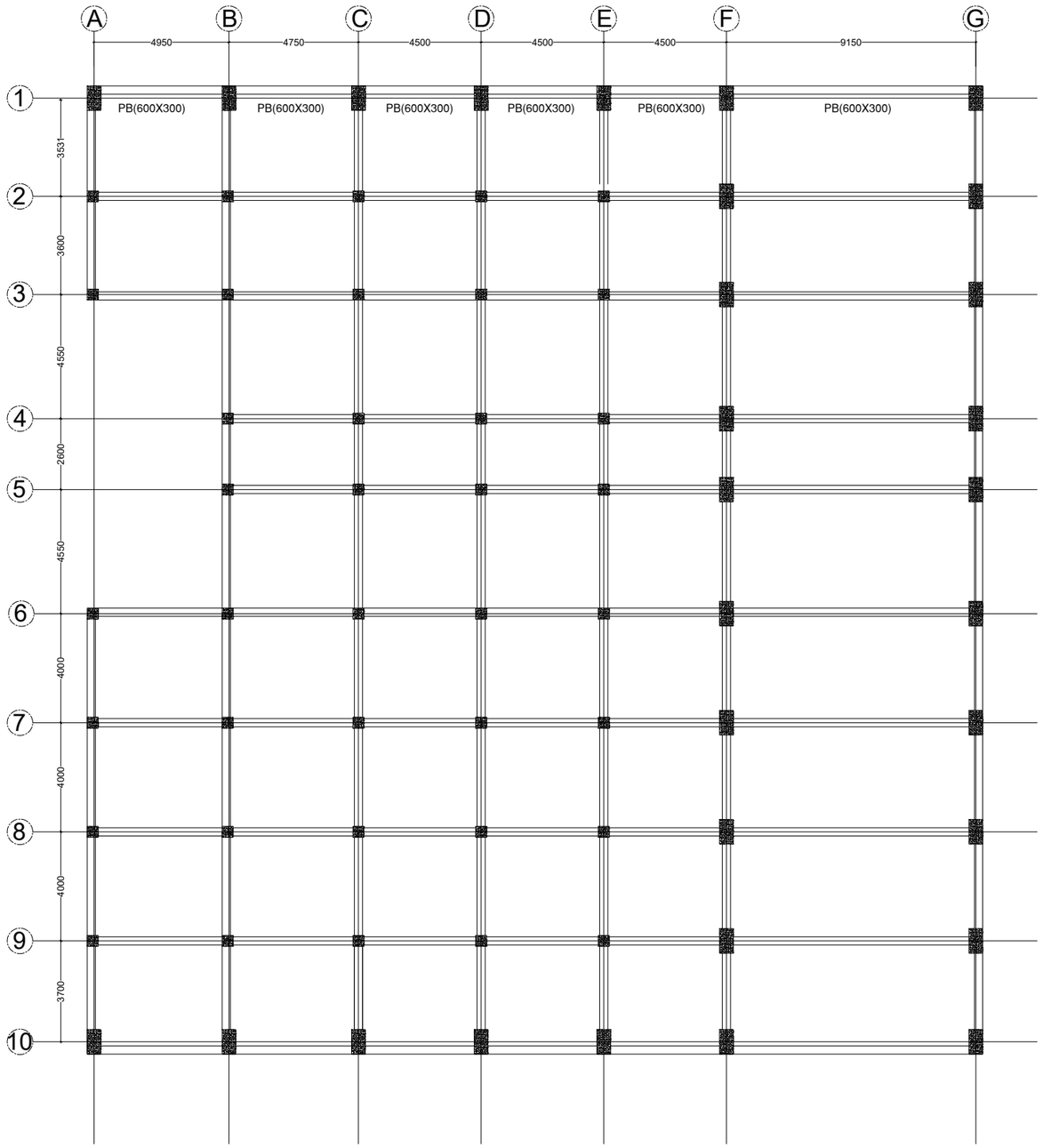




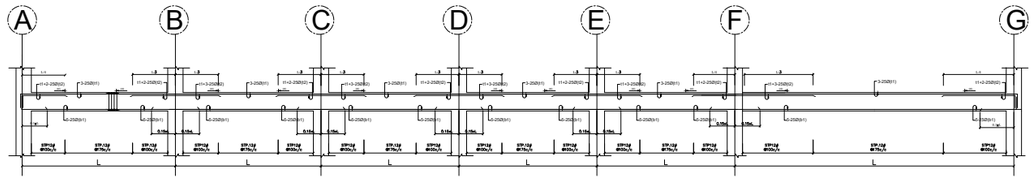
SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.
TITLE : DETAILS OF COLUMN LAYOUT PLAN	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

SCALE	DWG. NO.	REVISION
NTS	02	R-0

2622



PLINTH BEAM



TYPICAL PLINTH BEAM DETAILS

NOTES:

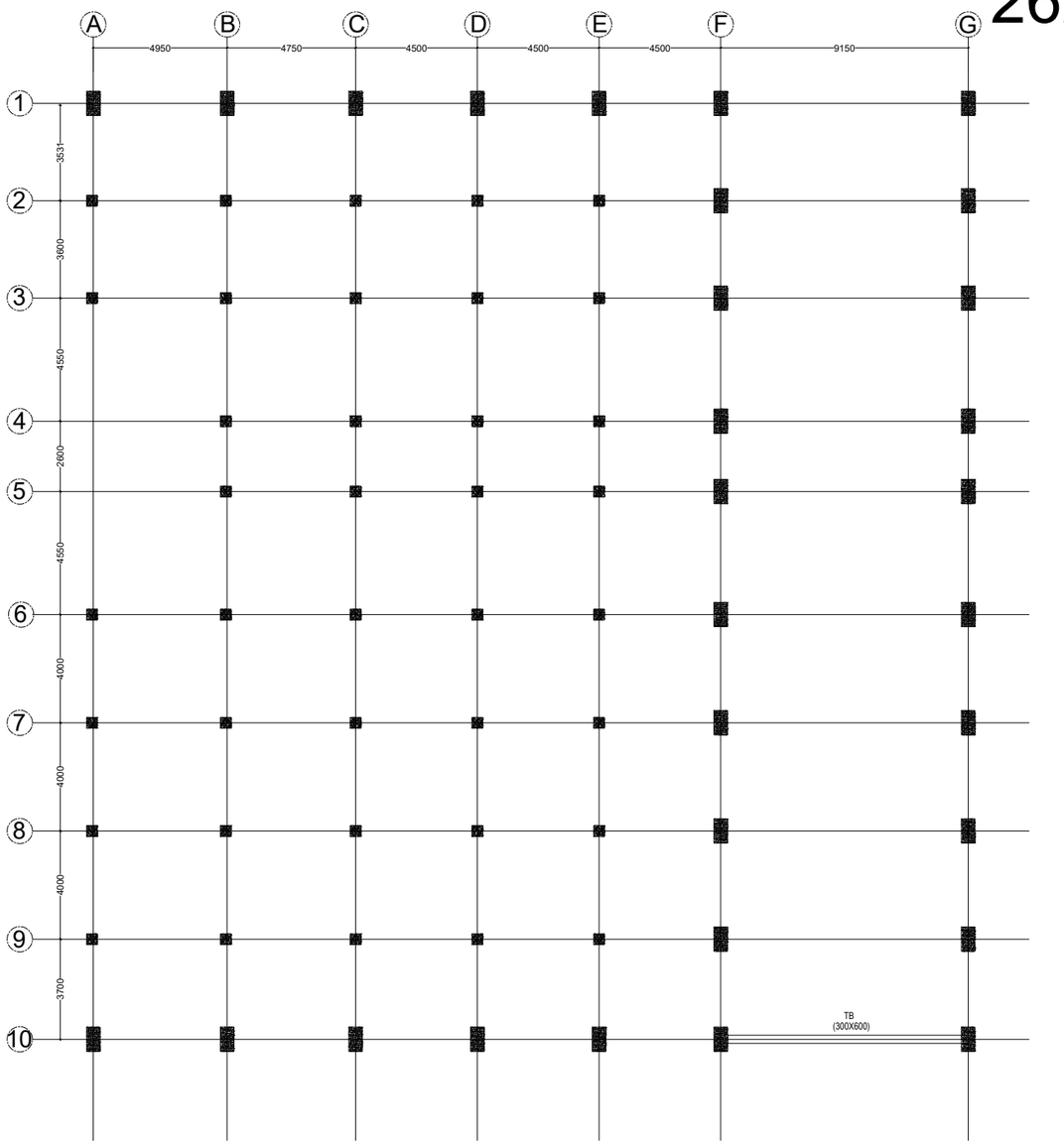
1. CO-ORDINATE THIS DRAWING ALONG WITH RELEVANT ARCHITECTURAL & SERVICES DWG'S.
2. ALL LEVELS ARE SHOWN IN THE PLAN, UNLESS OTHERWISE MARKED.
3. ALL SLAB THICKNESS 150 mm; OTHERWISE MARKED.
4. FORMWORK OR ITS SUPPORT SYSTEM SHALL BE EFFECTIVELY KEPT IN POSITION WITHOUT ANY MOVEMENT DURING AND AFTER PLACEMENT OF CONCRETE UNTIL THEY ARE READY TO BE RELEASED AFTER A SPECIFIED PERIOD.
5. FOR BEAMS WHERE DEPTH EXCEED 600mm., A 1Ø12 SHOULD BE ADDED TO EACH SIDE OF EVERY 30cm. OF BEAM DEPTH.
6. FOR BEAMS, SLABS AND RIBS WHERE LENGTH EXCEED 6.0m. CAMBER SHOULD BE MADE AT THE MIDDLE OF THE SPAN=1/300 SPAN.
7. WATER PROOFING TREATMENT SHOULD BE DONE AS PER SITE CONDITION.
8. HORIZONTAL CONSTRUCTION JOINTS MUST BE AVOIDED IN BEAM & SLAB.
9. READ THIS DWG. ALONG WITH FOLLOWING DRAWINGS.

9.1.	00 - S-CS -01	COLUMN SCHEDULE
9.2.	00 - S-CS -02	COLUMN REINFORCEMENT DETAILS.
9.3.	00 - S - 1F- 02	BEAM REINFORCEMENT DETAILS.

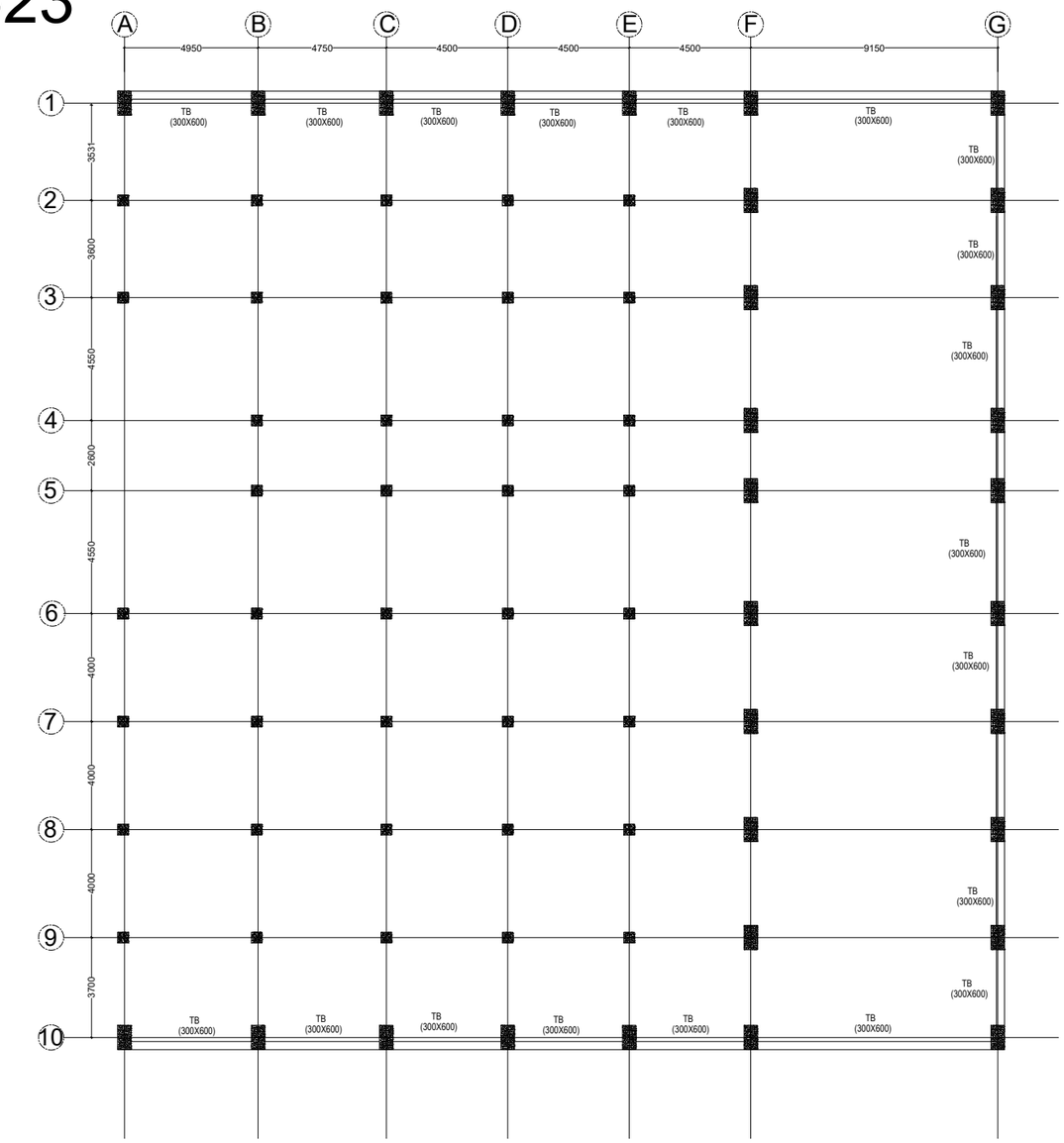
SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.
TITLE : DETAILS OF PLINTH BEAM	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

SCALE	DWG. NO.	REVISION
1:200	03	R-0

2623



TIE BEAM DETAIL AT LVL. 4.0M

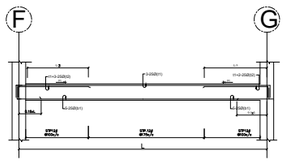


TIE BEAM DETAIL AT LVL. 9.0M

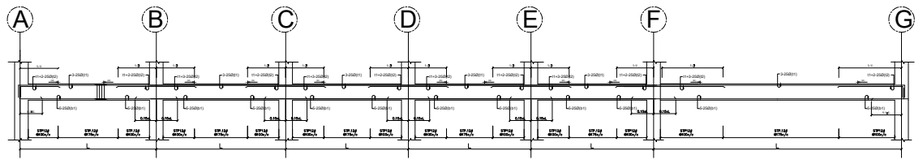
NOTES:

1. CO-ORDINATE THIS DRAWING ALONG WITH RELEVANT ARCHITECTURAL & SERVICES DWG'S.
2. ALL LEVELS ARE SHOWN IN THE PLAN, UNLESS OTHERWISE MARKED.
3. ALL SLAB THICKNESS 150 mm; OTHERWISE MARKED.
4. FORMWORK OR ITS SUPPORT SYSTEM SHALL BE EFFECTIVELY KEPT IN POSITION WITHOUT ANY MOVEMENT DURING AND AFTER PLACEMENT OF CONCRETE UNTIL THEY ARE READY TO BE RELEASED AFTER A SPECIFIED PERIOD.
5. FOR BEAMS WHERE DEPTH EXCEED 600mm., A 1Ø12 SHOULD BE ADDED TO EACH SIDE OF EVERY 30cm. OF BEAM DEPTH.
6. FOR BEAMS, SLABS AND RIBS WHERE LENGTH EXCEED 6.0m. CAMBER SHOULD BE MADE AT THE MIDDLE OF THE SPAN=1/300 SPAN.
7. WATER PROOFING TREATMENT SHOULD BE DONE AS PER SITE CONDITION.
8. HORIZONTAL CONSTRUCTION JOINTS MUST BE AVOIDED IN BEAM & SLAB.
9. READ THIS DWG. ALONG WITH FOLLOWING DRAWINGS.

9.1. 00 - S-CS -01 COLUMN SCHEDULE
9.2. 00 - S-CS -02 COLUMN REINFORCEMENT DETAILS.
9.3. 00 - S - 1F- 02 BEAM REINFORCEMENT DETAILS.



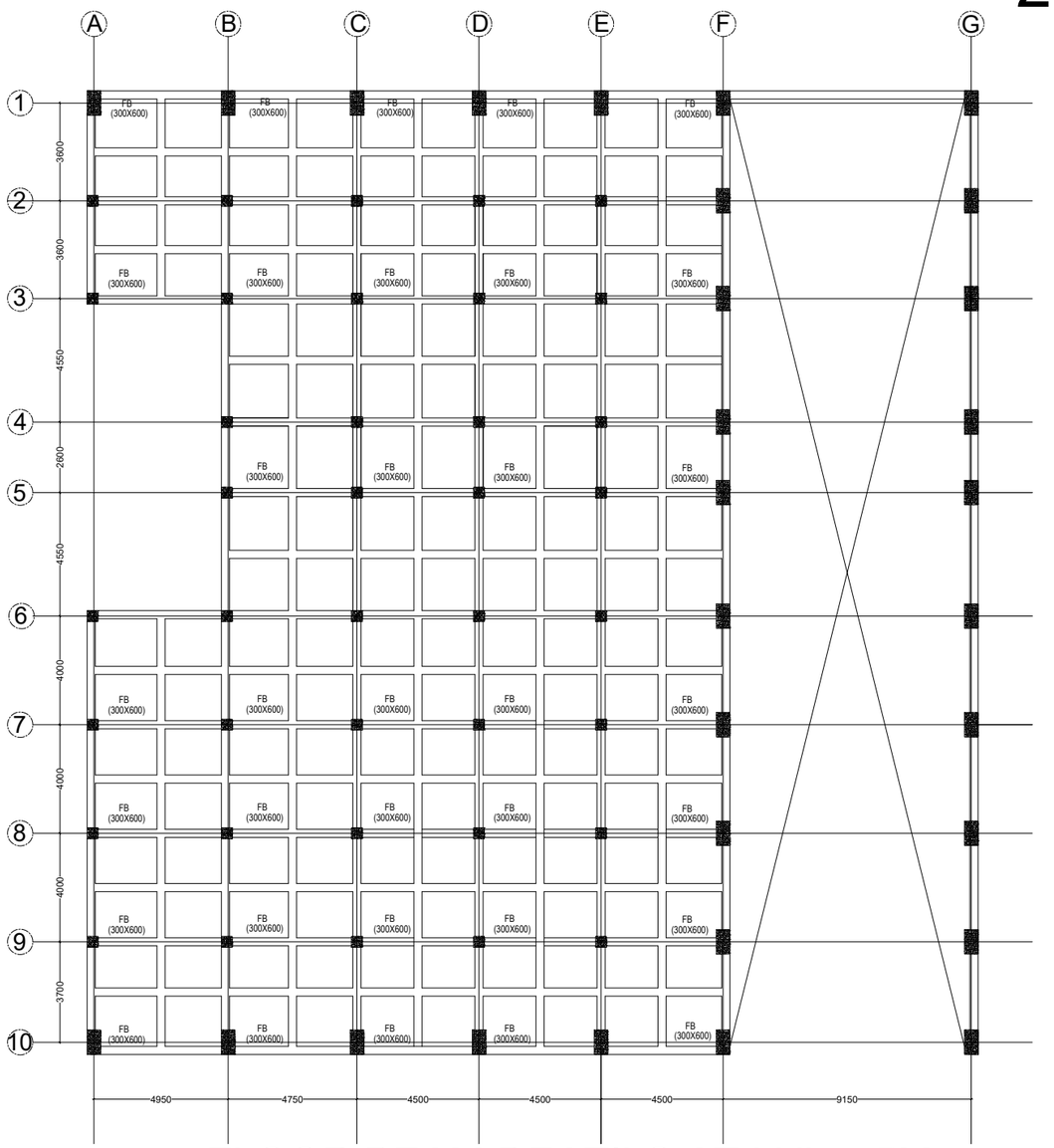
TYPICAL BEAM DETAILS



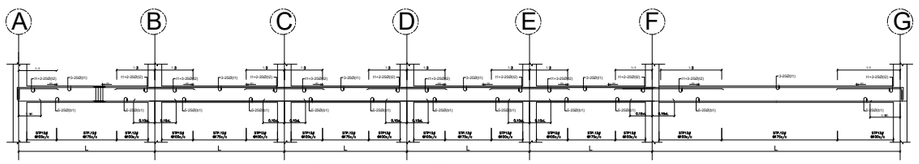
TYPICAL PLINTH BEAM DETAILS

SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.	
TITLE : DETAILS OF TIE BEAM	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW	
	SCALE: 1:225	DWG. NO.: 04
		REVISION: R-0

2624



FLOOR BEAM DEATILS AT LVL.3.5M

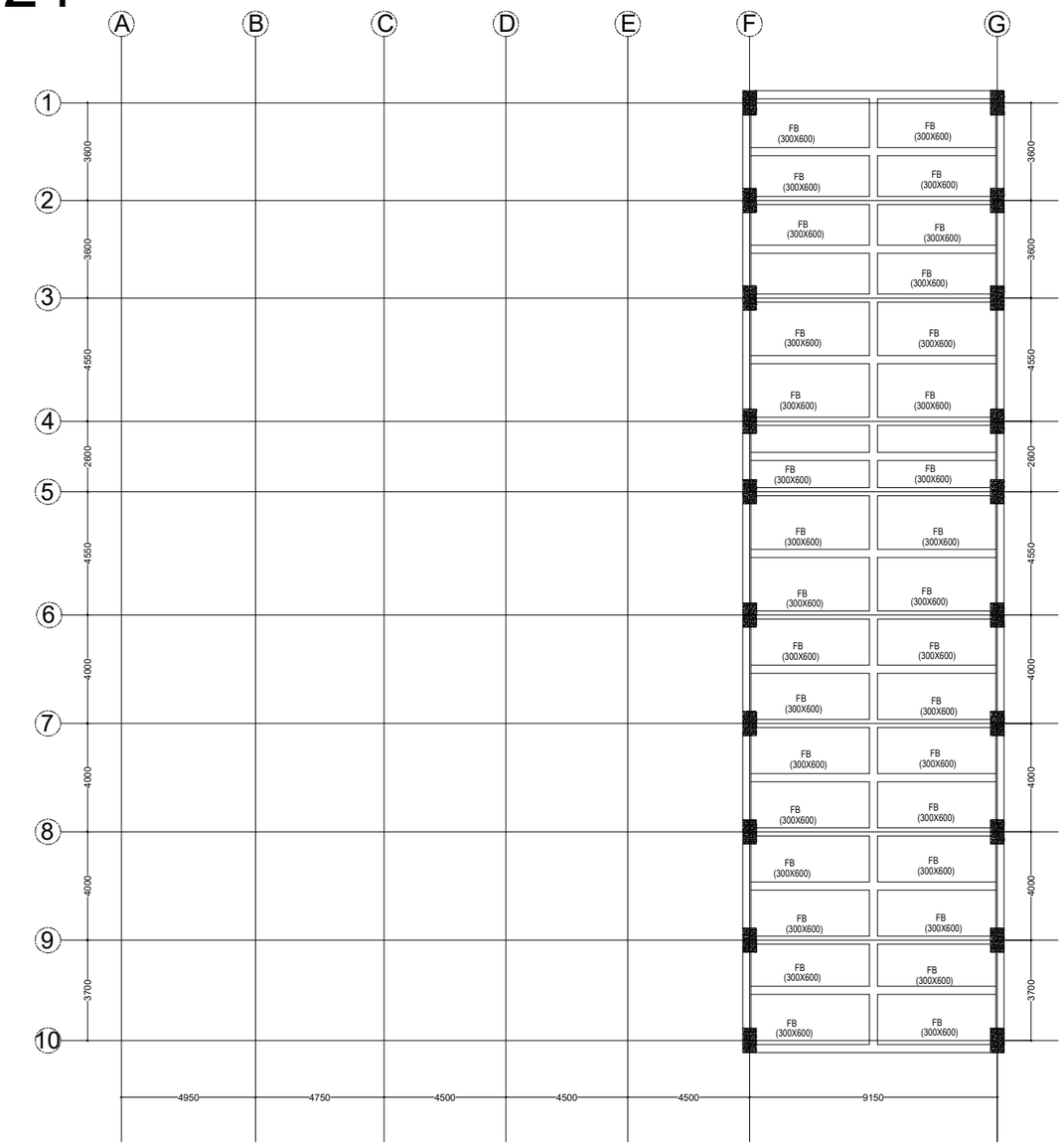


TYPICAL BEAM DETAILS

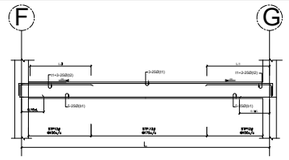
NOTES:

1. CO-ORDINATE THIS DRAWING ALONG WITH RELEVANT ARCHITECTURAL & SERVICES DWG'S.
2. ALL LEVELS ARE SHOWN IN THE PLAN, UNLESS OTHERWISE MARKED.
3. ALL SLAB THICKNESS 150 mm; OTHERWISE MARKED.
4. FORMWORK OR ITS SUPPORT SYSTEM SHALL BE EFFECTIVELY KEPT IN POSITION WITHOUT ANY MOVEMENT DURING AND AFTER PLACEMENT OF CONCRETE UNTIL THEY ARE READY TO BE RELEASED AFTER A SPECIFIED PERIOD.
5. FOR BEAMS WHERE DEPTH EXCEED 600mm., A 1Ø12 SHOULD BE ADDED TO EACH SIDE OF EVERY 30cm. OF BEAM DEPTH.
6. FOR BEAMS, SLABS AND RIBS WHERE LENGTH EXCEED 6.0m. CAMBER SHOULD BE MADE AT THE MIDDLE OF THE SPAN=1/300 SPAN.
7. WATER PROOFING TREATMENT SHOULD BE DONE AS PER SITE CONDITION.
8. HORIZONTAL CONSTRUCTION JOINTS MUST BE AVOIDED IN BEAM & SLAB.
9. READ THIS DWG. ALONG WITH FOLLOWING DRAWINGS.

9.1. 00 - S-CS -01 COLUMN SCHEDULE
9.2. 00 - S-CS -02 COLUMN REINFORCEMENT DETAILS.
9.3. 00 - S - 1F- 02 BEAM REINFORCEMENT DETAILS.



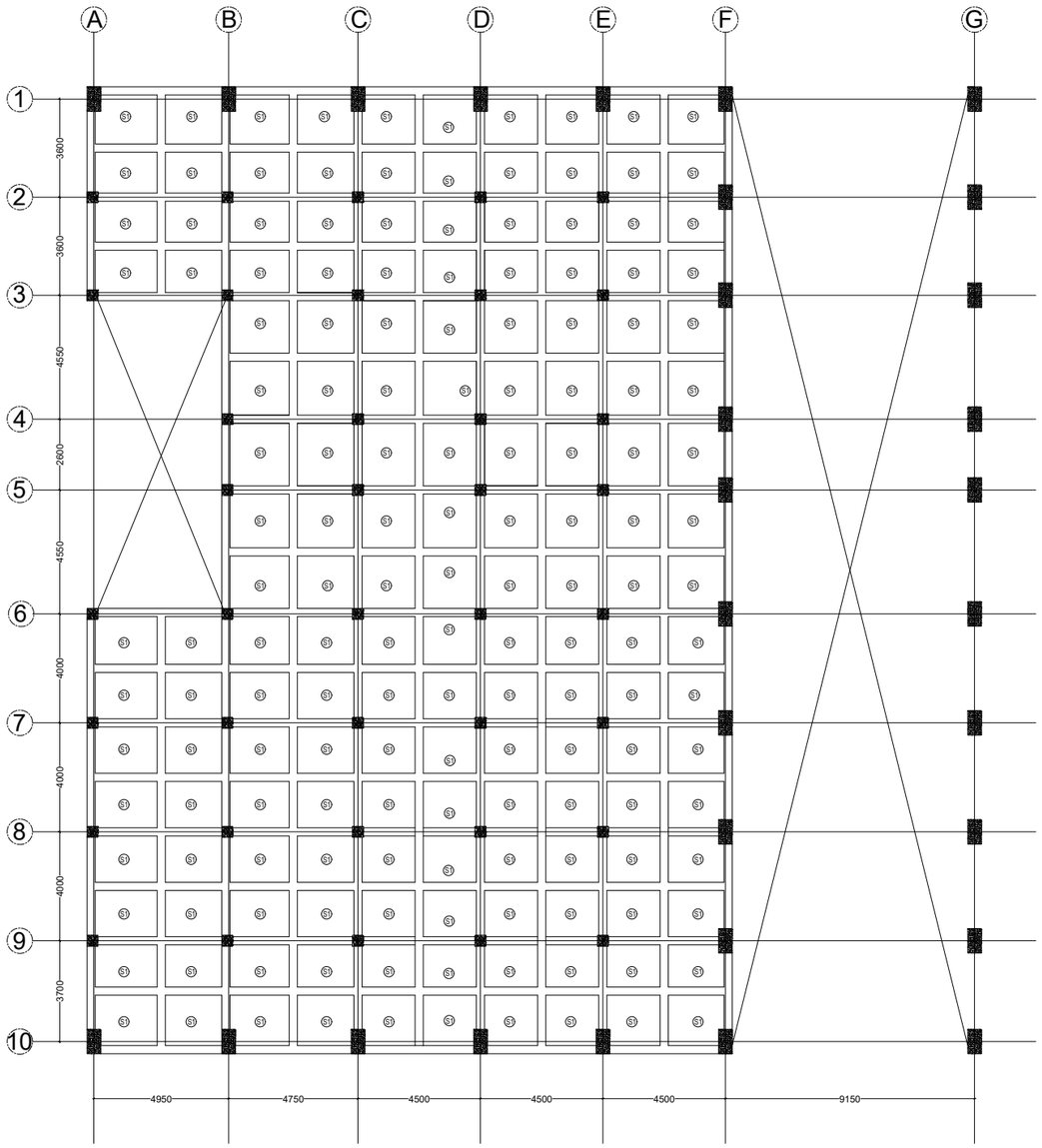
FOOR BEAM DEATILS AT LVL. 5.3M



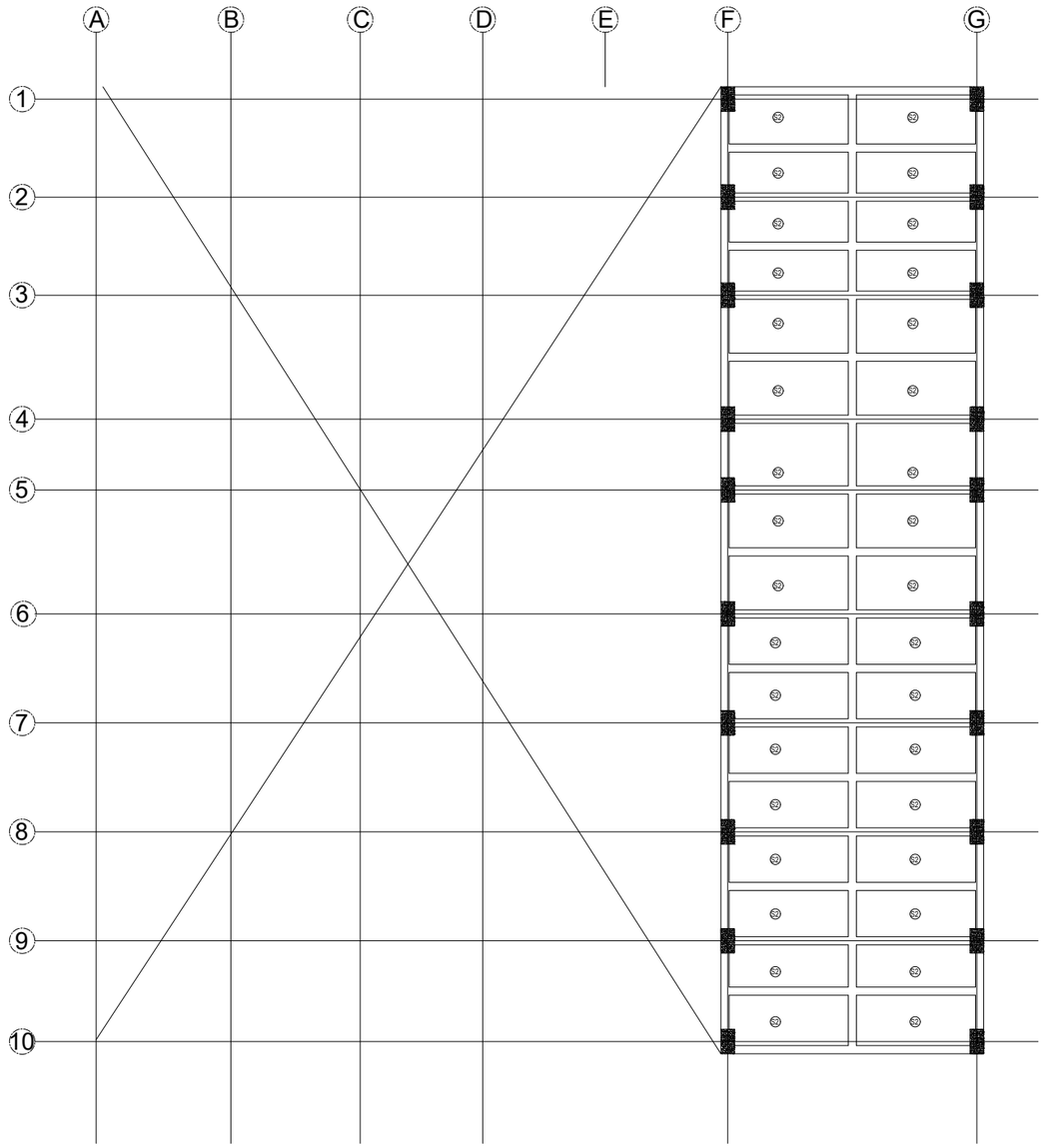
TYPICAL BEAM DETAILS

SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.	
TITLE : DETAILS OF FLOOR BEAM	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW	
	SCALE	DWG. NO. / REVISION
	1:225	05 / R-0

2625



SLAB DETAILS AT LVL.3.5M.



SLAB DETAILS AT LVL. 5.3M.

NOTES:

1. CO-ORDINATE THIS DRAWING ALONG WITH RELEVANT ARCHITECTURAL & SERVICES DWG'S.
2. ALL LEVELS ARE SHOWN IN THE PLAN, UNLESS OTHERWISE MARKED.
3. ALL SLAB THICKNESS 150 mm; OTHERWISE MARKED.
4. FORMWORK OR ITS SUPPORT SYSTEM SHALL BE EFFECTIVELY KEPT IN POSITION WITHOUT ANY MOVEMENT DURING AND AFTER PLACEMENT OF CONCRETE UNTIL THEY ARE READY TO BE RELEASED AFTER A SPECIFIED PERIOD.
5. FOR BEAMS WHERE DEPTH EXCEED 600mm., A 1Ø12 SHOULD BE ADDED TO EACH SIDE OF EVERY 30cm. OF BEAM DEPTH.
6. FOR BEAMS, SLABS AND RIBS WHERE LENGTH EXCEED 6.0m. CAMBER SHOULD BE MADE AT THE MIDDLE OF THE SPAN=1/300 SPAN.
7. WATER PROOFING TREATMENT SHOULD BE DONE AS PER SITE CONDITION.
8. HORIZONTAL CONSTRUCTION JOINTS MUST BE AVOIDED IN BEAM & SLAB.
9. READ THIS DWG. ALONG WITH FOLLOWING DRAWINGS.

9.1. 00 - S-CS -01 COLUMN SCHEDULE
9.2. 00 - S-CS -02 COLUMN REINFORCEMENT DETAILS.
9.3. 00 - S - 1F- 02 BEAM REINFORCEMENT DETAILS.

REINFORCEMENT DETAIL.

SLAB	DEPTH IN(MM)	X-DIRECTION			Y-DIRECTION			CONCRETE GRADE	REMARKS
		BOTTOM REINF.	TOP REINF.	EXTRA AT TOP END REINF.	BOTTOM REINF.	TOP REINF.	EXTRA AT TOP END REINF.		
S1	150	10@150C/C		10@150C/C	10@150C/C		10@150C/C	M-25	
S2	150	10@175C/C		10@175C/C	10@175C/C		10@175C/C	M-25	

SCHEME:- MRF CUM TRANSFER STATION

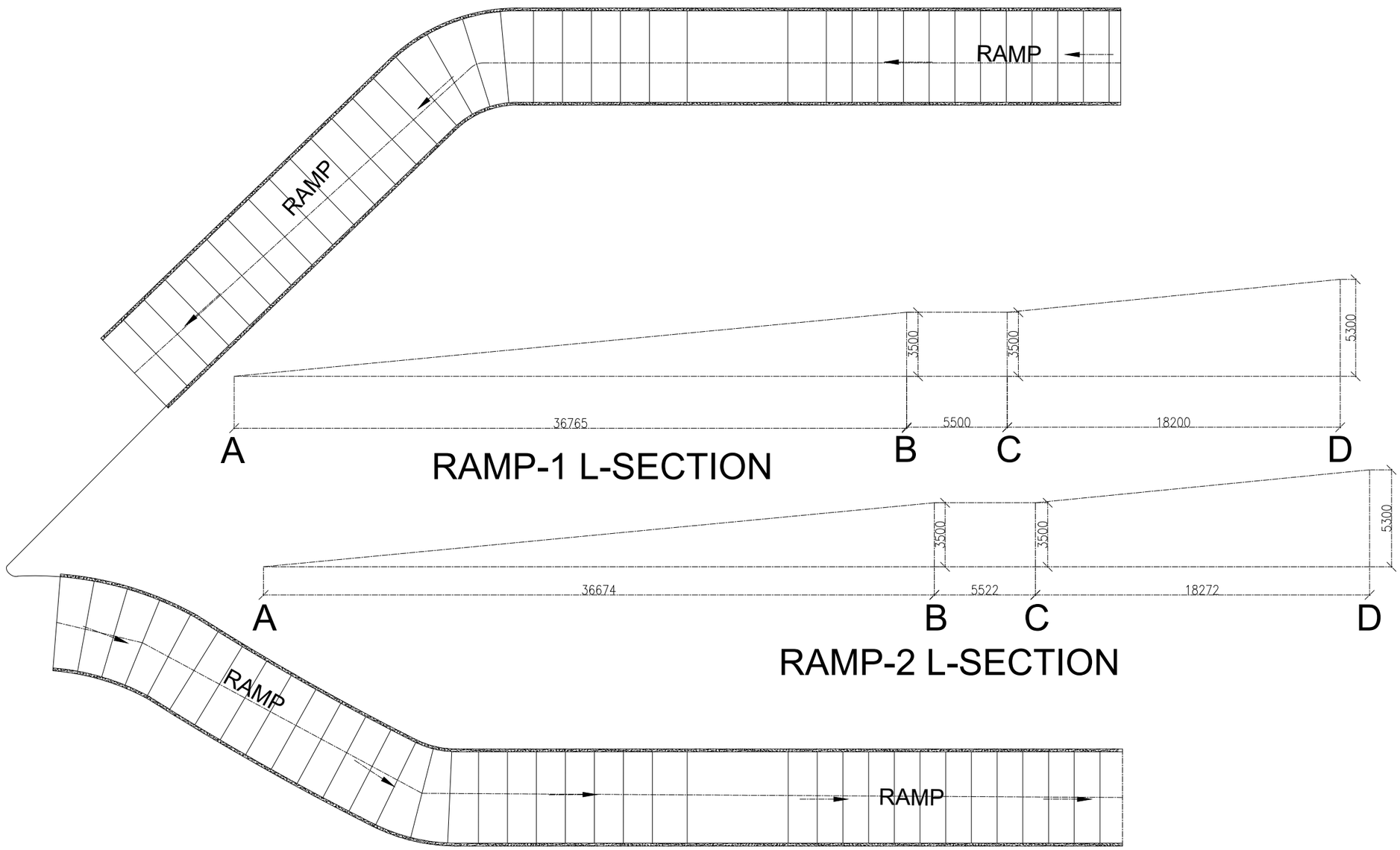
DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.

TITLE : DETAILS OF SLAB

CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

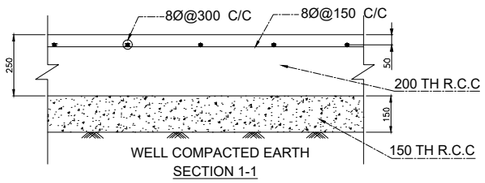
SCALE	DWG. NO.	REVISION
1:225	06	R-0

2626

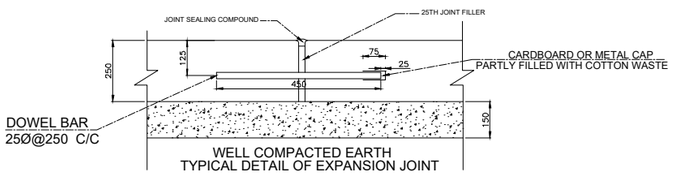


RAMP-1 L-SECTION

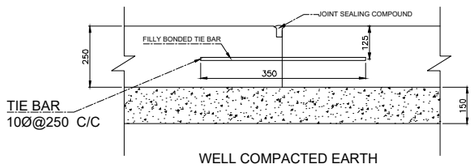
RAMP-2 L-SECTION



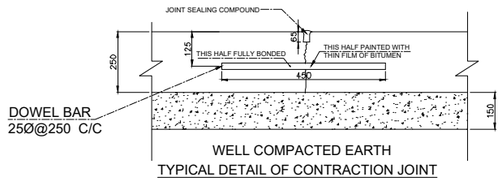
SECTION 1-1



TYPICAL DETAIL OF EXPANSION JOINT



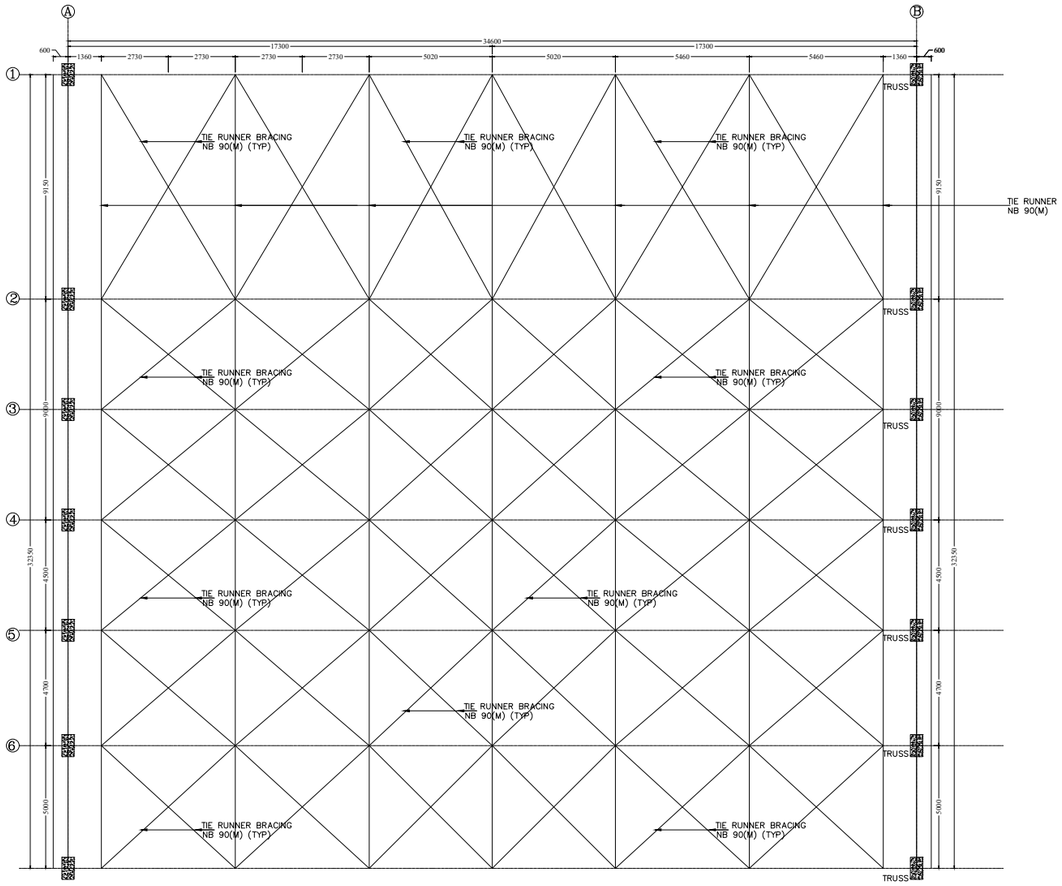
TYPICAL DETAIL OF LONGITUDINAL JOINT WITHTHE BAR



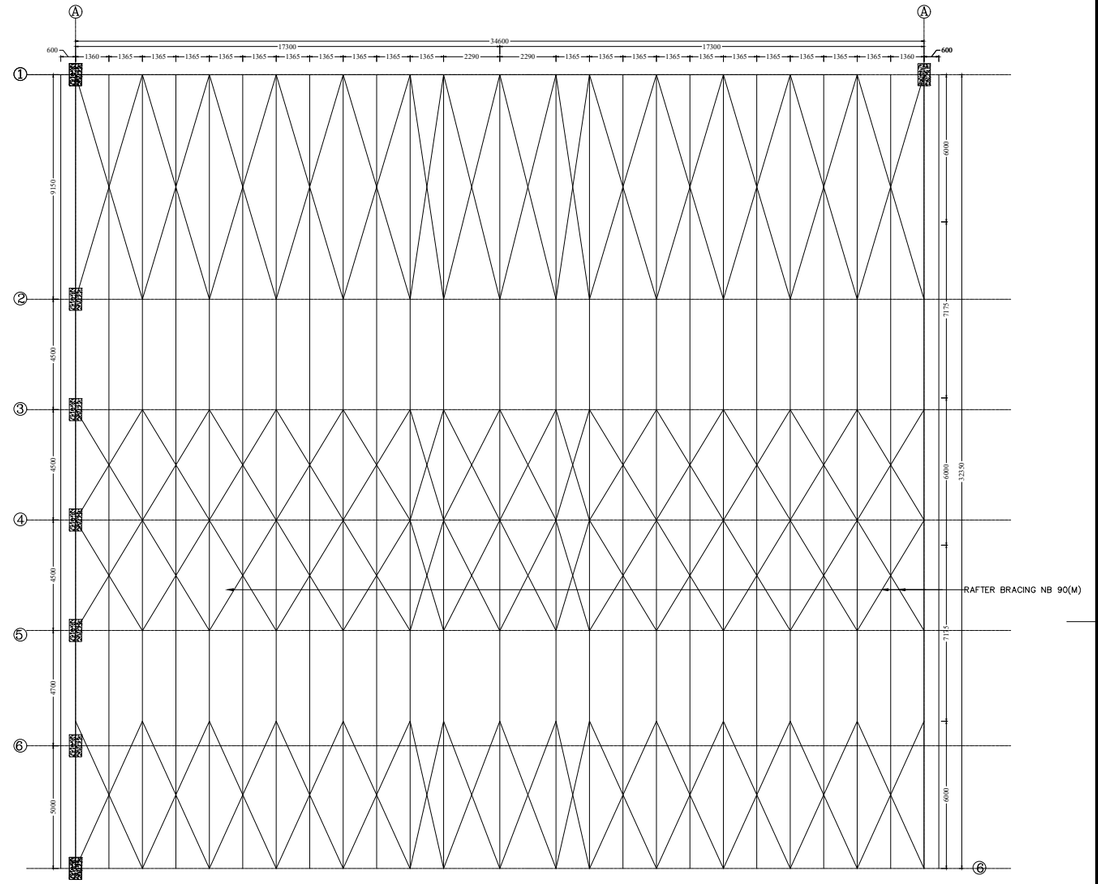
TYPICAL DETAIL OF CONTRACTION JOINT

SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.
TITLE : DETAILS OF RAMP	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

SCALE	DWG. NO.	REVISION
1:250	07	R-0



BOTTOM CHORD PLAN

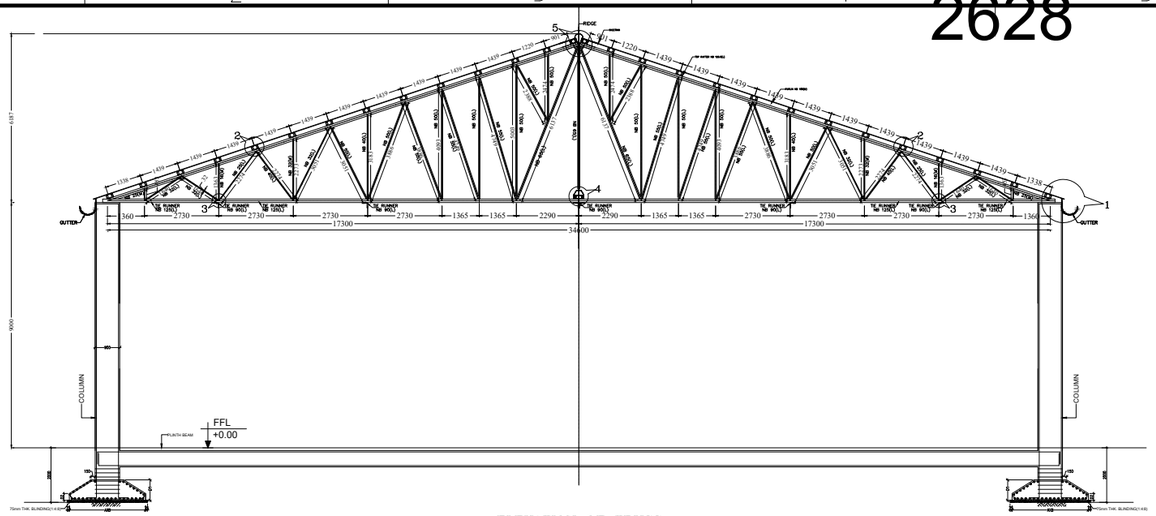


TOP CHORD PLAN

SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.
TITLE : G.A & STRUCTURAL DETAILS OF TRUSS (34.6 M)	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

SCALE	DWG. NO.	REVISION
1:250	08-A	R-0

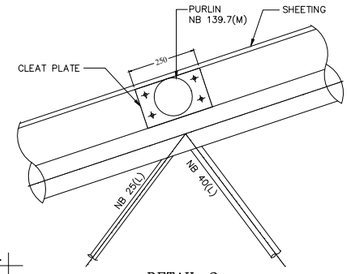
2628



ELEVATION OF TRUSS

TYP. COLUMN ELEVATON
UNLESS NOTED, OTHERWISE LAP ELEVATION
CONCRETE GRADE-AS/SCHEDULE

TYP. COLUMN ELEVATON
UNLESS NOTED, OTHERWISE LAP ELEVATION
CONCRETE GRADE-AS/SCHEDULE



DETAIL–2
(SCALE 1:10)

RIDGE LVL
+15187

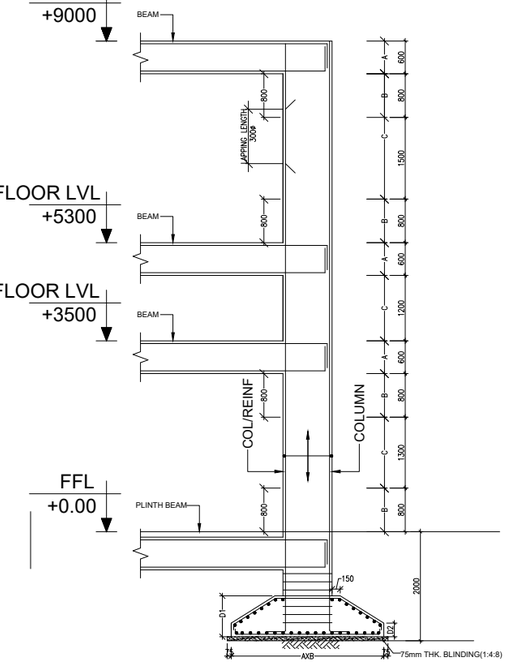
BOTTOM OF TRUSS LVL
+11300

BEAM LVL
+9000

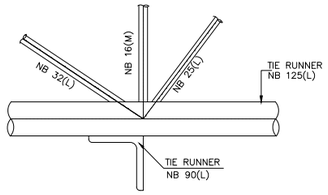
SECOND FLOOR LVL
+5300

FIRST FLOOR LVL
+3500

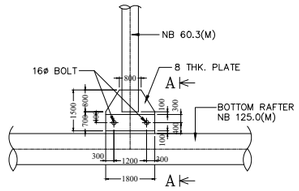
FFL
+0.00



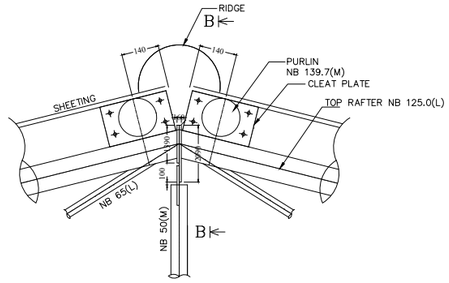
TYP. COLUMN ELEVATON
UNLESS NOTED, OTHERWISE LAP ELEVATION
CONCRETE GRADE-AS/SCHEDULE
SCALE– 1:2



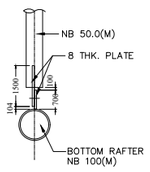
DETAIL–3
(SCALE 1:10)



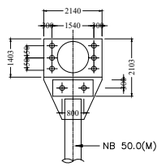
DETAIL–4
(SCALE 1:10)



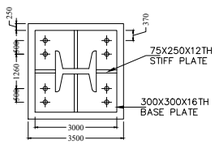
DETAIL–5
(SCALE 1:10)



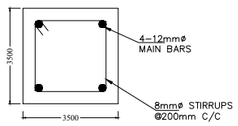
VIEW A–A
(SCALE 1:10)



VIEW B–B
(SCALE 1:10)



DETAIL OF BASE PLATE

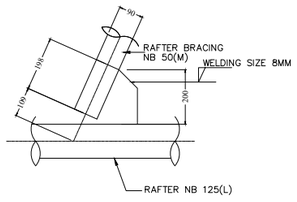


COLUMN DETAIL
SCALE– N.T.S

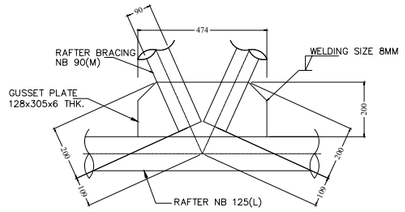
SIZE– 350X350
R/F– 4–12ø
MIX– M25
RING– 8ø@200C/C

SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.
TITLE : G.A & STRUCTURAL DETAILS OF TRUSS (34.6 M)	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

SCALE	DWG. NO.	REVISION
1:225	08-B	R-0

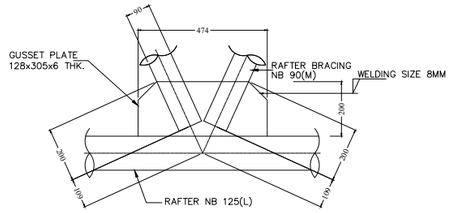


DETAIL–1
(SCALE 1:10)

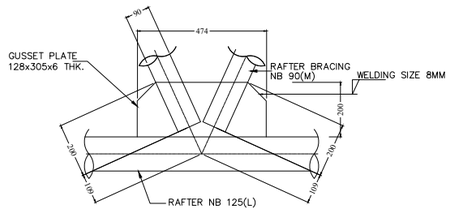


DETAIL–2

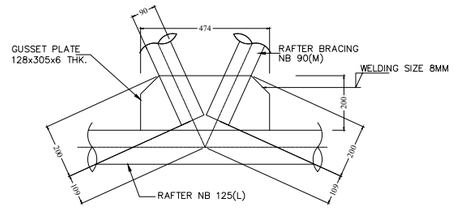
(SCALE 1:10)



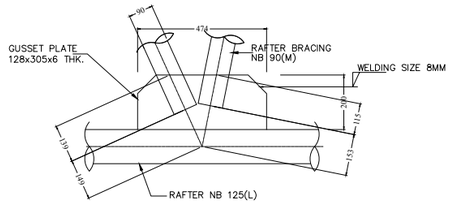
DETAIL–3
(SCALE 1:10)



DETAIL–3
(SCALE 1:10)

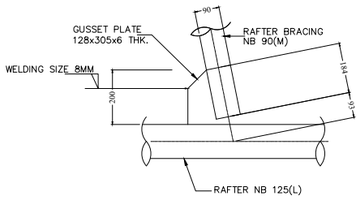


DETAIL–4
(SCALE 1:10)



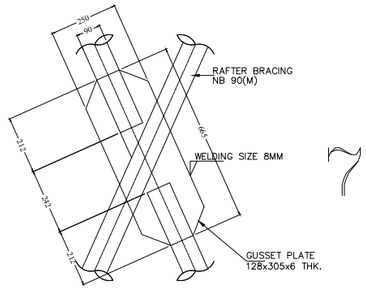
DETAIL–5
(SCALE 1:10)

5



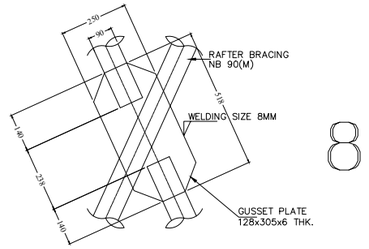
DETAIL–6
(SCALE 1:10)

6



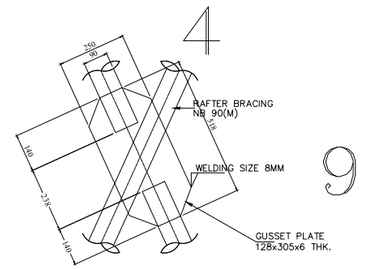
DETAIL–7
(SCALE 1:10)

7



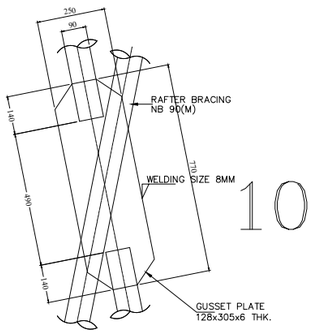
DETAIL–8
(SCALE 1:10)

8



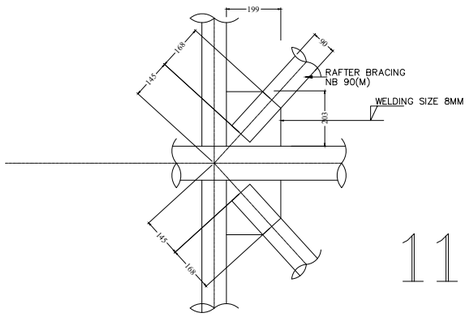
DETAIL–9
(SCALE 1:10)

9



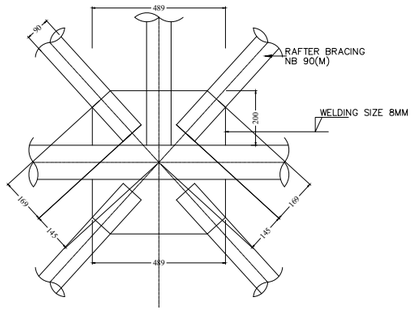
DETAIL–10
(SCALE 1:10)

10

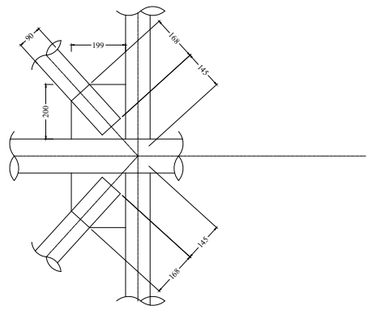


DETAIL–11
(SCALE 1:10)

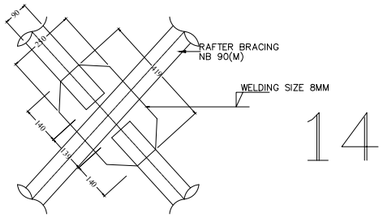
11



DETAIL–12
(SCALE 1:10)

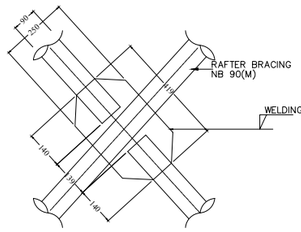


DETAIL–13
(SCALE 1:10)



DETAIL–14
(SCALE 1:10)

14



DETAIL–15
(SCALE 1:10)

15

SCHEME:- MRF CUM TRANSFER STATION	DEPTT. :- LUCKNOW NAGAR NIGAM, U.P.
TITLE : G.A & STRUCTURAL DETAILS OF TRUSS (34.6 M)	CONSULTANT :- REGIONAL CENTRE FOR URBAN AND ENVIRONMENTAL STUDIES, LUCKNOW

SCALE	DWG. NO.	REVISION
1:225	08-C	R-0

Annexure -12

Annexure 12

Detail of Payment against Bill Submitted by Ecogreen Energy Lucknow Pvt. Ltd.			
Sr. No.	**Particular**		**Amount**
1	Bill Amount Claimed by Concessionaire		3464753649
2	Rectified Bill Amount		2884846909
3	Deductions for Non-performance	Processing	43198854
4		C&T	162250069
5	Deduction for Excessive Breakdown of Vehicles		16465000
6	Net Payable after Deductions		2662932986
7	Income Tax		58895702.56
8	Net Payable after Taxes		2604037283
9	Payment of Agency deployed for User Charger Collection		179144593
10	Sinking Fund		170190279
11	Deduction for Fuel provided to Concessionaire		37578485
12	Procurement of Vehicle & Equipment on behalf of Concessionaire		25073931
13	Net Payable after All Deductions & Direct Payments		2192049995
14	Net Amount Paid		1882366345
15	Net Amount to be Paid		316876750.4